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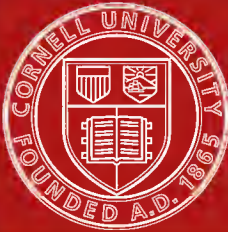


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**E L E M E N T S**  
OF THE  
**COMPARATIVE GRAMMAR**  
OF THE  
**INDO-GERMANIC LANGUAGES.**

Da muss sich manches Rätsel lösen.  
Doch manches Rätsel knüpft sich auch.  
*Goethe's Faust, Part I.*



**ELEMENTS**  
OF THE  
**COMPARATIVE GRAMMAR**  
OF THE  
**INDO-GERMANIC LANGUAGES.**

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**A CONCISE EXPOSITION**  
**OF THE HISTORY**

OF SANSKRIT, OLD IRANIAN (AVESTIC AND OLD PERSIAN), OLD ARMENIAN,  
OLD GREEK, LATIN, UMBRIAN-SAMNITIC, OLD IRISH, GOTHIC, OLD HIGH  
GERMAN, LITHUANIAN AND OLD BULGARIAN

BY

**KARL BRUGMANN,**  
PROFESSOR OF COMPARATIVE PHILOLOGY IN THE UNIVERSITY OF LEIPZIG.

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**VOLUME I:**  
**INTRODUCTION AND PHONOLOGY.**

TRANSLATED FROM THE GERMAN

BY

**JOSEPH WRIGHT, PH. D.**

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LONDON  
TRÜBNER & CO., LUDGATE HILL.

STRASSBURG  
KARL J. TRÜBNER.

1888.





## PREFACE TO THE ORIGINAL EDITION.

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Those who have impartially followed the development of comparative philology in the last twenty years will be aware of the great progress it has made in the interval. In both the scope and the nature of its work it has shewn all the elasticity and creative vigour of a science that is still young in spite of its seventy years. That its diverse and scattered details need to be once again brought together under one systematic arrangement will hardly be doubted by any competent judge. The first edition of Schleicher's excellent *Compendium* appeared in 1861, and was since twice published in a revised form by the author, the second time shortly before his death. When it was edited finally in 1876 with very few changes indeed, the two editors were already of opinion that it required complete remodelling (see the preface p. IX). Thus I feel sure that the *'Elements'*, the first volume of which is now before the reader, meets a real need.

Time and competent criticism will decide whether it has solved the problem in any degree satisfactorily and whether it can claim to be of the same service to our science and its students as was Schleicher's book in its time. My task was attended by all manner of difficulties and I am fully conscious that in some respects it is inadequately discharged. I trust nevertheless that the result may be of some service, at least for the present.

I take this opportunity of drawing especial attention to one or two points in the plan and execution of my work.

It was not my object to collect all the various views, often widely divergent, which have been from time to time put forward by authorities, on questions relating to the history of the Indo-Germanic languages. As a rule I give only the views that I consider right or at least probable, after submitting them to repeated tests. A mere regard to the size of the book necessitated this course. The most important authorities will be found summarily enumerated in the introduction and at the beginning of the separate sections. To mention in each case who has treated the subject, and who was the first author of the view I have accepted, seemed to me unnecessary to the purpose of the book, and excluded by the small space at my disposal. I took what was good wherever I was sure I had found it; all parties among the different methods and schools of linguistic science are fairly represented in these pages. Hence though I may per-

haps have overlooked much that is useful, I still hope that approximately at any rate I have attained the aim I had set before me: to exhibit the present state of our knowledge in a concise form, giving prominence to all the more important points.

At the same time I have not confined myself to stating such results as seem certain to stand for all future time. I have spoken of many problems that are still unsolved, in order to give the reader not only a survey of what has been already accomplished, but also a glimpse of the work that still remains to be done. This was indispensable in view of the position in which the science of the Indg. languages at present stands. Thanks to the discovery of many fresh sources of information, and still more, I think, to the fertile combination, which the past ten years have brought about between minute investigation on the one hand and the philosophy of language on the other (the character of which I have endeavoured to sketch in my essay, 'Zum heutigen Stand der Sprachwissenschaft' p. 33 ff.), new problems to be solved have of late arisen on all sides, and that in such numbers that many decades of work will still be needed to master them, so far as we can reckon that they are to be solved at all.<sup>1)</sup> Had I silently passed over all such unsettled questions in the history of the Indg. languages, the picture of the whole subject which I tried to draw would have been marred by many grievous blanks. But further I hoped to incite the reader to independent investigation, by referring to much that has not yet passed the stage of problem and hypothesis. In doing so I have taken care that what is uncertain should not preponderate over what is certain, and should everywhere be clearly distinguished from it. And if, instead of merely marking the phenomenon in question as unexplained, I have often hazarded a conjecture, at all events in something like the direction in which the solution of the riddle is to be sought, despite those who resent every 'probably' or 'perhaps' in scientific works, I may quote Goethe's words: 'The opinions you venture, are like the pawns you move forward on the chess-board; they may be taken, but they have introduced a game that will be won'. The conjectures I have admitted into this book should always be regarded only as challenges to more minute investigation.

As regards the arrangement of the material my aim is to let the different branches of language and the separate languages appear each as a unit complete in itself on the common background of the Indo-Germanic primitive community, yet in such a way that each single phenomenon appears separated as little as possible from the kindred examples in other languages. My method of exposition takes about the middle course between that of Bopp's Comparative Grammar on the one hand, which may

1) As regards exceptions and irregularities it has now become the effort of all scholars to aim at seeking for the reason of the exception, not occasionally only, but in every case, and systematically, and we consider our duty to science undischarged until we have found the answer to the 'why'. How many phenomena of language, which once were thought perfectly clear, so that a final judgment could be pronounced upon them, have by this means become unanswered problems!

be described as a connected picture sinking what belongs to the separate languages in the Indo-Germanic whole, and that of Schleicher's Compendium, on the other, which does little more than string together a number of separate grammars. It seeks to unite the excellences of both. This of course could not be done without some sacrifice of system. In the phonology I was obliged to add a series of chapters on combinatory sound-change after tracing the development of the primitive Indo-Germanic sounds one by one. Here I have had now and then to repeat in sum what had already been mentioned or to expand and supplement what before had been merely hinted at. I prefer to submit to this incongruity of arrangement, which Schleicher has avoided, than to disregard consciously the considerable didactic advantage that it affords; and in this point at least I hope to have on my side the academical teachers who lecture on comparative grammar.

In the transcription I have been as far as possible conservative. The reader will easily perceive why I was obliged to discard one or two symbols widely in use, e. g. the representation of the Sanskrit palatal and cerebral sibilants by *ç* and *ś* (or *sh*). I ought perhaps in general to have paid even more attention than I have done to the rule that the same sound in different languages should be represented by the same sign: e. g. Av. *ç*, not *γ*, on account of the Germanic (Ags.) *ç*; Gothic *u*, not *v*, on account of the Old High German *w*. And in several other points the notation might certainly be improved, at least if it be thought desirable to sacrifice what is widely or universally in use in favour of less usual methods. As regards the Aryan languages and Armenian especially, I gladly take this opportunity of expressing a wish, which, I think, most Indo-Germanic scholars share with me, that the Congress of Oriental scholars<sup>1)</sup> should sanction by its authority as soon as it is practicable to do so, some suitable system of transcription for these languages, which should have regard to the needs both of special philologists and of comparative scholars, so that the vagaries of the prevailing usage in the matter may be at last brought within bounds. That the question of transcription is not yet ready for a final settlement is no valid objection.

My work has been least independent in dealing with the phonology of Iranian and Armenian. Here I could generally connect it very closely with the excellent works of Bartholomae and Hübschmann, especially with the former's Handbook of the Old Iranian Dialects, and the latter's Armenian Studies. I have only deviated in a very few points from Hübschmann's treatment of the history of the Armenian sounds. In the Keltic branch many will look for a more detailed account of the British dialects. I fully admit that comparative philology must devote more attention to these dialects than has hitherto been the case. But my knowledge in this department is too small for me to venture to set any

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<sup>1)</sup> The attempt made in the fifth Congress (see 'Verhandlungen des fünften internationalen Orientalisten-Congresses', Berlin 1881, p. 89) has unfortunately led to no result.

dialect of the British group side by side with Irish. It was my intention two years ago to make myself so far familiar with Cymric as to be able to treat the chief features at least of this language along with the rest. My removal to Freiburg however at that time cut me off almost entirely from all Keltological literature, and I was thus obliged to abandon my design. As regards Irish also the want of a library<sup>1)</sup> sufficiently furnished with philological literature caused me difficulties in many ways. I am hence all the more thankful to Prof. Thurneysen of Jena [now in Freiburg], who not only sent me information on many points of Keltic philology, but also at my request undertook the trouble of revising the proof-sheets relating to Keltic. Both have been a help to my work in many details, in far more places than has been indicated by a reference to his name. In particular it was such help only that made it possible in all cases to distinguish the British forms correctly according to dialect and period. It may also be remarked that almost all the addenda relating to Keltic p. 565 ff. [now incorporated with the text of this translation] were due to communications from Thurneysen. If I add lastly that my treatment of some of the phenomena of Keltic philology is not in harmony with the views of this scholar, it is in order to prevent misunderstanding, that he may not in any way be made responsible for mistakes that might be found in the Keltic parts of this book. I have to thank Dr. Holthausen of Heidelberg [now in Halle] for some notices relating to Germanic, which he placed at my disposal after an inspection of several proof- and the finally revised sheets and of which I have for the most part made use.

I have not been able consistently to take account of the scientific literature which has appeared this year. I especially lament that the second edition of G. Meyer's Greek Grammar, Braune's Old High German Grammar and the second edition of Leskien's Hand-book of the Old Bulgarian Language did not appear until after my printing had begun.

To facilitate reference, I shall add an index of words at the end of the whole work.

Its continuation and conclusion shall follow as quickly as time and strength permit.

Freiburg i. B., July 1886.

KARL BRUGMANN.

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<sup>1)</sup> It is only since the founding of the chair for comparative philology that the University library here has systematically purchased works on this subject (apart of course from the classical languages and Germanic), so that the necessary material can only be procured very gradually.

## TRANSLATOR'S PREFACE.

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When Prof. Brugmann and Mr. Trübner proposed to me, two years ago, while I was still a student in Heidelberg, that I should translate the 'Grundriss der vergleichenden Grammatik der indo-germanischen Sprachen' into English as soon as it appeared, I gladly accepted the proposal, in the hope that I should thus be rendering valuable service both to English and American students of philology, especially to the former who would otherwise very possibly, if they did not happen to know German, have to remain an indefinite length of time without being able to enter into a systematic and scientific study of languages, based on firm and rigid principles.

If the work of translating the original has taken me longer than I at first anticipated it would, this is almost entirely due to the poverty-stricken state of our language as regards current philological technical terms. Some of the terms employed by me, e. g. slurred and broken accent, intersonantal, initiality, strong-grade etc., will no doubt sound strange at first reading. But those, who have either been trained at a German university or are familiar with German philological literature, will readily confess how difficult it sometimes is to find a very exact and appropriate English equivalent for many of the German grammatical technicalities. Time will of course show whether I have in each case hit upon the best term, but I have everywhere tried rather to represent as exactly as I could the meaning of the author than to produce an elegant English paraphrase, which could preserve neither the brevity nor the rigidly scientific form of the original.

Last spring Prof. Brugmann gave me in Leipzig a list of corrections, consisting partly of misprints not given at the end of the original work, and partly of a few slight mistakes which were mentioned in the reviews of the work. These as also the corrections and emendations at the end of the German edition have been worked into the body of the translation. I also received from the author a short time ago one or two other corrections of the original which will be found at the end of the present edition.

At the end of the volume will be found a short list of those abbreviations which would be likely to cause the reader any difficulty.

In conclusion I have to express my sincere gratitude to Prof. Brugmann and Mr. P. Giles, Fellow of Gonville and Caius College Cambridge, for the great assistance they have rendered me by helping in the reading of the proof-sheets.

J. WRIGHT.

London, November 29, 1887.



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## INTRODUCTION.

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### DEFINITION OF THE SCIENCE OF THE INDO-GERMANIC LANGUAGES, AND THE DIVISION OF THE INDO-GERMANIC FAMILY INTO ITS VARIOUS BRANCHES.

§ 1. The science of the Indg. languages forms, like Indg. Mythology, a section of Indg. '*Philology*', i. e. of that science, which has to investigate the intellectual development of the Indg. peoples from the time before their separation up to the present day. Its method accordingly is historical and its task is to investigate the whole development of the Indg. languages from the time when they were still one language down to the present day. Its unity is in no sense broken by the results furnished by the specialists in Sanskrit, Ancient and Modern Greek, Latin and the Romance languages, Keltic etc., for the sciences of the Indian languages, of Ancient and Mod. Greek etc. are integral components of the grand whole formed by that of the Indo-Germanic.

It is true that the so called comparative science of language has hitherto been almost exclusively confined to the older periods of the Indg. languages, but this is due to the division of labour which was involved in the method by which alone progress could be made, as well as to the limitations of human strength. Probably the same division of labour will still be necessary, but it implies no real opposition between the different parts of the science.

Compare the author's inaugural address 'Sprachwissenschaft und Philologie' (in his 'Zum heutigen Stand der Sprachwissenschaft', Strassburg 1885, p. 3 ff.).

§ 2. We are not at present in a position to determine finally what was the primitive home of the Indg. tribes. Only so much is clear, that these tribes in pre-historic times must have been far less widely diffused than they were at the beginning of the historic era. It was formerly usual to place this primitive home somewhere in Asia, whereas at present scholars lean rather to the opinion that the Asiatic members of the stock passed over from Europe. Cp. O. Schrader 'Sprachvergleichung und Urgeschichte', Jena 1883, p. 442 ff.

§ 3. It is impossible to suppose that a language should have gone through a long course of development, and be spoken by a people of any considerable numbers, without a certain amount of dialectical variation; and hence we cannot look upon the speech of the Indogermans, even while they still occupied a comparatively small territory and maintained a fairly close degree of intercourse with one another, as bearing in any strict sense, a uniform character. Local differences had no doubt already arisen, though actual instances of this have hardly as yet been established with perfect certainty. One such I have maintained, though only as a conjecture, in §§ 380, 417. In historical times there appear a multitude of dialects, diverging in a greater or less degree, the whole field of which can hardly be included in any one survey. We may take for granted that the differentiation of dialects about the year 2000 B. C. had gone so far, that a number of communities existed side by side, which could no longer, or only with difficulty understand one another. The historic record of the various individual developments begins at very different periods. E. g. the Indian development is known to us from about the year 1500 B. C. onwards, the Latin from about 300 B. C., the Irish since the eighth century of the Christian era (with the exception of the Ogam inscriptions, cp. § 9), and the Lithuanian from the middle of the sixteenth century.

A number of separate developments, which sprung from the primitive Indg. language, have perished without leaving any traces of their existence. Of others we have only very scanty fragments left, on which it is scarcely, if at all, possible to found a grammar, as of Phrygian, Macedonian, Messapian, Gallic, and Burgundian. The remainder have come down to us with a more abundant supply of material.

The dialects belonging to this last class, are arranged into eight groups (branches of language): 1. Aryan, 2. Armenian, 3. Greek, 4. Albanian, 5. Italic, 6. Keltic, 7. Germanic, 8. Baltic-Slavonic. Each group is distinguished by the fact that its individual members show in common a considerable number of changes in sound, inflexion, syntax and vocabulary; e. g. the shifting of the prim. Indg. explosives, discussed in § 527 ff. (what is known as the first sound-shifting), is one of the numerous characteristics of the close relation existing between the Germanic dialects.

Of the dialects, which have come down to us only in scanty fragments, there are a certain number which can be assigned with certainty to one or other of these eight groups, e. g. the Burgundian to the Germanic, and the Gallic to the Keltic group, whilst others, e. g. the Macedonian, seem to belong to none of them.

It is in itself very possible that some of these eight chief members stand to each other in a closer relationship, and form a single group historically distinct from the rest. All attempts, however, to establish such a closer relationship, have hitherto proved futile. The Italo-Keltic hypothesis has perhaps the best prospect of attaining a greater degree of probability in the future.

Cp. Johannes Schmidt *Die Verwandtschaftsverhältnisse der indogermanischen Sprachen*, Weimar 1872. Leskien *Die Declination im Slavisch-Litauischen und Germanischen*, Leipzig 1876, introduction. Delbrück *Einleitung in das Sprachstudium*, Edition 2. 1884, p. 131 ff. C. Schrader *op. cit.* p. 66 ff. The Author, *Zur Frage nach den Verwandtschaftsverhältnissen*

der indogermanischen Sprachen, in Techmer's Internat. Zeitschr. für allg. Sprachwissenschaft I 226 ff.

§ 4. (1) The Aryan branch consists of the Indian and Iranian groups.

The oldest and most archaic dialect of the Indian group is the language of the Veda, the oldest portions of which (the hymns of the Rigveda) possibly go back as far as 1500 B.C.<sup>1</sup>). Next comes Sanskrit in the stricter sense of the word (also called classical Sanskrit), the continuation of a dialect now lost, which existed side by side with the Vedic and differed but slightly from it in the formation of its sounds and inflexions. It became separated from the popular development as the literary language, and was stereotyped in a fixed and purely artificial form. The vulgar language, called Prākṛit, as early as the third century B.C. differed very materially from Sanskrit and at that time was divided into at least three chief dialects. Through the influence of Buddhism, Prākṛit was also raised to a literary language (Pāli). From the popular dialects of Prākṛit have descended the numerous modern Indian languages and dialects, Hindi (Hindustani), Bengali, Uriya, Maharatti, Guzerati, Sindhi, Penjabi and others.

In this work we shall only deal with the Vedic language and classical Sankrit.

Cp. Bopp Kritische Grammatik der Sanskrita-Sprache in kürzerer Fassung, Edit. 3., Berlin 1863. Benfey Vollständige Grammatik der Sanskritsprache, Leipzig 1852. The same Author's Kurze Sanskrit-Grammatik, Leipzig 1855. Whitney Sanskrit Grammar, Leipzig 1879 (with supplement I, Grammatisches aus dem Mahabharata, by A. Holtzmann, 1884; supplement II, The roots, verb-forms, and primary derivatives of the Sanskrit language, by Whitney, 1885).

The oldest recorded dialects of the Iranian group are Old Persian (West Iranian), the language of the Persian

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1) Cp. A. Kaegi Der Rigveda, die älteste Literatur der Inder, Edition 2, Leipzig 1881.

cuneiform inscriptions dating from about 520 to 350 B.C., and Avestic, also called Zend and Old Bactrian (East Iranian), the language of the Avesta, the sacred book of the Zoroastrians, which has come down to us with corruptions of many kinds, deviating considerably from its original form. The various portions of the work were composed at very different periods<sup>1</sup>). Some parts of the Avesta, including 17 hymns (*gāpā* f.), are written in a peculiar dialect, which is more archaic than the language of the other parts, and as distinct from which the latter is called Later Avestic or Zend in the stricter sense. Not one of the Modern Iranian languages is a direct continuation of Old Persian or Avestic. The Modern Persian dialects (Gilani etc.), Kurdic and probably also Ossetian (spoken in the neighbourhood of the Caucasus) are more closely related to the former, and the language of Afghanistan (*Paštu*) to the latter.

We shall only deal with the two Old Iranian languages.

Cp. Spiegel *Die altpersischen Keilinschriften*, Edition 2., Leipzig 1881. Justi *Handbuch der Zendsprache*, Leipzig 1864. Bartholomae *Handbuch der altiranischen Dialekte*, Leipzig 1883.

§ 5. (2) Armenian, which de Lagarde and Friedr. Müller assigned to the Iranian group, but Hübschmann (*Kuhn's Ztschr.* XXIII 5 ff., 400 ff.) has proved to be an independent member of the Indg. family of languages, is known to us since the fifth century of our era. The literary language (O.Armenian), which had then become fixed, remained in this usage without any material changes down to modern times, and is separated by a great interval from the modern dialects. Historical investigations have hitherto been almost exclusively confined to O.Armenian. The term Armenian will always be used in the sense of O.Armenian.

Cp. Petermann, *Grammatica linguae Armeniacae*, Berlin 1837. The same Author, *Brevis linguae armeniacae grammatica, litteratura, chrestomathia cum glossario*, ed. II, Berlin 1872.

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1) On the difficult question as to the age of the Avesta cp. Eduard Meyer *Geschichte des Alterthums* I (1884) p. 501 ff.

Hübschmann *Armenische Studien I*, Leipzig 1883 (of special importance for the phonology).

§ 6. (3) Greek had strongly marked variations in different localities long before Homer's time and in the historic era appears split up into numerous dialects.

These may be classified in the following manner: 1. Ionic-Attic, a. The district of Ionia, b. Attica. 2. Doric, a. Laconia with Tarentum and Heraclea, b. Messenia, c. Argolis and Aegina, d. Corinth with Corcyra, e. Megara with Byzantium, f. the Peloponnesian colonies of Sicily, g. Crete, h. Thera and Melos together with Cyrene, i. Rhodes with Gela and Acragas, k. the other Dor. islands in the Aegean, as Carpathus, Astypalaea etc. 3. North West Greek, a. Phocis, b. Locris, c. Aetolia, d. Acarnania, e. Phthiotis and the district of the Aenianes, f. Epirus, g. probably also Achaia. 4. Aeolic, a. Lesbos and Aeolian Asia Minor, b. North Thessaly, c. Boeotia. 5. Elean (belonging to North West Greek?). 6. Arcadian-Cyprian<sup>1</sup>). 7. Pamphylian.

These dialects are found in their purest form on inscriptions. The literary language, especially that of the poets, is in many respects artificially constructed; even the language of the Homeric poems is in great measure an artificial dialect.

Towards the end of the fifth century B. C. there was formed on the basis of the Attic dialect a literary language common to all Greeks, which almost entirely excluded the use of the other dialects from the later prose literature of antiquity. Hence it is that we have to gather our knowledge of most of the non-Attic local dialects either entirely, or almost entirely, from inscriptions.

The language of mediaeval Greek literature is an artificial mixture of ancient Greek with forms of the then spoken popular language in varying degrees of modification. Modern Greek

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1) Collitz (*Die Verwandtschaftsverhältnisse der griech. Dialekte* 1885) places this dialect in close relation with Aeolic and puts forward the hypothesis that 'the Thessalian dialect in point of language forms the transition-stage from Boeotian to Lesbian, from Lesbian to Cyprian-Arcadian and from Cyprian-Arcadian to Bœotian' (p. 9).



exhibits a rich development of dialects; as yet little has been done towards fixing the historical relation of the separate dialects to ancient Greek<sup>1</sup>).

We shall confine our attention to the development of the O.Gr. dialects.

Cp. Ahrens *De Graecae linguae dialectis*, I. *De dialectis Aeolicis*, Göttingen 1839, II. *De dialecto Dorica*, Göttingen 1843. R. Meister *Die griechischen Dialekte*, I. *Asiatisch-Äolisch. Böotisch, Thessalisch*, Göttingen 1882. G. Curtius *Grundzüge der griechischen Etymologie*, Edit. 5., Leipzig 1879. R. Kühner *Ausführliche Grammatik der griechischen Sprache*, 2 vols., Edit. 2., Hannover 1869—1870. G. Meyer *Griechische Grammatik*, Leipzig 1880 (Edit. 2. 1886). Delbrück *Die Grundlagen der griechischen Syntax*, Halle 1879. The Author, *Griechische Grammatik*, in Iw. Müller's *Handbuch der klassischen Altertumswissenschaft* II (1885) p. 1—126.

§ 7. (4) Albanian, the language of ancient Illyria, has only been known to us from monuments of any extent since the seventeenth century. The historical treatment of this language, which is beset with manifold difficulties — the greatest of which lies in clearly separating pure Albanian words from those borrowed from the Greek, Latin, Romance, Slavonic and Turkish languages —, is still in its infancy.

Cp. Gustav Meyer *Albanesische Studien*, Wien I 1883, II 1884 (in which the whole of the older literature has been collected together) and 'Der Einfluss des Lateinischen auf die alban. Formenlehre' in the *Miscellanea di Filologia*, dedicata alla memoria dei professori Caix e Canello p. 103 ff.<sup>2</sup>).

We shall only take this language into account in discussing

1) Considerations introductory to the study of the relation of Middle and Modern Greek to O.Greek and the researches on the subject are given by Krumbacher *Beiträge zu einer Geschichte der griech. Sprache*, in *Kuhn's Ztschr.* XXVII 481 ff.

2) The treatise of the same scholar 'Über Sprache und Literatur der Albanesen' in his 'Essays und Studien zur Sprachgeschichte und Volkskunde', Berlin 1885, p. 49 ff. is strongly to be recommended as an introduction to this subject.

the development of the Indg. palatal and guttural explosives § 411 and § 458—460.

§ 8. (5) The *Italic* branch consists of Latin on the one hand and of the Umbrian-Samnitic dialects on the other.

Latin, with which the little known dialect of Falerii was closely related, is known to us from about 300 B. C. onwards. So long as the language was confined to Latium, there existed no dialectical differences of any importance. The contrast between the popular and the literary language, which had already arisen at the beginning of the archaic period of literature (from Livius Andronicus to Cicero), became still sharper in the classical period, and the further development of the former is almost entirely lost to our observation until the Middle Ages, when the popular Latin of the various provinces of the Roman empire meets us in a form more or less changed and with a rich development of dialects (Romance languages: Portuguese, Spanish, Catalanian, Provençal, French, Italian, Raetoromanic and Roumanian)<sup>1</sup>).

We shall only consider the development of the Latin of antiquity.

Cp. Corssen *Über Aussprache, Vocalismus und Betonung der lateinischen Sprache*, 2 vols., Leipzig 1858. 1859, edit. 2., 1868. 1870. R. Kühner *Ausführliche Grammatik der lateinischen Sprache*, 2 vols., Hannover 1877. 1879. F. Stolz and J. G. Schmalz *Lateinische Grammatik*, in Iw. Müller's *Handbuch der klass. Altertumsw.* II (1885) p. 127—364.

The Umbrian-Samnitic dialects are known to a certain extent through inscriptions, which for the most part belong to the last centuries before our era, and through words quoted by Roman writers. We are best acquainted with Umbrian (Bréal *Les tables Eugubines*, Paris 1875, Bücheler *Umbria*, Bonn 1883) and Oscan (Zvetaieff *Sylloge inscriptionum Oscanum*, Petersburg-Leipzig 1878). Of the Volscian, Picentine, Sabine,

1) Cp. Budinszky *Die Ausbreitung der lat. Sprache über Italien und die Provinzen des römischen Reiches*, Berlin 1881, Gröber in the *Archiv für lat. Lexikographie* I 35 ff., 204 ff.

Aequiculan, Vestinian, Marsian, Pelignian and Marrucian dialects we have only very scanty remains (Zvetaieff *Inscriptiones Italiae Mediae dialecticae*, Leipzig 1884). All these dialects were forced into the background at an early period by the intrusion of Latin. The Sabines, who received citizenship in 267 B. C., seem to have been the first to become romanised. The slowest to give way was Oscan, which in the mountains did not perhaps become fully extinct for centuries after the Christian era.

Cp. further Bruppacher *Osk. Lautlehre*, Zürich 1869, Enderis *Versuch einer Formenlehre der osk. Sprache*, Zürich 1871.

§ 9. (6) The Keltic languages fall into three groups: Gallic, Britannic and Gaelic<sup>1</sup>).

We know something of Gallic through Keltic names and words quoted by Greek and Latin authors, through inscriptions and coins. But the interpretation of the forms, mostly proper names, is in most cases so uncertain that from these remains linguistic research has hitherto gained comparatively little.

Britannic broke up into Cymric (or Welsh), Cornish and Bas Breton (or Armorican); the connexion between the last two is especially close. We are acquainted with Cymric and Bas Breton from the eighth or ninth century onward, at first through glosses; the oldest records of Cornish are somewhat later. The last named dialect became extinct at the end of the eighteenth or beginning of the nineteenth century, both the others are still living.

Irish-Gaelic, Scotch-Gaelic (which is also known as Gaelic in the stricter sense), and Manx (spoken in the Isle of Man) form the Gaelic division. All three of these are still living. The first two languages seem hardly to have differed from each other in the ninth century. The oldest monuments are the O.Gaelic Ogam inscriptions (Ogam is the native name for the

1) The first two languages have often been classed together as a special group, but without sufficient reason. See Thurneysen *Keltoromanisches* 1884 p. 7 ff.

Gaelic runes), which possibly date as far back as about 500 A.D. The literary record of Irish begins in the eighth century, at first with glosses, and then from the year 1100 onward we have many extensive manuscripts which contain sagas, ecclesiastical literature etc. Scotch-Gaelic literature begins somewhat later than that of Irish and in the older period is closely connected with Irish. Manx is only known to us during the last few centuries<sup>1</sup>).

We shall consider chiefly Old Irish.

Cp. J. C. Zeuss *Grammatica Celtica* (e monumentis vetustis tam Hibernicæ linguæ quam Britannicarum dialectorum Cambricæ Cornicæ Aremoricæ comparatis Gallicæ priscae reliquiis construxit J. C. Z.), Edit. 2. by H. Ebel, Berlin 1871. Windisch *Kurzgefasste irische Grammatik*, Leipzig 1879.

§ 10. (7) The Germanic branch is divided into Gothic, Norse, and West Germanic.

Gothic, the most archaic language of the Germanic group, is chiefly accessible to us through the biblical translation of the West Gothic bishop Ulfilas (311—381 A.D.). The language perished with the Gothic nation. (The East Goths, who dwelt in the Crimca, retained their language down to modern times; but of this branch of Gothic we possess only a few isolated words.)

Norse (or Scandinavian), which in certain special points closely coincides with Gothic<sup>2</sup>) and is therefore by some writers classed together with it as East Germanic as opposed to West Germanic, down to the Viking period (800—1000 A. D.) was practically a single language, but later on became broken up into four languages, Icelandic and Norwegian (West Norse) on the one hand, Swedish and Danish (East Norse) on the other. The earliest records are runic inscriptions, the oldest of which

1) Windisch's article «Keltische Sprachen» in Ersch und Gruber's A. Encykl. d. W. u. K. second section, XXXV p. 132 ff., serves as a good introduction to the Keltic languages generally, the monuments of these languages and Keltological literature.

2) The most important of these coincidences are Goth. *ddj* = O.Icel. *ggj* from *ǰ* (§ 142) and Goth. *ggv* = O.Icel. *ggv* from *ǰ* (§ 179). Cp. Braune in Paul-Braune's Beitr. IX 546 f.

appear to belong to the fifth century. By O.Norse was, in former times, generally understood O. West Norse only; the term is now more properly applied to the whole development of the Scandinavian languages up to the sixteenth century.

The oldest representatives of West-Germanic are Anglo-Saxon, the continuation of which is Mod. English; O. Frisian; O. Saxon, now Low German; O. Low Franconian, now Dutch, Flemish, and the language of the German Lower Franconia; and O. High German, the present Upper- und Middle German dialects. The oldest records of these languages date from the eighth or ninth century, the oldest OHG. record belonging to about the period 740—745; but with Frisian we are acquainted only since the fourteenth century.

We shall limit ourselves chiefly to Gothic and Old High German.

Cp. J. Grimm *Deutsche Grammatik*, I<sup>2</sup>, II<sup>2</sup>, new reprint, Berlin 1870. 1878, III, IV Göttingen 1831, 1837. Rumpelt *Deutsche Grammatik, mit Rücksicht auf vergleichende Sprachforschung*, I (Lautlehre) Berlin 1860. A. Holtzmann *Altdeutsche Grammatik* I, 1 (Die specielle Lautlehre), 2 (Vergleichung der deutschen Laute unter einander), Leipzig 1870. 1875. W. Scherer *Zur Geschichte der deutschen Sprache*, edit. 2., Berlin 1878. Leo Meyer *Die gothische Sprache, ihre Lautgestaltung insbesondere im Verhältniss zum Altindischen, Griechischen und Lateinischen*, Berlin 1869. W. Braune *Gotische Grammatik*, edit. 2., Halle 1882. L. Wimmer *Altnordische Grammatik*, translated from the Danish by E. Sievers, Halle 1871. A. Noreen *Altnordische Grammatik* I (Altisl. und Altnorw. Gramm. unter Berücksichtigung des Urnordischen), Halle 1884. E. Sievers *Angelsächsische Grammatik*, Halle 1882 (2. ed. 1886). W. Braune *Althochdeutsche Grammatik*, Halle 1886. O. Behaghel *Die deutsche Sprache*, Leipzig und Prag 1886.

§ 11. (X) The Baltic-Slavonic branch. The Baltic division consists of Prussian, Lithuanian, and Lettic. The former died out in the seventeenth century and we only possess very few imperfectly recorded specimens dating from the fifteenth and

sixteenth centuries. The two latter are still living and their oldest records belong to the sixteenth century.

We confine ourselves chiefly to Lithuanian.

Cp. Nesselmann *Die Sprache der alten Preussen*, Berlin 1845. The same author, *Thesaurus linguae Prussicae*, Berlin 1873. Schleicher *Litauische Grammatik*, Prag 1856. Kurchat *Grammatik der littauischen Sprache*, Halle 1876. Bielenstein *Die lettische Sprache, nach ihren Lauten und Formen erklärend und vergleichend dargestellt*, 2 Theile, Berlin 1863. 1864. The same author, *Lettische Grammatik*, Mitau 1863.

The Slavonic languages fall into a South-Eastern and a Western group. To the former belong Russian (a. Great Russian and White Russian, b. Little Russian), Bulgarian and Illyrian (a. Servian and Croatian, b. Slovenian), to the latter Czech (Czech in the stricter sense, Moravian and Slovakian), Sorabian or Wendish (Upper- and Lower Sorabian) and Lechish (Polish and Polabian or Elbe-Slavonian). All these languages, with the exception of Polabian, are still living. The most archaic, and for Indg. grammar the most important, is the language in which the Slavonic apostles Cyril and Methodius (ninth century) wrote. In our investigations we accordingly consider this language of the first importance. It is called O.Slovenian by Miklosich, but by Schleicher, Schaffarik and others with more justness O.Bulgarian. It became the ecclesiastical language of the Greek church, and that form of it, which was modified through the influence of other Slavonic languages, especially of Russian, is generally known by the name of Church Slavonic.

Cp. Miklosich *Vergleichende Grammatik der slavischen Sprachen* 4 vols. Vienna, I<sup>2</sup> 1879, II 1875, III<sup>2</sup> 1876, IV 1874. Schleicher *Die Formenlehre der kirchenslavischen Sprache erklärend und vergleichend dargestellt*, Bonn 1852. Leskien *Handbuch der altbulgarischen (altkirchenslawischen) Sprache*, Weimar 1871, edit. 2., 1886.

§ 12. In accordance with what has been said in §§ 4—11, we shall speak exclusively or at all events especially of the oldest periods of those languages whose developments are

known to us through records extending over a great length of time. The term 'science of the Indg. languages', as has been already stated in § 1, does not demand such a restriction. This division of labour is wholly due to the course which the science has hitherto taken, and is fully justified by the present state of the science. Bopp in his *Vergleichende Grammatik* (3 vols., edit. 3, Berlin 1868—1871) and Schleicher in his *Compendium der vergleichenden Grammatik der indogermanischen Sprachen* edit. 4, Weimar 1876) also limit themselves similarly as we have done.

When we speak of primitive Indg. forms; of prim. Ar.; of prim. Gr. or of prim. Ital. etc., we generally mean those forms which were in use towards the close of the primitive period of these languages. But we also often mean such forms as belonged to an earlier period of this stage, and which had already undergone a change towards its termination. For instance, we therefore speak equally well of prim. Germ. \**fa<sup>h</sup>axō* and of prim. Germ. \**fāxō* (Goth. *fāha*, s. § 214), of prim. Gr. \**ποροι* and prim. Gr. \**ποσαι* (Att. *ποσι*, s. § 490), as of Lat. *sequuntur* and Lat. *secuntur* (§ 431). Forms, put down by us as prim. Ind., prim. Ar. etc., are therefore not to be indiscriminately regarded as belonging to the same period. Again, if we, for example, uniformly write *χ*, not *h*, in prim. Germ. forms where we put *h* for Gothic words, it must not be implied that *χ* had not in certain cases already become *h* in prim. Germanic (cp. § 529).

## ON THE STRUCTURE OF THE INDO-GERMANIC LANGUAGES IN GENERAL. ROOT AND SUFFIXES.<sup>1)</sup>

§ 13. The Indg. languages belong to the inflexional class. The inflexion of words has not existed from the very beginning, but has been gradually developed and perfected.

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1) With what follows compare Delbrück *Einleitung in das Sprachstudium*<sup>2</sup> (Leipzig 1884) p. 61 ff. and Paul *Prinzipien der Sprachgeschichte* (Halle 1880) p. 154 ff.

We have to presuppose a period in which suffixal elements were not yet attached to words. The word-forms of this period are called roots, and the space of time prior to inflexion, is called the root-period. It dates much further back than that stage of development whose word-forms we are able to deduce by a comparison of the separate Indg. groups of languages. This stage is usually simply called the Indg. parent-language.

What we understand by word-formation and inflexion arose by composition, that is, by the following process: a group of words which formed a syntactical complex was fused into a unity, in which the whole was in some way isolated in relation to its elements<sup>1)</sup>. This word-fusion from the beginning onwards occurred in the same way, just as afterwards, in the age of separate languages (partly even in historical periods) the final members of compounds became suffixes, e. g. Goth *-k* in *mik* (Mod. HG. *mich*) from prehistoric *\*me ge* (cp. Gr. ἐμέγε beside ἐμέ), French *-ment* in *fièrement* from *fera mente*, MHG. and Mod.HG. *-heit* in *schaenheit*, originally meaning 'schöne Beschaffenheit' (beautiful state or condition), where *heit* is still an independent word in MHG. and OHG., Mod.Irish *-mhar* in *buadh-mhar* 'victorious' = O.Ir. *mār mōr* Cymr. *mawr* 'magnus' (Zimmer Kelt. Studien II p. 22 ff). The formation of suffixes is not a work which belongs to any special prehistoric period and which was concluded at any definite point of time. But when once this process had begun, it was performed anew through all periods of the history of the Indg. languages and will probably also be repeated again in the future, so long as our languages continue to develop.

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1) "With respect both to meaning and form either the whole may pass through a development in which the separate parts do not participate when used independently, or vice versa the separate parts may pass through a development in which the whole does not participate, or it may happen that the separate parts cease to be employed independently, while they are preserved in combination, or lastly the mode of combination may vanish from living use and only remain preserved in certain set forms". Paul in the above work p. 165.



Suffixes are divided into word-forming suffixes or inflexional suffixes in the stricter sense, to which on the one hand belong case endings (e. g. *-m* in Indg. \**ékrom* = Lat. *equom*, Skr. *áśvam*), and on the other, personal endings (e. g. *-mi* in Indg. \**éymi* = Gr. *ἔιμι*, Skr. *émi*), and stem-forming suffixes (e. g. *-ter-* in Indg. \**pátéres* = Gr. *πατέρες*, Skr. *pitáras*, *-sko-* in Indg. \**gmskónti* = Gr. *βάσκοντι* *βάσκουσι*, Skr. *gáchanti*). It is impossible to draw a sharp line between the two species of suffixes, since many an element, which was originally only stem-forming, has come to be treated on the same level with word-forming suffixes. Cp. e. g. Lat. *legimínī*, whose final part *minī*, felt by the Romans as a personal ending (like *-mur* etc.), contains the stem-forming suffix *-meno-* (cp. Gr. *λεγόμενοι*); properly *legimínī estis* = *λεγόμενοι ἔστε*.

The derivation as well as the original value of those suffixal elements, which in the Indg. prim. period were already no longer felt to be the members of a compositum, is for the most part very doubtful. Of the conjectures which have been put forth regarding these suffixes, there are only a few to which one can allow a certain amount of probability. To these belongs especially the hypothesis, that a part of the personal endings were originally independent substantival pronouns, cp. the *-m* of the 1. sg. impf. Indg. \**ébherom* (Skr. *ábharam*, Gr. *ἔφερον*) with the pronominal stem \**-me* (Lat. *mē*, Goth. *mi-k*).

There are in the Indg. languages many words of which we can not prove that they either contain or ever did contain a suffix. These, therefore, apparently represent the form they had in the pre-inflexional period, e. g. Gr. *μὲ*, Goth. *mi(-k)* cpf. \**me*; Skr. *nú*, Gr. *νὸ*, Lat. *nu(-dīus)*, O.Ir. *nu no*, OHG. *nu no*, Lit. *nù(-gì)* 'now'. In other cases, root-words had disappeared in those compositions which we call inflected words. We must guard against fancying that, towards the close of the primitive period, or even later, elements like *es*, which we abstract as root from such forms as Indg. \**ésti*, (Gr. *ἔστι*, Skr. *ásti*), had an independent existence and a meaning without any definite syntactical relation.

§ 14. According to the analogy of such forms as Fr. *vis-à-vis*, *rouge-gorge*, it has become usual to indicate component parts of inflected words by hyphens, e. g. Gr. *εἶ-μι*, *πα-τέρ-ες*, *φῆρ-ο-ι*, in the same manner Indg. \**é̃-mi*, \**pə-tér-es*, \**bhér-o-ī-t*. It is thus intended to give a clear idea as to what parts of an inflected word once had an independent existence.

With regard to this mode of proceeding the following remarks are to be made.

1. We have seen in § 13, that as the first foundations of derivation and inflexion were laid by the fusion of independent elements, so this process has been continually repeated up to the present time. But the great majority of inflexional forms do not directly depend upon it. No sooner did the first inflexional compounds make their appearance, than they served as the models upon which other words were formed after their analogy, just in the same manner as most of the Mod. HG. composita in *-heit*, *-bar*, *-lich* etc. can no longer be conceived as proper syntactical compounds, but only as imitations of model forms, made at an earlier period. Composita, the formation of which we are able to trace in the younger stages of the separate languages, often exhibit manifold shiftings and deviations. The reason of these latter is, that all feeling for the mode of composition of the model forms became extinct. Thus, for instance, according to the analogy of Mid.HG. *mültekeit* from *mültec-heit* (cp. *mültec-tāch*) etc. have arisen such forms as Mod.HG. *frömmigkeit*, *eitelkeit* etc., by the abstraction of a suffix *-keit*. Such shiftings may also have taken place in the oldest stages of the inflexional period, so that, strictly speaking, we are never sure in the case of a suffix which has come down to us from the Indg. parent language, whether it ever existed as an independent word exactly in the same shape as we extract it from the body of a word, or whether it originally consisted of elements which passed into this shape by regular phonetic changes.

2. It very frequently happens, that two or more suffixes become fused into a unity in those periods of a language which we are able to control. E. g. Mod.HG. *-ner* in *bild-ner*, *harf-ner*

etc. is due to the *-ner* in such forms as *gärtn-er* (Mid. HG. *garten-ære*), which is a derivative of *garten*; Gr. *-αίνω* in *κερδ-αίνω*, *λευκ-αίνω* etc. to the *-αίνω* in such forms as *τεκταίνω* from \**τεκταν-ζω* (to *τέκτων*). In like manner many of the prim. Indg. suffixes, which we are wont to regard as a unity, e. g. the *-ter-* in \**pə-tér-es* (Gr. *πατέρες*), may have been fused together (out of several suffixal elements. Our inability to analyse a prim. Indg. element proves nothing for its primitive unity.

3. It is theoretically correct when we say that the root of a word is found after we have removed all formative syllables from it. But in the first place we do not know what shape Indg. words had towards the end of the root-period, and this applies especially to the fact that we are unable to say whether the language at this stage possessed only monosyllabic words, or only words of more than one syllable, or both categories. Secondly the analysis of elements, which were directly annexed to the ends of roots, is of a most doubtful nature. And lastly we are unable to determine what phonetic changes inflexional compounds had undergone from the beginning up to the dissolution of the primitive community. Hence it must not be supposed that the roots, which we in ordinary practice abstract from words, are at all to be relied upon as representing the word-forms of the root-period. We are utterly unable to determine e. g. whether the complex \**anə-* in Gr. *ἄνε-μο-ς*, Lat. *ani-mu-s*, Skr. 3. sg. *áni-ti* 'breathes' (cp. § 110) represents a unitary word of the root-period, or whether it is to be resolved into \**an-ə-*, that is, whether *-ə-* was a suffix, and thus originally an independent element.

Such being the state of things, we shall retain the terms 'root' and 'suffix' in this work for such parts of a word as *seq-* and *-e-*, *-tai* in Indg. \**ségetai* (Skr. *sácatē*, Gr. *ἐπειται*). We do not however assert that the elements, to which we give these names, ever existed as independent words. We merely indicate by means of hyphens (1) what was probably felt at any particular period as the nucleus (so to speak) of a whole system of word-forms (*seq-*), and (2) what was regarded as the formative

element (-e- and -tai in \*seq-e-tai, \*bhéydh-e-tai, \*bhér-e-tai etc.), shared in common by a greater or less number of different words. The elements -e- and -ə- in cases as Gr. ἐπ-ε-ται (Indg. \*seq-e-) and fut. τινέω τενῶ from \*τεν-ε-σω (Indg. \*ten-ə-, cp. Skr. fut. tan-i-ṣyāmi) may nevertheless originally have been parts of roots (dissyllabic root-words); but on account of forms like πύθεται, φέρεται, ἄγεται and νεμέω, φθερέω, βαλέω on the one hand and of forms like ξυσομαι and τείνω (from \*τενιω, §§ 131. 618) on the other, it becomes highly probable that they simply were for the perception of language (sprachempfindung) that which grammarians call "suffix" 1).

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1) 'A certain analysis of forms takes place in the formation of associated concepts which refer to the system of word-formation and inflexion, whereby categories arise which are analogous to the grammatical notions of root, stem, and suffix. But it must always be borne in mind, firstly, that the mind remains entirely unconscious of these categories as such; secondly that they have nothing to do with the original mode of the formation of words, but purely accommodate themselves to the sound-series (Lautreihe) which regularly goes through a number of forms in the language for the time being, so that e. g. in Mod. Germ. tag-, hirt- appear as nominal stems, trag- and brenn- as verbal and present stems, trug- and brannt- as the preterite stems of tragen and brennen; thirdly that the elements arising from analysis are never felt as something entitled to an independent existence, but only as something which is possible in certain modes of combination'. Paul Principien p. 64.

## PHONOLOGY.

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§ 15. By a comparison of the eight Indo-Germanic dialects (§ 3) we are in a position to arrive at the number and nature of the sounds possessed by the Indg. parent language. These were as follow: —

Vowels. In the function of sonants: *i* *ī*, *u* *ū*, *e* *ē*, *o* *ō*, *a* *ā*, *ə*. In the function of consonants: *ɨ*, *ʉ*.

Nasals. In the function of consonants: *ɲ* (velar), *ɳ* (palatal), *n* (dental), *m* (labial). In the function of sonants: *ɲ̄* *ɲ̄̄*, *ɳ̄* *ɳ̄̄*, *n̄* *n̄̄*, *m̄* *m̄̄*.

Liquids. In the function of consonants: *r*, *l*. In the function of sonants: *r̄* *r̄̄*, *l̄* *l̄̄*.

Explosives:

<i>p</i>	<i>b</i>	<i>ph</i>	<i>bh</i>	(labial).
<i>t</i>	<i>d</i>	<i>th</i>	<i>dh</i>	(dental).
<i>k̄</i>	<i>ḡ</i>	<i>k̄h</i>	<i>ḡh</i>	(palatal).
<i>q</i>	<i>g</i>	<i>qh</i>	<i>gh</i>	(velar).

To these is probably further to be added the spiritus lenis, a laryngeal explosive, e. g. Indg. \**esti* 'is', Gr. *ἔστι*. In the following paragraphs we shall indicate this sound only in Greek words.

Spirants: *s*, *z*, *j*, *v*.

Phonetic Elucidations<sup>1)</sup>.

§ 16. 1. Voiced and voiceless sounds. Speech-sounds<sup>2)</sup> are produced by the breath, expelled from the lungs, undergoing a checking which gives rise to an acoustic effect. This checking takes place partly in the larynx, partly in the organs above the larynx (mouth, or nose), and partly in both at the same time. When the checking in the larynx takes place in such a manner that the vocal cords (which in a state of rest are far apart) are so far brought together as to come into (rhythmical) vibration, a musical clang arises which is called voice. All sounds, which are spoken with voice, are called voiced, and all those without voice voiceless. In the Indg. prim. language the vowels, nasals, liquids, of the explosives. the mediae *b, d, g, q* and the mediae aspiratae *bh, dh, gh, qh*, and the spirants *z, j, v* were voiced; on the other hand the tenues *p, t, k, q* and the tenues aspiratae *ph, th, kh, qh* and the spirant *s* were voiceless.

The voiceless vowels (the *h*-sounds), nasals and liquids<sup>3)</sup>

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1) Cp. Ed. Sievers Grundzüge der Phonetik, zur Einführung in das Studium der Lautlehre der indogermanischen Sprachen, 2. Edit. Leipzig 1881, 3. Edit. Leipzig 1885.

2) It is not without considerable justification that the expression 'speech-sound' ('Sprachlaut') has of late been found fault with, so far as it is used to express the smallest elements of language in general, because among the so called explosives there are moments of perfect absence of sound which are also to be taken into consideration. And these moments form an element of a syllable just as much as the moments of sound, while in the analysis of a syllable they can no more be left out of consideration than the pauses in music can be regarded as not existing. Cp. § 320. If in this work we have not attached that amount of importance to the latest principles of phonetics — viz. that in the classification of speech-elements, their genesis, not their acoustic effect, should form the chief principle — which some phoneticians might wish to see, it is out of consideration that we do not yet possess a system and terminology, based on these views, which might be applied without considerable difficulties to the historical results of the science of languages.

3) Cp. Hoffory Kuhn's Ztschr. XXIII 533 ff., 541 ff., 554 ff., XXV 425 f., 'Prof. Sievers und die Principien der Sprachphysiologie' 24 ff.

in the course of the individual developments were added to the respective voiced sounds of the primitive period.

§ 17. 2. Sonorous sounds and noised sounds. The mouth and nose on the one hand, serve to modify the clangs formed in the larynx, on the other hand 'noises', which are independent of the activity of the larynx, can be produced in these organs through the current of breath undergoing a checking and friction. In uttering *t*, *s*, e. g. a noise is made on the inner side of the upper teeth, or on their sockets. Voice and noise formed in the mouth and nose (Ansatzrohrgeräusch) can be combined, e. g. in *d* and *z* (Fr. *zéro*, Russ. *zoloto* 'gold'). Those sounds, which are formed with noise, whether they be voiceless or voiced, are called noised sounds, whereas those, in which the formation of voice takes place in the larynx, while the mouth and nose merely serve as resonance chambers, are called sonorous sounds. The Indg. explosives and spirants were noised sounds, and the Indg. vowels and nasals, sonorous sounds. The *r*- and *l*-sounds were and are in the historic periods of the Indg. languages partly sonorous and partly spirantal in their formation. And it is not improbable, that the spirantal pronunciation, where it occurs in historic times, had everywhere first come into being during the course of the separate history of the respective Indg. languages.

§ 18. 3. Sonants and Consonants. Every syllable contains one sound, which is either alone or at least principally the bearer of the accent, e. g. the bearers of this accent in the word *höff-níng* are *o* and *u*. Such sounds are called sonants. The other elements of a syllable are to a certain extent only adjuncts to the sonant which forms the nucleus of the syllable, and are therefore called consonants. Every syllable must contain one sonant and can contain only one, whereas it can have several consonants (Mod. German *strúmpfs*) or none at all (Lat. imperative  $\tau^1$ ). One set of sounds can be used both as sonants and as consonants, especially the vowels —

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1) By this classification we omit to take account of the spiritus lenis, which strictly speaking ought to be reckoned among the consonants.

amongst these particularly *i*, *u* —, the nasals and liquids; we write these sounds *i u ŋ, ʒ* etc. when used as sonants, and *i, u, n, r* etc. when used as consonants. Cp. Mod. German *Á-si-én* beside *Á-sí-én* (in poets); Lat. *á-quám* beside *á-cú-ám*, *stín-guó* beside *ár-gú-ó*; English *ré-př-zh-těi-šŋ* (*representation*); Mod. Germ. *réch-né* beside *ré-chŋt* (*rechnet*), *gŋ-núg* (*genug*), *hán-dlé* beside *hán-dlŋ*, *gŋ-rá-dé* (*gerade*); Czech *kŋt* (*krt* 'mole'), *vŋk* (*vlk* 'wolf'); Skr. *pí-trá* (*pitrá*, instr. sg. of *pitár*- 'father') beside *pí-tŋ-šŋ* (*pitřŋ*, loc. pl. of the same word)<sup>1</sup>); in Slovakian *sŋn*, *vŋn* (*srn*, *vlŋ*) gen. pl. to *sŋ-ná* (*srna* 'roe'), *vŋ-ná* (*vlŋa* 'wave').

In our representation of pre-historic forms we consequently mark *i* and *u* also as consonants when they form the second component of a diphthong, e. g. Indg. 3. sg. \**éiti* = Gr. εἶσι Skr. *éti*, \**bhéudhetai* = Gr. πεύθεται Skr. *bódhatē*. The vowels *i* and *u* had here the same function as e. g. *r* in the 3. sg. \**bherti* from rt. *bher*- 'bear' (Skr. *bhárti*, Lat. *fert*) and *n* in the 3. sg. \**bhebhóndhe* from rt. *bhendh*- 'bind' (Skr. *babándha*, Goth. *band*). Cp. § 308.

Rem. A few phonetic elucidations on the explosives and spirants will be found in § 320 ff. and § 554.

### On the pronunciation of the letters.

§ 19. The various Indg. languages and dialects were and still are written in various alphabets by the respective peoples and their subdivisions. Sometimes different kinds of alphabets were even employed in different districts lying within the sphere of the same dialect, or also in the same district for different purposes, e. g. in Oscan (inscriptions in the Oscan-Samnitic, Latin, and Greek alphabets) and in Servian (the Cyrillic alphabet is employed by the followers of the Greek Church, and the Latin by the Roman catholics). It also frequently happened that one alphabet was permanently given up in favour of another, cp.

1) Skr. *pitrá* stands in the same relation to *pitřŋ* as *hánvā* i. e. *hánvā* does to *hánuŋ* (stem *hānu*- 'jaw-bone') and as *āvā* i. e. *āvā* does to *āvīŋ* (stem *āvī*- 'sheep').



e. g. the change from the runic to the Latin alphabet among the Germanic races.

It has become usual in works on Indg. grammar to employ native characters only in the case of Greek, Latin, and those younger developments which were and still are written in the Latin alphabet, but for the rest to make use of a transcription, based on the Latin alphabet. Now the Latin system of letters is insufficient for the transliteration of most foreign alphabets, and when this is the case, it is usual either to add a diacritic sign to the Latin letter, or to borrow a letter from other known alphabets.

The exposition of the history of the various sounds will furnish further information as to the living value of the letters. With regard to the transcription which we have adopted for the various languages, we simply make such observations here as will enable the reader to pronounce the words correctly or at least approximately so; in the case of dead languages it is, of course, often impossible to determine precisely the value of a letter.

§ 20. Sanskrit. The alphabet is as follows:

*a ā i ī u ū ṛ ṝ ḷ ē āi o āu ḥ ͡ k kh g gh ṅ c ch j jh*  
*ñ ṭ ṭh ḍ ḍh ṇ t th d dh n p ph b bh m y r l v ś ṣ s h.*

*ṛ, ṝ, ḷ* are sonants (s. § 18). *ṛ, ṝ* like consonantal *r* are cerebral (cp. *ṛ, ṛh* etc. below), i. e. similar to English *r*; *ḷ* and *l* are dental.

*h* (visarga) is our spiritus asper.

We indicate the nasal pronunciation of the sonants by *͡*, e. g. *aśū͡-ś* 'thread, beam of light', acc. *svādīvyā͡s-am* 'suaviorem', *ṛ, ṝ* = nasalised *ṛ, ṝ*, e. g. in *ṭṛhā͡-ti* 'he shatters', *nṝś͡-ca* 'viro-que'.

The voiceless aspirate explosives *kh, ch, ṭh, th, ph* and the voiced aspirate explosives *gh, jh, ḍh, dh, bh* are to be pronounced as explosives followed by an *h*, but cp. however Whitney's Skr. Gram. § 37.

The palatals *c, ch, j, jh* are generally pronounced as (compound) *tsh*-sounds, e. g. the initial sounds of *ca* 'and' and *jāna-s* 'creature' like the initial sounds of Italian *cento* and *gente* or those

of English *church* and *judge*. But they were simple sounds, similar to Mod.HG. *k* and *g* before palatal vowels, e. g. in *kind*, *gift*.

The cerebrals (cacuminals) *t*, *th*, *d*, *dh* are uttered with the tip of the tongue turned up and drawn back into the dome of the palate.

*ʷ* is the guttural, *ñ* the palatal, and *ŋ* the cerebral nasal.

*y* = *i*, *v* = *u* or spirantal *v*, s. §§ 18. 127. 161.

*s* is like Mod.HG. dental *s*, cp. *ásti* and Mod.HG. *ist*. On the other hand *ś* and *š* are *sh*-sounds; *ś* is the palatal and *š* the cerebral *sh*-sound; *ṣ̌* is thus the softened *ś* (*sʷ*) found in Slavonic and Lithuanian.

*h* is pronounced like our spiritus asper; it was however a voiced sound, the character of which is doubtful, cp. Whitney's Skr. Gram. § 65.

## § 21. Iranian.

### 1. Avestic.

The vowels are: *a i u e ɛ o*

*ā ī ū ē ē̄ ō ā̄.*

*e*, *ē* represent the open and *ɛ*, *ē̄* the close *e*-vowel, *ā̄* a dull *ā* sound approaching to *ō*. *a* is the nasal vowel of *a* and *ā* (§ 200). *y* = *i* or spirantal, *v* = *u* or spirantal (§§ 18. 127. 161).

Diphthongs: *aɛ* *ōi*, *ao* *ēu*, *āi* *āu*. *aɛ*, *ao* may be pronounced like the *ai*, *au* in the Middle German pronunciation of *kaiser*, *haus* etc. (cp. Bœot. *aɛ* and Ion. *ao* § 96, Lat. *ae* § 97).

Liquid: *r*. Nasals: *ʷ* guttural, *ñ* is palatalised *n* (§ 200), *n* dental, *m* labial; the value of *ʷ* and *ñ* is doubtful (§ 558, 3).

Explosives: *k c t p*, *g j d b*. *c* and *j* are like Skr. *c* and *j* (§ 20).

Spirants: *x* = Mod. HG. *ch* in *dach*, to which the corresponding voiced sound is *γ*. *ṣ́*, a palatalised sound, seems to have been similar to the Mod. HG. *ch* in *ich*. *s* = our voiceless *s* in *nest*, *z* = Fr. *z*. *þ* = Mod. Gr. *θ* and our *th* in *thin*, *ð* = Mod. Gr. *δ* and our *th* in *then*. *f*, *w* = our *f*, *v*. *š* is our *sh*, *ž* the corresponding voiced sound = Fr. *j*. *ṣ́* = Skr. *ṣ́*. The pronunciation of *ṣ̌*, *þ̣*, *ð̣* cannot be more exactly defined.

*h* is our spiritus asper (not = Skr. *h*).

## 2. Old Persian.

Vowels. *a i u, ā ī ū. y = ĩ* or spirantal (§ 127), *v = ʋ* or spirantal (§ 161). *y* and *v* were not pronounced in words ending in *-iy, īy, -uv, -ūv*. Final *-hy* is to be pronounced as *-hi*.  
Diphthongs: *ai au, āi āu*.

Liquids: *r, l*.

Nasals: *n, m*.

Explosives: *k c t p, g j d b* as in Avestic. *d* had also the value of *ḍ* (§ 402).

Spirants: *x, s, z, ḫ, f, š* as in Avestic. The value of *š* is not clear (§ 261).

*h* = Av. *h*.

Difficulties are caused by *iy, uv, īy, ūv*, which in certain special cases represent *y* and *v*, cp. §§ 125. 159. 558, 3.

Rem. The peculiar character of Old Persian cuneiform letters makes it, in some respects, difficult to decipher the words rightly. A syllable consisting of a consonant and a short vowel (*a, i, u*) was represented by one sign (*da, di, du*). Medially and finally the letters *a, i, u*, which initially expressed both *a, i, u* and also *ā, ī, ū*, were added to the corresponding sign to express length of vowel, e. g. *da + a = dā, di + i = dī*. A consonant which was not followed by a vowel, was also always represented by a syllabic sign, e. g. *pa + a + ra + sa + ma = pārsam* (acc. sg. 'a Persian'). Consequently in order to express a final consonant + *a*, an extra letter *a* was added at the end. Therefore, e. g. *-ma + a (-mā)* might mean both *-mā* and *-ma*. The letters *i, u* were usually added again to the signs for consonant + *i*, or *u*, so that e. g. *vi + i + sa + ma* may be read either as *vīsam* or *visam* and thus we are not able to make a clear distinction between *ī, u* and *ī, ū*. Cp. Bartholomae Handbuch p. 5 f. § 21 rem. 1. § 24 rem. 1.

## § 22. Armenian<sup>1</sup>).

Vowels. *a, u, i, o, ē, e, ē*. *ē* is an indefinite vowel somewhat resembling German *ö*. Pronounce *y, v* as *ĭ, ʋ* (§ 18).  
Diphthongs: *ea, ai, oi, au, iu*.

Liquids: *r, r̄; l, λ*. The difference in the pronunciation has not been determined. Nasals: *n, m*.

1) In the transcription of this language we entirely follow Hübschmann. Cp. his treatise 'Die Umschreibung der iranischen Sprachen und des Armenischen' (1882) p. 31 ff.

Explosives: *k t p, g d b*. *k t p* are aspirate tenues.

The Affricatae *č ċ ĵ, c ç j* may be pronounced as *tš thš dž, ts ths dz*<sup>1)</sup>.

Spirants. *x* is a deep guttural *ch* like the *ch* in Scot. *loch*. *s* and *z*, the latter = Fr. *z*. *š* and *ž*, the former a voiceless, the latter a voiced *sh*-sound.

*h* = our spiritus asper.

§ 23. Umbrian-Samnitic. The monuments of this dialect-group are almost exclusively inscriptions, which are written partly in the native, partly in the Latin and also occasionally in the Greek alphabet. We reproduce the native writing by spaced Roman type, whereas those words which have come down to us written in the Latin alphabet are printed in italics.

The Umbrian native alphabet does not possess any special letters for *o, g* and *d*, but represents them by *u, k* and *t*.

The *c*, in monuments written in Latin characters, must always be pronounced as *k*.

The sibilant (§§ 387. 502), which arose from *k* before palatal vowels and which we represent by *ʰ* and *ʰ* (*s*), may be pronounced like Skr. *ś*. The precise pronunciation of this sound, given by *d* in the native alphabet, and by *ʰS* (or *S*) in the Latin, is not known.

The modification of *d* (§ 369), which on the tables written in Latin is represented by *rs*, and also occasionally simply by *r* or *s*, has the sign *q* in the native alphabet. It was probably a strongly spirantal *sh*-kind of *r*, similar to Czech *ř*. We transcribe this Umbrian symbol with *ř*, and it may be pronounced like Czech *ř*.

Pronounce *z* as *ts*.

*h* occurs in both kinds of writing as sign of vowel lengthening, e. g. *kumnahkle* read *kumnākle*, *spahmu* read *spāmu*. On tables written in Latin this sign also appears between a double vowel which in itself already indicates vowel length, e. g. *spahamu* beside *spahmu*.

1) More will be found on the pronunciation of these sounds in Hübschmann's work quoted above p. 35 rem. 3.

Oscan *í* is a close *e*, in the function both of a sonant, e. g. *íst* 'est', and a consonant, e. g. in the diphthong *aí*; *ú* is a close *o*.

Pronounce *z* as *ts*, e. g. *húrz*, *az*, *keenzstur* (*nzs* = *ntss*, cf. *kvaísstur*), *Vezkeí*. But *z* is a voiced *s* (Fr. *z*), e. g. *egmazum*.

In Umbrian-Samnitic we uniformly omit the mark of length over vowels. We write e. g. *matrer* 'matris', although *ā* was undoubtedly spoken (§ 105). This plan has been adopted because the cases are too numerous in which the quantity of the vowel can not be determined with certainty.

§ 24. Old Irish writing, a variety of Latin, presents many diphthongs and triphthongs which were in reality only monophthongs and diphthongs. E. g. the *i* in *eich* 'of a horse' and in *tuaīth* 'to the people' only marks the *i*-timbre of the following consonant. Hence some write *é'ch tua'̄th*. S. § 640.

*c* is everywhere to be pronounced as *k*. On the pronunciation of *c* and *t* compare moreover § 212 rem. and §§ 513. 658.

*ch*, *th*, *ph* denote the guttural, interdental, labial voiceless spirants (*χ*, *þ*, *f*), s. § 514. *th* occasionally also stands for the voiced interdental spirant *ð*. *g*, *d*, *b* are both voiced mediae (§ 519) and voiced spirants *ɟ*, *ð*, *ɓ* (§ 522), *g* and *d* are even also used for the voiceless spirants *χ* and *þ* (§ 514). In Middle Irish *gh*, *dh*, *bh* took the place of *g*, *d*, *b* as signs for the voiced spirants; after the manner of Modern Irish we pronounce *gh* and *dh* before or after a palatal vowel like our *y* and before or after other vowels as *ɟ*.

*ś* is *h*. *ʃ* is silent. *mh* is a nasalised labial spirant.

Rem. In the Britannic dialects *u* has the sound of *ü*, in the greater part of Wales that of *i*. So far as Cymric is specially concerned, it may be remarked that *y* denotes partly a vowel, similar to that in the English word *fur*, and partly = Cymr. *u*; *w* is partly a sonantal vowel *u* and partly *ʷ*; *ch*, *th*, *ff* (*ph*) are voiceless, and *dd*, *f* voiced spirants; *m*, *n*, *r*, *l* are voiced, *mh*, *nh*, *rh*, *ll* voiceless. These values apply in the first instance to the living language only.

## § 25. Gothic.

*ai* is a short open *e*, and *au* a short open *o*. On the other hand *ái* and *áu* are to be pronounced as diphthongs. Antevocalic *ai* and *au* (e. g. *saian* and *staua*) were probably the long vowels to *ái* and *áu*, i. e. open  $\bar{e}$  and open  $\bar{o}$  (§§ 142. 179). Gothic writing leaves both *ai*, *ái*, *ai* and *au*, *áu*, *au* undistinguished.

$ei = \bar{e}$ .  $\bar{e}$  and  $\bar{o}$  were close.  $v = u$ ,  $j = \dot{i}$  (§ 18).

The guttural nasal ( $\vartheta$ ) was generally (after the analogy of Greek) expressed by *g* before homorganic explosives, e. g. *laggs* 'long', *drigkan* 'to drink', seldom by *gg* (*driggan*) or *n* (*bringan* 'to bring').

*q* (e. g. *riqis* 'darkness') = Lat. *qu*.

*d* initially and medially after *n*, *l*, *r*, *z* was a voiced explosive, whereas medially after vowels it was the interdental spirant  $\bar{d}$ . *b* initially and medially after consonants was a voiced explosive, whereas medially after vowels it was the labial spirant  $\bar{b}$ . A corresponding difference is also to be assumed for *g*. S. §§ 530. 538 and cp. also §§ 531. 539.

$\bar{p}$  is a voiceless interdental, *f* a bilabial spirant,  $z = \text{Fr. } z$ .

Pronounce initial *h* before vowels (e. g. *haban* 'to have') like our spiritus asper, in other cases (e. g. *hláifs* 'loaf, bread', *rahts* 'right', *táuh* 'I led') it is a spirant like German *ch*.

## § 26. Lithuanian.

Vowels: *a e i u*,  $\bar{a} \bar{e} y \bar{u}$ ,  $\acute{e} o$ . *e* and  $\bar{e}$  are to be pronounced very open.  $y = \bar{e}$ .  $\acute{e}$  and *o* are very close and always long (hence we omit the sign of vowel length). The vowels  $\acute{a} \acute{e} \acute{i} \acute{u}$  do not differ in pronunciation from *a e i u*; initially and medially they are always to be pronounced long, finally they are partly long, partly short. The little hook under a vowel indicates that the vowel was originally followed by a nasal, this sign has therefore only an etymological value (§ 218).

Diphthongs: *ai ei au*,  $\bar{a}i \bar{e}i \bar{a}u$ , *ui oi ě ũ*. The *o* in *oi* is to be pronounced long; this diphthong occurs in locatives as *toi* (from the feminine pronominal stem *to-*'this'), where it is usually

written *-oj* (*toj*). Pronounce *ē* as *īē* with a very open *ē* or as *īā*. Pronounce *ū* as *ūō* with a very open *ō* or as *ūā*.

When the accent is on a short vowel, it is represented by ` e. g. *piktas* 'bad'. In cases where ' and ~ are placed over simple vowels to indicate the accent, these vowels are always to be read long, e. g. *vārpa* 'ear of corn', *gėras* 'good'. In like manner *ái áu éi* are also to be read as *āī, āu, ēī*. More will be found on the accent signs ' and ~ in § 691. *j* is to be pronounced as *ī*, and *v* as a spirant (English *v*)<sup>1</sup>.

Liquids: *r, l*. On the difference between *l* and *l̥* see 'Palatalisation of Consonants' below.

Nasals: *n, m*. *n* is to be pronounced as *ŋ* (guttural nasal) before *k* and *g*, e. g. in *rankà* 'hand'.

Explosives: *k t p* (voiceless), *g d b* (voiced).

Spirants: *s, z* (= Fr. *z*), *sz* (= our *sh*), *ž* (voiced *sh*, Fr. *j*).

*c* = *ts*, *cz* = English *tsh*.

Palatalisation of Consonants. All consonants (with the exception of *j*) are liable to palatalisation. This uniformly takes place before palatal vowels (*e, é, i, y*): the *t, n, r, ž* in *svėte, kúne, múre, bėrže* (voc. sg. of the stems *svėta-* 'world', *kúna-* 'body', *múra-* 'wall', *bėrža-* 'birch') are therefore not to be pronounced the same as in *svėtas, kúnas, múras, bėržas* (nom. sg. of the same stems). When palatalised pronunciation takes place before non-palatal vowels, it is indicated by an *i* placed after the consonant, but this *i* must neither be read as syllabic *i* nor as *ī*, e. g. *kiaūlė* 'pig', *pióviau* 'I cut' (past t.), *piáusiu* 'I shall cut', *nėsziu* 'I shall carry'. We express the non-palatalised *l* by *l̥*; it is the 'guttural' *l*, which in those districts bordering on Poland, has a great resemblance to Polish *ł*, and often sounds like *u*, s. § 280. *l̥* is the palatalised liquid; we therefore write *galū* 'I can', not *galii*<sup>2</sup>).

1) This fixing of the pronunciation of *v* is on the authority of Schleicher, who had Prussian Lithuanian in mind. It is pronounced *u* in one part of Russian Lithuania.

2) In this mode of writing we have followed Juskiewicz.

## § 27. Old Church Slavonic (Old Bulgarian).

*a e o i ĭ u ŭ y ě.* *e* and *o* are open. Pronounce *ĭ* as a very close *ě*; *ŭ* somewhat the same as the *u* in English *but*; *ě* as *ē*; *y* as *ū*. On the quantity of *a, i, u, y, ě* cp. § 615. *ę* and *ą* are nasal vowels, the former = Fr. *in*, the latter = Fr. *on*. *j* = *i*, *v* = *u* or spirantal (§ 186).

*ch* like German *ch* in *ach*, *ś* like English *sh*, *ž* like Fr. *j*, *z* like Fr. *z*.

*c* = *ts*, *č* = *tsh* (Lith. *cz*).

Rem. We use *m, r* to denote the prim. Baltic-Slavonic representation of Indg. *ṃ, ṛ*. See §§ 248. 302. Pronounce the *ṛ* as a sound lying between *i* and *e*.

## HISTORY OF THE SEPARATE PRIMITIVE INDO-GERMANIC SOUNDS<sup>1)</sup>.

### THE VOWELS<sup>2)</sup>.

#### A. THE VOWELS AS SONANTS.

§ 28. The Indo-Germanic parent-language had *i ĭ, u ŭ, e ē, o ō, a ā, ə*.

*e, o* (both long and short) were probably pronounced open. Hence some scholars write them *ǣ, ǟ*. On the representation

1) Cp. § 599.

2) Amelung die Bildung der Tempusstämme durch Vocalsteigerung im Deutschen (1871); Ztschr. f. deutsch. Altert. XVIII 161 ff., Kuhn's Ztschr. XXII 369. — Osthoff in Paul-Braune's Beitr. III 1 ff., Morph. Unt. I 207 ff., IV 1 ff., Zur Gesch. des Perf. (1884). — The Author in Curtius' Stud. IX 361 ff., Kuhn's Ztschr. XXIV 1 ff., XXVII 201 ff., Morph. Unt. III 91 ff., Zum heutigen Stand der Sprachwissensch. 98 ff. — Fick in Bezenberger's Beitr. II 193 ff., III 157 ff., IV 167 ff., IX 313 ff., Gött. gel. Anz. 1880 p. 420 ff., 1881 p. 1425 ff. — Collitz in Bezenberg. Beitr. II 291 ff., III 177 ff., X 1 ff. — Ferd. Masing Das Verhältniss der griechischen Vocalabstufung zur sanskritischen (1878). — Verner in Morph. Unt. I 116 ff. — G. Meyer Kuhn's Ztschr. XXIV 226 ff. — Paul in Paul-Braune's Beitr. VI 108 ff. — Kluge Beitr. zur Gesch. d.



of these vowels cp. the Author in Curtius' Stud. IX 367, Morph. Unt. II p. III, Kuhn's Ztschr. XXVII 201 ff.

The value of *ə* can not be more precisely defined. It may be pronounced as *ä*, that is, an *a* somewhat approaching the sound of *e*.

The regular representation of these prim. Indg. vowels in the individual developments is as follows:

Idg.	Ar.	Arm.	Greek	Lat. (in accented syllables).	O. Irish (in accented syllables).	Germanic	Baltic-Slavonic	
						<del>Teutonic.</del>	Lith.	O. Bulg.
<i>i</i>	<i>i</i>	<i>i</i>	<i>ι</i>	<i>i, e</i>	<i>i, e</i>	<i>i, e</i>	<i>i</i>	<i>ĩ</i>
<i>ī</i>	<i>ī</i>	<i>i</i> (?)	<i>ι</i>	<i>ī</i>	<i>ī</i>	Got. <i>ei</i> i. e. <i>ī</i> , OHG. <i>ī</i>	y i. e. <i>ī</i>	<i>i</i>
<i>u</i>	<i>u</i>	<i>u</i>	<i>υ</i> (Boeo- tian etc. <i>υ</i> )	<i>u</i>	<i>u, o</i>	<i>u, o</i>	<i>u</i>	<i>ũ</i>
<i>ū</i>	<i>ū</i>	<i>u</i> (?)	<i>υ</i> (Boeo- tian etc. <i>υ</i> )	<i>ū</i>	<i>ū</i>	<i>ū</i>	<i>ū</i>	<i>y</i>
<i>e</i>	<i>a</i>	<i>e, i</i>	<i>ε</i>	<i>e</i>	<i>e</i>	<i>e, i</i>	<i>e</i>	<i>e</i>
<i>ē</i>	<i>ā</i>	<i>i</i>	<i>η</i>	<i>ē</i>	<i>ī</i>	Got. <i>ē</i> , OHG. <i>ā</i>	<i>é</i>	<i>ě</i>
<i>o</i>	<i>a, ā</i>	<i>o, (u)</i>	<i>ο</i>	<i>o</i>	<i>o</i>	<i>a</i>	<i>a</i>	<i>o</i>
<i>ō</i>	<i>ā</i>	<i>u</i>	<i>ω</i>	<i>ō</i>	<i>ā</i>	Got. <i>ō</i> , OHG. <i>uo</i>	<i>ũ</i>	<i>a</i>
<i>a</i>	<i>a</i>	<i>a</i>	<i>α</i>	<i>a</i>	<i>a</i>	<i>a</i>	<i>a</i>	<i>o</i>
<i>ā</i>	<i>ā</i>	<i>a</i>	<i>α</i>	<i>ā</i>	<i>ā</i>	Got. <i>ō</i> , OHG. <i>uo</i>	<i>ō</i>	<i>a</i>
<i>a</i>	<i>i</i>	<i>a</i>	<i>α</i>	<i>a</i>	<i>a</i>	<i>a</i>	<i>a</i>	<i>o</i>

german. Conjugation 1 ff. — De Saussure Mémoire sur le système primitif des voyelles dans les langues indo-européennes (1879). — Mahlow Die langen Vocale A, E, O in den eur. Sprachen (1879). — Möller in Paul-Braune's Beitr. VII 482 ff. — Bezzenberger in his Beitr. V 312 ff. Fröhde Bezzenberger's Beitr. V 265 ff., VI 161 ff., VII 97 ff. — J. Schmidt in Kuhn's Ztschr. XXV 1 ff. — Bartholomae Ar. Forsch. I 25 ff. — Bloomfield American Journal of Philology I 281 ff. — W. Schulze Kuhn's Ztschr. XXVII 420 ff. — Curtius Zur Kritik der neuesten Sprachforschung 90 ff. — Delbrück die neueste Sprachf. 30 ff. — Hübschmann Das indogerm. Vocalsystem (1885). — Bremer in Paul-Braune's Beitr. XI 262 ff.

Indg. *i*.

§ 29. Indg. \**i*- weak present-stem of rt. *eḡ*- 'go'; 1. pers. pl. Skr. *i-más*, Gr. ἰ-μεν. Indg. \**uid*- weak perfect stem of rt. *ueḡd*- 'see, know': 1. pers. pl. Skr. *vid-má*, Hom. *ἴδ-μεν*, Goth. *vit-um*. Indg. \**dīu*- 'sky': loc. sing. Skr. *div-í*, Gr. Δι-ἰ. Indg. \**i*- pronoun of the 3. pers.: Skr. neut. *i-d-ám*, Lat. *i-s i-d*, Goth. *i-s* 'he' *i-t-a* 'it'. Indg. *-i*- in reduplicated syllables, e. g. pres. Skr. *tí-ṣṭhāmi* (3. pers. sing. *tíṣṭhati*), Gr. ἰ-στυμι, Lat. *ṣi-stō* from rt. *stā*- 'stand', Skr. *bī-bhēmi*, OHG. *bī-bēm* from rt. *bhej*- 'tremble at, be in fear'.

Nominal suffixes Indg. *-i*-, *-ti*-, *-ni*-, e. g. Skr. *ávi-ṣ* 'ovis', Gr. ὄι-ς οἶς, Lat. *ovi-s*, O.Ir. dat. pl. *tri-b* 'tribus', Goth. dat. pl. *gasti-m* 'to guests', Lith. *akì-s* 'eye', O.Bulg. *paṭī* 'way' fr. \**paṭī-s* (§ 588, 7). Superlative suffix Indg. *-is-to-*, e. g. Skr. *svād-iṣṭha-s* Gr. ἡδ-ιστο-ς Goth. *sut-ista-* 'suavissimus', cp. also Lat. *mag-is-ter*. Locative suffix Indg. *-i*, e. g. Skr. *div-í*, Gr. Δι-ἰ, Lat. *rūr-e*. Personal ending Indg. *-mi*, e. g. Skr. *ás-mi*, Gr. εἰμὶ fr. \**éσ-μ* (§ 565), Lith. *es-mì*, O.Bulg. *jes-mì*.

§ 30. Aryan. Interrogative and indefinite pronoun *ci*-, Skr. *ci-d* Av. *ci-ḥ* O.Pers. *ciy* (read *cì*), enclitic particle: Gr. τί-ς τί-ς, Lat. *qui-s*, Indg. \**qi-s* \**qi-d*. Skr. *viś-* O.Pers. *viṣ-* 'clan', Indg. \**uiḥ*-: cp. O.Bulg. *vīs-ī* 'vicus' from \**uiḥ-i-s*. Skr. *dīṣṭi-* 'order, direction', Av. *ā-diṣṭi-* 'assignment': OHG. MHG. *in-zih*t 'accusation', Indg. \**dīkti-*. Skr. *ásti* Av. *asti* O.Pers. *astiy* (read *asti*) 'is': Gr. ἔσσι O.Bulg. *jestī* 'is', Indg. \**és-ti*. Skr. *ihí* Av. *iḍi* O.Pers. *iḍīy* (read *idi*) 'go': Gr. ἴθι, Indg. \**i-dhí*.

§ 31. Armenian *e-lík* 'he left': Gr. ἔ-λιπε, from rt. *leiq*- *e-git* 'he found' (*g* from *u*, § 162): Skr. *á-vid-a-t*, from rt. *ueḡd*- *tiv* 'day': Skr. instr. *divā* 'by day'. Stem *eri-* 'three' = Indg. \**tri-* (for the initial forms cp. §§ 263. 483), instr. *eri-vk*: cp. Skr. *tri-bhíṣ*.

*i*, except in final syllables, disappeared e. g. *gt-ane-m* 'I find', *lk-ane-m* 'I leave'. Cp. § 632.

§ 32. Greek. *πιθ-έ-σθαι* 'to obey': Lat. *fid-ēs*, from rt. *bheḡdh*-. *di-* 'two' (from \**ḍfi-*, § 166) in *δί-ς*, *δί-πους*: Skr. *dvi-*, Lat. *bi-*, Ags. *twi-*, OHG. *zwi-*, Indg. \**dwi-*. *ἐπι* 'on': Skr. *ápi*.

The *ε* in Elean πόλερ (= Att. πόλις) beside πόλιω and in Thessal. κρεννέμεν (inf., cp. Lesb. κρέινην, Att. κρένειν), Ὑβροίστας (= Att. Ὑβροίστης) seems to have arisen through the proximity of the *ρ*.

§ 33. Italic. Lat. *qui-s*, Umbr. Osc. *pi-s*: Gr. τί-ς. Lat. *mi-nu-ō mi-nor*, Osc. *mi-nstreis* 'minoris': Skr. *mi-nō-mi* Gr. *μινύω μινύθω* 'lessen', Goth. adv. *mi-ns* 'minus', O.Bulg. *mǎ-nijǎ* 'minor', from rt. *meǵ-*. Lat. *tri-* in *tri-bus tri-plex*, Umbr. *tri-pler* 'triplis': Skr. *tri-*, Gr. τρι-.

Already at an early period Lat. *i* had a tendency towards *e* close (open *i* or *i* pingue), hence e. g. the spelling *tempestatibus* (C. I. L. 32) for *tempestātibus* (cp. Skr. *ariṣṭātātī-bhyas* dat., abl. pl. of *ariṣṭā-tāti-* 'unimpairedness'). This was especially so before vowels (where *i* had partly arisen from *i̇*, see § 135), hence the inscriptional forms *fileai*, *Oveo* for *filiai*, *Ovio*. This intermediate sound was also represented by *ei*, e. g. *fileiai*.

*e* purum arose from *i*:

1. Before *r* = Indg. *s* (§ 569). *serō* from \**si-sō*: Gr. ἴημι, original form \**si-sē-mi*, from rt. *sē-* 'throw, sow'. *cineris* fr. \**cinis-is*, cp. *cinis-culu-s*.

2. Finally. *mare* fr. \**mari*, *leve* fr. \**levi*, cp. *mari-a mari-timus*, *levi-bus levi-ter*, and Gr. neut. ἰδοί 'acquainted with', Skr. *bhūri* 'multum'. Loc. sing. *rūr-e*: cp. Skr. *div-ī*. *ante* fr. \**anti* cp. *anti-stō*, Gr. ἀντί, Skr. *ánti*.

Rem. 1. On the other hand the *e* in the suffix of the acc. case sing. of *ei-*stems as *ignem* (Skr. *agnī-m*, Lith. *ūgnī*), *mortem* (Skr. *mṛtī-m*, O.Bulg. *sū-mrǐti*), *facilem* (cp. *facili-a*), was borrowed from such forms as *ped-em* (-em = Indg. -*m*, §§ 224, 238), as *siti-m*, *parti-m* etc. show. The *e* in *jū-dex*, *in-dex* beside *-dic-is* etc. (from rt. *deǵb-* 'direct', Skr. *dīṣ-* 'order, direction', Gr. δίκ-η) and the *e* in *comes* by the side of *comitis* etc. (stem *com-i-t-* 'accompanying', from rt. *ei-* 'go') has also probably arisen through the influence of analogy; cp. *opi-fex* beside *faciō*, *super-stes* beside *status* etc.

The combination *-ri-*, between consonants in unaccented syllables (according to the principle of accentuation in primitive Latin, § 680), became *r*, which passed into *er*. *in-certu-s* fr. \**in-*

*cri-to-s* = Gr. ἄκριτος, *sē-cernō* fr. \**sē-crinō*. *ābs-tergō* fr. \**abs-trigō* (cp. Gr. τρίβω); later also uncompounded *cernō*, *tergō*, cp. § 65 rem. 2. In the same manner, perhaps, also arose the forms *cón-testor testor testāmentu-m* (*test-* from \**terst-*, cp. § 269) beside Osc. *trīstaamentud* abl. 'testamento'. The process was the same as that whereby \**āgro-s* (Gr. ἀγρός) became \**agrs* \**agers* and lastly *ager* (§ 623 rem. 1. 655, 9). This process may be dated back to the Italic primitive period. Cp. also § 633.

Rem. 2. *ācri-bus ācri-tās* etc. are new forms, made by analogy.

The orthographical fluctuation in Umbrian between *i* and *e*, as neut. *piř-e pirs-e*, *peř-e pers-e* 'quid, quodcunque'; imper. *aha-tripursatu*, *ah-trepuratu* 'abs-tripodato'; acc. sing. of *eř-* stems in *-i-m* and *-e-m*, and the Oscan representation of this sound in its native alphabet by *í*, e. g. *píd* 'quid', *slagí-m* acc. sing. of the stem *slagi-* 'locus', show that *i* was pronounced open in both dialects.

§ 34. Old Irish. *fiss* 'knowledge' from prim. Ir. \**uissu-s*, that is, \**uid+tu-s*, root. *ueid-*. *fid* 'tree' from prim. Kelt. \**uidu-s* (Gall. *Vidu-casses*): OHG. *witu* 'wood'. Gen. sing. *fir* fr. \**firi* from Indg. stem \**ui-ro-* 'man': Lat. *vir*, Goth. *vair* fr. \**uira-z* (§ 35).

Cp. also Gall. *Ambi-gatus* (Liv.), *Ἀμφι-δραυολ* (Ptol.): Gr. ἀμφί; Gall. *tri-* 'three' in *tri-garanus*, O.Ir. dat. pl. *tri-b* 'tribus'.

*i* became *e* (by assimilation), when an *a* or *o* stood in the following syllable e. g. *fer* nom. sg. fr. original \**uiro-s*, *fedo* *feda* gen. sg. to *fid*.

In syllables with secondary accent *i*, so far as it did not entirely disappear (§§ 634. 657), became an irrational vowel, whose quality regulated itself after the timbre of the following consonants. E. g. beside the simple *fiss* stood the compound *cūbus* 'conscientia' fr. \**cón-f(i)uss*, that is, the *u*-timbre of the *ss* (presupposed through the older form \**uissu-s*) had caused the preceding irrational vowel to become *u* in the compound, whilst it left the accented *i* in the simple *fiss* unchanged. The *u* in *fuuss* beside *fiss* merely indicates the *u*-timbre of the *ss*.

§ 35. Germanic. Goth. *viduō* OHG. *wituwa* OS. *widowa* Ags. *widewe* 'widow': Skr. *vidhāvā-*, Lat. *vidua*, O.Ir. *fedb*, O.Bulg. *vidova*. Pret. 1. pers. pl. Goth. *bitum* OHG. *bizzum* O.Icel. *bitom* 'we bit': Skr. *bi-bhidimá*, Lat. *fidimus*. Goth. *fisks* OHG. and OS. *fisk* O.Icel. *fiskr* 'fish': Lat. *piscis*. Pronominal stem *hi-* 'this', Goth. dat. sing. *hi-mma* 'huic' adv. *hi-drē* 'huc', Engl. *hither*: Lat. *ci-* in *ci-ter ci-trā*, Lith. *szi-s* O.Bulg. *sī* 'hic' (§ 84. rem. 1), Indg. \**ki-*.

In Gothic *i*, before *h* and *r*, became *ai*, that is, open *e*. *māihstus* 'dung': OHG. *mist* 'dung', Ags. *mist* 'misty vapour', Skr. *mih-* Gr. *μίχλη* O.Bulg. *mīgla* Lith. *miglā* 'fog'. *vair* (pl. *vairōs*) 'man': Lat. *vir*, O.Ir. *fer*, Indg. \**ui-ro-s*.

In High German, the Indg. and Prim. Germanic *i* became *e* through the influence of a following *a*, *e* or *o* (cp. Irish). OHG. *wehsal* 'change': Dutch *wissel* O.Icel. *vīxl* 'change', prim. Germ. stem \**wiχsla-*, Lat. *vic- vic-ēs* 'change', Gr. *ἔλω* 'yield'. *lecchōn* 'to lick': Ags. *liccean* 'to lick', Gr. *λιχνεύω* 'I lick'. *wer* 'man': Goth. *vair*. *wessa* 'I knew': Goth. *vissa* 'I knew', pret. of OHG. *wizzan* Goth. *vitan* 'to know'. To this rule there are a number of exceptions of which some are difficult to explain. It may be assumed that they have arisen through form-association, e. g. in *-zigan* 'pulled together' by the side of pret. pl. *zigum* opt. *zigi* from rt. \**deijk-* 'show', and in *wissa* (= *wessa*) by the side of *wissum*, *wissi*. Cp. Paul's article in Paul and Braune's Beitr. VI 82 ff.

Rem. Some scholars assume that *i*, already in prim. Germanic, passed into *e* through the influence of an *a* or *o* of the following syllable, e. g. in OHG. *wehsal*. The difficulties, however, opposed to this theory seem to me greater than those presented by the hypothesis given above.

§ 36. Baltic-Slavonic. Lith. *pikis* (gen. *pikio*) O.Bulg. *pīklū* 'pitch': Lat. *pix*, Gr. *πίσσα* (from \**πικια*, § 489) 'pitch'. Lith. *līmpū* (pret. *lipaū*) 'I stick' (intr.), O.Bulg. *pri-līna* from \**-līpnā* (§ 545) 'I stick to, remain hanging': Skr. *līmpāti* 'he smears', Gr. *λίπος* (neut.) 'fat'. Lith. *deszinė* 'right hand', O.Bulg. *desīnū* 'dexter': Skr. *dākṣiṇa-* 'dexter'. Lith. *tri-sė*, O.Bulg. *trī-chū*: Skr. *tri-śū*, Gr. *τρι-σί*, loc. pl. from *tri-* 'three'.

In one portion of the Lithuanian dialects *i* is at the present day pronounced very open; hence such frequent spellings as *lepau lepo* = *lipaũ lipo* 1. and 3. pers. sing. pret. of *limpũ*.

Slavonic *ĩ* must, already in prim. Slav., have been a reduced sound, with a quality approaching *e*.

In Modern Slavonic developments *ĩ* became a full vowel in closed syllables (such syllables often arose through the falling out of an *ĩ* or *ũ* in the following syllable), Russ. *e*, Serv. *a*: e. g. Russ. *deñ* Serv. *dan* = O.Bulg. *dǎnĩ* 'day'; Russ. *čest* Serv. *čast* = O.Bulg. *čǐstĩ* 'honour'. On the other hand final *ĩ* as a sonantal vowel disappeared in every case; e. g. Russ. Serv. *dam* = O.Bulg. *da-mĩ* Lith. *dũ'-mi* 'I give' (Balt.-Slav.-original form \**dōdmi* from rt. *dō-*, Gr. *δίδομι*, § 547). Medial *ĩ* also, as a rule, disappeared in open syllables, e. g. Russ. *vdová* = O.Bulg. *vidova* 'widow'; Serv. *dne* = O.Bulg. *dǎn-e* gen. sing. of *dǎn-* 'day'. All these modifications can be traced as far back as the period of Old Church Slavonic. On the one hand they follow from such double spellings as *trechũ trichũ*, *paťemĩ paťimĩ* (instr. sing.), *paťechũ paťichũ* loc. pl. from *paťi* 'way', *denĩ dǎnĩ* 'day', *vesĩ vǐsĩ* 'entire', *levũ livũ* 'lion' — these forms can only be understood by assuming that the final *-ĩ* and *-ũ* were no longer syllabic (because *e* did not become *ĩ* e. g. in *paťimĩ* Instr. pl.)<sup>1)</sup> — on the other hand from such double spellings as *visi vǐsi* gen. 'vici' (cp. Skr. *viś-* 'clan'), *psati pǐsati* 'to write' (cp. Skr. *piś-* 'adorn', rt. *pejĕ-* 'cut, cut out'). The same laws hold for *ĩ* in the combinations *ĩn*, *ĩm*, *ĩr* from Indg. *ṛn*, *ṛm*, *ṛr* (§§ 252. 305). E. g. pres. O.Bulg. *mǐnq* 'I press, tread under foot': Lith. *minũ* 'I tread', original form \**myn-ō*, rt. *men-*; thence Russ. *mnũ*. O.Bulg. *tǐmǐnica* 'prison' from *tǐmǐnũ* 'dark', adj. to *tǐma* 'darkness' from \**tym-ā* rt. *tem-*; thence Russ. and also already O.Bulg. *temnica*. O.Bulg. *tǐraq* 'tero' original form \**tǐr-ām*, thence Russ. *tru*. The analogous treatment of *ũ* § 52 may also be compared with these modifications of *ĩ*.

1) Cp. also such spellings as *legũlco* (i. e. *legko*) for *lǐgũlco* 'leve, facile' (§ 52).

*i* before *j* became *i* in the period of Old Church Slavonic. *prija-znŭ* and *prija-znŭ* 'love, 'good will': Skr. *priyá-* 'dear', Goth. *frijōn* 'to love', Indg. adj. *\*prijó-* 'dear'. Gen. pl. *trŭjŭ* and *trijŭ*: Lith. *trijũ* 'trium'. *i* in the combination *-ij-* from Indg. *-ei-* (§ 68) underwent the same treatment, e. g. *vŭja* and *vija* = Lith. *vejũ* 'I turn, wind', Skr. *váyāmi*, Indg. *\*uějō*. The change of *ũ* to *y* before *j* went parallel to this modification, e. g. *dobrŭjŭ* and *dobryjŭ* 'the good man' (§ 84).

Rem. In the Zographos gospel *ũ* frequently is found for *i* before non-palatal vowels; e. g. *vŭdova* 'widow'. Cp. § 252 rem. and § 305 rem.

### Indg. *i*.

§ 37. Indg. *\*gŭ-uo-s* 'living': Skr. *jivá-s*, Lat. *vivo-s*, Lith. *gyva-s* O.Bulg. *živŭ*. Indg. *\*pŭ-uo-*, *\*pŭ-uen-*: Skr. *pŭ-van-* 'swelling (partic.), plump, fat', Gr. *πŭ-(F)o-ς πŭ-(F)ων* 'fat, plump'. Indg. *\*sŭ-men-*: Skr. *sŭ-mán-* 'parting of the hair on the top of the head', Gr. *ŭ-μᾶς* (st. *ŭ-μαν-τ-*) 'a leathern strap, rein', *ŭ-μων-ιά* 'rope of a draw-well', O.Icel. *sŭ-me sŭ-mi* 'cord, rope'.

Nominal suffix-form Indg. *-i-*: Skr. *naptŭ-š* 'daughter, granddaughter', *vidŭšŭ* 'ŭvŭā', Lat. *vic-tr-ŭ-c-s*, Goth. *frijōndi* 'female-friend' from prim. Germanic *\*frijōnd-i* (§ 660, 2), Lith. *vilkusi* O.Bulg. *vlŭkŭši* from prim. Baltic-Slav. *\*uŭlkusŭ* (§§ 303. 664), fem. particip. pret. act. of Lith. *velkũ* O.Bulg. *vlěka* 'I draw, pull' (rt. *uŭlq-*). Nominal suffix *-ino-*, forming adjectives denoting origin or material: Lat. *haed-ŭnu-s*, Goth. *gáit-eins* 'kid's', Lat. *su-ŭnu-s*, O.Bulg. *sv-inŭ* 'pig's', Goth. *sv-ein* (neut.) 'a pig' (cp. *gáitein* neut. 'a young he-goat'), Gr. *χορακ-ŭνο-ς* 'a young raven'. Indg. *-i* the ending of the Nom. Acc. dual of *ei-*stems: Skr. *páti* to nom. sing. *páti-š* 'master', O.Ir. *fáith* (original form *\*uáti*) to nom. sing. *fáith* (original form *\*uáti-s*) 'poet', Lith. *nakti* O.Bulg. *nošti* (prim. Baltic-Slav. *\*nokti*, § 664, 3) to nom. sing. Lith. *nakti-s* O.Bulg. *nošti* 'night'. Weak form of the optative suffix *-i-*: Skr. *dviš-ŭ-máhi* 1. pers. pl. Mid. of *dvěš-mi* 'I hate', Gr. *εἰδέμεν* from *\*εἰδεσ-ι-μεν* to *ἦδεα* 'I knew' from *\*ŭ-Fσιδ-εσ-α*, Lat. *s-i-mus*, Goth. *vil-ei-ma* = Lat. *vel-i-mus*,

OHG. 1. pers. pl. *s-ī-m s-ī-n* 'we may be' = Lat. *sīmus*, O.Bulg. *jad-i-mŭ* from *jad-* (*ěd-*) 'eat' (§ 76), cp. Lat. *ed-ī-mus*.

Rem. Of all the prim. Indg. vowels  $\bar{i}$  is the one which has been least changed in the development of the separate languages.

§ 38. Aryan. Skr. *vī-rá-s* Av. *vī-ra-* 'man, hero': Umbr. *veiro-* 'vir' (cp. § 41), secondary form of Indg. *\*uī-ro-s* (§ 34), denoted originally, 'endowed with strength', and is related to Lat. *vī-s*. Skr. *jī-rá-* Avest. *-jī-ra-* 'active', imper. 2. pers. sing. Skr. *jīva* O.Pers. *jīvā* (read *jīva*) 'live'. Skr. *bṛhat-ī-m* Avest. *ber<sup>o</sup>zait-ī-m* 'magnam, altam', cpf. *\*bhrgh-ūt-ī-m*.

§ 39. Armenian. I do not know any certain examples for the representation of  $\bar{i}$ . See, however, *siun* 'pillar' = Gr. *κίον* and *çin* 'milvus' = Gr. *ικτινος* in Hübschmann's Arm. Stud. I 49. 53.

§ 40. Greek. *ἰ-ς ἰ-φι* 'strength': Lat. *vī-s*. *ἰό-ς* 'poison' fr. *\*Fīoo-ς*: Lat. *vīru-s*, O.Ir. *fī*. *ῥίγος* 'frost': Lat. *frīgus* (§ 570). *πῖ-νω* 'I drink', imper. *πῖ-θι*: Skr. *pī-tá-s* 'drunk, having drunk' *pī-tī-ṣ* 'draught (of liquids)', O.Bulg. *pi-ti* 'to drink' *pi-vo* (neut.) 'potus, beer'.

§ 41. Italic. Lat. *vīvo-s*, Osc. *bivus* nom. pl. 'vivi'. Lat. *in-clī-nō*, *ac-clī-ni-s*: Gr. *κλῖ-νη κλῖ-τύ-ς*, Skr. *abhi-śrī-ṇā-ti* 'leads on, unites with'. Lat. *s-ī-mus*, Umbr. 2. pers. sing. *sir* 'sis', Osc. *fefac-i-d* 'fecerit' opt. of redupl. perf. (cp. Skr. 3. pers. sing. opt. pf. mid. *va-vrt-ī-tá* from *vart-* 'roll, turn'); the *-i-* (*-ī-*) in the Umbr. and Osc. forms, as well as in Lat. *sim sīs* (O.Lat. *siem siēs*), has been taken over from the 1. and 2. pers. pl. Osc. *li-mu* 'famem': Gr. *λι-μός-ς*.

In Latin *ei* was also written for this  $\bar{i}$ , e. g. *veivos, faxseis*. It was not, however, pronounced as a diphthong, but as a long (probably open) *i*. The old diphthong *ei* in *deicō* (cp. *δεικν-νῶ-μι*), *feidō* (cp. *πειθω*) etc. had become  $\bar{i}$ , but the spelling *ei* for this  $\bar{i}$  was still retained. At this period the sign *ei* began to be used for the old  $\bar{i}$  which had fallen together with *eī* (cp. also the late Greek spelling *ει* for original  $\bar{i}$ , as *πολείτης*). Cf. § 65.



The  $i$  in the Umbr. and Osc. words *sir* and *bivus*, *limu* (quoted above) is to be pronounced long. This quantity can be directly proved in Umbr. *persnihmu persnihimu*, i. e. *persn̄mu* (§ 23) 'precamino', depon. 3. sing. imper. from a verbal stem *persn̄-*, cp. Lat. *fīn̄-re*. It also follows from the spelling *ei* (on tables in Latin alphabet) in *sei* beside *sir si* = Lat. *sīs*, in *veiro* beside *viro* 'viros' (cp. Skr. *vīrā-s* § 38), probably also in *pers-ei* beside *pers-i* 'quid', the ending of which was a demonstrative particle corresponding to the  $-i$  in Gr. *ούτος-ί*. This spelling *ei* is to be put on a like footing with the *ei* in Lat. *veivos* and similar forms (see above), and points to an open pronunciation of the  $\bar{i}$ . The same quality of the  $\bar{i}$ -sound follows for Oscan from *fusid* 'foret, esset' (opt. of the *s*-aorist, cp. Skr. 3. sing. mid. *ma-s-ī-tá* from *man-* 'think'), assuming that the vowel in the end syllable had not been shortened and then become  $i$ .

§ 42. Old Irish.  $\bar{i}$  Cymr. *lliw* 'color, splendor': Lat. *līvor*. It is less certain that the  $\bar{i}$  in *crithid* 'emax' = Indg.  $\bar{i}$ : Skr. *krī-ṛā-ti* 'buys'.

For the treatment of  $\bar{i}$  in unaccented syllables see §§ 613. 634. 657, 2. 6.

§ 43. Germanic. Goth. *skeirs* (st. *skei-ra-*) O.Sax. *skīr* O.Icel. *skīrr* 'clear, bright', prim. Germ. *\*skī-ra-*, related to Gr. *σῴα* 'shadow' or to Lat. *dē-scī-scō* 'I withdraw, depart from'. Goth. *freidjan* 'to spare', OHG. *vriten* 'to foster, pamper', O.Icel. *frīða* 'to adorn, decorate': cp. Skr. *pri-tá-s* 'dear, pleased, joyful, satisfied'. Goth. *sv-ein* OHG. OS. *swīn* Ags. *swīn* O.Icel. *svīn* 'pig': O.Bulg. *sv-inū* Lat. *su-īnu-s* 'pig's (adj.)', belonging to a pig'. 1. pers. pl. opt. pf. Goth. *vēs-ei-ma* OHG. *wār-ī-m* O.Sax. *wār-i-n*, O.Icel. *vær-i-m* 'we might be': cp. Skr. 3. sing. opt. pf. mid. *vavrt-ī-tá* (from *vart-*).

It must be observed that *ei* in Goth. always signifies the monophthong  $\bar{i}$  (§ 25).

§ 44. Baltic-Slavonic. Lith. *vý-ti* O.Bulg. *vi-ti* 'to wind, turn': Gr. *ἵ-τέα* 'willow, salix' fr. *\*fī-τῆα*. Lith. *dvynū* (dual) 'twins': Lat. *bīnī*. O.Bulg. *griva* 'mane': Skr. *grīvā-* 'nape'.

Observe that  $y$  is the Lith. symbol. for  $\bar{i}$  (§ 26).

## Indg. u.

§ 45. Indg. \**jug-ó-m* 'yoke': Skr. *yugá-m*, Gr. ζυγό-ν, Lat. *jugu-m*, Goth. *juk*, O.Bulg. *igo* fr. \**ǰūgo*. Indg. weak stemform \**kū-n-* 'dog' (strong stemform \**kū-on-*, Skr. acc. sing. *śvān-am*): Skr. gen. sing. *śú-n-as*, Gr. gen. sing. κν-ν-ός, O.Cymric nom. pl. *cūn cwn*, Goth. *hun-d-s*, Lith. gen. sing. *szu-ñ-s* fr. \**szu-n-es* (§ 664, 2). Indg. \**nu* 'now': Skt. *nú*, Gr. *ν*, Lat. *nu-diu-s*, O.Ir. *nu no*, OHG. *nu no*, Lith. *nù-gi* 'now then'.

Weak nominal suffixes Indg. *-u-*, *-tu-*, *-nu-*: Skr. *svād-ú-ṣ*, Gr. ἡδ-ύ-ς 'sweet', Lat. *fruc-tu-s*, O.Ir. *fiuss fiss* 'knowledge' from \**uissu-s*, Goth. *su-nu-s* Lith. *sū-nù-s* O.Bulg. *sy-nū* (from \**sy-nū-s*, § 665, 4) 'son'. Weak form of the suffix of the pf. part. act. Indg. *-us-*: Skr. *vid-úṣ-ī* Gr. *ιδύα* from \**fid-vo-ia* (§ 131) fem. 'knowing', Goth. *bēr-us-jōs* 'parents' (properly 'those who have brought forth'), Lith. *vil̄k-us-i* O.Bulg. *vl̄ik-ūši* fem., to Lith. *velkū* O.Bulg. *vl̄ekā* 'I draw'.

§ 46. Aryan. Skr. *putrá-* Avest. *pupra-* O.Pers. *puša-* (§ 261) 'son': Osc. *puklo-* 'son'. Skr. *úpa* Avest. *upa* O.Pers. *upā* (read *upa*) prep. 'to': Gr. ὑπο, Lat. *s-ub*. Skr. *su-* Avest. *hu-* O.Pers. *u-* prefix = 'well, good, very': O.Ir. *su-* *so-*. Suffix of the loc. pl. Ar. *-su-*: Skr. *áśvē-ṣu* Avest. *aspaē-ṣu* 'in equis', O.Pers. *mādai-šuv-ā* 'in Medis' (*-ā* is postposition): O.Lith. *kn̄ygo-su* (Mod. *kn̄ygo-se* is formed by analogy) 'in libro' from *kn̄ygos* pl. 'liber', O.Bulg. *rāka-chū* 'in manibus' from *rāka* 'manus'.

In Sanskrit *ru* before a following *u* seems to have passed into *ṛ* (dissimilation). Present stem *śṛ-nu-* ('hear') from \**śru-nu-*, cp. Avest. 2. pers. sing. opt. *srunu-yā* (Skr. *śṛṇu-yās*), O.Ir. 1. pers. sing. pres. *clu-ni-m*, rt. *k̄ley-*. *bhṛ-kuti-ṣ* 'distortion of the eye-brows' beside *bhru-bhaṛga-s* *bhrū-bhaṛga-s* the same. Cp. Osthoff Morph. Unt. IV. 215 f.

§ 47. Armenian. *dustr* 'daughter': Skr. *duhitār-* Gr. θυγάτηρ Goth. *daúhtar* (§ 51) Lith. *duktė* O.Bulg. *dūšti* 'daughter'. *surb* 'clean': Skr. *śubhrá-s* 'clear, bright'. *nu* 'daughter-in-law': Skr. *snuṣā* Gr. νύ-ς OHG. *snur* O.Bulg. *snūcha* 'daughter-in-law'.

*u* in non-final syllables was dropped: *dster* gen. of *dustr*, *srboy* gen. of *surb*, verb *srbem* 'I clean'. Cp. § 632.

§ 48. Greek. *κλυ-τός* 'celebrated': Skr. *śru-tá-s* 'heard, celebrated', Lat. *in-clu-tu-s*, O.Ir. *cloth* from \**clu-to-s* (§ 50) 'celebrated', OHG. *Hlud-rīch* *Hlud-olf* *Hlot-hari* (§ 51). *ὑπέρ* *ὑπέρ* 'over': Skr. *upári* 'above, over', Lat. *s-uper*, Goth. *ufar* 'over'. Weak present suffix *-nu-* in *τά-νυ-ται*: Skr. *ta-nu-tē*, from root *ten-* 'stretch', Lat. *mī-nu-ō*.

In prim. Gr. and probably also for some time after the introduction of the letter *Y*, *u* was spoken by all Greeks. At an early period one part of the dialects changed *u* into *ū* which in the christian era was further changed into *i*. Another part, the Bœotians, Laconians, and probably also the Arcadians, Cyprians, Pamphylians, Chalcidians and Lesbians, retained *u* until far into historical times, e. g. Bœot. *λγυροός* (*ou* = *ū*) = Att. *λγυρός*. Meanwhile the vowel *u* in Bœot. underwent a modification which cannot be precisely defined, after *τ*, *θ*, *δ*, *ν*, *λ*, as is seen by the spelling *ιου* instead of *ου*, e. g. *Πολιού-ξενος* = Att. *Πολύ-ξενος*; cp. Osc. *iu* = *u* § 49.

The spiritus asper in *ὔδωρ* (Skr. *udán-* 'water'), *ὑπο ὑπερ* (Skr. *upa upari*) etc. seems to point to a transition from initial *u-* to *ū* in prim. Greek. Cp. *ἕμεις*: Skr. *yuṣma-*. It is not improbable that *v* became *i* through the dissimilating influence of a following *v*, as *πινυτός* from \**πυ-νυ-τός*, Skr. *pu-nā-mi* 'I clean, clear up'.

§ 49. Italic. Lat. *rubro-* (nom. *ruber*) Umbr. *rufro-* 'red': Skr. *rudhirá-s* Gr. *ἐρυθρός* O.Bulg. *rŭdrŭ* 'red'. Lat. *duō* Umbr. neut. *tuva* 'two': Skr. ved. *duvā* Gr. *δίω* 'two'. Osc. *pu-klo-* Pelig. Mars. *pu-clo-* 'son' Lat. *pu-tu-s* 'boy': Skr. *pu-trá-s* 'son'.

In Latin, before labials and perhaps also before *l*, a frequent sound, lying between *u* and *i*, made its appearance for Indg. *u*. *libet*, older *lubet*: Skr. *lubh-* 'to feel a strong desire'. *fimu-s* *fimu-m*, probably related to Gr. *θύ-μο-ν*. *limpa* (*limpidus*), older form

*lumpa* to Osc. Diumpaís 'Nymphis', prim. Italic \**dumpā*-<sup>1</sup>). The relation between *silua silva* and Gr. *ῥίλη* is uncertain (cp. Osthoff Morph. Unt. IV 158 f., W. Meyer Kuhn's Ztschr. XXVIII 163 f.). This *i* occurs especially often for the *-u-* of *u-(eu)-*stems, e. g. *lacri-ma*, older form *lacru-ma*, *laci-bus flucti-bus flucti-vagus mani-festus* beside *lacu-bus manu-festus*. Compare the change of *a* to the same *u*: *i*-sound (§ 97) in unaccented syllables before the same consonants.

Rem. It has been conjectured (Osthoff in the above named work pages 125, 158) that the *i* in *libet*, *finus*, *limpa*, *silua* arose from *u* phonetically only in unaccented syllables, in such combinations as *quī lubet*, *cōnlubet*, *in fumō* (cp. *ilicō* from \**in slocō*). But should not the historical relation of *loebertatem leiber* to Osc. Lúvfreís 'Liberi' Falisc. *loferta* 'liberta' be such that in Lat. \**loyb-* (= prim. Italic \**loyf-*. § 65 page 52) the consonantal *u* before *b* underwent precisely the same change as the sonantal *u* of *lubet*, so that \**loyb* first became \**loīb*, then *loēb*, and lastly *lib*-? In that case the change of *lubet* (with *u* in the chief accented syllable) to *libet* could scarcely be questioned. For the change of *loeb-* to *lib-* cp. § 81 rem. 2. I cannot resolve to separate Lat. *liber liberta* from Osc. Lúvfreís and Falisc. *loferta*, although I do not fail to recognise the overwhelming difficulties which present themselves (s. Danielsson in Pauli's Ital. Stud. 4, 156 ff.).

The spelling with *o* shows that *u* in Umbr. had, in certain cases or everywhere, an open sound: *sopam* 'suppam, supinam', *somo* 'summum', *trifo* 'tribum'. For Umbr. *i-* from *iū-* see § 133.

In Osc., *u* after *d*, *t*, *n*, *s* underwent a change which was represented by *iu*. Diumpaís 'Nymphis', Lat. *lumpa* (see above); *eitiuam* beside *eituam* 'pecuniam' (suffix *-u(u)ā-*). *tiurri* 'turrim' (a borrowed word?). Niumsieís *Νινμισδιης* gen. 'Numisii', to Lat. *numerus*. Siuttiis 'Suttius'. Cp. Bæot. *iov* = *ov* § 48.

§ 50. O. Irish. *suth* neut. 'birth, fruit' fr. \**su-tu*: Skr. *su-tá-s* Gr. *υῖός υῖός* 'son'. *sruth* neut. 'river' fr. \**sru-tu*: Skr. *sru-tá-s* Gr. *ῥυτός* 'flowing', Lith. *sru-tà* 'dung-water'. *clu-ni-m* 'I hear': Skr. *śru-* Gr. *κλυ-*, rt. *kley-*.

1) The spellings of the Lat. word as *lumphā*, *limphā*, *lymphā* are due to the supposed derivation from *νύμφη*, which even gave rise to *nymphaticus* (Löwe Archiv. f. Lat. Lexikogr. I 25).

Compare also Gall. *Druid-es*, O.Ir. *drui* (pl. *druid*) perhaps to, Skr. *dru-* Gr. *δρυ-* 'wood'; Gall. *catu-* 'combat' in *Catu-rīg-es* etc. (O.Ir. *cath*, gen. *catha*): OHG. *hadu-* 'war'.

*u* became *o* through the assimilating influence of *a* or *o* in the following syllable (cp. the similar change of *i* to *e* § 34). *cloth* from \**clu-to-s*: Gr. *κλυ-τό-ς* etc. (§ 48). *srotho srotha* gen. of *sruth*. *bond bonn* 'solea' fr. \**bundo-s*: Lat. *fundu-s* Skr. *budh-ná-s* 'bottom' (§ 469, 8). Compare West Germanic and Norse *o* from *u* § 51.

*u* became *o* in monosyllabic words. *nu no* = Skr. *nú* etc. (§ 45). *su-so* 'well' = Skr. *su-*. *du-do* 'bad' = Skr. *duš-* Gr. *δυσ-* Goth. *tuz-*. In this case too it is probable that the change from *u* to *o* was caused by the vowels of the following syllables.

For the fate of *u* in other than chief accented syllables cp. §§ 634. 657.

§ 51. Germanic. 1. pers. pl. pf. Goth. *ana-budum* 'we bade', OHG. *butum* O.Icel. *buðom* 'we offered': Skr. *bu-budh-imá* 'we watched, observed', Gr. *πέ-πυσται πυθ-έσθαι*, Lith. *bùd-inti* 'to rouse', O.Bulg. *bùd-ěti* 'to wake', from rt. *bheydh-* 'wake, observe'. Goth. *ga-kusts* (st. *ga-kusti-*) OHG. *kust* 'test, choice': Skr. *júṣṭi-ṣ* 'show of affection, favour'; *kustu-s* 'trial': Lat. *gustu-s* 'taste' from rt. *geus-* 'choose, γεύεσθαι'.

Before *h* and *r* Indg. *u* appears in Goth. as *aú*. *aúhsa* (st. *aúhsin-*) 'ox': Skr. *ukṣá* (st. *ukṣán-*) 'bull, ox'. *daúr* (st. *daúra-*) neut. 'door': Skr. *dúr-* (concerning the *d-* see § 480) Arm. *duṛn* Gr. *θύρᾱ* Lith. pl. *dùrys* 'door'.

In West Germanic and Norse *u* became *o* through the influence of an *a* or *o* of the following syllable. Part. passive OHG. *botan* (Mod. High Germ. *ge-boten*) O.Sax. *bodan* Ags. *boden* O.Icel. *boðenn* = Goth. *budans*, cp. Skr. part. *budhāná-s*. OHG. *tor* = Goth. *daúr* (prim. Germ. \**đura-m*) beside *turi* 'door'. Cp. §§ 247. 299.

Rem. Some scholars look upon this umlaut also as prim. Germ. (cp. § 35 rem.).

§ 52. Baltic-Slavonic. Lith. *krùvina-s* O.Bulg. *krüvînü* 'bloody': Lat. *cruentus*. Lith. pl. *musai* (stem *mus-*) 'mould

on sour milk', O.Bulg. *mǔchŭ* 'moss': Lat. *mus-cu-s*, OHG. *mos* (prim. Germ. stem *\*musa-*) 'moss'. Lith. *sū-nū-s* O.Bulg. *sy-nŭ* 'son': Skr. *sū-nū-ṣ* 'son'.

In some Lith. dialects *u* is pronounced very open, so that it can be regarded as a closed *o*, e. g. *sukaũ* *sũko* (1. and 3. pers. sing. pret. of *sukũ* 'I turn') appear as *sõkaũ*, *sõkõ*.

Slavonic *ŭ* must, already in prim. Slav., have been a reduced sound, approaching the quality of *o*.

*ŭ*, in Modern Slavonic developments, became a full vowel in closed syllables (such syllables often arose through the falling out of an *ĩ* or *ũ* in the following syllable), Russ. *o*, Serv. *a*, e. g. Russ. *son* Serv. *san* = O.Bulg. *sŭnŭ* from *\*sŭpnŭ* (§ 545) 'sleep': Gr. *ῥπ-νο-ς*; Russ. *doč* = O.Bulg. *dŭšti* 'daughter': Lith. *duktė*. On the other hand final *ŭ* disappeared, e. g. Russ. *syn* O.Bulg. *synŭ*, loc. pl. Russ. *rybach* Serv. *ribah* = O.Bulg. *rybachŭ* (from *ryba-* fem. 'fish'), cp. Skr. loc. pl. *áśvā-su* (from *áśvā-* 'mare'). Medial *ŭ* also, as a rule, disappeared in open syllables, e. g. Russ. Serv. *sna* = O.Bulg. *sŭna* (gen. sing. of *sŭnŭ*), Russ. *spat* = O.Bulg. *sŭpati* 'to sleep', *legka* = O.Bulg. *lġgŭka* nom. fem. of *lġgŭ-kŭ* 'easy' (further formation of an old *ŭ*-stem by means of the suffix *-ko-*). All these modifications can be traced as far back as the period of old Church Slavonic. On the one hand they follow from such double spellings as *krovŭ* *krŭvŭ* 'blood', *domochŭ* *domŭchŭ* (loc. pl. from the stem *domŭ-* 'house' = Lat. *domu-*); these forms can only be understood by assuming that the final *ĩ* and *ũ* were no longer syllabic; on the other hand from such double spellings as *rekŭ* *rekŭŭ* dat. sing. of the stem *rekŭŕe-*, that is, *\*rek-ŭs-ŭo-* according to §§ 84 and 147 (part. pf. act. of *rekŭ* 'I say'), *lġgŭko* beside *lġgŭko* neut. to *lġgŭkŭ*. With these modifications of *ŭ*, compare the parallel treatment of *ĩ* § 36.

Prim. Slav. *ŭŭ* became *ŭŭ* (cp. *ŭŭ* from *ŭy* § 60 and *ie* from *ŭo* § 84). O.Bulg. *žŭvŭ* 'I chew' from *\*žŭvŭvŭ*; OHG. *chiuwu* (§§ 143. 147). *igo* 'yoke' from *\*ŭgo* (§ 145) and this fr. *\*ŭgo*: Skr. *yugá-m*, Lat. *jugu-m*.

Rem. In the Zographos gospel *ī* for *ū* occurs occasionally before palatal vowels, e. g. *bīdēti* = *būdēti* 'to wake', *dīwa* m., but *dīwē* fem. neutr. 'two'.

### Indg. *ū*.

§ 53. Indg. *\*dhū-mó-s* 'ebullition, smoke': Skr. *dhūmá-s*, Gr. *θῦμός-s* ('courage, passion'), Lat. *fūmu-s*, Lith. pl. *dūmai*, O.Bulg. *dymū*. Indg. *\*bhū-*, weak form of the the rt. *bheu-* 'be, become' (§ 312): Skr. *bhū-tá-* 'become, been' *ābhū-tam* 'ye two were' *bhū-ti-ṣ* 'good condition, well-being', Gr. *φῦ-ταλιή* 'a planted place' 2. pers. du. *ἔφῦ-ρον*, Lith. inf. *bū-ti* O.Bulg. *by-ti* 'to be'. Indg. *\*mūs-* 'mouse': Skr. *mūṣ-*, Gr. *μῦς*, Lat. *mūs mūr-is*; OHG. *mūs* and O.Bulg. *myšī* fr. *\*mychī* (§ 588, 2), that is, originally *\*mūs-i-s*, show the change of the monosyllabic stem into the *ei*-declension.

Indg. *-ū* as ending of the nom. acc. du. of *eu*-stems: Skr. *sūnū* O.Bulg. *syny* from Indg. stem *\*sū-neu-* *\*sū-nu-* 'son', Lith. *žmogū* fr. *\*žmogū* (§ 664, 3) to *žmogū-s* 'man', O.Ir. *mug* fr. *\*mogū* (§ 657, 2) from stem *mogu-* 'servant'.

§ 54. Aryan. Skr. *dū-rá-* Avest. O.Pers. *dū-ra-* 'far' from rt. *deu-* 'withdraw' (Gr. Hom. *δέεσθαι* 'fall short of'). Skr. *śū-ra-* 'hero', Avest. *sū-ra-* 'strong': Gr. *ἄ-κῦρος* 'weak, invalid'. Skr. *nū* Avest. *nū* 'now': Gr. *νῦ-ν* O.Bulg. *ny-nē* 'now'.

§ 55. Armenian. I do not know any sure examples for the regular representation of Indg. *ū*. The following comparison of words may, however, be taken into consideration. *ku*, gen. *ku-oy*, 'dung' to Skr. *gūtha-* 'excrement', Avest. *gūḅa-* 'dirt'. *mukn*, gen. *mkan*, 'mouse, muscle', to Skr. *mūṣīkā-* *mūṣakā-* 'rat, mouse,' O.Bulg. *mysīka* 'mouse', Lat. *mūsculu-s* (cp. Hübschmann Zeitschr. d. deutsch. morgenl. Ges. XXXV 170, Osthoff Morph. Unt. IV 217 f.). Pl. *srun-k* (*-k* is the sign of the plural) 'shins, shanks', to Lat. *crūr-a* (Hübschmann, as above, page 177). Compare also Hübschmann Armen. Stud. I 62.

§ 56. Greek. *ὄφρῶς* *ὄφρῶν* 'eye-brow': Skr. *bhrū-* § O.Icel. *brū-n* Ags. *brū* 'eye-brow'. *βου-λῦ-τό-* 'the time for unyoking oxen': Lat. *so-lū-tu-s*, O.Icel. *lūðr* 'bruised, crushed, deafened,

tired out' (cp. *λότο γούνατα*). *στῦ-λο-ς* 'pillar': Skr. *sthū-rá-sthū-lá-* 'coarse, thick, massive'.

The change from *ū* to *ü* went parallel with that of *u* to *ü* (§ 48). The dialects, which retained *u*, retained also *ū*: Bœot. *Εὔ-θουμο-ς* = Att. *Εὐ-θύμο-ς*, Lac. *μονοίδδει* (which according to Hesychius means *λαλεῖ*) = Att. *\*μῦθιζει*.

It is doubtful whether *v̄* became *ī* through the dissimilating influence of a following *v* (cp. § 48). *φῖ-τν* (neut.) 'twig, sprout' has been brought together with Skr. gerund *bhū-tv-ā* and Lat. *fu-tu-ō*. It may, however, be connected with Lat. *fīō* and O.Ir. *biu* 'flo, sum', the original form of which was *\*bhū-īō* (§§ 170. 175). It is still more uncertain whether *īθν-ς* has come from *\*īθv-ς* (Osthoff Morph. Unt. IV 188 ff.).

§ 57. Italic. O.Lat. pf. *fū-ī fū-īmus* (Inscript. *fūeit*), Osc. Fuutrei 'deae creatrici': Skr. *bhū-tá-* etc. (§ 53). Lat. *sū-s sū-bus*: Skr. *sū-karā-* 'pig, boar', Gr. *ῥ-ς ῥ-ν*, OHG. *sū* (Mod.HG. *sau*) from prim. West-Germ. *\*sū-z* (§ 583). Lat. *cūpa* 'vat, recess for the dead': Skr. *kūpa-s* 'pit, hole'.

It is quite possible that in Umbr. the *i* in *pir* (*πῖρ*) beside abl. pure Osc. *purasiai* (loc. sing. of the stem *purasiā-* 'igniaria'), in *sim* (Gr. *ῥν*, Lat. *suem*) and *sif* (acc. pl.) beside *suřum sorsum* 'suillum', and in *frif* acc. pl. 'fruges', represents an older *ū* which may have been pronounced *ü*. (cp. O.Bulg. *y* fr. *ū* beside *ü* fr. *u*, §§ 52. 60.). It is however impossible to form a correct judgment owing to the quantities not being marked, and the scantiness of the material. Cp. Osthoff Morph. Unt. IV 16, Zur Gesch. d. Perf. 432.

§ 58. Old Irish. *rūn* (fem.) 'secret': OHG. *rūna* O.Icel. *rūn* f. 'secret, rune'. *dūn* (neut.) 'castle', Gall. *-dūnum* in names of towns (*Lupo-dūnum* and others): O.Sax. Ags. masc. *tūn* OHG. masc. *zūn* O.Icel. neut. *tūn* 'hedge, enclosure'. Pron. *tū* 'thou': Avest. *tū* Gr. *τῦ-ν-η* Lat. *tū* O.Icel. *þū* O.Bulg. *ty*.

For such forms as acc. sing. *rūin* beside nom. sing. *rūn* see § 640.

For *ū* in unaccented syllables cp. §§ 613. 634. 657.



§ 59. Germanic. In Goth., where *u* and *ū* in the native alphabet were not kept apart, *ū* can scarcely ever be established without the help of the other languages. Goth. *fūls* OHG. Ags. *fūl* O.Icel. *fall* 'foul': Lith. pl. *pūlei* 'matter', Gr. *πύθω* 'I make to rot, putrefy', Lat. *pūs pūris* 'matter, spittle' *pū-teō* 'I smell bad, stink'. Goth. *rūms* OHG. O.Sax. m. *rūm*, O.Icel. neut. *rūm* 'room, open place', from the same root as Lat. *rūs rūris* 'open field, country', Avest. *ravah-* 'free'. OHG. *ūtar* Ags. *ūder* 'udder': Skr. *ūdhar* 'udder'. OHG. *hlūt* Ags. O.Sax. *hlūd* 'loud' from rt. *hley-* 'hear': cp. Gr. imperative *ἄλῦ-τε*, O.Bulg. *sly-šati* 'to hear', *sly-tije* neut. 'call, name'.

§ 60. Baltic-Slavonic. Lith. *tūla-s* adj. 'so many a', originally a substantive denoting 'a mass', O.Bulg. *tylū* 'nape', originally 'intumescence': Skr. *tūla-* neut. 'panicle, tuft, cotton', Gr. *τύλη* 'a swelling or lump, callosity', from rt. *tey-* 'tumere'. Lith. *sūra-s* 'saline', O.Bulg. *syrū* 'raw': OHG. *sūr* O.Icel. *sūrr* 'sour, bitter'. Lith. *jūs* 'ye': Avest. *yūš yūžem* 'ye'. O.Bulg. *svěkry* 'mother-in-law': Skr. *śvaśrū-ṣ* 'mother-in-law'.

The change of *ū* to *y* belonged to the prim. Slav. period.

Prim Slav. *iy* became *ii* (cp. *ii* from *iū* § 52). O.Bulg. *šiti* fr. *\*šiti* (§ 147), and this fr. *\*šiyti*: Lith. *siūti* 'to sew', Skr. *syūti-ṣ* fem. 'sewing, sack'. Compare also *kraji* instr. pl. of *krajī* 'edge' but *raby* instr. pl. of *rabū* 'servant'.

#### Indg. *e*.

§ 61. Indg. pres. stem *\*bhero- bhere-* 'bear': Skr. *bhārāmi*, Arm. *berem*, Gr. *φέρω*, Lat. *ferō*, O.Ir. *berim*, Goth. *baíra*, O.Bulg. *bera*. Indg. *\*és-ti* 'is': Skr. *ásti*, Gr. *ἔστυ*, Lat. *est*, O.Ir. *is* (proclitic), Goth. *ist*, Lith. *esti* (now archaic), O.Bulg. *jestǎ*. Indg. *e* in the root syllable of neuters in *-es-*, e. g. Indg. *\*régos* 'vapour, darkness': Skr. *rájas*, Arm. *erek*, Gr. *ἔρεβος*, Goth. *riqiz-a-*; Indg. *\*nébhos*, 'cloud, atmosphere': Skr. *nábhas*, Gr. *νέφος*, Lith. *debes-ì-s* (the origin of the *d-* instead of *n-* is not clear), O.Bulg. *nebo*, comp. also with *l-*suffix Gr. *νεφέλη* Lat. *nebula* O.Ir. *nēl* (prim. kelt. stem *\*neblo-*, § 526) OHG. *nebul* 'cloud, fog'. Indg. *\*qe* 'and': Skr. *ca*, Gr. *τε*, Lat. *que*. Augment

of the past tenses of the Indicative (originally an independent particle) Indg. *é*: 3. pers. sing. Skr. *á-dyśat* Gr. *ἔ-δρακε* (rt. *derk-* 'see'), Arm. *e-lik* Gr. *ἔ-λιπε* (rt. *leiq-* 'leave'), Goth. *i-ddja* Skr. *á-yāt* 'he went' (for Goth. *ddj* see § 142).

*-e* Indg. ending of voc. sing. of *o*-stems: Skr. *vřka* Gr. *λύκε* Lat. *lupe* 'wolf', O.Ir. *maicc maic* from prim. kelt. *\*makue* 'son', Lith. *vilkė* O.Bulg. *vlŭče* 'wolf'. The 'thematic vowel' Indg. *-e* (by the side of *-o-*): e. g. 2. pers. pl. Skr. *bhár-a-tha*, Gr. *φείρ-ε-τε*, Lat. *veh-i-tis*, Goth. *bair-i-þ*, O.Bulg. *ber-e-te*. Nominal suffix Indg. *-es-*: gen. sing. Skr. *nábh-as-as* Gr. *νίφ-ε(σ)-ος* Lat. *gen-er-is* O.Bulg. *neb-es-e*, Goth. stem *riq-iz-a-* (a further formation by means of *-a-*), Lith. nom. sing. *deb-es-ì-s* (a further formation by means of *-i-*). Nominal suffix Indg. *-ter-*: Nom. pl. Skr. *pi-tár-as* 'fathers', Arm. *ds-ter-k* 'daughters', Gr. *πα-τίρ-ες*, gen. sing. Lith. *mo-ter-s* O.Bulg. *ma-ter-e*. Ending of the nom. pl. Indg. *-es*: Skr. *áśmān-as* from *áśman-* 'stone', Gr. *ἄμμον-ες*, O.Lat. *turbin-ēs*, Lith. *akmens* from *\*akmen-es* (§ 664, 2) O.Bulg. *kamen-e* from *\*kamen-es* (§ 665, 4) 'stones'. Ending of the 3. pers. sing. indic. pf. act. Indg. *-e*, e. g. *\*de-dórċ-e* (from rt. *derk-* 'see'): Skr. *dadárś-a*, Gr. *δέδορκ-ε*, O.Ir. *ad-con-dairc* from prim. Kelt. *\*-dorke*.

Indg. tautosyllabic *eĭ*<sup>1)</sup>. Skr. (ved.) *bhédāmi* 'I cleave', Goth. *beita* 'I bite', original form *\*bhéidō*; Arm. *lizem* Gr. *λείχω* 'I lick', original form *\*léighō*; Lat. *fidō* Gr. *πίθω*, orig. form *\*bhéidhō*; O.Ir. *tiagam* 'I go', Gr. *στειχω* 'I go', Goth. *steiga* 'I climb', orig. form *\*stéighō*; Lith. *geidžiù* 'I have a desire' for older *\*geidu* = O.Bulg. *žida* 'I wait, expect', orig. form *\*ghéidhō*. Indg. *\*éĭ-ti* 'he goes': Skr. *éti*, Gr. *ἔϊσι*, Lat. *it*, Lith. *ėiti* *ėit*, cp. O.Bulg. *i-da* 'I go'. Indg. *\*ghei-men-*: Skr. *hēman-* 'winter', Arm. *jiun* 'snow', from *\*jivn*, *\*jiman* (§ 202), Gr. *χειμα χειμών*.

1) We call a sound-group tautosyllabic, when its elements belong to the same syllable, i. e. are uttered with the same expiration-impulse; heterosyllabic, when the last element or elements are produced by a fresh expiration-impulse. *eĭ* e. g. is tautosyllabic before consonants (*\*bhei/dhō* = Gr. *πίθω*) and in a pause (*\*μοῖ/κεῖ/* = Gr. *οἶπει*). It is, as a rule, heterosyllabic before sonants (*\*gm/te/ies* = Skr. *gátayas*, Gr. *βάσις* from *\*βασε(ι)ες*).

Indog. tautosyllabic *ey*. Skr. *bódhāmi*, Gr. *πέθομαι*, Goth. *ana-biuda*, cpf. *\*bhēydhō* 'I watch, observe'; Lat. *dūcō* 'I lead', Goth. *tiuha* 'I draw'; O.Bulg. *skubā* 'I pull, tear', Goth. *af-skiuba* 'I shove off', Skr. *kṣóbhatē* 'falls in motion, wavers'. Indg. *\*kleu-men- \*kleu-my-to-*: Skr. *śrómata-* neut. 'the act of hearing' Avest. *sraoman-* neut. 'hearing', Goth. *hliuma* masc. (gen. *hliumins*) 'hearing' OHG. *hliumunt* 'renown'. Gr. *ῥέυμα* 'that which flows', O.Ir. *sruaim* (dat. pl. *sruamannaib*) 'stream', cpf. *\*srey-men-*. Gr. voc. *Zεῦ*, Indg. *\*d̥ey*.

§ 62. Aryan. Indg. *e* became *a* in the prim. Aryan period. This change however did not take place until after the vowel had changed the preceding *q*, *g*, *gh* into *c*, *j*, *jh* (§ 445). Skr. Av. *ca* O.Pers. *cā* (read *ca*) 'and': Lat. *que*. Skr. *pāñca* Av. *panca* 'five': Arm. *hing*, Gr. *πέντε*, Lat. *quīnque*, O.Ir. *cōic* from prim. Kelt. *\*kyenkue* (cp. § 212), Goth. *fimf*, Indg. *\*pénqe* 'five'. Skr. *śrāvas-* neut. 'renown', Av. *sra vah-* neut. 'word, prayer': Gr. *κλέψ-ος* 'renown', O.Bulg. *slovo* 'word' (§ 68), Indg. *\*kléu-os* (stem *\*kleu-es-*). Present stem Ar. *pat-a-* 'fly, fall' Skr. 3. sing. pres. act. *páta-ti* av. 3. sing. pret. act. *a-pata-ḥ* O.Pers. 3. sing. pret. mid. *a-pata-tā* (read *-ta*): Gr. *πέτεται*, Lat. *peti-t*. Skr. *pári* Av. *pairi* O.Pers. *pariy* (read *pari*) 'round, about': Gr. *πέρι*.

Indg. tautosyllabic *e<sub>2</sub>*, *ey* became *a<sub>2</sub>*, *ay* in prim. Aryan, thence Skr. *ē*, *ō*, Av. *aē*, *ōi*, *ao ēu*, O.Pers. *ai*, *au* (cp. §§ 126. 160). Skr. *ē-ti* Av. *aēiti* (= *\*aē-ti*, § 638) O.Pers. *ai-tiy* (read *aiti*) 'he goes': Gr. *εἶσι*. Skr. *bódhatē* Av. *baodāitē*: Gr. *πέθεται*, Indg. *\*bhēydhetai* from rt. *bheydh-* 'guard, watch, observe'. O.Pers. *dauštar-* 'friend', Skr. *jōṣṭár-* 'one who desires' from rt. *ḡey-* 'choose': cp. Gr. *γευστήριον* 'a thing to taste with, a cup'.

Rem. Av. final *aē* became *ē*, see §§ 78, 94. Here would have to be mentioned loc. sing. *aspē* beside *aspōi* and *aspaē-ca* (*-ca* = Gr. *τὲ*, Lat. *-que*) = Skr. *áśvē* (from Indg. stem *\*ekwo-* 'horse'), if *-a<sub>2</sub>*, the prim. Ar. ending of *o*-stems, arose from Indg. *-e<sub>2</sub>* (cp. *o<sub>2</sub>kei*). This, however, can also be traced back to Indg. *-o<sub>2</sub>*. Cp. § 116 and the accident.

For Av. *e*, *i*, *ē*, *o* from prim. Iran., prim. Ar. *a* = Indg. *e* see § 94.

§ 63. Armenian. *cer* 'old man': Gr. γέρον 'old man', Skr. *járant-* 'fragile, old man'. *eln* (gen. *elín*) 'stag': Gr. ἔλαφος (orig. form \**elq-bho-s*) 'stag', Cymric *elain* 'cerva', Lith. *éln-i-s* O.Bulg. *jelen-ĩ* 'stag', cpf. \**elen-*. *evñi* 'seven': Gr. ἑπτὰ, Lat. *septem*, O.Ir. *secht n-* (§§ 211, 243), Goth. *sibun*, Lith. *septyni*, O.Bulg. *sedmĩ*, Skr. *saptá*. *ev* 'and, also': Gr. ἐπι 'on, at', Skr. *ápi* 'also', cpf. \**épi*.

*e* became *i* before nasals. *hin* (gen. *hnoy*) 'old': Gr. ἔνοσ 'old', Lat. *sen-ior*, O.Ir. *sen* 'old', Goth. *sin-ista* 'the oldest (man)', Lith. *sėna-s* Skr. *sána-s* 'old', Indg. \**seno-s*. *cin* 'birth': Gr. γένος. *hing* 'five': Gr. πέντε.

Occasionally *a* is found instead of *e*, e. g. *tasn* 'ten': Gr. δέκα, Lat. *decem*. The circumstances under which *a* occurs for *e* have not been ascertained.

Indg. tautosyllabic *eĭ* appears as *ē* in final syllables, in other syllables as *i*. *dizem* 'I accumulate', orig. form \**dhéĭghō* (cp. Gr. τεῖχος 'wall', Av. *pairi-daeza-* 'fence'), aor. 1.sing. *dizi*, 3. sing. *e-dēz*. *lizem*, *lizanem* 'I lick': Gr. λείγω. *jūn* 'snow': Gr. χιμῶν.

Indg. tautosyllabic *eŷ* appears as *oi* in final, as *u* in non-final syllables. *lois*, gen. *lusoy*, 'light': Gr. λευκόσ 'white', Goth. *liuh-aþ* 'light'. *unain* 'empty' from \**oin-ain*: Gr. εὔ-νι-σ 'bereft'. *eŷ* probably in the first place became *ou*; cp. § 79 and *nor* (gen. *noroy*) 'new' as compared with Gr. νέφοσ, νε(φ)αρόσ.

§ 64. Greek. *ἔπεται* 'he is together with, follows': Lat. *sequitur*, O.Ir. *sechur* 'sequor', Lith. *seki* 'I follow', Skr. *sácatē* 'he is together with, follows', Indg. 3. sing. pres. mid. \**séq-e-tai*. 1. sing. *ēw ō*: Lat. *erō* (used as future), Skr. *ásāni*, conj. to Indg. \**és-mi* 'I am.' γένος neut. 'sex, race': Lat. *genus*, Skr. *jánas*, Indg. \**gėnos*. *πλέ(φ)ω* 'I sail, swim': O.Bulg. *plóna* 'I flow, sail' (§ 68), Skr. *plávatē* 'he swims, sails', Indg. 1. sing. act. \**plėŷ-ō*. *ἐγώ* 'I': Arm. *es*, Lat. *ego*, Goth. *ik*, Skr. *ahám*. Comparative suffix *-τερο-*: πό-τεροσ, ὠμό-τεροσ; Skr. *í-tara-s* 'other', Lat. *i-teru-m*, O.Ir. *luathi-ther* 'quicker', O.Bulg. *je-terũ* 'quidam'.

*λείπω* 'I leave': Goth. *leiþva* 'I lend', cpf. \**léĭq-ō*. ζεύγος neut. 'yoke': Lat. *jūger-o-* (cf. dat. abl. *jūger-ibus*) 'acre'. ζευκτηῆρες

'straps of the yoke' : Skr. *yōktár-* 'he who puts the harness on'.

In the Elean dialect *ε* was pronounced very open, as is seen through the representation of this sound on inscriptions by *α*, e. g. *σκενάων* gen. pl. beside *σκεύεα*, *εῦσαβέου* = Att. *εὔσεβοῖ*.

In the Locrian dialect *ερ* became *αρ*, e. g. *πατάρα* = *πατέρα*, *ἀνφόταρος* = *ἀμφοτέρως*.

In the Doric dialects, as well as in Lesbian, Thessalian, Pamphylian and Cyprian *ε* became *ι* before vowels, especially before *ο* and *α*, e. g. Lacon. *θιός* = *θεός*, Cypr. *Ἰέπιμα* = Ion. *ἔπειμα*, whilst *ε* in this case at least, was pronounced close in the Boeot. and Ionic-Attic dialects. This is shown by the representation of this short vowel by means of *ε*, *ει*, *ι* in Boeot. (e. g. *θεο-θειω-θιω-*) and by *ε*, *ει* in Ionic-Attic (e. g. *ἐαυτόν* and *εἰαυτόν* from *\*σε(F)αὔτων*, *ἐννέα* and *εννεία* from *\*ἐν-νε(F)α*).

The Indg. tautosyllabic *eĭ* in *λείπω* etc. was still a diphthong in Ionic and Attic at the beginning of the V. century B. C.; but during this century it became a close *ē* and in the III. cent. B.C. *ī*, though the spelling *ει* was retained. This change also took place in the other dialects, earliest in Boeot., where *ī* appears on inscriptions already in the V. cent. B. C. and *ει* was dislodged from the written language.

In Cret. *εν* became *ον* by the assimilation of the *ε* to the second component of the diphthong, e. g. *ψουδία* = *ψενδέα ψενδῆ*. *ερ* for *ευ* in Ionic can be traced back to the V. cent. B. C., e. g. *φεόγειν* (cp. *αρ* from *αυ* § 96).

§ 65. Italic. Lat. Falisc. Umbr. *estu*, Volsc. *estu* 'esto', Osc. *estud* 'esto': Gr. *ἔστι*, *ἔστω*. Lat. *decem*, Umbr. *desen-duf* (i. e. *de'senduf* see §§ 23. 387) 'duodecim', Osc. *dekkvīarim* 'dec-uriale'm': Gr. *δέκα*, O.Ir. *deich n-* fr. prim. Kelt. *\*deken* (§ 66), Goth. *taihun*, Lith. *dėszimt*, O.Bulg. *desetŭ*, Skr. *dāśa*. Lat. *en* (*en manom* 'in mortuum') *en-do*, *in in-du*, Umbr. imper. *en-etu* 'inito', Osc. *em-bratur* 'imperator', Pelign. abl. pl. *em-pratois* 'imperatis, iussu': Gr. *ἐν*, Goth. *in*. *e* in the perfect reduplication, O.Lat. *pe-pugī*, Umbr. *pe-purkurent* 'rogaverint', Osc. *fe-facid* 'fecerit': Gr. *πε-φύασσι* Skr. *ba-bhūva* from rt. *bheṃ-* 'to be, be-

come', O.Ir. *ce-chan* 'cecini' (cp. Lat. *canō*, *ce-cinī*), Goth. *raí-rōþ* (to pres. *rēda* 'I advise'). Lat. *pecu*, Umbr. *pequo* 'pecua': Goth. *faihu*, Skr. *páśu*, cpf. *\*péku* 'cattle'. Lat. Umbr. *et*: Gr. *ἔτι*. Lat. *mediu-s*, Osc. *mefiaí* loc. from st. *mefiā-* 'media': Gr. μέσσο-ς μέσο-ς 'medius', O.Ir. *medōn* 'the middle', Goth. *midjis* 'medius', O.Bulg. *mežda* 'medium, boundary', Skr. *mádhyas* 'medius', Indg. *\*médhjo-s* 'medius'.

Heterosyllabic and tautosyllabic Indg. *eu* became common Italic *ou*:

1. O.Lat. *tuos* 'tuus', Umbr. gen. *tover* 'tui', Osc. dat. *tuvai* 'tuae', prim. Italic *\*touo-s*: Gr. *τε(F)ός-ς*. O.Lat. *sovo-s* 'suus', Osc. abl. *súvad* 'sua', prim. It. *\*soyo-s*: Gr. *ἑός* from *\*σε(F)ός-ς*. Lat. *novem* (for *\*noven*, formed after the analogy of *septem*, *decem*, cp. § 233), Umbr. *nuvis* 'novies': Goth. *niun*, Skr. *náva*, Indg. *\*néuŋ* 'nine'. Lat. *novo-s*, Osc. acc. *Núvellum* 'Novellum' nom. pl. *Núvlanús* 'Nolani', Mars. dat. pl. *Novesede* 'Novensilibus', prim. It. *\*noyo-s* 'new': Gr. *νέφο-ς*. Lat. *plovēbat*, *perplovere*: Gr. *πλέ(F)-ω*. For *-u-* from *-ou-* in unaccented syllables, as *dēnuō* from *dē novō*, see § 172, 1.

2. Lat. *ducō dūcō* 'I lead': Goth. *tiuha*, cpf. *\*déukō*. *ūrō* 'I burn': Gr. *εῖω εῖω* 'I singe', Skr. *ōṣāmi* 'I burn', Indg. *\*éusō*. Cp. also O.Lat. *Polouces* (*l = ll*), later *Pollūcēs = Πολυδένκης*. Umbr. *totam* 'civitatem', Osc. *τωφο* 'civitas' *tovtad* 'civitate' *túvtíks* 'publicus', Marruc. *tovtai totai* 'civitati': Goth. *þiuda* 'people', cpf. *\*teutā-*. Osc. gen. *Lúvfreís*, Falisc. *loferta* 'liberta': Gr. *ἐλεύθερος*; concerning Lat. *loebertatem līber* see § 49 rem. On the history of this tautosyllabic It. *ou*, which fell together with Indg. *ou*, cp. § 81 page 77.

Rem. 1. The nature of the transmission and the historical facts of the language, as exhibited above, exclude any importance being attached to the form *Leucesie* in the Saliar hymn; cp. also Jordan Krit. Beitr. zur Gesch. der lat. Sprache 1879, p. 31 ff.

*e* remained unchanged in Latin:

1. Before *r*. *ferō*, *cōnferō*, *vertō*, *convertō*, *alter*, *alterius* with *r =* Indg. *r*; the form *lēvir* 'brother-in-law' arose through popular etymological association with *vir*, cp. Gr. *δᾶήρ* acc. *δᾶέρα*, Lith. *dēver-ī-s*. *gerō*, *ingerō*, *sceleris* with *r* from *s* (cp. § 569).

2. Finally. *luxe* : *λύκε*. *age agite* : *ἄγε ἄγετε*. *quīnque* : *πέντε*.

3. As a rule before double consonants: *scelestu-s*, *ob-sessu-s* (*ob-sideō*), *au-spex* (*au-spic-is*).

Change of *e* to *i*:

1. According to prim. Lat. accentuation in unaccented syllables (§ 680) followed by a single consonant (except *r*). *colligō* : *legō λέγω*. *ob-sideō* : *sedeō ἔδος*. *oppidum* : *Pedum πέδον*. *prō-tinus* : *tenu-s*. *agite agitō* : *ἄγετε ἀγέτω*. *agimīnī* : *ἀγόμενοι*.

Rem. 2. The *i* instead of *e* in *plicō* (Gr. *πλέκω*), O.Lat. *spiciō* (rt. *spēk-*) *miniscor* (rt. *men-*), and others, is to be explained from the fact that the form, which regularly arose in composition, made itself independent (*com-plicō*, *cōn-spiciō*, *re-miniscor*).

Rem. 3. *juven-em* with *-en-* instead of *-in-* was, perhaps, influenced by *juventūs juvenu-s* etc. *ap-petō*, *ex-petō* for *\*ap-pitō*, *\*ex-pitō* re-formed from analogy with the simple form *petō*, or else formed at a time when the activity of the law had died out according to which *colligō* etc. arose; cp. *ēquaerō* beside *exquirō*, *exaequō* beside *inīquo-s*, *conclausu-s* beside *conclūsu-s* etc.

2. Independent of accent, in closed syllables before nasals. *quīnque*<sup>1)</sup> : *πέντε*. *tinguō* : *τέγγω* 'I wet'. *in intus* : *ἐν ἐντός*. To which may be added *dīgnu-s* beside *decet*, as well as *līgnu-m*, *tīgnu-m*, in case they really are related to *legō* 'I gather, collect' and *τέχνη*; for *gn* was pronounced *ɲn* (§§ 500. 506). This change also affected *en* and *em* from *ɲ* and *ɲ̄* (§ 237), e. g. *vīgintī* : Dor. *ἑξήκτι*, *sim-plex* : *ἁ-πλάξ*. There are, however, in both cases many exceptions, the explanation of which is difficult, e. g. *offendimentu-m* (*fend-* = Indg. *\*bhendh-* and *-mento-* = Indg. *\*-m̄nto-*), supine *ventum* (= Skr. *gántu-m*, Indg. *\*gém-tu-m*), part. *in-ventu-s* (= Gr. *βατό-ς*, Skr. *gatá-s*, Indg. *\*gm-tó-s*). Cp. further *decem* (= Skr. *dáśa*, Indg. *\*dék̄m̄*) beside *undecim*.

For Lat. *-o-* from *-ue-* see § 172, 3.

Tautosyllabic *eī* seems to have still been a diphthong in Lat. at the period of the oldest monuments, cp. the spellings *deivos deiva*, *deico*, *feido* and others. The diphthong, however,

1) Concerning the long vowel in *quīnque*, *dīgnu-s*, *līgnu-m*, and *tīgnu-m* see § 619.

at an early date became an open  $\bar{i}$ , and the sign *ei* now became also employed for the representation of open  $\bar{i}$ -vowels (or close  $\bar{e}$ -vowels) of other origin (see §§ 41. 73).

In Umbrian and Oscan Indg. *e* was mostly represented by *e*. Besides the examples already mentioned, the following may be compared: Umbr. *petur-pursus* 'quadrupedibus', Osc. *petora* 'τέτταρα', Umbr. *co-vertu* 'convertito', *destram-e* 'in dextram', Osc. dat. Genetai 'Genitae' (to Lat. *genitor*). Beside these occurs also *i*, Osc. *i*, e. g. Umbr. *tisit* 'deceit', Osc. *ist* 'est' (beside *estud* 'esto'), *nistrus* 'propiores' (beside *nesimum* 'proximum'). Owing to the scarcity of the material it is impossible to decide whether the change to *i* (open) took place under certain conditions, unknown to us, or whether *e* had everywhere the same close pronunciation in Umbrian-Oscan, and that we have here to do with a mere irregularity of the graphic representation of the sound.

Tautosyllabic *ei* was represented in Oscan by *eí*, *ei* and (rarely) *ii*. *deikum* *deicum* inf. 'dicere'. *deivai* dat. 'divae', *deivatud* imper. 'iurato', *diivii* dat. 'divinae' (a derivative like Umbr. *deveia* 'divina'). *tereí* loc. 'in terra', cp. Gr. *οἴκει*. The spelling *ii* points to a passage of the diphthong into open  $\bar{i}$ . In Umbrian *ei* certainly became closed  $\bar{e}$ . *etu* *etu* 'ito'. *deveia* 'divina'. *destre* loc. 'in dextro', cp. Osc. loc. *tereí*.

§ 66. Old Irish. *e* was often retained as such in chief-accented syllables. *con-dercar* 'conspicitur': Gr. *δέρομαι* 'I see', from rt. *derh-*. *celim* 'I hide': OHG. *hilu* 'I hide', cpf. *\*kelō*. Gen. *meda* 'of mead', Skr. *mádhv* 'sweetness, honey', Gr. *μέθv* 'wine', OHG. *metu* 'mead', O.Bulg. *medŭ* 'honey', Indg. *\*médhv*. *ech*, Gall. *epo-* (in *Epo-rēdia* name of a town): Lat. *equo-s* Goth. *aihvā-* (in *aihvā-tundi* 'thorn bush') Skr. *áśva-s* Indg. *\*ekvō-s* 'horse'. *tech teg* 'house' from *\*tegos*: Gr. *τέγος*. *cethir* 'four': Gr. *τέτταρες*. Cp. further Gall. *πεμπέ-δουλα* 'quinquefolium': Gr. *πέντε*, Indg. *\*péteqe*.

In such cases as: gen. *eich* 'equi' from prim. Kelt. *\*ekvā* (-*i* still in Ogam inscriptions, as *maqui* 'filii', and in Gall. *Sego-mari* etc.): Lat. *equi*; 3. sing. pres. *as-beir* 'he brings forward,



says' from \*berit, prim. Indg. \*bheret; *deich* *n-* 'decem' from \*deken, Indg. \*dekm̄ (§§ 242. 243) the *i* after the *e* only indicates the palatal timbre of the following consonant, which had been produced through the palatal vowel of the next following syllable. In a corresponding manner the *u*-(*o*-)timbre of the following consonants is represented by *u* and *o* in the dat. sing. *neurt*, *eoeh* from \*nertō, \*ekyō (nom. *nert*, *ech*, stem *nerto-* 'power, might', *echo-* 'horse'; with *nerto-* cp. Gall. *Nerto-marus*, *Cob-nertus* etc.). See § 634. Under certain conditions chief-accented *e* became *i* before a following palatal vowel or *u*. *tige* fr. \*tegos, gen. sg. to *tech* 'house'. *as-bír* 'thou sayest' fr. \*biri(s), prim. f. \*bhere-s. *mid* 'mead' fr. \*medu, to gen. sg. *meda*, s. above. *as-bíur* 'I say' fr. \*biru, prim. f. \*bherō.

*e* in other than chief-accented syllables, in case it did not entirely vanish, (§§ 634. 657), became an irrational vowel, the quality of which adjusted itself mostly to the timbre of the following consonants.

*i*. *as-bérid* 'you say' = Gr. φέρετε. *is* 'est' always proclitic = Gr. ἐστὶ; the accented form would be \*eis.

*a*. *as-* 'ex' in *as-bérid*, *as-rénaim* 'reddo' and others beside *és-* (O.Gall. *ex-*, Cymr. *eh-*: Lat. *ex*, Gr. ἐξ) in *és-rechtaid* 'exlex' *és-orgun* 'a striking, killing' etc.

*u*. (*ni*) *épur* (fr. \*éd-bur) beside *as-bíur* 'dico' fr. \*beru, prim. Kelt. \*berō = φέρω. *cóm-mus* 'proportion, weight, worth' to *méss* 'measure, judgment' fr. \*messu-s (\*med+tu-s, to Goth. *mitan* 'to measure').

In forms like *só-nirti* adj. pl. 'strong, brave', *só-nirte* 'strength, power' compar. *só-nortu* 'stronger' beside *nért er* had first become *r*. S. § 634. In the later orthography *só-nairti* *só-nairte* beside *só-nirt* *só-nirte* *a* merely indicates the timbre of the preceding consonant. S. § 640.

Indg. and prim. Keltic tautosyllabic *e*<sub>1</sub> became *ē*, whence *ia*, if *a*, *o*, or *u* followed. *ad-fēded* 'narrabat', *ad-fiadat* 'narrant': Gr. *ἔειδομαι*, rt. *υεῖδ-*. Fut. 2. pers. pl. *for-tēsíd* 1. pers. pl. *for-tiasam*, to 1. sg. pres. *for-tiagaim* 'I help': Gr. *σείχω* *σείξω*, Goth. *steiga*. Voc. *dē* 'O God' from \*dē(ye) (Lat. *deive*), nom.

*dia* from \**dē(u)o-s* (Lat. *deivos*). On the 2. sing. *for-tēis* cp. § 640. *ē* = Indg. *eĭ* is to be held for prim. Kelt. Cp. *e. g.* Gall. *rēda* 'waggon' *Epo-rēdia*, O.Ir. *rēid* 'passable, free, even, smooth' Cymr. *rhwydd* 'prosper, expeditus' (st. \**rēdi-*), O.Ir. *riadaim* 'I drive, ride', rt. *reĭdh-*: OHG. *rītan* 'to move oneself away, drive, ride' and *be-reiti* 'ready, equipped' (the latter with rt. form *roĭdh-*).

Indg. tauto- and heterosyllabic *eu*. The Irish and British branch concurrently point to *ou*. This, before consonants, became in O.Ir. *ō*, whence probably in the first instance *ua*, when *a, o* followed; in British *u*. O.Ir. *tuath* Cymr. Bret. *tut* Corn. *tus* 'people' from \**tōtā*: Goth. *þiuda*, cpf. \**teytā*. O.Ir. *lōche* (gen. *lōchet*) 'lightning', *luach* 'white' in *luach-tē* 'whitehot': Goth. *liuhap* 'light', Gr. *λευκό-ς* 'white'. O.Ir. dat. pl. *srua-mannaib*, nom. sing. *sruaim* 'stream': Gr. *ῥεῦ-μα*, Indg. stem \**srey-men-*. In like manner we have *ō* from antesonantal *ou* in O.Ir. *nōi n-* 'nine' (beside Cymr. *naw* Corn. *naw* Bret. *nav nao*), fr. \**noyen*, Indg. \**nény* (cp. §§ 65. 174. 233); whereas *ū* in O.Ir. *clū* 'renown' = Gr. *κλέ-φος* and in *nūe* 'new' beside O.Bret. *nowid*, to Skr. *nāvya-s* (cp. §§ 139. 154).

Rem. If the change from *ō* to *ua* in O.Ir. was occasioned by an *a* or *o* in the following syllable, then such forms as nom. *sruaim* fr. \**srōmin*, dat. *tuait̄h* from \**tōtī* cannot have been formed according to law, but are merely due to a levelling with the forms of other cases.

*eu* is still found in Gall. in forms like *Teuto-matus*, *Leucetius* (Zeuss-Ebel G. C. 34 f.); beside these already also *Toutus* *Τουτιους* etc. (as quoted above). In like manner also *Nivella*, *Nivisium*, the *i* of which is also probably a direct continuation of *e*, but also already *Novesium* and *Novio-dūnum* 'New-castle' (as quoted above 56). The question is probably here a difference of dialect within the Gallic branch itself.

§ 67. Germanic. Indg. *e* became *i* in prim. Germ. in the following cases:

1. before nasal + consonant. Goth. O.Sax. Ags. *bindan* OHG. *bintan* O.Icel. *binda* 'to bind', 1. sing. Indg. \**bhéndhō*: Skr. *bāndhana-m* 'a binding' fut. *bandhiṣyá-ti* 'he will bind', Lat. *of-fendimen-tu-m* 'chin-cloth'.

Rem. 1. That this *i* made its appearance already in prim. Germ., is confirmed by the fact that the verb Goth. *rinna* OHG. *rinnu* 'I run', whose orig. form \**ri-nu-ō* contains Indg. *i*, and which belongs to Skr. *ri-nā-ti* 'lets flow, lets run', *ri-nā-tē* 'begins to flow' (Osthoff Morph. Unt. IV. 45), passed over into the series *binda* : *band* in its tense-formation in every Germ. dialect (pret. Goth. OHG. etc. *rann*). This could only have taken place, if the *i* in *bindan* etc. had already arisen.

2. In hetero- and tautosyllabic *eĭ*.

a. Nom. pl. Goth. *þreis* OHG. *drī* O.Icel. *þrīr* 'three' from \**þriĭ(i)z* \**þreĭez* : O.Bulg. *trĭje* (§ 68), Skr. *trāyas*, Gr. *τρεῖς* from \**τρε(ι)ες*, Indg. \**tréi-es*. Goth. *gasteis* OHG. *gesti* O.Icel. *gester gestir* 'guests' from \**zastiĭ(i)z*, \**zasteĭez* : O.Bulg. *gostĭje*, cpf. \**ghosteĭ-es*, cp. Skr. *āvay-as* (nom. sing. *āvī-ṣ*). Goth. *satjan* O.Sax. *settian* O.Icel. *setja* infin. 'to cause to sit, to set', 1. sing. Goth. *satja* from \**satiĭō*, \**sodéĭō*, causat. from rt. *sed-* 'sit' : cp. Skr. *sādāyā-mi* 'I make to sit, set', Gr. *φοβέω* 'I make to flee, scare' from \**φοβεĭω*.

b. Goth. *steigan* OHG. *stĭgan* O.Icel. *stīga* 'to climb', prim. Germ. 1. sing. \**stĭzō* from \**stĭĭzō* : Gr. *στειχω*, Indg. \**stéĭghō*.

Rem. 2. The great antiquity of this *i* is confirmed by the fact, that the present: Goth. *þeiha* OHG. *dĭhu* 'I extend', which in prim. Germ. had arisen from \**þinaxō*, older \**þenaxō* (= Lith. *tenkù* 'I reach out with something') (§ 214), gave occasion for the formation of the pret. form: Goth. *þáih* OHG. *dēh* etc. (after the analogy of preterites from such roots as *steigh-*). This was only possible, if the *i* in \**stĭzō* (goth. *steiga*) was already there.

3. When the following syllable contained a pre-Germanic *i(ĭ)* or *ī*. From 3. sing. \**esti* (= *ἔστι*) \**isti* : Goth. OHG. O.Sax. *ist*, Ags *is*. From 3. sing. \**bhereti* (O.Bulg. *bereti*, Skr. *bhárati*) \**beredi*, thence \**beridi* : Goth. *batriþ*, OHG. *birit*. Prim. Germ. \**lizĭana-n* 'to lie' : O.Icel. *liggja* O.Sax. *liggian* OHG. *likkan* : Gr. *λέχος* 'bed' rt. *leg-*. Prim. Germ. \**irþmaz* 'earthen' (OHG. *irdĭn*) beside \**erþō* 'earth' (OHG. *erda*) : Gr. *ἔρ-αζε* 'on to the earth'.

Rem. 3. We have also here a proof of the great antiquity of the *i*. The verb \**biđĭana-n* 'to beg' (Goth. *bidjan* O.Sax. *biddian* O.Icel. *biđja*), which belongs to Gr. *πείθω* 'I prevail upon, persuade' rt. *bheĭdh-*, would not have had *a* in the pret. of all Germ. dialects (3. sg. \**bađ(i)* Goth. *baþ* etc.), had not prim. Germ. \**lizĭana-n*, \**sitĭana-n* (rt. *sed-*) been pronounced with *i*.

4. Finally, *e*. g. 2. sing. imper. *\*fari* (Goth. *far*) from *\*fare* cp. Gr. ἄγε. Such an *-i*, like Indg. *i* (see 3) had influence upon a preceding *e*; hence 2. pers. pl. *\*fariði* (Goth. *fariþ* OHG. dial. *ferit*): Gr. ἄγετε; acc. *\*mi-ki* (Goth. O.Icel. *mik* OHG. *mih* 'me'): Gr. ἐμέ-γε, etc. Cp. Kögel in Paul u. Br. Beitr. VIII 135 f.

5. In isolated cases, where no reason for the change has yet been discovered, especially in unaccented syllables: *e*. g. Nominal suffix prim. Germ. *-iz-* = Skr. *-as-* Gr. *-εσ-* Lat. *-es-* (Goth. *ag-iz-a-* 'fear'). Cp. Paul's article in Paul-Braune's Beitr. VI 85, Osthoff Zur Gesch. d. Perf. 419.

The West Germanic dialects in general stopped at this point. An *e*, preserved in uninterrupted continuity from the Indg. prim. language, is retained *e*. g. in OHG. *beran* 'to bear' = prim. Germ. *\*berana-n* (Gr. φέρειν) and *reht* 'right' = prim. Germ. *\*rehta-z* (Gr. ὀρεκτός).

Rem. 4. The change of *e* to *i* through the influence of a following *u* is questionable. *E*. g. in OHG. 1. pers. sg. *biru*, *nimu*, to *beran*, *neman*. *situ* m. 'custom', probably to Gr. ἔθος 'custom'. *sibun* 'seven': Lat. *septem*. *hiruz* 'stag' fr. prim. Germ. *\*cherut-* (with anaptyctic *u*, s. § 628): Gr. κέρασ 'horn'. See Paul in Paul-Braune's Beitr. VI 78 f., Brate in Bezenb. Beitr. XI 185, Braune Ahd. Gramm. p. 19.

The *i* also of the root syllable in *biris*, *birit* etc. might only have been produced in West Germanic through the following *i*.

The Norse dialects have also such an old *e*, *e*. g. O.Icel. *bera* = OHG. *beran*.

On the other hand every *e*, which had remained in prim. Germ., became *i* in Goth. Then this *i*, through the influence of a special Gothic law, which also concerned *i* = Indg. *i* (§ 35), became *e* (*ai*) again before *r* and *h*. *niman* 'to take', as opposed to OHG. *neman* O.Icel. *nema* = Gr. νέμειν. *ga-vigan* 'to stir, move', as opposed to OHG. *wegan* O.Icel. *vega* 'to move oneself' = Lat. *vehere*. *fill* (neut.) 'hide' (in *þruts-fill* 'leprosy'), but OHG. *fel* Ags. *fell* O.Icel. *fjall* 'hide' from *\*fella-* *\*felna-* (§ 214) = Lat. *pellis*, Gr. πέλλα; but *batran* from *\*biran* = OHG. *beran*, *raihits* from *\*rihts* = OHG. *reht*. The forms *airþeins* = OHG. *irdin* 'earthen' and *ga-raihtjan* = O.Sax.

*rihtian* OHG. *rihtan* 'to judge' may serve as evidence to show that *baiṛan* and *raihts* had not an *e* which had been preserved in uninterrupted continuity through the influence of *r* and *h*. For it is scarcely possible to separate the *ai* in these forms from that in *airþa* 'earth' and *raihts* 'right'.

Indg. tautosyllabic *eμ* appears in Goth. as *iu*. *kiusa* 'I choose, test, select': Gr. γένομαι, cpf. \**gēys-ō*. *ana-biuda* 'I bid, command': Gr. πείθομαι, cpf. \**bhēydhō*. *þiuda* 'people': Osc. *tovtad* 'civitate', O.Ir. *tuath* 'people', cpf. \**teyṭā-*. In High German it became, before *a-*, *e-*, *o-* vowels, in the oldest period *eo*, then *io*, in all other cases *iu*. *deota diota* 'people', but *diutisc* 'popularis' (Goth. *þiudiskō* adv. 'ἔθνικῶς'). *reozan riozan* 'to weep' = Goth. \**riutan*: Skr. *rōdana-m* 'weeping' (noun), rt. *reyd-*. It is probable that the pronunciation *eμ* still existed generally in prim. Germ. and that *iμ* only arose at that time when there was an *i* in the following syllable, e. g. \**þiudiska-z* (OHG. *diutisc*) beside \**þeydō* (OHG. *deota*).

§ 68. Baltic-Slavonic. Lith. *vežù* O.Bulg. *vezq* 'I drive': Gr. Pamphyl. *Ἔχω* Lat. *vehō* Goth. *ga-viga* Skr. *vāhāmi*, Indg. \**uégħō* 'I move, drive'. Lith. *velkù* O.Bulg. *vlékq* from \**velkq* (§ 281) 'I draw, drag': Gr. ἔλκω (cp. § 164 rem.), cpf. \**uélqō*. Lith. *keturì* O.Bulg. *četyrije* 'four': Gr. τέτταρες Umbr. *petur-* O.Ir. *cethir* Skr. *catvār-as*. Nominal suffix *-ter-*, gen. pl. Lith. *mo-ter-ũ* O.Bulg. *ma-ter-ũ* 'matrum': cp. Gr. μη-τέρ-ες. Voc. sing. *vilké* O.Bulg. *vlūče* 'wolf': Gr. λύκε, Lat. *lupe*. Personal suffix of the 2. pers. pl. Lith. *es-te* *ěsa-te* O.Bulg. *jes-te* 'estis': cp. Gr. ἔστέ.

In Lith. *e* is mostly pronounced very open and in some southern and eastern dialects it regularly became *a*, when initial, e. g. *asù* = *esù* 'I am' (§ 666, 2).

Indg. hetero- and tautosyllabic *eμ* apparently became *oμ*, whence Balt. *aμ* (cp. § 84), already in the period of the Baltic-Slavonic prim. community.

a. Heterosyllabic: Lith. *av*, O.Bulg. *ov*. Lith. *tava-s* 'tuus', *sava-s* 'suis': Gr. τ(Ὶ)ός-ς, ἐ(Ὶ)ός-ς. O.Bulg. *novŭ* 'new': Gr. νέφο-ς. O.Bulg. *þlovq* 'I flow, sail': Gr. πλέ(Ὶ)ω. O.Bulg. nom.

pl. *synove* 'sons' from \**sūneŋ-es*: cp. Gr. ἡδέ(ς)-ες, Goth. *sunjus* 'sons' from \**sunijus* prim. Germ. \**suneŋ-ez* (§ 179), Skr. *sūnāv-as*. — Lith. *devyni* Lett. *dewīni* 'nine', Pruss. *newīnts* 'the ninth', O.Bulg. *devęti* 'nine' are to be explained as being formed from analogy with Lith. *dėszimt* O.Bulg. *desęti* 'ten'; we may observe also that the initial *d-* instead of *n-* cannot well be explained otherwise than as being borrowed from the word for ten.

Rem. 1. It is doubtful whether the *d-* of the Lith. and Lett. word for 'nine' was due to Slavonic influence and *neŋ-* was the right form in prim. Baltic, which was retained in Pruss., or whether already in prim. Baltic-Slavonic *deŋ-* took the place of *noŋ-* and the *n-* of the Pruss. form was borrowed from Germ. (cp. Bopp. Vergleich. Gramm. I<sup>3</sup> 76, Fick Wörterb. II<sup>3</sup> 588. 744, Brückner Litu-Slav. Studien I 80, Osthoff Morph. Unt. I 93).

b. Tautosyllabic: Lith. *au*, O.Bulg. *u* (fr. *ou* § 185). Inf. Lith. *pláu-ti* 'to rinse' O.Bulg. *plu-ti* (1. sing. pres. *plova*), supine Lith. *pláu-tu* O.Bulg. *plu-tū*: cp. Gr. ἔπλεν-σα, Skr. inf. *plōtu-m* (3. sing. pres. mid. *plāv-a-tē* 'he swims'). Lith. *raudmi* (an archaic pres. form, now *raudōju*) 'I lament, complain': Skr. *rōdi-mi* 'I lament, weep', Indg. \**rēud-mi* or \**rēuds-mi*. Lith. *raugiū* 'I belch': cp. Gr. ἐρέγομαι. Lith. *naūje-s* 'new': Goth. *niuji-s* 'new'. O.Bulg. inf. *sluti* 'to be called', supine *slutū*: Skr. inf. *śrōtu-m* 'to hear', to O.Bulg. *slovo* (stem *sloves-*) 'word': Gr. κλέφος Skr. *śrāvas* (neut.) 'renown'.

Heterosyllabic Indg. prim. Baltic-Slav. *eĭ* became *īĭ* in prim. Slav. and this *ī* was, in the period of Old Church Slavonic, lengthened to *i* (cp. § 36 page 37). O.Bulg. *vĭja* *vija*: Lith. *vejū* 'I turn, wind', Skr. *vāyāmi* 'I weave', Indg. \**uēĭō*. Nom. pl. *gostĭje*, *gostije* 'guests' (nom. sing. *gostĭ*) from \**gostēĭ-e(s)*: cp. Skr. *āvay-as* 'oves'. *triĭje* *triĭje* 'three': Skr. *trāy-as*, Indg. \**trēĭ-es*.

Indg. tautosyllabic *eĭ* appears in Lith. as *ei* and *ē*, in Slavonic as *i*. The course of development of the latter was \**eĭ*, \**iĭ* (\**īĭ*), *ī*, cp. the change of heterosyllabic *eĭ*. Lith. 1. sing. *eimī* 'I go', 3. sing. *eīti* (Pruss. *ēit*): Gr. εἶμι εἶσι; supine *eītu* O.Bulg. *itū*: Skr. inf. *ētum* from Indg. \**eĭ-tu-m*, rt. *eĭ-*. Lith. *szlei-va-s* *szlei-vi-s* 'having crooked legs' (Lett. *slēi-ja* 'stripe', *slēi-ju* 'I lean against'): Gr. κλει-τύ-ς, rt. *kleĭ-*. Lith. *vėida-s* 'face' O.Bulg. *vidū*

'looks' (noun), Lith. *vėizdžiu* 'I see' (for the *z* cp. § 547 rem.), O.Bulg. *viždq* 'I look' from \**viždq* (§ 147): Gr. *ἑίδομαι, ἑίδος*. Lith. *geidžiū* 'I long for', Pruss 3. pl. *geide* 'they wait', O.Bulg. *židq* 'I wait'. Lith. *deivj-s* 'idol' *deivė* (fem.) 'ghost' beside *dėva-s* (Lett. *dīvs*) 'god', Pruss. *deiwa-s* 'god': Lat. *deivos dīvus*. Lith. *žė-mà* (Lett. *fīma*) O.Bulg. *zi-ma* 'winter': Gr. *χειμα, χειμῶν*. Lith. *dė-nà* (Lett. *dīna*) 'day', Pruss. *dei-na-n* acc. sing. 'day' from a stem \**dej-n-* (\**dej-en-*) beside \**di-n-* (O.Bulg. gen. *dī-n-e* 'day's'). Lith. *snėga* (Lett. *snig*) 'it snows': Gr. *νίφει*, rt. *sneigh-*. Lith. *lėkù* 'I leave' (Lett. *līku* 'I lay'): Gr. *λείπω*, rt. *leiq-*. O.Bulg. *pišq* 'I write' from \**pīs-iq* (§ 147): Gr. *πέλω* 'I scratch' rt. *peik-*.

Rem. 2. The circumstances, under which *eī* at one time remained (*ei*) in Lith., and at another time became *ē*, have not been ascertained (cp. Mahlow Die langen Vocale A, E, O, page 143 f. and Osthoff Morph. Unt. IV 112). We are inclined to think that only circumflexed *ei*, e. g. in *eiti* 'to go' (cp. § 691), regularly became *ē* when the following consonant had not a palatal timbre, caused by an *é-* or *i-* vowel in the next following syllable (cp. the double forms *ē* and *ia* in Irish § 66); hence *dėvas* beside *deivys* *deivė*, *eimė* beside *lėkù*. The supine *eitu* instead of \**ētu* would have been formed after the analogy of *eiti*; *einù eina* 'I go' 'he goes' (instead of \**ēnù* \**ēna*) with *ei-*, because they were not formed until after this sound-law had ceased to operate. Such verbs as *lėžiù lėszti* 'to lick' = O.Bul. *līzq* (from \**līz-īq*) beside such as *geidžiù geisti* (Leskien Der Ablaut in Wurzelsilben im Litauischen p. 144 f.) present difficulties. For it is certainly hardly probable that the few forms as sup. *lėsztu* etc. could have extended their *ē* to the whole verb. Cp. the change *ai:ē* § 84 rem. 2.

*en, em* before explosives and spirants became *ē* in Slavonic e. g. *svetū* 'holy', *zėbq* 'dilacero, frigeo'. S. § 219.

### Indg. *ē*.

§ 69. Indg. *dhē-* 'set, lay': Skr. fut. *dhā-syāmi dhāna-* (neut.) 'position', Gr. fut. *θήσω*, Goth. *ga-dēps* (st. *ga-dēdi-*) 'deed, position', Lith. fut. *dė-siu* inf. *dė-ti*, O.Bulg. aor. *dė-chū* inf. *dė-ti*. Indg. *plē-* 'fill': Skr. part. *prā-tā-*, Arm. *li* (gen. *lioy*) 'full' from \**plē-īo-s*, Gr. *πλήρης* 'full' aor. *ἔπλησα*, Lat. *plē-nu-s im-plē-tu-s*, O.Ir. *līn* 'numerus, pars', O.Icel. *fleire fleiri* 'more' (from st. \**flē-īz-en-*, cp. § 614).

Optative suffix Indg. *-iē-* *-īē-*: 2. pers. sing. Skr. *s-iyā-s s-yā-s*,

Gr. εἶης from \**ēs-ιη-s*, Lat. *s-iē-s* from rt. *es-* 'be'. *-tē(r)* nom. sing. ending of *-ter*-stems: Skr. *mā-tā* Arm. *mair* from \**mā-tēr*  
 Gr. Dor. μᾶ-τηρ 'mother', Lith. *mo-tė* and *mó-tė* 'wife, married woman', O. Bulg. *mati* from \**mātē* 'mother'. *-ē* Indg. ending of the instr. sing. of *o*-stems: Skr. *uccā* 'above', Gr. Lacon. πῆ-ποκα 'usquam' or 'unquam', Goth. *pē* to *pā-* 'the', *hvē* to *hva-* 'who' 1).

Perfect stem Indg. *ēd-* from rt. *ed-* 'eat': Skr. part. *ād-i-vān*, Gr. ἐδ-ηδ-ώς, Lat. *ēd-imus*, Goth. *ēt-um*, Lith. part. *ēd-ēs*, O. Bulg. part. *jad-ū*. Imperfect stem Indg. *ēs-* from *es-* 'be': Skr. 1. sing. *ās-am* 3. sing. *ās*, Gr. 1. sing. Hom. ἦα 3. sing. Dor. ἦς, Indg. 1. sing. \**ēs-η* 3. sing. \**ēs-t*. Cp. § 114.

The tautosyllabic diphthongs *ēi* and *ēu* probably did not frequently occur in the prim. language. E. g. Imperfect stem Indg. *ēi-* from *ei-* 'go': 2. sing. Skr. *āiṣ*, Indg. \**ēi-s*. \**plēi-stó-* 'most': Gr. πλεῖστο-ς O. Icel. *flestr* (§§ 116, 611, 614). Nom. sing. Indg. \**dīēu-s* 'sky': skr. *dyāuṣ*, Gr. Ζεύς from Ζηϋς (§ 611).

§ 70. Aryan. 3. sing. pret. Skr. *á-dhā-t* Avest. *dā-p* O. Pers. *a-dā* from rt. *dhē-* 'put'. Skr. *vā-ti* Avest. *vāiti* 'it blows': Gr. ἄ(f)η-σι 'it blows', OHG. *wāan* 'to blow', Lith. *vė-je-s* 'wind', O. Bulg. *vě-je-tě* 'it blows', rt. *uē-*.

The change from *ē* to *a* took place in the prim. Aryan period, after the vowel (like Indg. *e*) had palatalised the preceding *g*-sounds, e. g. Skr. *-jāni-ṣ* 'wife, spouse': Goth. *qēns* (st. *qēni-*) 'wife', Indg. \**qēni-* (§ 445).

For Avest. *ē*, *ō*, *ā* from prim. Iran. prim. Aryan *a* = Indg. *e* see § 102.

§ 71. Armenian. *mi* 'that not': Skr. *mā*, Gr. Dor. μή. *mit* (Gen. *mti*) 'sense': Gr. μῆδος 'advice' μῆδομαι 'I contrive', O. Ir. *ro mīdar* 'iudicavi' (cp. § 314). *li* 'full', aor. 3. sing. *e-li-ç* 'he filled', Indg. *plē-* (§ 69). This *i* disappeared in non-final syllables. Besides gen. *mt-i* cp. further gen. *amsoy* 'of the month' beside nom. *amis* (*-s-* from *-ns-* § 202): Gr. Lesb. gen.

1) Skr. *uccā* is not a certain example for Indg. *-ē*, since it might also represent Indg. *-ō*. The *ē*-type must, at all events, be claimed for the prim. Indg. language. s. §§ 114. 115.



μῆν-ος (cp. § 72); *l-nu-m* 'I fill': Lat. 3. pl. *ex-plē-nu-nt*, O.Ir. *l̄-naim* 'I fill'.

The representation by *ē* in *αλυῆς* 'fox' beside Gr. ἀλώπηξ, Skr. *lōpāśa-* is uncertain (Hübschmann Kuhn's Ztschr. XXVI 603).

§ 72. Greek. ἵημι from \*σι-ση-μι 'I throw, jerk, send off' ἵ-μα 'a throw': Lat. *sē-men*, O.Ir. *s̄-l* 'seed', Goth. *mana-sēþs* 'mankind, world', Lith. *sėjū* O.Bulg. *sějα* 'I sow' *sē-me* 'seed', rt. *sē-* 'throw, sow'. μῆν, gen. μην-ός Lesb. μῆν-ος, 'month' (concerning nom. sing. μείς cp. § 611) μῆνη 'moon': Skr. *mās-* 'moon', Arm. *amis* (gen. *amsoy*) 'month', Lat. *mēns-i-s* (cp. however, § 612), O.Ir. *mī* (gen. *mīs*) 'month' (cp. §§ 212. 574), Goth. *mēna* 'moon', Lith. *mėnū* (gen. *mėnes-io*) 'moon', O.Bulg. *měsečī* 'moon' (cp. §§ 220. 221). ἦβᾶ ἦβη 'youth': Lith. *jėgiū* 'I am able'. Nom. *δυσ-μενής* 'evil disposed, hostile': Skr. *dur-manās* 'downcast, sad', cpf. \**dus-menēs*.

This η, which was probably pronounced open in prim. Greek, and which is marked as open *ē* in Lesb. by the spelling α (*αίμισεων*: Lat. *sēmi-* 'half'; *Αἰσιόδοος* = Dor. Att. *Ἡσιόδοος* Boeot. *Εἰσιόδοος*), became *ā* in Elean, e. g. *μά, εἶᾶ, πατᾶρ*, whereas in Boeot. and Thessal. it became closed *ē* which, after the introduction of the Ionic alphabet, was represented by *ει*, e. g. Boeot. *μεῖνα, πατεῖρ*, Thess. *ύστερο-μειννῖᾶ, εἶβᾶ*; the latter pronunciation can also be established for the Ionic dialects (§ 104).

§ 73. Italic. Lat. *fē-mīna* 'woman' *fē-lō* 'I suck', Umbr. *feliuf filiu* 'lactantes' *fel.* (abbreviation) 'filius': Arm. *di-em* 'I suck' (aor. *di-ec-i*), Gr. *θή-σατο* 'he sucked' *θη-λή* 'teat, nipple', O.Ir. *dī-nu* 'lamb', OHG. *tāan* 'to suckle', Lith. *dėlė* 'leech' *pirm-dėlyš* 'first-birth', O.Bulg. *dě-tę* 'infans', Skr. *dhā-trī* 'wetnurse'. Lat. *plē-nu-s*, Umbr. *plener* 'plenis': Gr. *πλή-ρης*. Lat. *mēns-i-s*, Umbr. *menzne* 'mense' (i. e. *mentsne* from \**mensne*, § 209), *se-menies* 'semenstribus': Gr. μῆν; for the Lat. *ē* cp. § 612. Lat. *rē-s*, Umbr. *re-per* 'pro re' abl. *ri* 're': Skr. *rā-s* 'wealth, treasure, kingdom'. Lat. *rēx rēg-is*, Osc. *regatureī* 'rectori', Marruc. *regen[a* dat. 'reginae': O.Ir. *rī* (gen. *rīg*) Skr. *rājān-* 'king'. Lat. *lēx lēg-is, lēgātu-s*, Osc. *ligud* 'lege' *ligatúis* dat. 'legatis', prim. Ital. stem *lēg-*. Lat. *diēs diem, diē-cula*, Osc.

*zi-colois* 'diebus' (to which probably also *djiikúlús* pl. 'dies'): cp. Skr. acc. *dyám* 'sky, day', Gr. Ζῆν (§ 188).

The fluctuation of the spelling *e, i* in Umbr. and *e, í, i, ei* in Osc. points to a close  $\bar{e}$ . Since orig. long *e* is represented on the tab. Bant. by *i*, and on the cippus Abell. by *í*, while the new  $\bar{e}$ , which arose from the lengthening of  $\check{e}$  on Ital. soil, is represented by *e*, we must conclude that the latter had a more open sound in Osc.

That Indg.  $\bar{e}$  had a close pronunciation also in Lat. follows from such spellings as *pleib[es]*, *leigibus* on inscriptions (see §§ 41, 65).

The  $\bar{i}$ , which arose from  $\bar{e}$  in Lat. *filius* (*fē-*), *suspiciō* (*spēc-*), *conviciu-m* (*vēc-*, rt. *ueq-* in *vocāre*) is by Osthoff, perhaps rightly, assigned to the influence of the following *i* ( $\check{i}$ ); cp. also *dē-lēniō* beside *dē-lēniō*, *sub-tilia*.

§ 74. Old Irish. In accented stem-syllables  $\bar{i}$ . *fīr* 'true': Lat. *vērū-s*, Goth. *tuz-vērjan* 'to doubt', O.Bulg. *věra* 'faith'. *mīl* 'animal': Gr. *μῆλο-ν* (Boeot. Thess. *μῆλο-ν*).

The other Kelt. dialects also present  $\bar{i}$  ( $\check{i}$ ), e. g. O.Cymr. O.Bret. *-ri* = O.Ir. *rī* 'rex', O.Corn. O.Bret. *quir* = O.Ir. *fīr* 'verus' and so also Gall.  $\bar{i}$  in *rīx* 'rex' (*Catu-rīges* etc.). The great antiquity of this sound-change would also be supported by the Germ. *\*rīk-* 'ruler' (Goth. *reiks*), if this, as it is believed to be, was borrowed from Kelt. *rīg-* in prim. Germ. times.

Rem. The form *Dubno-rex* beside *Dumno-rīx* (Zeuss-Ebel G. C. 20) is due to the influence of Lat. *rēx*.

Concerning the treatment of  $\bar{e}$  in secondary accented syllables see §§ 613. 634. 657.

§ 75. Germanic. Prim. Germ. open  $\bar{e}$ . Goth.  $\bar{e}$ , which was pronounced very close, as follows most clearly from the pretty frequent spelling *ei*, e. g. *qeins* beside *qēns* 'wife' (occasionally also *i*, e. g. *spidists* beside *spēdistis* 'the last'). German  $\bar{a}$ . This change to  $\bar{a}$  had its beginning in High German, where it is first found in Bavarian (about 170 A.D). From thence it was gradually extended to North Germany.  $\bar{a}$  was

established in Franconian in the seventh century, but in Saxon not until several centuries later. See Bremer in Paul and Braune's Beitr. XI p. 1 ff. *ā* is found in Norse already in the oldest runic monuments, e. g. *-marik* = Goth. *-mērs* (*váila-mērs* 'of good report'). I must leave the difficult question undecided as to whether Ags. *ǣ* and O.Fris. *ē* represent the retention of the prim. Germ. *e*-quality, or have passed through the intermediate stage *ā*. Bremer and Siebs (in the above named work p. 12 ff. and 226 ff.) accept the first theory.

Rem. 1. *ē*, in unaccented syllables, seems not to have undergone the change to *ā*, but to have retained its quality; unaccented prim. Germ. *ē* appears in OHG. OS. as *e*, and in ON. as *e*, *i*. See Bremer's article in the above named work p. 29 ff.

Goth. *mana-sēps* 'mankind, world', Ags. *sēd* O.Fris. *sēd* OHG. *sāt* OS. *sād* 'seed': Lat. *sē-men* O.Bulg. *sē-me* 'seed', rt. *sē-*. Goth. *ga-dēps* Ags. *dēd* OHG. *tāt* OS. *dād* 'deed': Gr. *θήσω*, Lith. *dē-siu* 'I shall place' rt. *dhē-*. Goth. *ga-rēdan* 'to reflect', Ags. *rēdan* O.Fris. *rēda* OHG. *rātan* OS. *rādan* O.Icel. *rāða* 'to advise': Lat. *rē-rī* 'to think' *rē-bar*. Goth. *nēpla* OHG. *nādala* 'needle', OHG. *nāan* 'to sew': Gr. *νήμα* 'yarn' *νήτρον* 'distaff', Lat. *nēmen* 'yarn, thread' *nētus* 'spun', rt. *snē-nē-* (§ 589, 3). OHG. *sāmi-* 'half' *sāmi-quek*: Gr. *ἡμι-βίος* Lat. *sēmi-vīvos* 'half-alive', Skr. *sāmi* adv. 'half', Indg. *\*sēmi*.

Concerning Goth. *ai* fr. Indg. *ē* in *saia* 'I sow' fr. rt. *sē-*, see § 142.

Rem. 2. Side by side with prim. Germ. open *ē* there existed also a close *ē*, which appears in Goth. also as *ē*, in OHG. as *ea*, *ia* (OS. *ē*. O.Icel. *ē*), as Goth. *hēr* OHG. *hear* *hiar* OS. *hēr* O.Icel. *hēr* 'here', Goth. *fēra* 'side, country, district', OHG. *feara* *fiara* 'side, part', OHG. *heaz* *hiaz* O.Icel. *hēt* 'I was called', OHG. *leaz* *liaz* O.Icel. *lēt* 'I left'. The origin of this prim. Germ. *ē* has not yet been satisfactorily explained. (cp. the chapter on Germ. strong preterites in the accident). The sound can scarcely be traced back in any case to an Indg. *ē*.

§ 76. Baltic-Slavonic. Lith. *spėju spēti* 'to have leisure, or time for a thing, to be quick enough', O.Bulg. *spēja spēti* 'to progress, to have success': Lat. *spēs* *spēr-āre*, Goth. compar. *spēdiza* 'later' OHG. *spāti* 'late'. Lith. *dėdė* 'uncle', O.Bulg. *dėdū* 'grandfather': Gr. *τήθη* 'grandmother' *τήθις* 'aunt'. O.Bulg.

*měra* 'measure': Lat. *mētior* 'I measure', Goth. *mēl* 'time' (O.Icel. *māl* 'measure, time', OHG. *māl* 'mark, sign'), Skr. *mātrā* 'measure'. Verbal stems in Lith. *-ė-* O.Bulg. *-ě-*, e. g. Lith. *sėdė-ti* O.Bulg. *sědě-ti* 'to sit': cp. Lat. *sēdē- sēdēre*.

Throughout the whole domain of Lithuanian *ė* is pronounced very close, and in some places can hardly be distinguished from *y* (*ī*).

In Slavonic the sound-combinations *kě*, *gě*, *chě*, *jě* passed into *čā*, (*d*)*žā*, *šā*, *jā* (cp. §§ 461—464. 588). O.Bulg. inf. *kričati* 'to scream' fr. \**krikēti*: *krikū* 'scream, cry'. *běžati* 'to flee' fr. \**běgēti*: *běgū* 'flight'. *slyšati* 'to hear' fr. \**slychēti*: cp. *sluchū* 'a hearing'. *stojati* 'to stand' fr. \**stojēti*.

In like manner initial *ě-* became *jā-*. *jastī* 'eats': Lith. *ėst(i)* 'eats like an animal', cp. Lat. *ēst*. *ėd-* became first \**jėd-*, as *jestī* fr. \**estī* = Gr. *ἔσσι* (§ 666, 1), then *jad-* as *stojati* fr. \**stojēti*.

Final *-ě* became *-i*. Nom. *mati* 'mother', = Lith. *motė* 'wife' Skr. *mātā* 'mother', cpf. \**matē*. cp. §§ 84. 665, 3.

### Indg. *o*.

§ 77. Indg. 3. sg. pf. act. Indg. \**de-dórĕ-e* fr. rt. *derĕ-* 'see': Skr. *dadárša*, Gr. *δῆδορξε*; Lat. *memordit momordit* 'he bit', Skr. *mamárda* 'he rubbed, ground' fr. rt. *merd-*; Goth. *band* Skr. *babándha* 'he bound' fr. rt. *bhendh-*; Gr. *γέγωνε* Skr. *jajāna* fr. rt. *ġen-* 'gignere'. 1. sg. pres. act. causat. Indg. \**dorĕkējō* 'let see' fr. rt. *derĕ-*: Skr. *daršáyāmi* 'let see', Goth. *ga-tarhja* 'mark'; Gr. *ὄξεω* 'let go, ride', mid. 'go, ride, swim', Goth. *vagja* 'move', O.Bulg. *vožq* fr. \**voziq* (§ 147) 'let go', Skr. *vāháyāmi* 'let go, run' fr. rt. *ueġh-*; Lat. *torreō* fr. \**torsejō* (§ 134) 'cause to dry up', Skr. *taršáyāmi* 'let thirst, languish', OHG. *derran* O.Icel. *þerra* 'to dry, wither' fr. prim. Germ. \**þarziġana-n* (cp. Goth. *ga-þairsan* 'to wither') fr. rt. *ters-*. Indg. *o* in the root syllable of nominal stems, and the *-o-* which serves to form nominal stems: Arm. suffix *-a-vor* (properly 'bearing, bringing', cp. Mod.HG. *-bar*) in *lus-á-vor* 'clear' (§§ 332. 485), Gr. *λευκο-φόρος*, cpf. \**bhorō-s*; Gr. Acc. *ὄχο-ν* 'waggon, carriage' O.Bulg. acc. *vožŭ* 'waggon, carriage',

cpf. \**uoǵho-m*; Lat. *procu-s* 'wooer' to *precor* 'I beg'; Goth. *dags* fr. \**ǰaza-z* 'day' (the flexional *-a-* retained in Norse runic inscriptions: *dagar*), Lith. *isz-daga-s* 'burnt out place' *dāga-s* m. (beside *dagà* f.) 'harvest' properly 'hot season, time', Skr. *dāha-s* 'burning, fire-brand' *nī-dāghā-s* 'heat, hot season, summer', Indg. \**dhogho-s* fr. rt. *dhēgh-* 'burn'; Skr. *tāna-s* Gr. *τόνο-ς* 'thread, string' from rt. *ten-* 'stretch out, extend': Skr. *vŕka-s* 'wolf', Gr. *λύκο-ς*, Lat. *equo-s lupu-s*, O.Ir. *fer* 'man' fr. \**uiro-s* (in Gall. still the prim. form of the ending, e. g. *tarvo-s* 'bull'), Goth. Acc. pl. *vulfa-ns* 'lupos', Lith. *vilkā-s* 'wolf', O.Bulg. dat. du. *vľuko-ma* to nom. sg. *vľukŭ* 'wolf'. Indg. pronominal stem \**to-* 'this, the', nom. acc. neut. Skr. *tā-d*, Gr. *τό*, Lat. *istu-d*, Goth. *þu-t-a*, O.Bulg. *to*, Indg. \**tó-d*. The so-called thematic vowel *-o-*, e. g. Indg. pres. stem \**bhero-* fr. rt. *bher-* 'carry, bear': 3. pl. Skr. *bhāra-nti* 1. pl. *bhāra-mas*, Gr. Dor. *φέρου-ντι φέρου-μες*, Lat. *vŕvo-nt feru-nt*, Goth. 3. pl. *baíra-nd* 1. pl. *baíra-m*, Lith. 1. pl. *vėža-me* (*vežù* 'I ride'), O.Bulg. 3. pl. *vezatŭ* fr. \**vezo-ntŭ* (§ 219) aor. 1. pl. *vezo-mŭ* (1. sg. pres. *vezq* 'ride'), *-os* Indg. suffix of the gen. sing. (beside *-es* in O.Bulg. *kamen-e* Lat. *patr-is*, § 81. rem. 1) : Gr. *πατρ-ός*, O.Lat. *patr-us*, O.Ir. *athar* fr. \**pater-os* or \**patr-os*.

Indg. \**októ* \**oktōy* 'eight' : Skr. *aṣṭā aṣṭāu*, Arm. *ut*, Gr. *ὀκτώ*, Lat. *octō*, O.Ir. *ocht* Goth. *ahtáu*, Lith. *aszttūni* O.Bulg. *osmŭ*. Indg. \**poti-s* 'master' \**potnī* 'mistress' : Skr. *pātnī* 'mistress', Gr. *πόσι-ς* 'husband' *πότινα* 'lady, mistress', Lat. *poti-s* 'capable, able', Goth. *brūþ-faþs* 'bridegroom', Lith. *pàts* 'husband', *vėsz-patis* 'sovereign master'. Skr. *ákṣi* neut. 'eye', Arm. *ač-k* pl. 'eyes', Gr. *ὄσσε* du. 'eyes' fr. \**ok<sup>h</sup>ǵe* (§ 489), *ὄψομαι* 'I shall see', Lat. *oculu-s*, Lith. *akī-s* 'eye', O.Bulg. *oko* neut. 'eye'. Indg. \**pró* 'before, in front, forth' : Skr. *prá*, Gr. *πρό*, O.Ir. *ro*, Goth. *fra-*, Lith. *pra-* O.Bulg. *pro-*. Personal ending of the 3. sg. mid. Indg. *-to* : Skr. *ābhara-ta*, Gr. *ἐφέρε-το*.

Indg. tautosyllabic *oi*. 3. sg. pf. Indg. \**uoid-e* 'he knows' : Skr. *vēda*, Gr. *ἴσθι*, Goth. *vait*; O.Bulg. *věniŭ* fr. \**véd-mŭ* 'I know' (the pf. personal endings have been replaced by the pres.) also represents the stem \**uoid-*; 3. sg. pf. Indg. \**le-lóiq-e* 'has

left' : Skr. *viréca*, Gr. *λέλοιπε*, Goth. *láiho*. Indg. pres. causat. \**uoǐdéo-* fr. rt. *ueid-* 'see, know' : Skr. *védáyāmi* 'I let know, communicate', OHG. *weizen* (prim. Germ. \**uaitiāna-n* 'to cause to know, prove'; O.Bulg. *béditi* 'to compel', Goth. *báidjan* OHG. *peittan beitan* 'to compel', cpf. 1. sg. pres. \**bhoǐdhéǐō*. Gr. *λοιπό-ς* 'remaining', Lith. *lėka-s* 'remaining single, odd' *āt-lėka-s* and *āt-laika-s* 'remnant, remainder' O.Bulg. *otū-lėkū* 'remnant' fr. rt. *leiq-*. Av. *kaenā-* fem. 'penalty, punishment', Gr. *ποινή* 'ransom, reward, penalty', O.Bulg. *cěna* 'pretium' (Lith. *kaina* according to Mikuckij in Geitler Fonolog. 38. 110), cpf. \**qoǐnā-* 'ransom' fr. rt. *qeǐ-*. Indg. nom. pl. masc \**toǐ* fr. stem *to-* 'this, the' : Skr. *té*, Gr. *τοί*, Lat. *istī* (cp. *poploe populī*), Goth. *þái*, Lith. *tė* O.Bulg. *ti*. The gen. sg. of *eǐ-*stems in Indg. *-oǐs* : Skr. *ávēš* (*ávi-š* 'ovis'), Goth. *anstáis* (*anstis* 'favour'), Lith. *akėš* (*akī-s* 'eye') O.Bulg. *paǐti* (*paǐti* 'way'). The optative of the thematic tenses with Indg. *-oǐ-*, 2. sg. \**bhéroǐ-s* (indic. 2. sg. \**bhére-si* 'thou bearest') : Skr. *bhárēš*, Gr. *φέρους*, Goth. *bairáis*, O.Bulg. *beri*, Lith. 3. sg. (permissive) *te-sukė* (*sukū* 'I turn').

Indg. tautosyllabic *ou*. 3. sg. pf. Indg. \**bhe-bhómdh-e* 'has waked, marked' : Skr. *bubódha*, Goth. *báuf*; Gr. Hom. *εὐλήλουθε* (with the added Attic reduplication) beside *ελεύσομαι* 'I shall come'. Pres. causat. Indg. \**bhoumdhéǐō* 'I cause to awake, wake, remind' : Skr. *bōdháyāmi*, O.Bulg. inf. *buditi*; Goth. *káusja* 'I taste, test', Skr. *jōšáyātē* mid. 'likes, finds pleasure in', Indg. 1. sg. \**ǵouséǐō*. The Gen. sg. of *eu-*stems in Indg. *-ous* : Skr. *sūnōš* (*sūnī-š* 'son'), Osc. *castrovs* (*castru-* 'fundus'), Goth. *sunáus* (*sunu-s* 'son'), Lith. *sūnaūs* (*sūnī-s* 'son') O.Bulg. *synu* (*synū* 'son').

§ 78. Aryan. Indg. *o*, in closed syllables and finally became *a* in the prim. Ar. period. 3. sg. pf. Skr. *tatákša* Av. *tataša* 'has made, created' fr. rt. *téks-* (cp. § 401), prim. f. \**tetókse*. Skr. *aštá* Av. *ašta* 'eight' : Gr. *ὀκτώ*. Skr. *bhára-nti* Av. *bara-inti* : Gr. Dor. *φέρο-ντι*. Skr. *ábhara-m* O.Pers. *abara-m* : Gr. *ἔφερο-ν*. Skr. opt. mid. *bhárē-ta* Av. *baraē-ta* : Gr. *φέρου-το*.

Indg. tautosyllabic *oǐ*, *ou* became in prim. Ar. *ai*, *au*, thence Skr. *ē*, *ō*, Av. *aē* *ōi*, *ao* *ēu*, O.Pers. *ai*, *au* (cp. §§ 126. 160).

1. *oǐ*. Prim. Ar. perfect stem \**uaid-* = Indg. \**uoǐd-* fr.

rt. *uejā-* 'see, know' : Skr. 3. sg. *vēda* 2. sg. *vēttha* Av. Gāp. *vaēdā vōisthā* : Gr. *οἶδε οἶσθα*. Prim. Ar. *\*ai-ya-* = Indg. *\*oḷ-yo-*, Av. *aeva-* O.Pers. *aiva-* 'unus' : Gr. *οἴ(F)ο-ς*. Prim. Ar. optative stem *\*bharay-* = Indg. *\*bheroḷ-* fr. rt. *bher-* 'bear' : Skr. 1. pl. *bhārēma* 3. sg. *bhārēt*, Av. 1. pl. *baraēma* 3. sg. *barōiḥ* : Gr. *φέρομεν φέροι*. Final *aē* became *ē* in Av. : *tē* nom. pl. 'hi' beside *taē-ca tōi* Skr. *tē* Gr. *τοί*, Indg. *\*toḷ* 'the, these', cp. O.Pers. *tyaiy* (read *tyai*) 'qui' fr. stem *\*tḷo-*. -

2. *ou-* Prim. Ar. causative stem *\*bhaydhāya-* = Indg. *\*bhaydhēyo-* fr. rt. *bheydh-* 'wake' : 3. sg. Skr. *bōdhāya-ti* Av. *baodāyēiti*, cp. O.Bulg. inf. *buditi*. Prim. Ar. *-auš* = Indg. *-oys*, the ending of the Gen. sg. of *eu-*stems, Skr. *sūnōṣ* 'fili', Av. *vayaoš* 'aëris', O.Pers. *kūrauš* 'Cyri'.

In Aryan *a* = Indg. *o* can still be distinguished from *a* = Indg. *e* (§ 62), in so far as *q*-sounds were not palatalised before it, e. g. prim. Ar. fem. *\*kaṇnā-* (Av. *kaēnā-* 'penalty') fr. Indg. *\*qoḷnā-* (cp. Gr. *ποινή*) beside prim. Ar. pres. 3. sg. mid. *\*caḷ-atai* (Skr. *cāyatē*) fr. Indg. *\*qeḷ-e-tai*. See § 445 ff.

Indg. *o* in open syllables probably became *ā* in the prim. Ar. period. Acc. sg. Skr. *pād-am* Av. *pāḍ-em* 'pedem' : Gr. *πόδ-α*. 3. sg. pf. Skr. *ja-jān-a* 'genuit' : Gr. *γέ-γον-ε*; Av. *da-dār-a* = Skr. *da-dhār-a* 'held fast', fr. rt. *dher-* (Lith. *deriū* 'I hire'). Causat. Skr. *dhārayāmi* Av. *dārayēmi* O.Pers. *dārayāmtī* (read *-mi*) fr. the same rt. *dher-*; Skr. *bhārayāmi* Av. *bārayēmi* fr. rt. *bher-* 'bear' : Gr. *φορέω*; Skr. *sādāyāmi* Av. *hādāyēmi* O.Pers. *hādāyāmtī* (read *-mi*) fr. rt. *sed-* 'sit' : Goth. *satja*. Skr. *jānu* 'knee' : Gr. *γόνυ*. 1. pl. Skr. *bhārāmasi* Av. *barā-mahi* 'ferimus', O.Pers. *ḫahyā-mahy* (read *-mahi*) 'dicimur' : Gr. Dor. *φέρο-μες*. Acc. sg. Skr. *āśmān-am* O.Pers. *asmān-am* 'stone' : Gr. *ἄκμων-α* 'anvil', cp. Goth. *ahman* 'spirit'; Skr. *tākṣān-am* 'carpenter' Av. *tašān-em* 'creator' : Gr. *τέκτων-α*; Skr. *svāsār-am* 'sister' : O.Ir. *siair* cp. Goth. *svistar*; Skr. *dātār-am* Av. *dātār-em* 'giver' : Gr. *δώτορα*; nom. pl. Skr. *nāpāt-as* Av. *napāt-ō* 'descendants, grand-children' : Gr. *νέποδες* (concerning *δ* instead of *τ* see § 327). Participial suffix Skr. Av. *-āna-* (Skr. *dādḥ-āna-* Av. *daḥ-āna-* fr. rt. *dhē-* 'set, do', Skr. *juṣ-*

-*ānā*- fr. rt. *ǵeus*- 'taste'): Goth. *-ana-* (*baúr-ans*, *gib-ans* etc.), perhaps also Gr. *-ovo-* (e. g. *Κρ-όνο-ς* = Skr. *kr-ānā-s* 'efficient, active', see Osthoff *Morph. Unt.* IV 374, and on the other hand Froehde *Bezenb. Beitr.* VII 322).

Rem. Some scholars, especially Collitz and Joh. Schmidt, dispute the validity of this sound-law and assume that Indg. *o* was in every case regularly represented by *a* in Aryan. I too am still far from considering my theory given above as mathematically certain (cp. *Morph. Unt.* III 129). But the difficulties, which it leaves unexplained, seem to me to be less and easier to dispose of than those which the hypothesis of Collitz and Schmidt presents. Nor does Collitz's latest treatment of the graded declensions (though containing certain acute ideas which further the subject) convince me of the validity of his standpoint, since among other things it leaves the distribution of *e* and *o* in the Germanic declension (*ahmins*, *ahmin* : *ahman*, *ahmans*) unexplained. Cp. the author's articles in *Stud.* IX p. 367 ff. p. 380 ff. and *Morph. Unt.* III 102 ff., Collitz *Bezenberger's Beitr.* XI p. 291 ff., X p. 2 ff., Joh. Schmidt *Kuhn's Ztschr.* XXV p. 2 ff., Osthoff *Morph. Unt.* I p. 207 ff., IV p. XV and pp. 226. 303. 368 ff., Hübschmann *Das Indg. Vocalsystem* 1885.

Concerning Av. *e*, *i*, *e*, *o* fr. prim. Iran. prim. Ar. *a* = Indg. *o* see § 94.

§ 78. Armenian. *ost* 'branch': Gr. *ὄζος* Goth. *asts* 'bough', cpf. \**ozdo-s*. *orb* 'orphan': Gr. *ὄρφo-* in the pl. compound *ὄρφo-βόται* (*ἐπίτροποι ὄρφανῶν*, Hesych.), Lat. *orbu-s*. The nominal suffix *-o-*: *mardo-* 'man', gen. *mard-o-y*, cp. Gr. *-o-ιο*, Indg. \**-o-sjo*.

*o* is often weakened to *u*, a process which may be regarded as regular for the combination of *o* with a following nasal + consonant. *-sun* in *ere-sun* 'thirty' etc.: Gr. *-ουπυ*. *hun* 'ford, way': Lat. *pons* 'bridge', O.Bul. *pqtī* 'way'.

Beside *o* (*u*) appears also *a*, without the special conditions for this representation being ascertained. *ač-k* 'eyes': Gr. *ὄσσε*, Lat. *oculu-s*. *at-ea-m* 'I hate': Lat. *od-iu-m*.<sup>1)</sup>

Indg. tauto-syllabic *oi* appears as *ai* in *ait-nu-m* 'I swell' *ait* (gen. *aiti*) 'cheek': Gr. *οιδάω οιδέω* 'I swell' *οἶδος* 'tumour', OHG. *eiz* 'ulcer'. By the side of this perhaps also as *ē*, which became *i* in non-final syllables, e. g. *mēg*, Gen. *migi* 'mist': Skr. *mēghā-* 'cloud'; *gini* 'wine': Gr. *οἴνο-ς*. It is not certain

1) Cp. now also Bartholomae *Ar. Forsch.* II 46.



whether  $\bar{e}$ ,  $i$  in these words (cp. Hübschmann Armen. Stud. I p. 60) do not rather represent Indg.  $e\bar{i}$  (cp. § 63).

Indg. tautosyllabic  $ou$  seems to occur as  $oi$  (thence  $u$  in non-final syllables) in  $\rho\acute{o}\iota\tau$ , gen.  $\rho\acute{u}\tau\omicron\upsilon$ , 'σπονδή',  $\rho\acute{u}\tau\alpha\mu$  'σπονδάζω'.  $oi$  ( $u$ ), however, can here and in other cases (Hübschmann Stud. I p. 62) be also regarded as representing Indg.  $eu$  (cp. § 63).

§ 80. Greek. Pf.  $\kappa\acute{\epsilon}\lambda\omicron\upsilon\phi\epsilon$  (instead of \* $\kappa\epsilon\lambda\omicron\upsilon\phi\epsilon$  after the analogy of  $\tau\acute{\epsilon}\tau\rho\omicron\phi\epsilon$  and others): Goth.  $hlaf$ , cpf. \* $qe-ql\acute{o}p-e$  'has stolen' fr. rt.  $ql\acute{e}p-$ . Causat.  $\sigma\omicron\beta\acute{\epsilon}\omega$  'I drive away, scare': Skr.  $ty\bar{a}j\bar{a}y\bar{a}mi$  'I bid one leave a thing', to  $\acute{\sigma}\acute{\epsilon}\beta\omicron\mu\alpha\iota$  'I step back before something, am afraid, reverence'; Skr.  $ty\bar{a}j\bar{a}mi$  'betake myself away, stand back from a thing'.  $\lambda\acute{o}\chi\omicron\varsigma$  'bed, couch, ambush'  $\acute{\alpha}\text{-}\lambda\omicron\chi\omicron\varsigma$  (fr. \* $\acute{\alpha}\text{-}\lambda\omicron\chi\omicron\varsigma$ , § 564) 'bed-mate, wife': O.Bulg.  $sq\text{-}log\ddot{u}$  'consors tori', fr. rt.  $leg\acute{h}-$ .  $\delta\acute{\upsilon}\varsigma\text{-}\pi\omicron\omicron\omicron\varsigma$  'hard to pass': Skr.  $du\check{s}\text{-}p\bar{a}ra-$ , fr. rt.  $per-$ .  $\acute{o}\lambda\kappa\acute{o}\varsigma$   $\acute{o}\lambda\kappa\acute{\eta}$  'a dragging, furrow': Lith.  $\acute{u}\check{z}\text{-}valka-s$  'over-coat, bed-cover', cpf. \* $\mu\omicron\lambda\omicron\varsigma$  fr. rt. \* $\mu\epsilon\lambda\omicron\varsigma$  (cp. § 164 rem.).  $\acute{\delta}\acute{o}\mu\omicron\varsigma$  'house': Lat.  $domu-s$  O.Bulg.  $dom\ddot{u}$  'house'.  $\acute{\alpha}\text{-}\omicron\omicron\sigma\eta\tau\eta\rho$  'helper' (§ 489): Lat.  $sociu-s$ .  $\acute{\rho}\omicron\phi\acute{\alpha}$   $\acute{\rho}\omicron\eta$  'stream', prim. f. \* $srou\text{-}\bar{a}$  fr. rt.  $sreu-$ .  $\phi\theta\acute{o}\eta$  'consumption, decline' fr. \* $\phi\theta\omicron\mu\text{-}\bar{a}$  fr. rt.  $\phi\theta\epsilon\iota-$  in  $\phi\theta\acute{\iota}\text{-}\omicron\varsigma$ .  $\acute{o}\sigma\tau\acute{\epsilon}\omicron\text{-}\nu$  'bone': Lat.  $os\ ossis$ , Skr.  $\acute{a}sth\bar{i}$  (neut.) 'bone'.  $\acute{o}\zeta\omega$  'I smell': Lat.  $odor$ . 2. du. impf. act.  $\acute{\epsilon}\phi\acute{\epsilon}\rho\epsilon\text{-}\tau\omicron\nu$ : Skr.  $\acute{a}bhara\text{-}tam$ , cpf. \* $\acute{\epsilon}\text{-}bhere\text{-}tom$ ; 3. sg. impf. mid.  $\acute{\epsilon}\phi\acute{\epsilon}\rho\epsilon\text{-}\tau\omicron$ : Skr.  $\acute{a}bhara\text{-}ta$ , cpf. \* $\acute{\epsilon}\text{-}bhere\text{-}to$ , fr. rt.  $bher-$  'bear'.

In Aeolic (Lesb., Thessal., Bæot.), Arcadian-Cyprian and Pamphylian  $o$  either became fully  $u$  or a sound approaching it (written  $v$ ), e. g. Thess.  $\acute{\alpha}\nu\bar{\nu}$  =  $\acute{\alpha}\nu\acute{o}$ , Arcad.  $\acute{\alpha}\lambda\lambda\upsilon$  =  $\acute{\alpha}\lambda\lambda\omicron$ , Pamph. gen.  $\text{Κουρασίων}\text{-}\nu\varsigma$  =  $\text{-}\omega\nu\text{-}\omicron\varsigma$ .  $o$  certainly did not undergo this sound-change in every sound-combination and word-position; the limits and conditions, however, under which it took place, cannot be precisely determined owing to the scarcity of monuments.

Tautosyllabic  $oi$ .  $\pi\acute{\epsilon}\pi\omicron\iota\theta\epsilon$  'trusts': Goth.  $b\acute{a}i\bar{p}$  'has waited for' (pres.  $beida$ ), cpf. \* $bhe\text{-}bh\acute{o}i\bar{d}h\text{-}e$ .  $\omicron\iota\nu\acute{o}\text{-}\varsigma$   $\omicron\iota\nu\acute{\eta}$ : Lat.  $oino\text{-}s$   $\bar{u}nu\text{-}s$ , O.Ir.  $oen$ , Goth.  $\acute{a}ins$ , Pruss. acc.  $\acute{a}ina\text{-}n$ , cpf. \* $\acute{o}\bar{i}\text{-}no\text{-}s$  'unus'. Loc. pl.  $\lambda\acute{\nu}\omicron\iota\text{-}\omicron\iota$ : O.Bulg.  $vl\acute{u}c\acute{\epsilon}\text{-}ch\ddot{u}$ , Skr.  $v\acute{f}k\bar{e}\text{-}\acute{s}u$ , Indg. \* $\mu\lambda\omicron\iota\text{-}su$ , stem \* $\mu\lambda\omicron\text{-}$  'wolf'.

o<sub>2</sub> became o<sub>2</sub> in Bœotian, e. g. Ἀριστί-θενο-ς inscript. of Tanagra (to θοίνη 'feast' fr. rt. *dhei-*, Skr. *dhi-nô-mi* 'I satiate'), thence *ū* in the third century B. C., Θύναρχο-ς, Φυλιά (= Φοικιά) and in the youngest Bœot. inscriptions beside *v* also *ei*, that is, *ī* or a sound closely approaching it, e. g. pl. ποίόμενει = ποιούμενοι (cp. τοί: Skr. *tē*, Goth. *þāi*). The change to *v* took place in the other dialects (but not before the second century A. D.) and led to the Mid. and Mod. Gr. *ī*.

Tautosyllabic *ov*. Hom. εἰλήλουθε 'has come' beside fut. ἐλεύσομαι. σπουδή 'zeal' beside pres. σπένδω. This diphthong became *ū* in Ionic and Attic in the fifth century B. C., but the spelling *ov* was retained. The diphthongic pronunciation may have remained longer in the other dialects. The representation in Cypr. is noteworthy: *o-vo* = *ov*, *a-ro-u-ra-i* = ἀρούραι.

§ 81. Italic. In the prim. Italic period *o* appears, with the exception of certain reductions in final syllables, to have been still unchanged in every sound-combination.

Lat. *totondit* 'has shorn' pf. to \**tendō* = Gr. τένω τένω 'I gnaw at'. Causat. *noceō* 'I injure' (Skr. *nāśāyāmi* 'I make to disappear, destroy') to *nex necis*. *procu-s* 'wooner' to *precor*. Abl. *pondō* 'by weight' to *pendo*.

The *o* in unaccented syllables, which in older Latin still remains unchanged (e. g. *fīlio-s*, *dōno-m*, *opos*), became *u*, except before *r* = *s* (§ 569) and after *u* and *u*: *fīliu-s*, *dōnu-m*, *opus*, *vehunt*, *tetulī*, *con-tulī*, *sēdulō* (fr. *sē-dolō*). *o* was retained before *r* = *s*, e. g. in *temporis* fr. \**tempoz-is* (a new form, in place of \**tempez-is*, after the analogy of the Nom. acc. *tempos*), and after *u*, *u*, e. g. in *vīvos*, *vīvom*, *vīvont*, *equos*, *sequuntur*, *mortuos*. The forms *vīvus*, *vīvum*, *vīvunt*, *mortuus* etc. (like *locus*, *legunt*), do not occur before the eighth century A. U. C., by which process *qu* (*ku*), *gu* (*gu*) passed into *c*, *g*.: *ecus* (gen. *equī*), *relin cunt* (1. pl. *relinquimus*), *ungunt* (1. pl. *unguimus*) etc. (cp. Bersu Die Gutturalen und ihre Verbindung mit *v* im Lat., Berlin 1885, p. 53 ff.).

*u* fr. *o* occurs also in chief accented syllables, especially before nasals. *uncu-s*: Gr. ὄγκο-ς 'bow, hook'. *uncia* older *oncia* 'ounce'

to Gr. ὄγκος 'mass, bulk'. *hunc* fr. older *honc*. *unguis* to Gr. ὄνυξ. *umbō* 'boss of a shield' and *umbil-īcu-s*, to Gr. ὀμφαλό-ς. In like manner *ursu-s* fr. \**or(c)so-s*, *mulctu-s* fr. \**molcto-s*, whose *or*, *ol* arose from Indg. *g*, *l*, § 295.

Final *-o*, like *-a* (§ 97), became *e*. Imper. *sequere*: Gr. ἔπε(σ)ο. Nom. *olle* (*ille* seems to be a new form after *iste*, *ipse*) fr. \**ol-se* (§ 571), *iste* a new form for \**is-se* (with *t* transferred from such forms as *istum istō*): the second component of these compounds is identical with Skr. *sá*, Gr. *ó* (Indg. \**so*), cp. the accidence.

Also in other cases *o* in unaccented syllables seems occasionally to have become *e*, *i*, that is, an irrational vowel, which appears after *i* and in closed syllables as *e*, and in other cases as *i*. *īlicō* fr. \**in slocō*. *hospes hospitis* fr. \**hos(t)ī-pit-* (§ 633) beside *potis sum* (*com-pos -potis*). *anni-culus* to *anno-*, *auri-fex* to *auro-*, *socie-tās* to *socio-*, *novi-tās* (Gr. νεό-της) to *novo-*. *legi-mus* = Gr. λέγο-μεν. It, of course, still remains to be determined in what relations this change stands to the *u* in *filius* etc. and for what reasons here the one, there the other course of variation was introduced; cp. § 680. The question might also be raised as to whether Indg. *e* does not occur in *anni-culus*, *auri-fex*, *socie-tās*, *novi-tās* and in *legi-mus*: *anni-culus* etc. like οἰκέ-της, *legi-mus*, new formation after *legi-tis* = Gr. λέγε-τε.

Rem. 1. The genitive suffix *-es -is* (*salūt-es salūt-is*) has not arisen from *-os -us* (*senātū-os, homin-us*). *-es* and *-os* were both old inherited forms (see p. 67).

Thurneysen Kuhn's Ztschr. XXVIII p. 154 ff. assumes the transition of *ov* to *av*, e. g. *caveō*: Gr. κο(φ)ίω 'I mark'; *cavo-s*: Gr. κόου 'excavations'; *lavō*: Gr. λόε 'he washed'. Cp. however, Hübschmann Das Idg. Vocalsystem p. 190.

The fluctuation of the orthography between *o* and *u* in the Umbrian-Samnitic dialects points to a close pronunciation of the *o*. Since the Umbr. *u* was the sign both for *o* and *u* (§ 23), the tables written in the national alphabet contribute nothing towards determining the quality of the *o*-sound; the tables written

in Lat. have both *o* and *u*. In Oscan *ú u*, *o u*. Umbr. *purka porca* 'porcas': Lat. *porcu-s*, Gr. *πόρκο-ς*, O.Ir. *orc*, OHG. *farh farah* (§ 277), Lith. *pařsza-s*, cpf. *\*porĥo-s* 'pig, suckling-pig'. Umbr. *uuf ovi* acc. 'oves': Lat. *ovi-s*, Gr. *ῶι-ς*, Goth. *avēpi* neut. 'flock of sheep', Lith. *avī-s*, O.Bulg. *ovī-ca*, cpf. *\*ovī-s* 'sheep'. Umbr. *curnac-o* 'cornicem': Lat. *cornīx* Gr. *κορώνη* 'crow', prim. st. *\*kor-en- \*kor-n-*. Osc. *pútiad putiā* 'possit' *putiāns* 'possint': Lat. *potis*, Gr. *πόσι-ς*. Umbr. *puř-e* 'quod', Osc. *púd pod* 'quod': Lat. Faliscan *quo-d*, Gr. *πο-*, Goth. *hva-*, Indg. *\*go-*. Nominal suffix *-o-* in Umbr. *puplu-m poplom* 'populum', Osc. *húrtú-m* 'hortum, templum', *dolo-m dolum* 'dolum', Volsc. *piho-m* 'pium': Lat. *dolo-m dolum*, Falisc. *vootu-m* 'votum'.

The diphthongs *oi* and *ou*.

Tautosyllabic *oi* in chief accented stem syllables became *oe*, *ū* in Lat. *oino-s oeno-s ūno-s*: Gr. *οινό-ς*, cpf. *\*oi-no-s* 'one'. *moini-cipio-m moenia mūnia*: Goth. *ga-main-s* 'common', Lith. *maīna-s* 'exchange', Gr. Sicel. *μοῖ-το-ς* 'requit'.

*oe*, *ī* arose in final syllables. Nom. pl. *poploe* (Saliar hymn), *plourumē* (C. I. L. I 32), *plūrimī*: Gr. *τοί, λύκοι*, Goth. *þái*, Indg. *-oi*, *\*toi* fr. stem *to-* 'the, this'. Cp. instr. pl. *\*ois*, *-oes* (*oloes*) *-īs* (*equīs*) fr. *\*-ōis* (§ 612). In like manner also *ī* in the monosyllabic nom. pl. *hī quī*, instr. pl. *hīs quīs*. *quī* and *quīs* may have originated from an unaccented position (*sī qui, āli-quī* etc.) and *hī* and *hīs* may be due partly to assimilation to *quī*, *quīs*, and partly to assimilation to the polysyllabic forms *illī*, *illīs*. Cp. also the nom. sg. *quī* fr. O.Lat. *quoi* (*goi* = *quoi* on the Dvenos-inscrp., cp. Bersu Die Gutturalen, Berlin 1885, p. 40) i. e. *\*quo* + particle *i* (*ī*).

Rem. 2. *oi* is also said to have become *ī* in chief accented syllables, when preceded by *v* or *l*: *vīdit oīde*, *vīnu-m oīno-s*, *vīcu-s oīco-ς*, *līquit lī-loipe*, *līber loebertatem* and others. This sound-change cannot, however, be accepted as definitely proved, since almost all examples under this category can also be easily explained otherwise. See Osthoff Morph. Unt. IV p. 129, Zur Gesch. des Perf. p. 191, Danielsson in Pauli's Altit. Stud. 4. 156 f.

Rem. 3. Why *ferēs*, which I (against Thurneysen Bezenberger's Beitr. VIII 269) consider equal to Gr. *φέρους* Goth. *batráis*, with *ē* and not *ī*? It is possible that *ē* arose regularly in the 1. sg. (O.Lat. *ferem*)

and 3. pl., and then from these two forms was extended to the other persons. I leave it undecided as to whether *-em*, *-ent* were the continuation of prim. Lat. *\*-oĭ-m*, *\*oĭ-nt* (cp. Gr. 1. sg. Att. *τρέφω*, 3. pl. Delph. *παρ-ίζου*, Goth. 3. pl. *bairáin-a*), or that of Indg. *\*-oĭm*, *\*-oĭ-nt*, which, according to Lat. sound-laws (§ 237), must, first of all, have become *\*-o(ĭ)em*, *\*-o(ĭ)ent*. It is also conceivable that *capĭēs* and *audĭēs* are regularly formed, but that *\*ferĭs* arose with the same contrast as that in which *sociē-tās* and *novi-tās* stand to each other. In that case *\*ferĭs* has been transformed to *ferēs* after the analogy of *capĭēs*; but then *mediĭ*, *mediūs* (*μέσσοι μέσοις*) must also be regarded as modifications of *\*mediē*, *\*mediēs* after *novī*, *novīs*.

In Umbrian *u* = *oĭ* whereas the Oscan-Sabell. monuments still present the diphthong, as to which it is certainly questionable, whether the written diphthong still existed everywhere as such in the language itself. Umbr. *unu* 'unum', Osc. *úin[itú]* 'unita'. Osc. *múinikad* abl. 'communi': O.Lat. *comoinis*. Umbr. *kuraia* 'curet', Pelignian *coisatens* 'curaverunt': Lat. *coirō coerō cūro* (the forms *coraveront* C. I. L. I 73 and *couraverunt* l. c. 1419 are very singular; in the latter *ū* was certainly meant), prim. Ital. stem. fem. *\*koisā-*. Cp. also the Osc. instr. pl. *Núvlanúis* 'Nolanis' *zicolois* 'diebus', Pelignian *suois* 'suis', Umbr. *veskles -is* 'vasculis': Lat. *oloes illīs*; Umbr., like Lat., indicates here a special manner of treating *oĭ* in final syllables.

Tautosyllabic Indg. *oy*, fell together with Indg. *ey* (§ 65) and is still only traceable in Osc. as diphthong: Gen. sg. *castrovs* fr. stem *castru-* 'fundus' (§ 77). In Umbr. *ō*: gen. *trifor* 'tribus'; *rofu* 'rubos': Goth. *rāuþs*, cpf. *\*roudhō-s*. *ū* arose in Lat., e. g. gen. sg. *fructūs*; pf. *fūdīt*: cp. Goth. *gáut* 'poured out' (pres. *giutan* 'to pour out'). By side of it also *ō*: *rōbu-s* = Umbr. *rōfo-*, gen. *domōs* = *domūs* (Augustus wrote *domos*); cp. also the inscrip. forms with (long) *o*, *losna* (= *lūna* fr. *\*louc-snā*, § 570), *poplicod* (beside *pouublicom publicus*), *nondinum* (beside *noundinum nūndinum*). It remains doubtful how this duality *ū* and *ō* in Lat. is to be estimated. It was hardly a mere graphic duality.

Rem. 4. In a number of Ital. words containing *oy*, it cannot be decided, whether this diphthong represents prim. Indg. *ey* (§ 65) or *oy*, e. g. in those containing *louk-* as Osc. gen. *Lúvkanateis* 'Lucanatis' *Luvkis Luvikis* 'Lucius', Lat. *Loucina Luucius* etc., fr. rt. *leuk-* 'illumine' (Gr. *λευκός* *λοῦσον*).

§ 82. Old Irish. In chief accented syllables *o*. *ocht* 'eight' : Gr. ὀκτώ. *roth* 'wheel' : Lat. *rota* 'wheel', OHG. *rad* 'wheel', Lith. *rāta-s* 'wheel'. *orc* 'pig' : Gr. πόρκο-ς. *gorim* 'I heat, warm, burn' : O.Bulg. *gorēti* 'to burn', Lith. *gāra-s* 'steam', fr. rt. *gher-*. Prep. *co n-* 'with' : Lat. *cum*, Umbr. Osc. *com*. It passes into *u* with the palatalisation of the following consonant : *suide* 'seat' fr. \**sodio-* = Lat. *soliu-m* (*l* = *d*, § 369), rt. *sed-* 'sit' (§ 640). Cp. also *mug* 'slave' fr. \**mogu-s* (Goth. *magu-s* 'boy, servant'), *ru-* beside *ro-* (Indg. \**pro* 'before, in front', p. 67), *cum-* beside *com-* *con-* (*co n-*, see above).

In secondary accented syllables *o*, so far as it did not entirely disappear (§§ 634. 657), became an irrational vowel, whose sound quality mostly regulated itself according to the timbre of the following consonant.

*a*. 1. pl. *as-béram* 'dicimus', 3. pl. *as-bérat* : Gr. φέρομεν, (Doric) φέροντι, ἔφερον, Goth. *baíram*, *baírand*; *-berat* may be middle = Gr. φέροντο, or it is, as Thurneysen thinks, to be regarded as the regular continuation of \**beront*, Indg. \**bheront* (*t* in the combination *nt* had not the same development as *t* in other cases in Irish, and we have no evidence that original *t* in the final combination *-nt* was dropped in Irish).

*i*. Gen. *biud* 'victus' fr. \**bi(y)otī*, to nom. *biad* fr. \**bi(y)oto-m* : Gr. βίωτο-ς Lith. *gyvatà* O.Bulg. *životū* 'life'.

*u*. Dat. *biud* (to the above named *biad*) fr. \**bi(y)otō*.

In forms like *cómarbus* 'cohereditas' beside *órpe* 'hereditas' (Goth. *arbi* neut. 'inheritance') *or* had first of all become *r*. S. § 634.

In the 3. sg. *ad-cón-dairc* (Gr. δέδορακε), *réraig* 'dixerit' (O.Icel. *rak*, rt. *reġ-*) *a* only indicates the timbre of the preceding consonant. See § 640.

Cp. Gall. *o* in *tarvo-s* 'bull' : Gr. ταῦρο-ς; νεμητο-ν neut. 'sanctuary' (O.Ir. *nemed n-*) : cp. Gr. ζυγό-ν; *epo-* 'horse' in *Epo-rēdia* = Lat. *equo-*.

In chief accented syllables Indg. *oġ* became *oē* (written *oe* and *oī*). *oen* 'unus' : Lat. *oino-s unus*. *cloen* 'oblique, unjust, bad' : Goth. *hlāins* 'hill', fr. rt. *klei-* 'lean, incline'. Before pala-

talised consonants *oi̇* for *oe*, e. g. *cloine* 'obliqueness, injustice'. Old *oi̇* may, therefore, have been retained here.

Rem. Beside *oe*, *oi* was also written *æe*, *ai*, e. g. *aen* 'unus' beside *oen*; *clain* nom. pl. of *cloen*; *maini* 'dona, pretiosa' (to Lat. *moenia, mūnia*).

In final syllables *oi̇* became *ī*, which disappeared and only left its traces in the palatalisation of the preceding consonant. Nom. pl. *eich* 'equi' fr. \**ekyī*, cp. Gr. *ἵπποι*, Lat. *poploe populī* (§ 657, 4). In Gall. inscrip. the nom. pl. still ends in *-oi*: *Tanotaliknoi*.

Indg. *ou* fell together with *eu* (§ 66). It became *ō*, whence later *ua*. *ruad* 'red', Cymr. *rhudd* Corn. *rudh* Bret. *ruz*: Goth. *ráuþs* (stem *ráuda-*), cpf. \**rouðho-s*; cp. Gall. *Roudu-s Ande-roudu-s*.

§ 83. Germanic. Pf. 3. sg. Goth. *varþ* OHG. *ward* O.Icel. *varð* 'he took a direction, became': Skr. *vavárta*, cpf. \**ue-uórt-e*, fr. rt. *uert-* 'turn'. Causat. Got. *us-vakjan* 'to awake', OHG. *wecchan*: Skr. *vājáyati* 'he urges on, drives on', cpf. 1. sg. \**uogéið*, fr. rt. *ueg-* 'be active, strong'. Causat. Goth. *fra-ward-jan* OHG. *far-warttan* 'to let perish, destroy': Skr. *vartáyati* 'lets something take a turning or course', cpf. 1. sg. \**uortéið*, fr. rt. *uert-*. OHG. OS. O.Icel. *band* (neut.) 'band, cord', prim. f. \**bhondho-m*, fr. rt. *bhendh-* 'bind', cp. Skr. 3. sg. pf. *babándha*. Goth. *gasts* OHG. OS. *gast*, O.Icel. *gestr* 'guest' Norse Runes *gastix*: Lat. *hosti-s* 'stranger, enemy', O.Bulg. *gostǐ* 'guest', cpf. \**ghosti-s*. Goth. *asts* OHG. *ast* (masc.) 'branch': Gr. *ῥοος*, cpf. \**ozdo-s*. Goth. *þat-a*, OHG. *daz*, O.Icel. *þat* 'that, the': Gr. *τό*, cpf. \**tó-d*.

Rem. 1. Indg. *o* fell indiscriminately together with Indg. *a* (§ 99) and Indg. *ə* (§§ 109, 110) already in prim. Germ. At this period *a* was used for the three vowels in chief accented syllables, in other syllables frequently or always *o*. The latter quality was still retained in Westgerm. in historical times: e. g. in the dat. pl. OHG. *worto-m wort-um* OS. *wordo-n wordu-n*, Ags. *wordu-m* fr. stem orig. \**uŕdho-* or \**uŕ-to-* 'word' (but Goth. *vaúrda-m*). See Paul's article in Paul-Braune's Beitr. IV p. 358 ff. and VI p. 186 ff. Since it has not been definitely settled for many syllables, whether *o* or *a* was spoken in prim. Germ., we write the prim. Germ. forms throughout with *a* according to the Goth. notation, an inexactness, which is of little importance for this comparative grammar.

Indg. tautosyllabic *o*. 3. sg. Goth. *vāt* OHG. *weiz* OS. *wēt* Ags. *wāt* O.Icel. *veit* 'knows': Gr. *οἶδε*. Goth. *láihw* OHG. *lēh* Ags. *lāh* 'he lent': Gr. *λέλοιπε*. Causat. Goth. *láisjan* (for regular \**láiſjan*, § 581) OHG. *lërran lëran*, OS. *lërian* 'to teach', beside Goth. *leisan* 'to learn', rt. *leis*-. Goth. *áins* OHG. *ein* OS. *ēn* Ags. *ān* O.Icel. *einn* 'one': Lat. *oino-s ūnu-s*. 2. sg. opt. Goth. *batráis*: Gr. *φέροις*. Gen. sg. Goth. *anstáis* (fr. *ansti*- 'favour'): cp. Lith. *akės* (fr. *aki*- 'eye'), Indg. ending *-ojs*.

Indg. tautosyllabic *ou*. Pf. 3. sg. Goth. *báup* OHG. *bōt* OS. *bōd* Ags. *beád* O.Icel. *baud* 'bade': Skr. *bubbōdha*, Indg. \**bhebhoudh-e*. Goth. *ráuþs* (st. *ráuda*-) OHG. *rōt* OS. *rōd* Ags. *reád* O.Icel. *rauðr* 'red': Gall. *Roudu-s* O.Ir. *ruad* 'red', cpf. \**roudhō-s*. Gen. sg. Goth. *sundáus* (fr. *sunu*- 'son'): Lith. *sūnaūs* (fr. *sūnu*- 'son'), Indg. ending *-ous*.

In the eighth century *a* became *e* in OHG., caused by a consonantal or sonantal *i* in the following syllable. *nerian* i. e. *nerjan* = Goth. *nasjan* (for regular \**naſjan*, § 581) 'to rescue', causat. to *ga-nesan* = Goth. *ga-nisan* 'to become healed', fr. rt. *nes*-, Gr. *véουαι*. Nom. pl. *gesti* (sg. *gast*) 'guests' = Goth. *gasteis* (sg. *gasts*, st. *gasti*-). This umlaut, however, was hindered by *r, l, h* + Consonant (see Braune in Paul-Braune's Beitr. IV p. 540 ff.), e. g. *far-warttan* 'destroy' (p. 77) dat. *nahti-m* 'noctibus' (st. *nahti*- = Lat. *nocti*- Lith. *nakti*-). But the *e*, which arose from this *i*-umlaut, differed from the *e* which arose out of prim. Germ. *i, e* (§§ 35, 67) not only in OHG. but also in MHG. and even in NHG.: the latter, also written *ě* by way of distinction, was open, the former close (J. Franck Zeitschr. f. deutsch. Altert. XXV 218 f., W. Braune Lit. Centralbl. 1884. column 124 f., Luick Paul-Braune's Beitr. XI 492 f.).

Prim. Germ. *ai* became *ei* (*weiz, ein*) except before *r, h, w* where it became *ē*: *lërran, lēh*.

Prim. Germ. *au* remained partly as diphthong, *au* and later *ou*, e. g. pf. *scaub scoub* = Goth. *skáuf* 'pushed' (pres. Goth. *skiuba*), *boug* = Goth. *báug* 'bent' (pres. Goth. *biuga*), and partly became *ō* viz. before dental consonants and *r, l, h* (= Goth. *h*), e. g. *bōt, rōt*, pf. *drōz* = Goth. *þrát* 'troubled' (pres. Goth.



*þriuta*), *trōran* 'to make to drop, spill' = Goth. *dráusjan* (for regular \**drauzjan*, § 581) 'make to fall, fell, throw' (causat. to Goth. *driusan* 'to fall'), pf. *zōh* 'drew' = Goth. *táuh* 'led' (pres. Goth. *tiuha*).

Quite independent of this change of *ai* and *au* to *ē* and *ō*, there was an older (prim. Westgerm.) reduction of the same diphthongs to *ē* and *ō*, which took place in unaccented syllables. Final *ē* and *ō* were shortened according to § 661, 6. OHG. *blinte* nom. pl. masc. 'blind', *blintēm* dat. (instr.) pl. 'blind' = Goth. *blindái*, *blindáim*, prim. Germ. \**blindai*, \**blindai-mi*. *berēs* 2. sg. opt. = Goth. *bairáis* (p. 78). *tage* dat. loc. sg. (to *tag* 'day') = prim. Germ. \**daʒai*, cp. Gr. loc. *οἶκoi* and dat. *οἶκω* (§ 659, 2. 3). *sunō* gen. sg. (to *sunu* 'son') = Goth. *sunáus* (p. 78).

Here belongs also OHG. *dē* 'the', *dēm* 'the' = Goth. *þái*, *þáim*, since the pronoun regularly suffered the change in those cases, where it was unaccented.

The forms *dia die* = *dē* and *deam diem* = *dēm* show that this *ē* = prim. Germ. *ai* was equivalent to the *ē* discussed in § 75 rem. 2.

Rem. 2. These OHG. (Westgerm.) sound-laws in like manner held good for Germ. *a* = Indg. *a* and Indg. *ǝ*. See § 99 and § 109.

§ 84. Baltic-Slavonic. Indg. *o* was *o* in the Baltic-Slav. unitary period, and generally remained *o* in Slav., whilst it became *a* in Baltic.

Lith. *tāka-s* 'path', O.Bulg. *tokŭ* 'course', to Lith. *tekù* O.Bulg. *teka* 'I run'. O.Bulg. *raz-dorŭ* 'rent, gap': Gr. *δορά* 'skin, hide', fr. rt. *der-* 'tear, flay'. O.Bulg. causat. *ložiti* 'ponere': Goth. *lagjan* 'to lay', fr. rt. *legh-* 'lay, make a bed'; *topiti* 'to heat': Skr. *tāpáyāmi* 'I heat', fr. rt. *tep-*. Lith. *naktŭ-s*, O.Bulg. *noštŭ* 'night': Lat. *nox noctis*, Goth. *nahts* 'night'. Lith. *avi-s* O.Bulg. *ovŭ-ca* 'sheep': Lat. *ovi-s*. Nominal suffix *-o-*: Lith. nom. sg. *viška-s* 'wolf', dat. pl. *višká-ms* O.Bulg. *vŭško-mŭ*, prim. Balt-Slav. st. \**uŭlko-* (§ 302) 'wolf': Gr. *λύκο-ς*. The thematic vowel *-o-*: Lith. 1. pl. pres. *nēsza-me* 'we carry', O.Bulg. 1. pl. aor. *neso-mŭ* 'we carried': Gr. *φέρο-μεν*.

*om*, *on* before consonants (except *ǰ*) generally appear as *a* in Slavonic. *zǰbu* 'tooth: Gr. γόμφο-ς 'plug, bolt', rt. *ǰembh-*. *blǰdǰ* 'error' beside *blǰdǰ* 'erro', rt. *bhlendh-*. *o* became *u* (*ǰ*) in final syllables before final nasal and before *-ns*. Thus Indg. *\*-o-m* (in the acc. sg. of *-o*-stems and in the 1. sg. pret.) became *\*-u-n* (§ 217) *-ǰ* (§ 219), as *vlǰkǰ* 'lupum', *nesǰ* 'I carried'; Indg. *\*-o-ns* in the acc. pl. (cp. Gr. Cret. κόρμους) became *\*-uns* whence further the *-y* of historical times, as *vlǰky* 'lupos' (§ 219). Final *-ǰ* = Indg. *\*-om* was lengthened to *y* before *j*, e. g. *dobrǰ-jǰ* and *dobry-jǰ* 'the good (man)' (*dobrǰ* is the accusative form, used as nom., see the accident), cp. § 36 p. 37.

In the same language *ǰo* became *ǰe*. Nom. acc. sg. neut. *ǰe* 'it': Gr. ὄ 'quod', Skr. *yá-d* 'quod', cpf. *\*ǰo-d*. Dat. pl. *konje-mǰ* fr. st. *konje-* fr. *\*konǰo-* 'horse', *mǰže-mǰ* fr. st. *mǰže-* fr. *\*mǰg-ǰe-* (§ 147), *\*mǰg-ǰo-* 'man', cp. dat. pl. *vlǰko-mǰ*.

In like manner *ǰ* influenced a following *a* in Lithuanian: *a*, in this combination and after consonants which have been palatalised by *ǰ*, is pronounced as an open *e* in many dialects, e. g. *kraǰjes* 'blood', pl. *kraǰeǰ* = *kraǰjas*, *kraǰjaǰ*; *svǰczes* 'guest', pl. *svǰczeǰ* = *svǰczias*, *svǰczaǰ*; dat. sg. *jǰm* 'him', instr. pl. *jǰs* = *jám*, *jaǰs*.

Rem. 1. Lith. *jǰ-s* 'he' is not equal to Gr. ὁ-ς Skr. *yá-s*, but stands to these in the same relation as Gr. τί-ς, Lat. *qui-s* stand to Skr. *ká-s* Goth. *hva-s*. Also *sǰi-s* 'this' (beside gen. *sǰið*) is not fr. *\*kǰo-s*, but like O.Bulg. *sǰ* 'this' = orig. *\*kǰi-s* (O.Bulg. gen. *sego*, dat. *semu* etc. for regular *\*šego*, *\*šemu* etc. fr. *\*sǰego* etc. after the analogy of the nom. *sǰ* and acc. *sǰ*). After the same manner as *jǰs* stands to gen. *jǰ*, dat. *jǰm* etc. are also to be explained nominatives sg. like *mǰdis* (gen. *mǰdǰio*) 'tree', whose *-i-* instead of *-ǰi-* is on the same level as the *-i-* in *gerǰs-is* (definite form to *ǰǰra-s* 'good'), and those like *ǰaidǰs* (Gen. *ǰaidǰio* 'cock', whose *y* arose from *iǰi* (§ 147). Indg. *i* was likewise contained in the final syllables of O.Bulg. nom. and Acc. *konǰǰ* 'horse' (st. *konje-*), Goth. nom. as *harǰi-s* 'army, host' (st. *harǰja-*) and *hǰirdeis* fr. *\*ǰirǰǰi-s* 'shepherd' (st. prim. Germ. *\*ǰirǰǰia-*), O.Lat. *Cornǰlis Cornǰlim*, *alis alim* beside *Cornǰlius*, *alius* Osc. *Kǰipǰis* 'Cipius', Umbr. *Trutitǰs* 'Truttǰdus'. To these may possibly be added the Greek proper names in *-is* beside *-ios* *-ias*, as Δǰμικ Δǰεινικ etc. Cp. §§ 120. 143. 219 rem. 1. 660 rem. 3 and the accident.

Indg. tautosyllabic *oi* appears in Lith. as *ē* and *ai*, in Slav. as *ě*. Lith. *snēga-s* 'snow' (beside *snaigalà*<sup>1</sup>) 'snow flake' *snai-gyti* 'to snow a little') Pruss. *snaygis* O.Bulg. *snēgū* 'snow': Goth. *snāivs* 'snow', cpf. \**snoigho-s*, fr. rt. *sneigh-*. Lith. *āt-lėka-s* and *āt-laika-s* 'remnant, rest' *laikyti* 'to hold', O.Bulg. *otū-lėkū* 'remnant, rest': Gr. λοιπό-ς, fr. rt. *leiq-*. Lith. *lairinti* 'to let rise', O.Bulg. *pri-lėpū* 'salve, grease': Gr. ἀλοιφή 'salve', fr. rt. *leip-stiek*, glue'. Lith. *maįszala-s* 'medley, compound' *maisyti* 'to mix', Pruss. *maysota-n* 'mingled', O.Bulg. *pri-mėsū* 'admixtio' *mėsiti* 'to mix', from rt. *meik-* (Gr. μεΐξίς), cp. § 414 rem. Lith. 3. sg. opt. *te-sukē* (*sukū* 'I turn'), O.Bulg. 2. pl. opt. *berēte* (*bera* 'fero'): Gr. φέροι, φέροιτε. Lith. *kėma-s* 'farm, village' *kaimyna-s* 'neighbour': Goth. *hāims* 'village', cpf. \**qoi-mo-s* (cp. O.Bulg. *po-koi* 'rest, repose'), fr. rt. *qei-*. Pruss. *waisei waisse* 'thou knowest', O.Bulg. *vēmī* fr. \**vēd-mī* and *vēd-ě* 'I know': Gr. οἶδε, Indg. pf. stem *uoīd-*. Lith. *pēmū* 'shepherd boy': Gr. ποιμήν. Lith. *staiğà* 'sudden' *staiğyti-s* 'hasten': Gr. στοῖχο-ς 'row', fr. rt. *steigh-* 'rise'.

Rem. 2. It is undetermined after what law *ē* and *ai* interchange in Lith. I conjecture that originally *ai* regularly remained only when the following consonants had a palatal timbre, which had been caused by an *é*- or *i*-vowel in the following syllable; in other cases *ai* became *ag*, then open *ē*, and later *ě*. Cp. e. g. *kaimynas* with *kėma-s*, *pá-saiti-s* (masc.) 'a binding thong' with *sėta-s* 'cord' (§ 100), and the numerous verbs in *-yti* as *laikyti* (*laikaū*, *laikiaū*, *laikysiu*). In this case *kaima-s* (another form of *kėma-s*) would be a new formation after *kaimynas*, and *laikaū* after *laikiaū* etc.; in the case of nouns like *āt-laika-s* 'remnant', *maina-s* 'exchange', the verbs in *-yti* and the like which exist side by side with them would come into consideration, etc. Only slurred ('geschliffen') *ai* (*aī*) seems to have undergone the change to *ě*, whereas *ai* (*dáikta-s* 'place, thing', *pa-láida-s* 'loose, slack') remained also before consonants having a labial timbre. Cp. *ē* and *ei* = Indg. *eī* § 68 rem. 2.

Slav. *ě* = Indg. *oi* and = Indg. *ai* (§ 100) are to be distinguished from *ě* = Indg. *ē* (§ 76) in historical times from the fact that before them *k*, *g*, *ch* do not appear changed into *č*, (*d*)*ž*, *š*, but into *c*, (*d*)*z*, *s*. Loc. pl. *vlūčechū* (*vlūkū* 'wolf'), *bo(d)zéchū* (*bogū* 'god') with the Indg. ending \**-oi-su*, cp. Gr.

1) Kurschat in Lith.-Germ. Diet. accents it thus *snaigala*.

λύκοισι Skr. *vŷkēšu*. Instr. sg. *tacémĭ*, instr. pl. *tacĕmi*, dat. pl. *tacĕmĭ* fr. *takŭ* 'talís'. Opt. 2. pl. *rĭcĕte* from *reka* 'I say', cp. Gr. *φĕροιτε*. Cp. §§ 461. 462. 463. 464. 588.

Final *ĕ* = Indg. *oi ai* mostly became *i*. Nom. pl. *ti*: Lith. *tĕ*, Gr. *τοί*, stem *to-* 'the'; in like manner *vlŭci*: Gr. *λίκοι*. Gen. sg. *paŭi* (*paŭi* 'way'): Lith. *akĕs* (*akĭ-s* 'eye'), Goth. *anstáis* (*ansti-* 'favour'), Indg. *\*-ois*. Opt. 2. 3. sg. *berĭ*: Gr. *φĕροις*, *φĕροι*, cpf. *\*bhĕrois*, *\*bhĕroit*. In the same way *-ĕ* = Indg. *-ĕ* became *-i* in the nom. *mati* 'mother' = Lith. *motĕ*, § 76.

Rem. 3. It remains undetermined why the loc. sg. had *-ĕ*, not *-i*, *vlŭcĕ* (cp. Gr. *οίκοι*, OHG. *tage* fr. *\*đazai* orig. *\*dhoghoi*). Cp. dat. loc. sg. *raĕĕ*, nom. acc. du. *raĕĕ* (§ 100) of *raĕa* 'hand', and 1. sg. *vĕd-ĕ* 'I know' with the personal ending of the Skr. pf. mid. *tutud-ĕ* fr. *tud-* 'push'. Cp. Leskien Die Declin. im Slav.-Lit. u. Germ. p. 53, Mahlow Die langen Vocale *A E O* p. 103 f., and Osthoff Zur Gesch. des Perf. p. 194.

Initial *ĕ-* = Indg. *oi- ai-* likewise became *i-*. *inŭ* 'unus': Lith. *v-ĕna-s* (§ 666, 1), Pruss. *aina-n* acc., Lat. *oino-s ūnu-s*. *iskati* 'to seek': Lith. *j-ĕszkóti* 'to seek', OHG. *eiscōn* 'to seek', a verb whose root is probably to be set down as *ais-*, not *eis-* (Osthoff Zur Gesch. d. Perf. p. 133); *iskati* certainly incurs the suspicion of being a Germanic borrowed word, see § 414 rem. Also here a difference is shown in comparison with Indg. *ĕ*. For this latter, when initial, became *ja-*, see §§ 76. 666, 1. Cp. further § 666 rem. 2.

Just as *\*io* became *ie* (see above), so also *\*ioi* became *\*iei* and further (by § 68) *ii*. Loc. pl. *jichŭ* (fr. st. *je-* 'he' fr. *\*io-*), *konjichŭ* (fr. st. *konje-* 'horse' fr. *\*konio-*) as opposed to *tĕchŭ*, *vlŭcĕchŭ*. Opt. 2. pl. *dĕjĭte* (*dĕja* 'I put'), as opposed to *berĕte*.

Indg. tautosyllabic *ou* as well as the *ou* (§ 68) which arose from *eu* in the Balt.-Slav. unitary period, appears in Lith. as *au*, and in Slav. as *u*. Gen. sg. Lith. *sŭnaŭs*, O.Bulg. *synu*: Goth. *sunáus*, Indg. *\*-ous*. Lith. *raudà* 'red colour', O.Bulg. *ruda* 'metal': Goth. *ráuþs* 'red', rt. *reudh-*. Lith. *naudà* 'profit, wealth, property': OHG. *nōz* O.Icel. *naut* (neut.) 'domesticated animal' to Goth. *niutan* 'to obtain, enjoy', rt. *neud-*. Lith. *raudà* 'lamentation': OHG. *rōz* (masc.) 'weeping' to *riozan* 'to weep', rt. *reud-*

Indg. *ō*.

§ 85. Indg. *jōs*- 'gird' : Av. *yāsta*- 'girded', Gr. ζωστός-ε 'girded' ζωστήρ 'girdle', Lith. *jū'sta* 'girdle' O.Bulg. *po-jasū* 'girdle'. Indg. *dō*- 'give' : Skr. fut. *dā-syāmi* 'dabo' *dā-na-m* 'donum', Arm. *tu-r* 'gift', Gr. δώ-σω δῶ-ρο-ν, Lat. *dō-nu-m*, *dōs dōtis*, Lith. fut. *dū'-siu* 'dabo' inf. *dū'-ti* 'dare', O.Bulg. *da-ti* 'dare' *da-rū* 'donum'.

The abl. sg. of *-o*-stems in Indg. *-ōd* : Skr. *vfkaḍ* (*vfka-s* 'wolf'), Gr. Locr. Cret. *ō* 'unde', Lat. *Gnainōd Gnaiō*. 1. sg. of stems with thematic vowel in Indg. *-ō* : Av. *manya* 'I think' fr. prim. Ar. *\*manyā* (§ 649, 1), Skr. *bhārā-mi* 'fero' (*-mi* was here newly added), Gr. *φέρω*, Lat. *ferō*, O.Ir. *as-biur* 'effero, dico' fr. prim. Kelt. *\*berō*, Goth. *baíra* 'fero' fr. prim. Germ. *\*berō*, Lith. refl. *sukū'-s* 'I turn myself'. Nom. sg. in Indg. *-ō(r)* : Skr. *svásā* 'soror', Gr. δώτωρ 'giver', Lat. *datōr dator*, O.Ir. *siur* Lith. *sesū* 'soror'.

The diphthongs *ōi* and *ōu* were probably not very often tautosyllabic in the Indg. prim. period. Dat. sg. of *-o*-stems in *-ōi* : Av. *haomāi* (*haoma-*, a plant), Gr. *ἰππῶ*, Osc. Abellanúí 'Abellano' Lat. *equō*, Lith. *vil̃kui* 'lupo'. Instr. pl. of the same stems in *-ōis* : Skr. *áśvāiṣ*, Gr. *ἰπποῖς* fr. *\*ἰπποῖς* (§ 611), Pelign. *enatois* 'gnatis, filii', Lat. *oloes illis* fr. prim. Ital. *-ōis* (§ 612), Lith. *vil̃kais* : Skr. *vfkaīṣ* (§ 615). Nom. sg. Indg. *\*gōu-s* 'bullock' : Skr. *gāūṣ*, Gr. *βοῦς* (§ 611). Loc. sg. Indg. *\*sūnōu* (nom. *\*sūnú-s* 'son') : Skr. *sūnāu*, O.Bulg. *synu*, Umbr. *manuv-e* 'in manu' (*v* was a glide as in *tuva* 'duo' and others, § 169), probably also Goth. *sunáu*, Lat. (dat.) *usū*. Indg. *\*oktōu* 'eight' (beside *\*oktō*) : Skr. *aṣṭāu*, Goth. *ahtáu*; *\*duōu* 'two' (beside *\*duō*) : Skr. *dvāu*, O.Ir. *dau dō*, older *dāu* (§ 645 final 1).

§ 86. Aryan. Skr. *āśú-ṣ* Av. *āsu-š* 'quick' : Gr. ὠκύ-ε, Lat. *oc-ior*. Skr. *dādā-ti* Av. *dadāiti* 'dat' : Gr. *δίδω-σι*. Nom. acc. du. in *\*-ō* (cp. § 645 final 1) : Vedic *hástā* Av. *Gāp. zastā* O.Pers. *dastā* 'both hands' : Gr. *ἰππῶ*, Lat. *ambō*. Imper. in *\*-tōd* : Skr. vedic *bhāratād* : Gr. *φερέτω*, Lat. *estōd estō*.

Concerning Av. *ē*, *ō*, *ā* = prim. Iran. prim. Ar. *ā* fr. Indg. *ō* see § 102.

§ 87. Armenian. The regular representation seems to have been *u*. *e-tu* 'I gave': Skr. *ádām. tur* 'gift': Gr. *δῶρο-ν*, rt. *dō-*. *hum* 'raw': Gr. *ὠμό-ς* Skr. *āmá-s* 'raw'; the initial *h-* has no etymological value. *šun* 'dog' fr. Indg. \**kūḍn*, Lith. *szun* (§ 92 rem.).

§ 88. Greek. *γνω-* 'perceive, know' *ἔγνω-ν γνω-τό-ς γνωῶ-μα*: Skr. *jñā-* 'perceive, know' fut. 3. sg. *jñā-syāti* partic. *jñā-tás*, Lat. *gnō-scō nō-tu-s*, OHG. *ein-chnuadil* 'insignis, egregius' *be-cnuodelen* 'to give a countersign', O.Bulg. inf. *zna-ti* 'know', *zna-me* 'sign'. Aeol. *πά-νω* 'I drink' pf. *πέπω-κα ἄμ-πωτι-ς* 'ebb-tide': Skr. *pāti* 'he drinks', *pána-m* 'drink', Lat. *pōtu-s pōtiō pōtor*, Lith. *pū'ta* (fem.) 'drinking-bout'. Acc. *βῶν* 'bovem': Skr. *gām* 'bovem', cpl. \**góm*, to nom. \**gōm-s* (§ 85). Derivative verbal stems in *-ō-*, *ύπνώ-σω ύπνω-τέον*: Lat. *aegrō-tu-s*, Lith. *sapniū-ti* 'to dream'.

In the Thessalian dialect *ω* passed into *υ* (*ov*): e. g. *ἔδουκε* = *ἔδω-κε*, *γνούμα* = *γνώ-μη*, *Ἀρίστον* = *Ἀρίστων*.

§ 89. Italic. Lat. *ō*. The fluctuation of the orthography between *o* and *u* in the Umbrian-Samn. dialects points to a close *ō* (cp. short *o* § 81): in Umbr. *u*, *o*, *u*, in Osc. *ú*, *u* (also *uu*, a proof for the length of the vowel), *o*, *u*. Lat. *dō-nu-m*, Falisc. *donum*, Umbr. *řunu*, Osc. *dúnúm*, d]uunated ('donavit'), Mars. *dunom*, Vestin. *duno*: Gr. *δῶρο-ν*. Lat. *pō-tu-s*, Umbr. *puni poni* abl. 'posca': Gr. *πέπω-κα*. Lat. *flōs flōris*, *Flōra*, Osc. *Fluusaí* dat. 'Florae', Sabin. *Flusare* 'Floralí': MHG. *bluost* (fem.) 'blossom, bloom' Ags. *blōstma* (masc.) 'flower', st. \**bhlōs*. Umbr. *ař-fertur-e ars-fertur-e* dat. 'adfertori, flaminí', Osc. *regatureí* dat. 'rectori' kenzsur *censtur* nom. 'censores', Umbr. *ařmune* dat. 'alimoni', Akeřunia- *Acersonia*- Osc. *Akudunnia*- 'Aquilonia-', Pelign. *Semunu* gen. 'Semonum', Lat. suffix forms *-tōr-*, *-mōn-*. Abl. sg. of *-o*-stems: Lat. *Gnainvōd*, Umbr. *poplu* 'populo' *somo* 'summo', Osc. *Búvaianúd* 'Boviano' *preivatud* 'privato', Volsc. *vinu* 'vino': Gr. Locr. Cret. *ῶ* 'unde'. Umbr.-Osc. nom. pl. of the same stems in *-ōs*: Umbr. *prin-vatus prinvatatur* 'legatí' *screihtor* 'scriptí', Osc. *Núvlanús*.

'Nolani': Skr. *vykāś* Goth. *vulfōs* 'lupi'. Imperatives in *-tōd*: Lat. *estōd*, Umbr. *fertu* 'ferito', Osc. *líkítud licítud* 'liceto', Pel. *petieđu* 'petito' (?), Volsc. *estu* 'esto': Gr. *ἔστω*.

The *ū* instead of the expected *ō* in Lat. *datūr-u-s quae-stār-a*, *fūr* = Gr. *φάρος* 'thief', *hū-c* beside *quō* (are they to be compared with *fāg-u-s* beside *equ-o-s*? § 81) and others (Corssen *Aussprache* II<sup>2</sup> p. 193 f.) is unexplained.

§ 90. Old Irish. In chief accented syllables *ā*. *gnāth* 'known, accustomed': Gr. *γνωτό-ς*. *blāth* 'bloom, blossom': OHG. *bluot* 'bloom, blossom', fr. st. *bhlē- bhlō-*, cp. Goth. *uf-blēsan -baiblōs* 'to blow up, make to swell', Lat. *flōs*. *lār* 'floor, ground': MHG. *vluor* Ags. *flōr* 'floor', to Gr. *πλη- πλω-* Lat. *plē- plō-* 'fill, swell, overflow'. *dā* 'two': Gr. *δώ-δεκα*, Skr. Ved. *dvā*, Indg. *\*dwo* 'two' (O.Ir. *dau do* = Indg. *\*dwo*, see § 85). Cp. also O.Cymr. *di-auc* 'segnem' (properly 'not quick'): Gr. *ὠκνός*; O.Cymr. *au* = *ā* (Zeuss-Ebel G. C. 93).

Rem. As to whether *ā* was also spoken in Gallic depends, so far as I see, upon the view taken of proper names in *-gnāto-s*. Zeuss-Ebel (p. 16) identify this word with O.Ir. *gnāth*, whereas Thurneysen identifies it with Lat. *gnātu-s* (*Cintugnātus* 'first-born', Keltoroman. p. 2).

In final syllables *ō* passed into *ū*, and became shortened. 1. sg. pres. *no guidiu* 'I beg' *biu* 'I am': cp. Gr. *καίω* etc. Nom. sg. of *n*-stems, *air-mitiu* 'reverentia' (acc. *air-mitin n-*): Lat. *mentiō*. Dat. (instr.) sg. of *-io*-stems, *cēliu* 'socio': Lat. *modo* (adv.). Voc. pl. *a fīru* 'o viri' fr. prim. Kelt. *\*uirōs*: Goth. *vairōs*, Osc. *Núvlanús* 'Nolani'. In *as-biur* 'effero, dico' fr. *\*biru* *\*berō*, *fūr* 'viro' fr. *\*viru* *\*virō* this vowel is still reflected only in the labial timbre of the consonant which preceded the once present *u* = *ō*. Cp. on *ō* in unaccented syllables also §§ 613. 634. 657, 2. 6. 7.

§ 91. Germanic. In prim. Germ. *ō*. Goth. *flōdu-s* OHG. *flōt float fluat fluot* OS. Ags. *flōd* O.Icel. *flōð* 'flood, tide': Gr. *πλωτό-ς* 'swimming', Lat. *plōrāre* (cp. Hom. *δάκρον πλώειν τ 122*). Goth. *fōdr* neut. 'sheath', OHG. *fōtar fuatar fuotar* 'case': Gr. *πῶμα* 'lid, cover', Skr. *pā-tra-m* 'vessel, receptacle'. Goth. *fōtu-s* OHG. *fōz foaz fuaz fuoz* OS. Ags. *fōt* O.Icel. *fōtr* 'foot': Gr. Dor.

nom. sg. πός 'foot'. Goth. *sai-sō* pf. 'sowed' : Gr. ἀπέωκα, ἀν-έωνται, Heracl. ἀν-έωσθαι, pf. of ἀφίημι ἀνίημι fr. rt. *sē*- 'throw, sow'. OHG. *spuot* OS. *spōd* 'success, speed' fr. *spē*- : *spō*-, cp. the ablaut grade *spē*- in Goth. *spē-diza* 'later' Lith. *spē-ti* 'to be at leisure' (§ 76). O.Icel. *ōss* (masc.) 'estuary' : Lat. *ōs* *ōris*, *ōstiu-m*. Nom. pl. Goth. *vulfōs* 'lupi' : Osc. Nývlanús 'Nolani'.

Indg. *ō* and *ā* fell together in *ō* in the prim. Germ. period, and were therefore similarly treated in all Germ. dialects. Cp. § 107.

Goth. *ō* was a close sound approaching closely to *ū*, hence it is occasionally also written *u*.

In OHG. *ō* is only retained in the oldest monuments. This became first of all *oa*, *ua*, and then later *uo*, which, from about the year 900, became the universally predominant form. This change of *ō* to *oa* etc. did not take place in unaccented final syllables.

Prim. Germ. final *-ō* became *-a* in Goth. and *-u* in HG. : Goth. *bai-ra* OHG. *biru* = Gr. γέρω. Prim. Germ. *-ōn* became *-ō* in Goth. and *-o* in OHG. : Goth. nom. *raþjō* 'number, account', OHG. *hano* 'cock'. See §§ 659—661.

§ 92. Baltic-Slavonic. Slav. *ā*, Lith. (Lett.) *ū*. Lith. *dū-ti* O.Bulg. *da-ti* 'to give' : Lat. *dōs* *dōtis*. Lith. *jū's-ta* O.Bulg. *po-jas-nŭ* 'girdle' : Gr. ζαστό-ς ζώ-νη. Lith. *nū* 'of, from', O.Bulg. *na* 'on, up' : Gr. ἄνω. Nom. acc. du. masc. of *-o*-stems : Lith. *gerū'-ju* 'the two good (men)' (Nom. sg. *gerās-is*), O.Bulg. *vlŭka* (nom. sg. *vlŭkŭ* 'wolf') : Gr. λύκω. Lith. *ū'džiu* 'I smell, scent' : Gr. ὠδ- in pf. ὀδ-ωδα, ὀσ-ώδης. Lett. *snūts* 'son-in-law' : Gr. γνωτό-ς 'relation, brother'.

In Lithuanian this vowel, when it had the broken ('gestossen') accent, became *u* in final syllables. *gerū* 'ἀγαθῷ' beside *gerū'-ju* 'τῷ ἀγαθῷ'. *sukū* 'I turn' beside the refl. *sukū'-si* *sukū'-s* cp. § 664, 3.

In both sections of this branch final *\*-ōm*, *\*-ōn* became *\*-ūn*, whence Lith. *-u*, O.Bulg. *-y*. Lith. gen. pl. *dėvū* (which properly ought to be written *dėvū̃*), in dialects still *dėvunə* (fr. *dėva-s* 'god'), orig. form *\*dėiūōm*, Skr. Ved. *dėvām*, cp. § 218.



O.Bulg. nom. sg. *kamy* 'stone' (st. *kamen-*) fr. \*-*mōn* : cp. Gr. ἄκ-μων 'anvil', OHG. *hano* (prim. Germ. \**χανōn*) 'cock', Goth. *raþjō* (prim. Germ. \**raþjōn*) 'number, account'. The participle *bery* 'ferens' can quite as well be considered equal to Gr. φέρων as to Skr. *bhāran* fr. \**bheront-s*. (§§ 84. 219).

Rem. Lith. *szū* 'dog', *akmū* 'stone' have the same formation as Lat. *homō*, Goth. *guma* fr. prim. Germ. \**zumō*, Skr. *āsmā*, cp. also Pruss. *smoy* = Lith. *žmō* 'man'. On the other hand the dial. form *szun* (beside *szū*) is a formation in *-ōn* (cp. Armen. *šun* Gr. *κίων*).

### Indg. *a*.

§ 93. Indg. \**ājō* 'I drive, lead' (rt. *ag-*): Skr. *ājāmi* Arm. *acem*, Gr. ἄγω, Lat. *agō*, O.Ir. *agim*, O.Icel. inf. *aka*. Indg. \**āgrō-s* 'field, acre': Skr. *ājra-s*, Gr. ἀγρός-ς, Lat. *ager*, Goth. *akrs*. Skr. *ākṣa-s* Gr. ἄξων Lat. *axi-s* OHG. *ahsa* Lith. *aszū-s* O.Bulg. *osŭ* 'axle'. Indg. \**aliō-* 'alius': Armen. *aīl*, Gr. ἄλλο-ς, Lat. *aliu-s*, O.Ir. *aile*, Goth. *alji-s*. Skr. *āpa* Gr. ἄπο Lat. *ab* Goth. *af* 'of, from, by'. Skr. *mādātī* 'undulates (of water), is drunk, drinks immoderately', Gr. *μαδάω* 'I am wet', Lat. *mādeō* 'I drop with wet'. Voc. sg. of *ā*-stems in Indg. *-a*: Skr. *āmba* 'O mother', Gr. *νύμφᾶ δέσπορα*, O.Bulg. *ženo* 'O wife'. Suffix of the instr. sg. *-a*: Skr. gerunds in *-y-a* and *-ty-a*, e. g. *ā-gām-y-a* *ā-gā-ty-a* 'by approaching', Gr. *πεδ-ά* (§ 311), *παρ-ά*, *ἄμ-α*, Lat. *ped-e*.

Indg. tautosyllabic *aj*. Skr. *ējha-s* 'fire-wood', Gr. *αἶθω* 'I burn', Lat. *aedēs* (originally 'fire-place, hearth'), *aestu-s* 'heat, ebullition', O.Ir. *aed* 'fire', OHG. MHG. *eit* Ags. *ād* 'a burning pile', rt. *ajdh-* 'glow'. Skr. *sēt-ū-ṣ* 'fettering, binding' *sē-tār-* 'one who puts in fetters', Lat. *sae-ta* 'strong hair, bristle', OHG. *sei-d* (neut.) 'cord, knot', Lith. *sē-ta-s* 'cord', *pā-sai-ti-s* (masc.) 'a binding thong', O.Bulg. *sē-tŭ* (fem.) 'cord', rt. *saj-* 'bind'. 3. sg. mid. in Indg. *-taj*: Skr. *bhāratē*, Gr. *φέρειται* (rt. *bher-* 'ferre'); this orig. form *-taj* is not, however, quite certain, since \**-tj* would also necessarily become Skr. *-tē* Gr. *-ται* (§ 109).

Indg. tautosyllabic *au*. Skr. *ōjas-* (neut.) *ōjmān-* (masc.) 'power, strength', Lat. *augeō* *augus-tu-s* *augmen* *augmentu-m*, O.Ir. *ōg* 'integer', Goth. *auka* 'I add, augment', Lith. *augu* 'I grow'

*augmā* (gen. *augmeñs*) 'growth, excrescence', rt. *aug-*. Gr. *παύ-σω* 'I shall check', Lat. *pau-cu-s*, cp. Goth. pl. *fav-ái* 'few'.

§ 94. Aryan. Skr. *ápa* Av. *apa* O.Pers. *apa-* 'away, off': Gr. *ἄπο*. Skr. *ásman-* Av. O.Pers. *asman-* 'stone, thunder-bolt, sky': Gr. *ἄκμων* 'anvil, thunder-bolt'. Skr. *ávati* 'notices, favours', Av. *avah-* (neut.) 'protection': Lat. *aveō*. Skr. *yajñá-* Av. *yasna-* (masc.) 'veneration of the gods, offering': Gr. *ἀγνό-ς*, rt. *iağ-*.

Indg. and prim. Ar. tautosyllabic *ai*, *au* became *ē*, *ō* in Skr., *aē* *ōi*, *ao ēu* in Av. and *ai*, *au* in O.Pers. (cp. §§ 126. 160):

1. *ai*. Skr. *édha-s* 'fire-wood', Av. *aesma-* (masc.) (Av. *-sm-* fr. *-ām-* is remarkable, cp. however § 403): Gr. *αἶθω*. Skr. *sétu-š* 'string, bridge', Av. *haētū-š* 'bridge, way': Lat. *saeta*, rt. *saī-* 'bind'.

Avestic had *ē* for *aē*, when final. Dat. sg. Skr. *gáv-ē* Av. *gav-ōi* *gav-ē* 'bovi': Gr. *ἰδμεν-αι*. 3. sg. mid. Skr. *bháratē*: Gr. *φέρεται*; Av. *vaenaitē* O.Pers. *vainataiy* 'seems'. Nom. Acc. du. of *ā*-stems, Skr. *ubhé* Av. *uwē* 'both': O.Bulg. *ženě* (*žena* 'wife').

2. *au*. Skr. *ójas-* Av. *aojah-* (neut.) 'strength, power' Lat. *augus-tu-s*, rt. *aug-*. —

Aryan *a* corresponds, in addition to Indg. *a*, also to Indg. *e* (§ 62) and *o* (§ 78), further to Indg. sonant nasal (§§ 228—231) and occasionally to Indg. *ə* (§ 109a). To these was added further in prim. Iran. a new *a* in the combination *ar* = Skr. *ur* *ir*, Indg. *ʔr* (§ 290). Here may be discussed a few changes which prim. Iran. *a*, irrespective of its origin, underwent in Av.

1. *a* became *e* before *m*, *n* or *v*, and the *e*-quality seems to have been most clearly marked in final syllables, since it is here written most consistently. *nemāh-* (neut.) 'reverence': Skr. prim. Ar. *námas-*, Indg. *\*nemes-*, rt. *nem-*. *te-m* acc. 'the': Skr. prim. Ar. *tá-m*, Indg. *\*tó-m*, Gr. *τό-ν*. *bare-m* 'I brought': O.Pers. (*a*-)bara-*m* Skr. (*á*-)bhara-*m*, Indg. *\*(é-)bhero-m*, Gr. (*é*-)φερο-*ν*. *dasema-* 'decimus': Skr. *daśamá-* Indg. *\*dekṣmó-* (§ 231). 3. pl. pres. *bare-nti*, impf. *bare-n*: Skr. *bhára-nti*,

(á-)bhara-*n*, Indg. \*bhéro-*nti*, \*(é-)bhero-*nt*, Gr. Dor. φέρου-*ντι*, (ἔ-)φερου-*ν. tevšī-* (fem.) 'strength': Skr. táviṣī-, rt. *teu-*. *e-vista-* 'unknown': Skr. á-vitta-; *a-* = Indg. *ʷ-* (§ 232), cp. also Gr. ἄ-ιστο-*ς*.

*e*, which arose from *a* before *m*, *n* or *v*, passed into *i* after *y*, *c*, *j*, *ž*, but the orthography is also here inconsequent. *yi-m* 'quem': Skr. yá-*m*, Gr. ὄ-*v. yimá-*, name of a hero: Skr. yamá-*. haca-mna-* part. of *haca-itē* 'accompanies', cp. Skr. sáca-mána-*. vāc-im* acc. of *vāxš* 'word': Skr. vāc-*am*; -*am* = Indg. -*ʷ(m)* (§ 231 rem.). *jimaḥ* 3. sg. conj. aor. fr. rt. *gem-* 'go', cp. Skr. gámat for regular \*jámat (§ 451 rem.). *snaežint-* 'snowing' to *snaežaiti* 'snows'.

Rem. The Gāpā dialect had also *ē* for *e* and *i* before *m n v*, especially in final syllables. *emavant-* 'vigorous': late Av. *amavanti-* Skr. *ámavanti-*. Acc. *kehrp-em*: late Av. *kehrp-em* 'figure, body', Skr. *kṛp-am. yēm* beside *yim*: Skr. yá-*m. xšqmēn-ē* dat. fr. *xšqm-man-* 'grief, affliction', cp. Skr. *vártman-ē. ē-visti-* 'want of acquaintance' beside late Av. *e-vista-* (see above).

2. *a* became *e* after *y* before *i, ī, ē, y, ŋh* (fr. Ar. *sī*, § 125), *c* or *j* in the following syllable. The orthography is also here inconsistent, since *a* appears also beside *e*. 3. sg. act. *kārayēiti*, 3. pl. act. *kārayēinti*, 3. sg. mid. *kārayetē* of *kārayēmi*, Causat. fr. *kar-* 'make'. *yesnya-* 'adorable' beside *yasna-* 'offering, price': Skr. *yajñá-* Gr. *áyó-ς*. Gāp. gen. masc. *yēhyā* 'cuius' = Skr. *yásya*, late Av. *yēñhā* (fem.) 'cuius': Skr. *yásyās. ipyejah-* 'need, danger': Skr. *tyájas-*. Cp. *ē* fr. *ā* § 102.

3. *a* became *o* before *u, ū* or *v* in the following syllable, especially after labial sounds, and before *r* + consonant. The spelling with *o* is also in this case not consistent; since beside it *a* also occurs. *pouru-š* (fr. \**poru-š*, § 638) 'multus' beside nom. pl. *parav-ō*: Skr. *purú-š, puráv-as* (§ 290). *vohu* 'bonum': Skr. *vásu. mošu* 'soon, quick': Skr. *makšú*. Gāp. *ver<sup>e</sup>zyotū* 3. sg. imper. of *ver<sup>e</sup>zyēmi* 'I work'. *aš-bourva-* 'having much food': cp. Skr. Ved. *sū-bharva-* 'much consuming'. *cor<sup>e</sup>ḥ* 3. sg. aor. 'made. : cp. Skr. *ákar* fr. \**a-kart*, prim. Ar. \**a-cart*. Cp. *ō* fr. *ā* § 102.

§ 95. Armenian. *aseln* (gen. *aslan*) 'needle': Gr. *ἀκρο-ς*

'point', Lat. *acu-s* 'needle', Lith. *asz-t-rū-s* O.Bulg. *os-t-rŭ* 'sharp'. *argel* 'hinderance': Gr. ἀρκέω 'I ward or keep off', Lat. *arceō*.

*taigr*, gen. *taiger* (*g* fr. *u* § 162): Skr. *dēvár-*, Gr. δᾶήρ (§ 96), Lat. *lēvir* (§§ 65. 368), Ags. *tācor* OHG. *zeihhur* (with remarkable guttural), Lith. *dēver-ī-s* O.Bulg. *dēver-ī*, Indg. prim. *f*. \**daiwér-* \**daiw-* 'husband's brother, brother-in-law' (§ 155 rem. .

§ 96. Greek δάκρον: Lat. *dacruma lacruma* O.Bret. *dacr* Goth. *tagr* 'tear'. κακίό-ς (Hesych.) 'little finger', κακό-ς 'bad' compar. κακίων: Av. *kasu-* 'small' compar. *kasyā*. μακρό-ς 'long': Av. *masah-* 'greatness' O.Pers. *maḥišta-* 'uppermost', Lat. *macer*, OHG. *magar* 'lean'. ἄγχω 'I press tight', ἄγγι 'near': Skr. *āhas-* 'tightness, oppression', Av. *azah-* 'tightness, anxiety', Lat. *angō* *angor*, Goth. *aggr-u-s* 'close, tight', Lith. *añszta-s* 'close, tight', O.Bulg. *ažŭ-kŭ* 'tight, close', rt. *añgh-* 'straiten'.

Tautosyllabic *ai* and *av*. λαιό-ς: Lat. *laevo-s*, O.Bulg. *lěvŭ*, cpf. \**laiwo-s* 'left'; here also OHG. *slēo* 'powerless', prim. Germ. \**slaiwa-z?* αἰών 'time, life-time', αἰφεί αἰεί 'always': Lat. *aevo-m* 'time, life-time', Goth. *áivs* (st. *áiva-*) 'time'. ναί 'yea, verily': Lat. *nae*. κανλό-ς 'stalk': Lat. *cauli-s* 'stalk' *caulae* 'holes, cavities', Lith. *káula-s* 'bone'. δεδαν-μένος, to δαίω (fr. \**δαφω*, § 131) 'I kindle'. αὔ 'again' (αὔ-τε, αὔ-τις): Lat. *au-t*, *aut-em*.

In Bœotian *ai* became *ae* (c. g. *Ἀεσχρώνδας, Ἀουανίας*, inscript. of Tanagra), for which *η* (e. g. *ἡί = αἰφεί*) appears from about 400 B. C. and on the latest inscriptions *ει* i. c. close *ē* (e. g. *Ἐἵμων*). The same *ει = ai* in Thessalian about 220 B. C., e. g. 3. sg. conj. mid. *βέλλει-τε* = Dor. *δήλη-ται* 'vclit'. Later, but probably not before the second century A. D., *ai* passed into *ē* also elsewhere in Greece.

In Ionic-Attic *ā* fr. *ai(f)* before *e-*, *i-* and *a-* sounds. δᾶήρ fr. \**δαιφηρ*: Skr. *dēvár-*. αἰεί (αἰεί) = αἰφεί. Hom. αἰόσω Att. ἄπτω fr. \**φαι-φικ-ω* (a reduplicated form like *δαι-δάλλω*, *παι-φάσσω*). ἐλάᾱ = ἐλαί(*f*)*ā* (cp. the Lat. borrowed word *olīva*). Cp. § 131.

*aō* for *am* can be established for Ionic from the fifth century B. C. onwards, e. g. *ατόν = αὔτόν*. Cp. *eō* fr. *em* § 64.

§ 97. Italic. Lat. *agō*, Umbr. *aitu* Osc. *actud* 'agito': Gr. ἄγω. Lat. *amb-itu-s*, Umbr. *ambr-etuto* 'circumeunto' (concerning *-b-* cp. § 209), Osc. *amfr-et* 'ambiunt': Gr. ἀμφί ἀμφίς, 'circum'. Lat. *albu-s*, Umbr. *alfu* 'alba', Osc. *Alafaternum* 'Alfaternorum': Gr. ἀλόφος 'white leprosy', cpf. \**albho-*. Lat. *caper capra*, Umbr. *cabriner* gen. 'caprini': Gr. κάπρος 'wild-boar', O.Icel. *hafr* 'buck'. Lat. *ante*, Osc. *ant* 'ante': Gr. ἀντί 'opposite', Skr. *ánti* 'opposite, before'. Lat. *am-āru-s* 'bitter': Skr. *am-lá-s am-bla-s* (§ 199) 'sour, sourness'.

In Latin, *a* (we here also take into account *a* = Indg. *a*, § 109d, and *ar*, *al* which arose from *ā*, *ǎ*, § 306) was changed in syllables which were unaccented, in prim. Latin (§ 680):

1. to a sound lying between *u* and *i* before labials and *l* in open syllables. *man-cupium* and *man-cipium* beside *capiō capulu-m*. *in-suliō* and *in-siliō* beside *saliō*: Gr. ἄλλομαι 'I spring, leap'. Cp. § 49 p. 42. The orthography fluctuated greatly, and it is questionable whether this fluctuation is not partly to be attributed to the fact that the sound was a different one, when followed by *i*, cp. e. g. *ac-cipiō* beside *oc-cupō*. *sur-ruptus* for *sur-reptus* fr. *rapiō* was certainly formed by analogy (see 3).

2. to *u* before *l* + consonant (except *ll*). *ex-sultō* beside *saltō*, *in-culcāre* beside *calcāre*.

3. to *e* in closed syllables (exceptions under 2), before *r* and finally. *ac-ceptus parti-ceps* beside *capiō man-cupium*, *cōnfectus arti-fex* beside *faciō cōnficiō*. *ac-centus corni-cen* beside *canō ac-cinō corni-cin-is*. *obstetrīx* beside *stator cōn-stituō*. *in-pertiō* beside *partiō*. Instr. sg. of consonantal stems, as *ped-e*, *aer-e*, cp. Gr. πῆδ-ά, ἄμ-α (cp. § 93 p. 87); perhaps also *inde* = Gr. ἐνθα. *red-dere* beside *dare*.

4. to *i* in open syllables (exceptions under 1. 3. 5.) and before *ng*. *ad-igō* beside *agō*. *concinō* beside *canō*. *Juppiter* beside *pater*. *cōn-stituō* beside *statuō*. *sisti-te* = Gr. ἵστα-τε. *in-situs* beside *satus*. *serite* fr. \**si-sa-te* (§ 33) = Gr. \*ἵατε, the older form of ἵετε (§ 109c). *red-ditus* beside *datus*. *at-tingō* beside *tangō*.

5. *-au-* became *-u-*: *ē-luō ē-luācru-s* beside *lavācru-m* and (O.Lat.) *lavere*, s. § 172, 1. *-ua-* probably also became *-u-*: *con-cutiō con-cussus* beside *quatiō quassus*<sup>1)</sup>.

Before the christian era tautosyllabic *ai* became *ē* in Latin (having passed through the intermediate stage *aē*). This change occurs earliest in the popular language. The various stages of the change cannot be precisely fixed chronologically, since the orthography inconsistently retained *ai* and *ae* long after the monophthongic pronunciation was established; *ai* is still found on inscriptions under the Empire. *aidīli-s aedēs*: Gr. *αἰθω* (cp. § 93). *caecus Caicilius Caecilius Cēcilius*: O.Ir. *caech* 'blind', Goth. *háihs* 'blind'. *haedus ēdus*: Goth. *gáits* 'goat'. *lēvir* (popularly connected with *vir*, s. § 65): Gr. *δαίρ* (§ 96), Skr. *dēvár-*, Indg. *\*daiuér-* 'husband's brother'.

*ai* became *ī* in prim. Lat. secondary accented syllables. *in-quīro* beside *quaerō quaistor quaestor*. *ex-īstumō* beside *aestumō*. Cp. also *mēnsīs* fr. *\*mensaīs* (Osc. *diumpaīs* 'lumpis, nymphis'), the *-aīs* of which arose from *-āīs* (§ 612). Concerning *ex-quaerō* and the like cp. § 65 rem. 3.

Tautosyllabic *au*. *aurōr-a* fr. *\*auz-ōz-ā* (§ 569): Gr. *ἄρχ-αυρο-ς* 'near the morning' *ἀϋριον* 'morning' from stem *\*ἀύσρο-*, O.Icel. *austr* OHG. OS. *ōstar* adv. 'eastwards', Lith. *ausz-rà* day-break'. *auri-s*: Goth. *áusō* (Gen. *áusins*) Lith. *ausì-s* 'ear'. This *au* became *aō* (cp. *aē* fr. *ai*) in the popular language and later *āō* or the pure monophthong *ā*, as the orthography *o* shows, e. g. *oricula* = *auricula*. Unaccented *au* before *u* appears, in the time of the Emperors, as *a*, e. g. *Agustus, ascolto, augurium*.

To the proportion *in-quīrō* : *quaerō* correspond *in-clūdō* : *claudō* and *dē-frūdō* : *fraudor*. Concerning *con-clausu-s* and like forms cp. § 65 rem. 3.

Tautosyllabic *ai* and *au* remained diphthongic in Oscan, whilst in Umbrian they became respectively *ē* and *ō*.

1) Cp. Thurneysen Über Herkunft und Bildung der lat. Verba auf *-io* p. 51. Otherwise Osthoff Zur Gesch. des Perf. 585 and Bersu Die Guturalen und ihre Verbindung mit *v* im Lat. 132.

Osc. *svaí svae* Umbr. *sve* 'si' (Volsc. *sepis* 'siquis'), probably = Gr. *αἰ*. Osc. *Aíifineís* (or *Aíifneís*) gen. 'Aedini', to Lat. *aedēs* (Osc. *aídil* 'aedilis' was a borrowed word, as is shown by the *d*).

Osc. *avti*, Umbr. *ote*: Lat. *aut*, Gr. *αὐ*, *αὐτε*. Umbr. *oht*. (abbreviation) *uhtretie* 'auctoritate': Lat. *auctor*. Cp. also Osc. *ταυρομ* 'taurum', Umbr. *toru* 'tauros': Lat. *taurus*.

§ 98. Old Irish. *anim* 'soul' *anāl* 'breath': Gr. *ἀνε-μο-ς* 'wind', Lat. *ani-mu-s ani-ma*, Skr. *áni-ti* 'breathes', Goth. *us-anan* 'to exhale'. *canim* 'I sing': Lat. *canō*, Goth. *hana* 'cock'. *aile* 'alius': Gr. *ἄλλο-ς*, Lat. *aliu-s*. *alim* 'I nourish, bring up': Lat. *alō*, Goth. *ala* 'I grow up'. Cp. also Cymr. *am* = Gr. *ἀμφί*; Gall. *ad-in Ad-magetobriga* and others, O.Ir. *ad-* in *ad-glādur* 'I address' and other words = Lat. *ad*.

In forms like *aile* 'alius', gen. *maicc* fr. *\*makū* (Ogam inscrip. still *maqui*) 'fili' (nom. *macc* fr. prim. Kelt. *\*makyo-s*), the *i* following *a* denotes the palatal timbre of the following consonant. In like manner *u* denotes the *u*-timbre of the same consonant, e. g. in 1. sg. *ad-gaur* 'I forbid' for *\*garu* *\*garō* (cp. *gair* 'call' and Gr. Dor. *γᾶρυ-ς* 'speech') and others. S. § 640. Original *a*, so far as it did not entirely disappear (§ 634), appears mostly as *a* in unaccented syllables, e. g. *cúm-ang* 'angustus' (Lat. *angustu-s* Gr. *ἄγχιω*)<sup>1</sup>, beside the *u* and *i*, caused by the timbre of the following vowel, e. g. *for-cón-gur* 'praecipio' beside *ad-gáur*.

Indg. tautosyllabic *a<sub>i</sub>* became *ag*. *caech* 'blind': Lat. *caecu-s*. *aed* 'fire': Gr. *αἶθω*. Before palatalised consonants *ai*, e. g. *caich* nom. pl. 'caeci' fr. *\*caicī*.

*a<sub>i</sub>* became *ī* in final syllables. *dī* (fem.) 'two': Skr. *dvē*, Indg. *\*dyáī*; the change to *ī* may here have taken place, when the word did not have the chief accent. *ī* in orig. polysyllabic forms is still only recognisable in the palatalisation, as du. *tuath* (sg. *tuath* 'people' = Goth. *þiuda*) fr. *\*tōtī*, older *\*teytai* (§ 657, 4).

Indg. tautosyllabic *au* appears, when accented, as *au*, *ō*: *ō*

1) Concerning the root of this adj. cp. Zimmer Kelt. Stud. II 79.

'ear' dat. pl. *auib*, *au-nasc* 'ear-ring': Lat. *auri-s*. *ōg* 'integer': Lat. *augeō*.

§ 99. Germanic. Goth. *ahva* OHG.OS. *aha* 'water, river': Lat. *aqua*. Goth. *skaban* OHG. *scaban* Ags. *scafan* O.Icel. *skafu* 'to scrape': Gr. *σκαπάνη* 'spade' *σκάπτω* 'I dig', O.Lat. *scaprēs* 'shabby, rough' Lat. *scabō* 'I scrape, scratch', rt. *sqap-sqab-* (§ 469, 7). Goth. *haban* OHG. *habēn* Ags. *habban* O.Icel. *hafa* 'to have': Lat. *habeō*, cpf. of the stem *\*khabhē-* (§ 553). Goth. O.Icel. OS. *salt* OHG. *salz* 'salt': Armen. *ալ* Gr. *ἄλς* Lat. pl. *salēs* O.Ir. *salann* O.Bulg. *solī* 'salt'.

Rem. Concerning the falling together of Indg. *a* and *o* in Germ. see § 83 rem. 1. Indg. *a* appears as *o* in other than chief accented syllables, e. g. in *ob*, *of*, the Westgerm. proclitic forms of the prep. *ab af* 'of' (Gr. *ἀπό*, Lat. *ab*), e. g. OHG. *ob-lāzan* 'dimittere'. Cp. Paul in Paul and Braune's Beitr. VI pp. 186, 191.

Indg. tautosyllabic *ai*. Goth. *skáidan* OHG. *scēidan* OS. *scēthan* Ags. *scādan* 'separate': Lat. *caedō* 'I hew, cut out', rt. *sqhaii-* *sqhaiid-* (§§ 469, 7. 553). OHG. *eidt* Ags. *ād* 'rogus, ignis': Gr. *αἶθω*.

Indg. tautosyllabic *au*. Goth. *áuk* 'for, but', OHG. *auh* OS. *ōk* Ags. *éac* 'also', O.Icel. *auk* 'thereto', to Goth. *áukan* 'to increase': Lat. *augeō*.

The special OHG. treatment of *a*, *ai*, *au* has been stated in § 83. According to the sound-laws given there, are to be explained e. g. the following forms: *ēli-lenti* fr. older *ali-lanti* 'from another land, strange': Goth. *alji-s*, Lat. *alius*. *erran* fr. *\*erjan*: Goth. *arjan* 'to plough', Lat. *arō*. *ēwīn*: Goth. *dīveins* 'eternal', Gr. *αἰών*, Lat. *aevo-m*. *auh*, later *ouh*: Goth. *áuk* (see above). *ōra*: Goth. *áusō* 'ear', Lat. *auri-s*, Lith. *ausì-s*.

§ 100. Baltic-Slavonic. Indg. *a* became *o* in the Baltic-Slav. unitary period, and fell entirely together with Indg. *o* (§ 84).

Lith. *nas-raĩ* pl. 'throat', O.Bulg. *nos-ŭ* 'nose': Skr. *nás-* OHG. *nas-a* 'nose'; that the rt. is Indg. *\*nas-*, not *\*nos-*, follows from Lat. *nār-ēs*, Lith. *nós-i-s* (fem.) 'nose' which stand in ablaut relation to the above words. Lith. *ariù* O.Bulg. *orja* 'I plough': Armen. *araur* 'plough', Gr. *ἀρόω* Lat. *arō* 'I plough', O.Ir.



*arathar* 'plough', Goth. *arja* 'I plough'. Lith. *ākla-s* 'blind': Lat. *aquilu-s* 'dark'. Lith. *atgà* 'pay, reward': Skr. *arghá-* m. n. 'worth, value, gift of honour', Gr. ἀλγή ἄλφημα 'wage', fr. rt. *algh-*. O.Bulg. *otī-cī* 'father': Skr. *atti-attā-* 'elder sister', the latter also 'mother', Gr. ἄττα 'father', O.Ir. *aite* 'foster-father, trainer'. O.Bulg. instr. sg. *ženojā* voc. sg. *ženo* of *žena* 'wife': Skr. instr. sg. *jihvājā* (nom. *jihvā* 'tongue'), Gr. voc. sg. *νύμφᾶ* (nom. Dor. *νύμφᾱ*).

With regard to the following sound-developments compare the laws given in § 84.

Slav. *a* before explosives and spirants. O.Bulg. *azū-kū* 'narrow', *a-chati* 'odorari' (s. § 219).

Slav. *ie* fr. *io*. Voc. sg. *zmije*, *duše*, to nom. sg. *žmija* 'serpent', *duša* (fr. \**dūchjā*, §§ 147 rem. 3. 588, 3) 'soul', cp. *ženo* from *žena*. Instr. sg. *jeja*, nom. sg. *ja* 'she', cp. *toja* from *ta* 'the'.

Indg. tautosyllabic *ai* as *ë* and *ai* in Lith. and as *ě* in Slav. Lith. *dēver-ī-s* O.Bulg. *dēver-ī* 'brother-in-law': Gr. δάφη fr. \**δαφη* (§ 96). Nom. du. fem. Lith. *tė-dvi* (*-dvi* = *dvi* 'two') O.Bulg. *tě* from st. \**tā-* 'the': Skr. *tě*, perhaps also Gr. *ταί* Lat. *istae* (see Brugmann, Kuhn's *Ztschr.* XXVII p. 199 ff.), Indg. \**tđi*. Lith. *pá-saiti-s* m. 'a binding thong', *sėta-s* 'cord' (cp. also *at-saj-à* 'trace of a horse'), O.Bulg. *sėti* f. 'cord' fr. rt. *saj-* 'bind'. Lith. *skėdà* and *skėdrà* 'chip' *skaistū-s* and *skáista-s* 'clear': Lat. *caedō* part. *caesus*, *caesius* 'clear-eyed', Goth. *skáidan* 'separate'. O.Bulg. *lěvū* 'left': Lat. *laevo-s*.

Before this *ě* in Slav. *k* becomes *c*, e. g. *račě* nom. du. of *raka* 'hand'.

Rem. Concerning the change between *ë* and *ai* in Lith. see § 84 rem. 2, concerning final Slav. *ě* see § 84 rem. 3.

Slav. *ji* fr. \**ie<sub>1</sub>*, \**io<sub>1</sub>*. Nom. du. fem. *zmiji* of *žmija* 'serpent', *duši* of *duša* 'soul', cp. *račě*. Likewise *ji* 'they, they two' = Skr. *yé*, Indg. \**iáj*.

Indg. tautosyllabic *au*, as *au* in Lith. and *u* in Slav. Lith. *saūsa-s* O.Bulg. *suchū* 'dry': Skr. *śōṣa-s* (fr. \**sōṣa-s*, § 557, 4) 'a drying up', Gr. αῦω 'I dry, make dry' fr. \**σασω* (§ 564), Ags. *seár* 'withered, dry' OHG. *sōrēn* 'to parch' O.Icel. *saurr* 'mud', fr. rt. *sāys-*. Lith. *augmū* (gen. *augmeñs*) 'growth, ex-

crecence': Lat. *augmen-tu-m*. O.Bulg. *u-* 'off, away' (*u-myti* 'to wash off', *u-dati* 'to give away, *ἐκδοῦναι θυγατέρα*'), Pruss. *au-* 'off, away' (*au-mu-sna-n* acc. 'ablution'): Lat. *au-*, *au-ferre*.

Indg. *ā*.

§ 101. Indg. *\*bhāghu-s* 'elbow': Skr. *bāhū-ś* 'arm', Gr. Dor. *πᾶχv-ς* 'fore-arm, elbow', OHG. *buog* O.Icel. *bōgr* 'elbow' Indg. *\*mā-ter-* 'mother': Skr. *mātār-*, Arm. *mair*, Gr. Dor. *μάτηρ*, Lat. *māter*, O.Ir. *māthir*, OHG. *muoter* O.Icel. *mōðer mōðtir*, Lith. *motė* ('wife'), O.Bulg. *mati*.

Indg. fem. suffixes *-ā-*, *-tā-*, *-iā-* etc.: Skr. *áśvā* 'mare', *sā* 'the', Gr. *χώρα* 'land', Dor. *ᾶ* 'the', Lat. dat. abl. pl. *dextrā-bus*, O.Ir. dat. instr. pl. *mnāib* fr. st. *mnā-* fr. *\*bnā-* (nom. sg. *ben* 'woman, s. § 520) = Skr. *gnā-* 'woman', Goth. dat. pl. *gibō-m* fr. st. *gibō-*, nom. sg. *giba* 'gift', *sō* 'the' f., Lith. instr. pl. *rañko-mis* fr. st. *ranko-*, nom. sg. *rankà* 'hand', O.Bulg. instr. pl. *raĳka-mi* fr. stem *raĳka-*, nom. sg. *raĳka* 'hand'. Indg. conjunctive suffixes *-ā-*, *-iā-*, etc., stem *\*bherā-* from *bher-* 'bear': Skr. 2. pl. *bhārā-tha*, Lat. *ferā-tis*, O.Ir. 1. pl. *do-bera-m*, O.Bulg. 1. sg. *bera* fr. *\*bherā-m* (cp. Brugmann Morph. Unt. I p. 145, III p. 30 f., Kuhn's Ztschr. XXVII p. 419)<sup>1</sup>). Indg. pres. suffix form *-nā-*: Skr. *mi-nā-mi* fr. rt. *meḷ-* 'lessen', Gr. Hom. *δάμvη-μi*. *-tām* Indg. personal ending of the 3. du. act.: Skr. *ābhara-tām*, Gr. Dor. *ἐφερέ-τᾶν*, Indg. *\*ēbhere-tām* fr. rt. *bher-* 'bear'.

The tautosyllabic diphthongs *āi* and *āu* were not, as it seems, frequent in prim. Indg. *-āi* ending of the dat. sg. of *ā*-stems: Skr. *su(v)-apatyāi* (*su(v)-apatyā-* 'having a beautiful posterity'), Gr. *χώρα*, O.Lat. *Mātūtā* 'Matutae', Goth. *gibai* 'to a gift'. Skr. *nāuš* 'ship', Gr. *ναῦς* fr. *\*nāuś* (§ 611).

§ 102. Aryan. Skr. *sthāna-* n., Av. O.Pers. *stāna-* n. 'standing, standing-place, place of abode': Gr. *δύστηνο-ς* fr. *\*δvς-σtāvno-ς* 'in evil plight', Lith. *stóna-s* 'position', O.Bulg. *stanū* 'position, bed'. Skr. acc. *nāv-am* 'navem', (ved.) *nāv-īyā* f. 'a navigable river', Av. *nāv-ya-* 'flowing': acc. Gr. Hom. *vḡ(F)-α*, Lat. *nāv-em*.

1) Gr. *φέρωμεν*, *φέρετε* for *\*φεράμεν*, *φεράτε* with vowel quality after the analogy of the indic. and conj. forms with *ο*, *ε* as Hom. conj. *ἵομεν*, *ἀλήθετε*, Att. indic. *φέρομεν*, *φέρετε*.

Skr. *sénā-m* O.Pers. *hainā-m* acc. sg., Av. *haēnā-hu* loc. pl. fr. st. *sénā- hainā- haēnā-* (prim. Ar. *\*sainā-*) 'army'. Conj. Skr. *vāhā-si* Av. *vazā-hi* 'vehas', O.Pers. *parsā-hy* = Skr. *pychā-si* 'poscas'. —

Aryan *ā* corresponds not only to Indg. *ā* but also to Indg. *ē* (§ 70), *ō* (§ 86), and to long sonant nasal (§ 253). Here may be discussed certain changes which prim. Iran. *ā*, irrespective of its origin, underwent in Avestic.

1. After *y*, *ā* became *ē* before *i*, *ī*, *ē*, *y*, *c* or *j* in the following syllable. *kārayēmi* : Skr. *kārayāmi* causat. fr. *kar-* 'make', cp. Lat. *moneō*. *ver<sup>e</sup>zyēiti* 3. sg. act., *ver<sup>e</sup>zyēitē* 3. sg. mid. conj. of *ver<sup>e</sup>zyēmi* 'I work, do' : cp. Lat. *capiat*, *capiat̄ur*. Cp. *ē* fr. *a* § 94.

2. *ā* became *ō* before *u*, *ū* or *v* in the following syllable, but the orthography is mostly inexact, since *ā* also occurs. *vī-dōtu-š* 'demon of the dead' beside abl. *vī-dātaōš*. Cp. *o* fr. *a* § 94.

3. *ā* became *ā̄* before *nh* (fr. *s*, § 558) and before nasal + explosive sounds. *nā̄nhā-* 'nose' : O.Pers. *nāha-m* acc., Skr. *nāsā-*, cp. Lat. *nār-ēs*. *yā̄nham* gen. pl. from *yā-* 'quae' (Gr. *ῆ*) : Skr. *yāsām*. *mā̄nha-* 'moon' : Skr. *māsa-*. *ušā̄nh-em* acc. 'dawn' : Skr. *uśās-am*, cp. Lat. *aurōr-a*. *vā̄nti* 'they blow' : Skr. *vānti*, Gr. *ἄεισι* fr. *\*āFη-ντι* (§ 611). *barā̄nti* 3. pl. conj. of *barāmi* 'I bring' : Lat. *ferant*.

§ 103. Armenian. *elbair*, gen. *elbaur*, 'brother' (§ 263) : Skr. *bhrātar-*, Gr. *φράτωρ* (member of a *φρατοῖα*), Lat. *frāter*, O.Ir. *brāthir*, Goth. *brōþar*, Lith. *broter-ėli-s* ('little brother'), O.Bulg. *bratr-ŭ*, Indg. *\*bhrātor-* 'brother'. *nav*, gen. *navu*, 'ship' : Skr. acc. sg. *nāv-am*; the Arm. word is, however, not free from the suspicion of having been borrowed from Persian.

§ 104. Greek. Dor. *ἄδύ-ς* : Skr. *svādū-ś*, Lat. *suāvis* (*svāvis*) fr. *\*smād-u-i-s* (§ 170), OS. *swōti* OHG. *swuazi suozi* (prim. Germ. *\*smōt-īa-*), Indg. *\*smād-u-* 'sweet, lovely'. *δέ-δη(f)-ε* 'it burns' *δήιον* (*δάφιον*) *πῦρ* : Skr. *dāvā-s* 'fire-brand'. Dor. *φᾶ-μι* 'I say', fut. *φᾶ-σω*, *φᾶ-μᾶ* 'voice, saying' : Lat. *fā-rī*, *fā-ma*, *fā-bula*, O.Bulg. *ba-jati* 'fabulari'. Nominal suffix *-τᾶτ-*, Dor. *νεό-*

-*τᾱς* -*τᾱτ-ος* 'youth' : Skr. *dēvā-tāt-* (gen. *dēvā-tāt-as*) 'deity, worship', Lat. *novi-tās*, gen. *novi-tāt-is*, 'novelty'.

In Ionic-Attic *ā* became *η* : ἡδύς, φημί, νεότης. This was in certain Ionic dialects an open *ē* in comparison with the Indg. *ē* in *θή-σω* (§ 72). This passage to *η* is older than the first appearance of Att. Ion. *τᾱς*, *πᾱσα* fr. *τάνς*, *πάνσα* (§§ 205. 618). Forms like *ύγιᾱ ἐνδεᾱ* beside *σαφῆ* fr. -*ε(σ)-α* etc. render it more probable that the *ā* in Att. *ἰᾱσομαι*, *καρδίᾱ*, *γενεᾱ*, *σικύᾱ*, *πρᾱττω*, *χώρᾱ* etc. (Ion. *ἰήσομαι*, *καρδίη*, *γενεή*, *σικύη*, *πρήσσω*, *χώρη*) goes back to an open *ē* than that it should be an unchanged Indg. and prim. Gr. *ā*.

§ 105. Italic. Lat. *māter*, gen. sg. Umbr. *matrer* Osc. *maatreis* : Gr. Dor. *μάτηρ*. Lat. *pāc-* 'peace', Umbr. *pase* 'pace', Osc. Paakul 'Paculus' (cp. *Pacuvii-s*) : Skr. *pāśa-s* 'knot, cord', Gr. Dor. *πάγνυμι* 'I fasten', OHG. *hī-fuoga* 'match-maker (of marriage)' fem., MHH. *vuoge* 'joint'. Lat. *Stātiu-s*, Osc. *Staatiiis* 'Stātius', fr. *stā-* 'stand'. Feminine suffix -*ā* : Lat. *dextrā-bus*, *istā-rum*, Gen. *familiās*, Umbr. *sestentasia-ru* 'sextantiarum' *tutas* 'civitatis', Osc. *paa-m* 'quam' *egma-zum* 'rerum' *moltas* gen. 'multae' : Gr. st. *χωρᾱ*-, *τᾱ*-. Verbal stems in -*ā* : Lat. *testā-* in *testā-tu-s* *testā-mentu-m*, Umbr. *katera-mu cateraha-mo* (-*aha* = -*ā*, § 23) 'catervamini', Osc. *trīstaamentud* abl. 'testamento' : Gr. *πειρᾱ*- 'try' in *πειρᾱ-σομαι*, *πειρᾱ-τέον*. Lat. *fāgu-s* 'beech' : Gr. Dor. *φᾱγό-ς* 'oak', OHG. *buocha* Ags. *bōc* 'beech', Goth. *bōka* 'letter'. Lat. conjunct. *sistā-tur*, *sternā-tur*, *sistā-mus*, *sternā-mus* : Gr. Arcad. *ἰστᾱ-τοι*, Skr. 3. sg. *sthā-ti* (*sthā-* 'stand'), 1. pl. *yu-nā-ma* (*yu-* 'yoke, draw tight'), cp. §§ 111 rem. and 113.

In Umbrian open *ō* fr. *ā* in the nom. sg. of *ā*-stems and in the nom. acc. pl. neut. of *o*-stems, as the fluctuation between *o* (*u*) and *a* shows. *etantu mutu* 'tanta multa' and *panta muta* 'quanta multa'. *vesklu* and *veskla* 'vascula'. *triiu-per trio-per* 'ter' and *triiā* 'tria'. The same *o*-sound in *pihaz pihos* 'piatus', *Casilos* 'Casilas' (dat. *Kasilate Casilate*). In Oscan likewise *ū*, *u*, *o*, *u* for the final *ā* in the nom. sg. of *ā*-stems and in the nom. acc. pl. neut. of *o*-stems. Fem. *viū viū* 'via', *molto*

'multa', *πολις* 'civitas'. Neut. *teremenniú* 'termina', *comono* 'comitia', *petiro-pert petiru-pert* 'quater'. Cp. § 655, 2.

§ 106. Old Irish. *āg*, gen. *āga*, 'combat': Skr. *ājī-ṣ* 'race, pugilistic combat', Lat. *amb-āgēs* 'circuit, way'. *-tau* 'am': Lit. *pa-stóju* 'I become something', cpf. *\*stā-žō* fr. rt. *stā*- 'stand'.

In the following examples the *i* after *a* indicates the *i*-timbre of the following consonant. *fāith* 'poet' fr. *\*uāti-s*: Lat. *vātēs*, cpf. of the stem *\*uāti-*. *tāid* 'thief': O.Bulg. *tatī*, cpf. of the stem *\*tāti-*, Skr. *tāyú-ṣ* 'thief', Gr. Dor. *τάράουαι* 'am bereft, in want'. *gāir* 'call, cry': Gr. Dor. *γᾶρ-υ-ς* 'voice, speech'. Cp. § 640.

In unaccented syllables mostly *a* for *ā*. *túatha* nom. pl. of fem. *tuath* (fr. *\*teytā*) 'folk' beside *mnā* fr. st. *mnā*- 'woman'. Adjectives in *-ach* fr. *\*-āco-s* (cp. Gall. *Benācu-s*, *Dumnācu-s* and others), as *cnoc-ach* 'hilly' from *cnocc* 'hill'. Cp. §§ 613. 657. Concerning the dat. pl. *túathaib* i. e. *túath\*ib* s. § 640.

§ 107. Germanic. Goth. *sōkjan* OHG. *sōhhan soahhan suahhan suohhan* OS. *sōkian* 'to seek': Gr. Dor. *ἀγέουαι* 'I lead or show the way', Lat. *sāgu-s* 'predicting' *sāgīre* 'I track, perceive'. Goth. *stōls* 'throne', OHG. *stuol* OS. Ags. *stōl* O.Icel. *stōll* 'stool': Lith. *pa-stōta-s* 'frame, scaffold'. Goth. *brōþar* OHG. *bruoder* O.Icel. *brōðer brōðir* 'brother': Lat. *frāter*. Verbal stems in *-ō*, e. g. *salbō*- 'anoint' part. pass. Goth. *salbōþs* OHG. *-salbōt* 'anointed': Gr. *πειρά-πειράειν*, Lat. *testā-testātu-s*.

Indg. *ā* and *ō* fell together in *ō* already in prim. Germ., s. § 91. What was there said concerning the treatment of *ō* = Indg. *ō* in Goth. and OHG., also holds good for *ō* = Indg. *ā*. For the shortening of final *ō* in polysyllabic words cp. e. g. Goth. nom. sg. *þiuda* fr. prim. Germ. *\*þeuđō*, orig. *\*teytā*.

§ 108. Baltic-Slavonic. Lith. *ō*, Lett. Pruss. *ā*, O.Bulg. *a* (prim. Slav. *ā*, s. § 615).

Lith. *broter-ėli-s* 'little brother' *brōli-s* 'brother', Lett. *brāli-s* 'brother', Pruss. voc. *brāti*, O.Bulg. *bratr-ŭ* 'brother': Lat. *frāter*. Lith. *motė* 'wife', Lett. *māte* 'mother', Pruss. *po-mātre*

'step-mother', O.Bulg. *mati* 'mother' : Lat. *māter*. Inf. Lith. *stó-ti* Lett. *stá-t* Pruss. *stā-t* O.Bulg. *sta-ti* fr. rt. *stā* 'stand'. Dat. pl. of *ā*-stems: Lith. *žėmó-ms* Lett. *šimá-m* O.Bulg. *zima-mū*, nom. sing. *žėmà šima zima* 'winter'. Lith. *nósi-s* f. 'nose' : Lat. pl. *nārēs*, Skr. Ved. du. *nás-ā*. O.Bulg. *tajǎ* adv. 'secretly' : Av. *tāya-* 'theft' Skr. *tāyú-ṣ* 'thief'.

*ā* is to be inferred for the Baltic unitary period. This *ā* remained in Lett. and Pruss., whilst it became *ō* in Lithuanian. Lith. *ō* is still pronounced very open in the Memel dialect, whereas elsewhere, probably in most places where Lithuanian is spoken, it has a close articulation. The universal Lith. shortening of the broken accented vowel e. g. in the nom. sg. *žėmà* (orig. f. *\*gheĩ-mā*) arose at a time when *ā*, or at all events an *ō* differing very little from pure *ā*, was still spoken (§ 664, 3). This short *a* just as *a* = Indg. *o* (§ 84) is pronounced as open *e* in many dialects after *j* and palatalised consonants, e. g. *gijè* = *gijà* f. 'thread', *gìre* = *gìria* 'forest'.

*a* arose in Slav. in those cases where *ā* with the following nasal became a nasal-vowel. Acc. sg. *ženā* 'wife', orig. f. *\*genā-m*. 1. sg. *vezā* 'veho' = Lat. *veham*, cpf. *\*ueghā-m*. Cp. § 219.

### Indg. *ə*.

§ 109. This vowel, whose quality cannot be more precisely determined — it may be pronounced as a sound lying between *a* and *e* — appears in many root syllables as the sonant of the secondary accented weak grade (§§ 315—317). We denote it by *ə* following the general practice of writing *ə* for the 'indistinct vowel-sound'.

In Armenian and European it fell together with Indg. *ə* (§§ 93—100) (for the representation of it in Greek s. below), but was still separated from this in Aryan: Indg. *a* = Ar. *a*, but Indg. *ə* = Ar. *i*, only before *i*-vowels = *a* (cp. Hübschmann Das idg. Vocalsystem p. 1 ff.).

Indg. *\*pə-tér-* 'father' : Skr. *pitár-*, Arm. *hair* gen. *haur*, Gr. *πατήρ*, Lat. *pater*, O.Ir. *athir*, Goth. *fadar*. Indg. *stə-*

weak form of the rt. *stā-* (Gr. *στᾶ-*, Lat. *stā-*): Skr. *sthi-tá-s* 'standing' *sthi-ti-ṣ* 'standing, stability', Gr. *στα-τό-ς στα-σί-ς*, Lat. *sta-tu-s sta-tiō*, Goth. *sta-þs* (st. *stadi-*) 'place', Lith. *sta-taũ* 'I place', O.Bulg. *sto-jǫ* 'I stand'. Indg. *də-* weak form of the rt. *dō-* (Gr. *δω-*, Lat. *dō-*): Skr. 3. sg. aor. mid. *á-di-ta* (act. *á-dā-t*), Arm. *ta-mk̄* 'damus', Gr. *δά-νος* n. 'gift, loan', *ἔ-δο-το δο-τό-ς δό-σι-ς*, Lat. *da-mus da-tus da-tor*, Lith. part. pf. act. *dā-ves*.

a. Aryan. Skr. *pi-tá* Av. *pi-ta* O.Pers. *pi-tā* 'father': Gr. *πα-τήρ*. Skr. *mi-tá* Av. *mi-ta-* 'measured', Skr. Av. *mi-ti-f* 'measure', Indg. *\*mā-tó-*, *\*mā-ti-*, Gr. *μέ-τρο-ν*, fr. rt. *mē-* (Lat. *mē-tior*, Skr. *mā-trā-* 'scale'). Skr. *sá-di-ta-s* 'fettered' *á-di-ti-ṣ* 'unbound, boundless': Gr. *σύν-δε-το-ς δέ-σι-ς*, fr. rt. *dē-* (Gr. *δί-δη* 'he bound' *ὑπό-δη-μα* 'sandal', Skr. *dā-man-* 'string').

On the other hand *ə* became *a* before *i*-vowels. The optative, formed fr. the rts. *stā-*, *dhē-*, *dō-*, was in Indg. 1. sg. act. *\*stə-ǰē-m*, 2. pl. *\*stə-ǰ-té* (fr. *\*stə-ī-te* like *\*bhéroǰte* = *φέρουτε* fr. *\*bhero-ī-te*), 3. pl. *\*stə-ǰ-ǰt*, analogously *\*dhə-ǰē-m* etc.; thence prim. Ar. *\*stajām* *\*stajta* *\*stajant*, *\*dhajām* etc. The *ē* in the Skr. forms act. 1. pl. *\*sthēma* 2. pl. *\*sthēta*, 3. sg. mid. *\*sthēta* (= Gr. *σταίμεν*, *σταίτε*, *\*σταῖτο*) was transferred to the forms with *-ay-* (cp. Skr. 3. pl. *bhārēy-ur* with Av. *baray-en* with *ē* instead of *ā* after *bhārēma* etc.), hence Skr. *sthēyām dhēyām dēyām*, *sthēyur* etc.; *sthēyāma* is formed after the analogy of *sthēyām*, like *s-yā-ma* for *\*s-ī-ma* (Lat. *sīmus*). Cp. § 116. Further Skr. *-ay-* and *-ē-* = *-ǰi-* in *dháyāmi* 'I suck': Goth. *daddja* 'I suckle' (§ 142) O.Bulg. *dojǫ* 'I suckle'; and in *dhē-nū-ṣ* 'milking', fr. rt. *dhē(ǰ)-* (cp. Hübschmann as above p. 21 ff. 79).

b. Armenian. *ta-m* 'do' *ta-mk̄* 'damus' fr. rt. form *də-* 'give'. *dail* (*dal*) 'beastings' *dayeak* (gen. *dayeki*) 'wet-nurse' fr. *dhǰi-*, weak grade to rt. *dhē(ǰ)-* 'suck' (cp. a.). *ba-n* 'λόγο-ς' (rt. *bhā-*) either from *bhə-* (Gr. *φᾶ-μὲν*) or *bhā-* (Gr. *φη-μι*, Lat. *fā-ma*), see § 316.

c. Greek. *ἄ-δην* 'abundantly, enough': Lat. *sa-tur sa-tis*, O.Ir. *sa-thech* 'satiated', Goth. *sa-þs* 'satiated', Skr. *a-si-nv-á-*

'insatiable', fr. rt. *sā-* (O.Ir. *sāith* 'satiety', Goth. *sō-þs* 'satisfying', Lith. *só-ti-s* f. 'satisfying, satiety'). *παλαι-φα-το-ς φά-τι-ς φα-μέν* fr. rt. *bhā-* 'speak'. *λαθεῖν* beside *λήθειν* 'to escape', rt. *lāθ-*. *τακερός* 'easy to melt' *τακῆναι* beside *τήκειν*, rt. *tāk-*.

The weak grade forms of *ā*-roots regularly retained *a*. In like manner also the forms which became isolated through their development of meaning: *δά-νος* fr. rt. *dā-* and *λαγ-αρό-ς* 'slack, thin' *λαγ-όνες* 'the flanks, loins': Lat. *laxu-s*, OHG. *slach* OS. *slac* 'slack' O.Icel. *slakr* 'slack, idle' fr. rt. *slēg-* (Gr. *λήγω* 'I leave off' *ἄ-λληκτο-ς* 'incessant'); also *δάκτυλο-ς* 'finger', in case it is connected with O.Icel. *taka* 'to take' beside Goth. *tēkan* (pf. *taitōk*) 'to touch'. In other cases *a*, in forms from *ē-* and *ō-*roots, took the timbre *ε* and *ο* after the analogy of forms with *η* and *ω*: *θε-τό-ς* fr. *θη-* 'set', *έ-τό-ς* = Lat. *sa-tu-s* fr. *ή-* 'throw', *σύν-δε-το-ς* cp. Skr. *sá-di-ta-s* fr. *δη-* 'bind', *μέ-τρο-ν* fr. *μη-* 'measure' (Lat. *mē-tior*), *δο-τό-ς* = Lat. *da-tu-s* fr. *δω-* 'give' *πο-τό-ν* 'beverage' fr. *πω-* and others. Cp. *ορ, ολ* for regular *αο, αλ* = Indg. *ʔr, ʔl* after the analogy of *ορ ρω, ολ λω* = Indg. *ʔ ʔ* in *έ-πορ-ο-ν* etc. § 306.

Rem. Fick's hypothesis (Bezzenberger's Beitr. IX 313 ff.) that the vowel triad *a, ε, ο* in *στα-τό-ς, θε-τό-ς, δο-τό-ς* is a continuation of three different prim. Indg. vowels, is not at all convincing.

d. Italic. Lat. *pa-ter*, Umbr. *Iu-pa-ter* 'Juppiter' *Iuve pa-tre* 'Jovi', Osc. *pa-tír*: Gr. *πα-τήρ*. Lat. *sta-bulu-m*, Umbr., *sta-flarem* 'stabularem', Osc. *Anter-sta-tai* dat. '\*Inter-stitae', Volsc. *sta-to-m* 'statutum, consecratum', fr. rt. *stā-*. Lat. *da-mus da-tu-s*, Falisc. *da-tu* 'datum', Vest. *da-ta* abl. 'data', fr. rt. *dā-*.

Lat. *sa-tu-s* fr. rt. *sē-* 'sow' in *sē-men*. *spa-tiu-m* 'space' fr. rt. *spē(ē)-* 'extend' in *spē-s*, Lith. *spē-ti* 'to be at leisure, to be quick enough', O.Bulg. *spē-ti* 'to progress, have success'. *lassu-s* 'weary, tired': Goth. *lats* 'weary, idle', fr. rt. *lēd-* in Goth. *lēta* 'I let, leave'. Lat. *ca-tu-s* 'sharp' beside *cōs cōtis* 'whetstone'.

For the treatment of Lat. *a* in syllables which, according to prim. Lat. accentuation, were unaccented, e. g. *Juppiter*, s: § 97.



e. Old Irish. *a-thir* 'father': Gr. *πα-τήρ*. *sa-thech* 'satiated': Lat. *sa-tur*, Gr. *ἄ-δην* 'abundantly', Skr. *a-si-nv-á-* 'insatiable'.

The form *-airissid*, 2. pl. of *-airissim* 'I stand, stand still' fr. rt. *stā-*, probably may not be traced back to *\*(pari-)si-sta-te* and directly be placed equal to Gr. *ἵ-στα-τε*, as can be the case with Lat. *sisti-te* = *ἵστα-τε* (§ 97 p. 91), since the form *\*-airessid* with the influence of the *a* on the preceding syllable would be expected; cp. also 1. sg. *-airissiur*, which points to *\*sistiō*.

f. Germanic. Goth. *fa-dar* OHG. *fa-ter* O.Icel. *fa-ðer* *fa-ðir* 'father': Gr. *πα-τήρ*. Goth. *sta-þs* (st. *stadi-*) OHG. *sta-t* (gen. *steti*) OS. *sta-d* (gen. *stedi*) 'place': Gr. *στά-σι-ς*, Skr. *sthī-ti-ṣ*; OHG. *stara-blint* O.Icel. *star-blindr* 'blind with a cataract', Mod.HG. *starr* 'stiff': Skr. *sthī-rá-s* 'fast, immovable', rt. *stā-*. Goth. *ra-þjō* OHG. *re-dia* 'account': Lat. *ra-tiō*, rt. *rē-* (Lat. *rē-ri*). OHG. *slaf* Low Germ. *slap* 'slack' to Goth. *slēpan* 'to sleep'. Ags. *snear* 'snare, cord, string' O.Icel. *snara* 'cord', rt. *snē-* 'bind, spin'. OHG. *blat* OS. *blad* O.Icel. *blað* 'leaf', orig. part. 'blossomed', rt. *bhlē-* 'swell, bloom'.

For the treatment of *a* in OHG. (e. g. gen. *steti* to nom. *stat*) s. § 83.

g. Baltic-Slavonic. Lith. *sta-taū* 'I place', *stā-klės* pl. 'loom', O.Bulg. *sto-ja* 'I stand', fr. rt. *stā-*. Lith. part. pf. act. *dā-vęs* to inf. *dū-ti* 'to give', fr. rt. *dō-*. O.Bulg. *spo-rū* 'plentiful': Skr. *sphī-rá-* 'large, plentiful', to *spēja* 'I have success': Skr. *sphāyāmi* 'I thrive'. O.Bulg. *doja* 'I suckle': Goth. *daddja*, Skr. *dhāyāmi*, fr. rt. *dhē(i)-* 'suck'.

§ 110. In prim. Indg. *ə* was frequently spoken directly after the root syllable. Some regard this *ə* as forming a fixed part of the root and speak of dissyllabic roots; whether rightly (cp. p. 17), or not is here a matter of indifference.

The forms, which the vowel in this case assumes in Lat. and O.Ir., are explained by the laws which hold good for unaccented syllables in these languages, cp. §§ 97. 98.

In Greek it appears as *α*, *ε*, *ο*. A still closer investigation is needed to determine on what the various timbre in this

case depends. The explanations hitherto attempted are unsatisfactory.

Skr. *duh-i-tār-*, Gr. *θυγάτηρ* beside Av. *dug'dar- duγdār-* Goth. *daúhtar* Lith. *duktė* 'daughter'. Cp. Bartholomae Kuhn's Ztschr. XXVII p. 206 f., and von Fierlinger in the same vol. p. 478.

Skr. *dam-i-tá-* 'tamed' *dam-i-tár-* 'tamer', Gr. *ἀδάματος* 'unsubdued' *πανδαμάτωρ* 'all-subduer', Lat. *dom-i-tu-s dom-i-tor*. Skr. *vam-i-ta-* Gr. *ἐμ-ετός* Lat. *vomi-tu-s* 'vomited'.

Skr. *jan-i-tár-* Gr. *γεν-ετήρ* *γεν-έτωρ* Lat. *gen-i-tor* 'begetter', Lat. *gen-e-trīx*. Lat. *mer-i-tōr-iu-s mer-e-trīx*, *mol-i-tor mol-e-trīna*.

Skr. *bhar-i-tra-m* 'arm, that with which one carries' (fr. *bhar-* 'carry, bear'), Gr. *φέρ-ετρον* 'bier, litter', Lat. *prae-fer-i-culu-m* 'offering-cup' (as implement, to bear something before one self). Skr. *ar-i-tra-s* 'oar' (cp. *ar-i-tár-* 'rower', Gr. *ἔρ-έτης Ἐρ-έτορα*), *khan-i-tra-m* 'shovel'. O.Ir. *cenēl cenel* 'sex, race' = O.Cymr. *cenell* fr. \**ken-e-tlo-n*; *scēl* 'story, tidings' = Cymr. *chwedl* fr. \**skw-e-tlo-n* (Cymr. *chwedl* fr. \**swetl*, cp. §§ 175. 573) fr. rt. *seq-* 'say', O.Ir. *ē* through compensation lengthening (§ 518); cp. Zimmer Kelt. Stud. II 7. 142 f., Thurneysen Rev. Celt. VI 324 f.

Gr. *ἄν-εμος* 'wind', Lat. *an-i-mu-s*, cp. Skr. 3. sg. *án-i-ti* 'breathes, gapes'. Skr. *ján-i-man-* 'birth' *var-i-mán-* 'extent, distance'. Gr. *τερ-άμων* 'becoming soft by boiling' *ἀτέρο-αμνο-ς* 'indigestible, hard', *τελ-αμών* 'shoulder-belt'. Lat. *reg-i-men, mon-u-mentu-m, col-u-men, col-u-mn-a*. O.Ir. *anim*, dat. *anmain*, 'soul' (cp. Lat. *anima*), *menme*, dat. *menmain* 'sense' (prim. f. \**men-ə-men-*).

Skr. *kraviṣ-* 'raw meat', Gr. *κρέας*, cpf. \**qreuəs-*; Skr. *śócīṣ-* 'flame', Gr. *γῆρας* 'old age'.

Skr. *tan-i-ṣyāmi* 1. sg. fut. act. fr. *tan-* 'stretch, extend', *vēd-i-ṣyāmi* fr. *vid-* 'know', *vart-i-ṣyē* 1. sg. fut. mid. fr. *vart-* 'turn'. *āvēd-i-ṣam* 1. sg. aor. fr. *vid-* (cp. also *vēd-i-tum* inf., *vēd-i-tar-* 'knower'), *āyās-i-ṣam* fr. *yā-* 'go'. Gr. fut. *τεν-έω τενῶ* (*τείνω* 'I stretch'), *κρεμ-ά-ω κρεμῶ* fr. the verbal stem *κρεμα-* 'hang

up' (cp. *κρεμ-ά-θρα* 'a basket to hang things up in'), Hom. *ἰμοῦμαι* fr. *ἰμ-ό-ομαι* fr. the verbal st. *ἰμ-ο-* 'swear' (cp. *ἰμ-ό-της* 'swearer'). Plusquamperf. *ἤδ-ε-α*, opt. pf. *εἶδ-ε-ίην*, opt. aor. *δειξ-ε-ιαν*. Lat. fut. pf. *vīd-e-rō* (= Gr. *εἶδ-έ-ω*) *dīx-e-rō*, conj. pf. *vīd-e-rīmus* (= Gr. *εἶδ-ε-ἴμεν*) *dīx-e-rīmus*. Here perhaps belong also the Slav. aor. in *-o-chŭ*, e. g. 1. sg. *nes-o-chŭ*, 2. pl. *nes-o-ste* from *nesa* 'I carry'.

Pres. Skr. *vām-i-mi* 'I vomit', *rōd-i-mi* 'I lament, weep'. Gr. *κρέμ-α-μαι* 'I hang'; *ἐμέω* 'I vomit' is probably a transformation of \**Fεμ-ε-μ* = Skr. *vām-i-mi*. Lat. *vom-i-s*, *vom-i-t* (cp. Skr. *vām-i-ṣi*, *vam-i-ti*) may be forms of this class, which, being associated with *legis legit* and the like, was the cause of their passing into the *ō*-conjugation; here probably belongs also *vol-u-mus* (*s-u-mus* a new formation, after which 1. sg. *s-u-m*).

It also seems necessary to assume Indg. *ə* in certain flexional syllables. Nom. acc. pl. neut. Skr. *bhārant-i* Gr. *φέρουτ-α* = Indg. \**bhēront-ə*, part. pres. fr. rt. *bher-* 'bear'; cp. on the other hand voc. Skr. *āmba*, Gr. *νύμφᾶ*, O.Bulg. *ženo* with Indg. *-a* §§ 93. 94. Are the personal endings Skr. *-mahi* and Gr. *-μεθα* (1. pl. impf. mid. Skr. *ābharā-mahi*, Gr. *ἐφερόμεθα*) to be traced back to an Indg. \**-medhə*?

Vowel contraction in the indg. primitive period.

§ 111. The Indg. long vowels and *i̇*- and *u̇*-diphthongs, whose regular representation in the individual branches of languages has been exhibited in §§ 28—108, were not, as may with probability be assumed from an etymological analysis of word-forms, originally monosyllabic, but first became so by contraction.

Rem. As regards the putting down of pre-historic forms we follow this principle: where by analysis a form can be deduced as being originally dissyllabic, and all languages concurrently exhibit it as monosyllabic, we regard the contraction as having already taken place in the prim. Indg. period, e. g. the pf. stem *ēd-* (rt. *ed-* 'eat', Lat. *ēd-imus* etc.) which, after the analogy of perfect stem forms whose root begins with a consonant, is to be resolved into an older *e-ed-<sup>1</sup>*.

1) Since it is here only a question of the formative-type in general, it is immaterial whether this very example belongs to the oldest of its

Observe further: when an isolated form in a single language presents two vowels directly coming in contact with each other (but neither arising from the meeting together of two stems or words, nor due to the elision of a consonantal element which originally stood between the vowels), of which the first is an *a*-, *e*-, or *o*-vowel, it is never, so far as can be seen, the regular continuation of a prim. Indg. form with uncontracted vowels, but always a new formation. Here belong, e. g. the Homeric conjunctive forms *θήομεν*, *παροστίετον* etc. and Goth. 1. sg. pf. *aíðuk* (*áukan* 'to add, augment'). Cp. also § 600.

The following are examples of forms which became monosyllabic in the Indg. prim. period. They, of course, all rest upon etymological analyses only and their hypothetical character should not be mistaken.

§ 112. I. Contraction of *a*-, *e*-, *o*-vowels with *a*-, *e*-, *o*-vowels.

The product of the contraction was everywhere *ā*, *ē*, or *ō*. When the two vowels differed in quality, the product regulated itself after the quality of the first. Cp. Osthoff Morph. Unt. II 113 ff., Zur Gesch. d. Perf. 123 ff., Bremer in Paul-Braune's Beitr. XI 264 ff.

§ 113. I. *ā* arose from:

*ā* + *a*. Dat. sg. fem. *\*ekwāi* fr. *\*ekwā-ai* or *\*ekwa-ai* (*\*ekwā* 'mare': Skr. *áśvā*, Lat. *equa*): Skr. Ved. *-āi*, Gr. *-α*, O.Lat. *-ā*, Goth. *-ái*, O.Bulg. *-ě*. Instr. sg. fem. *\*ekwā* fr. *\*ekwā-a* or *\*ekwa-a*: Skr. Ved. *-ā*, Gr. *-ā* (Att. *δημοσίā*, *πῆ*, Ion. *κρονφῆ*), Lat. *-a* (*frūstra*).

*ā* + *e*. Nom. pl. fem. *\*ekwās* fr. *\*ekwā-es*: Skr. *-ās*, Umbr. Osc. *-ās*, Goth. *-ōs*, Lith. *-ōs*. Conjunctive stems in *-ā-* fr. *-ā-e-*, e. g. *\*stā-* fr. *\*stā-e-* (rt. *stā-* 'stand'), e. g. Skr. 3. sg. act. *sthāti*, Gr. Arcad. 3. sg. mid. *ἴσῳροι*.

*ā* + *o*. Conjunctive stems in *-ā-* fr. *-ā-o-*, e. g. Skr. Ved. 1. pl. *yunāma* (1. sg. ind. *yu-nā-mi* 'I bind to'), Gr. Dor. *δύ-νā-μαι* (Att. *δύνωμαι* is a new formation).

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kind, and accordingly a dissyllabic *e-ed-* as predecessor of *ēd-* was once really spoken, or whether *ēd-* first made its appearance after the termination of the process of contraction and on coming into existence took its *ē* after the analogy of other perfect stems.

Rem. The Indg. nom. acc. pl. neut. \**jugā* (Skr. Ved. *yugā*, Lat. *juga*) fr. stem \**jugo-* presents difficulties. If *a* (or *ā*) was the case suffix: why not \**jugō* or \**jugē*? If Osthoff is right (Zur Gesch. d. Perf. 123 f.) that the product of contraction only assumed the quality of the first vowel, when the second did not contain the chief accent of the word, one might think of an older \**jugo-á* or *juge-á* (respec. -*á*). But it is equally possible that Indg. \**jugā* is to be looked upon as \**jug-ā*, i. e. the stem forming suffix was dropped before the case ending (tonlose tiefstufe, 'unaccented weak grade' § 311).

§ 114. 2. *ē* arose from:

*e* + *a*. Perfect stem \**ēg-* fr. \**e-aġ-* (fr. rt. *aġ-* 'drive, lead'): 1. pl. Lat. *ēg-imus* Skr. *āj-imá*. Instr. sg. of -*o*-stems, e. g. \**qē* fr. stem \**qo-* 'who', Gr. Lacon. *πή-ποκα* 'usquam' or 'unquam', Goth. *hvē*: Skr. instr. in -*ā* can equally as well be placed here as to the form in Indg. -*ō* fr. -*o-a*. (§ 115).

*ě* + *e*. Perfect stem \**ēd-* fr. \**e-ed-* (rt. *ed-* 'eat'): Lat. 1. pl. *ēd-imus*, Goth. 1. pl. *ēt-um*, Lith. part. masc. *ėd-ęs* fem. *ėd-us-i*, O.Bulg. part. masc. *jad-ŭ* fem. *jad-ŭši*, Skr. 1. pl. *ād-imá*, Gr. part. *είδ-ηδ-ώς* for older \**ηδ-ώς*. Conjunctive stems in -*ē* fr. -*ē-e*, \**dhē-* fr. \**dhē-e* (rt. *dhē-* 'place'), e. g. Skr. Ved. 3. sg. *dhāti*, prim. Gr. \**θητι*. 1. sg. impf. \**ēs-η* 'eram' fr. \**ē-es-η* (rt. *es-* 'esse'): Skr. *ās-am*, Gr. Hom. *ῆα*, Att. *ῆ*.

*ē* + *o*. Conjunctive stems in -*ē* fr. -*ē-o-*, \**dhē-* fr. \**dhē-o-*, Gr. Messen. *ποο-τιθητι*, Skr. Ved. \**dhānti*.

§ 115. 3. *ō* arose from:

*o* + *a*. Dat. sg. masc. \**ekūōi* fr. \**ekyo-ai* (\**ekyo-s* 'horse' = Skr. *áśva-s*, Lat. *equo-s*): Av. -*āi*, Gr. -*ω*, Lat. -*ō*, Osc. -*úí*. Instr. sg. of the same class of stems in -*ō* fr. -*o-a*: Lat. -*o* (*modo*, *cito*), Gr. -*ω* (since a number of adverbs in -*ω* -*ως* are probably instrumentals, not ablatives), O.Ir. -*u* (*cēliu* fr. *cēle* 'comrade'), OHG. -*u*, Lith. -*ù* (*gerù* fr. \**gerŭ*, as *gerŭ-ju* shows, s. § 664, 3); the Skr. instrumentals in -*ā* can equally as well belong here as to the form in Indg. -*ē* fr. -*e-a* (§ 114).

*ō* + *e*. Nom. pl. \**ekūōs* fr. \**ekyo-es*: Skr. -*ās*, Umbr. Osc. -*ōs*, Goth. -*ōs*, O.Ir. voc. pl. *a fīru* 'o viri' fr. \**uirōs* (§ 90). Conjunctive stems in -*ō* fr. -*ō-e*, \**dō-* fr. \**dō-e* (rt. *dō-* 'give'), e. g. Skr. Ved. 3. sg. *dāti*, prim. Gr. \**δωτι*. 3. sg. indic. pf. of roots in

-ō, e. g. Skr. Ved. *dadā* 'dedit' fr. Indg. \**dedō* fr. \**de-dō-e*, Goth. *saisō* 'sevit' for regular \**saisa* (§ 660, 2) fr. Indg. \**sesō* fr. *se-sō-e* from rt. *sē-* 'sow'.

*o + o*. Gen. pl. \**ekūōm* fr. \**ekūo-om*: Ar. -*ām*, Gr. -*ων*, Lat. -*um*, OHG. -*o*, Lith. -*ū*.

*o + a\** (i. e. it cannot be determined whether the second vowel was *a*, *e* or *o*). Abl. sg. \**ekūōd* fr. \**ekūo-a<sup>z</sup>d*: Gr. -*ω* (Loer. Cret. *ᾶ* Loer. *ὄπω* 'unde'), Lat. -*ōd*<sup>1)</sup>. Instr. pl. \**ekūōis* fr. \**ekūo-a<sup>z</sup>is*: Skr. -*āiṣ*, Gr. -*οις* (§ 611), Lat. -*oes -īs* (§ 612), Lith. -*ais* (§ 615). 1. sg. pres. act. \**bherō* (Gr. *φέρω*, Lat. *ferō*) fr. \**bhero-a<sup>z</sup>*: Ar. -*ā*, Gr. -*ω*, Lat. -*ō*, O.Ir. -*u* (*no ráidiu* 'I speak'), Goth. -*a*, Lith. -*ù* (*sukù* 'I turn' fr. \**sukū*'), cp. the refl. *sukū-si* 'I turn myself', § 664, 3). The nom. acc. du. of *o*-stems in -*ōu* perhaps also belong here (whence -*ō* before consonants in prim. Indg. § 645, 1), e. g. \**duōu*: Skr. *dvāu* O.Ir. *dau dō* 'two' (§ 85).

§ 116. II. Contraction of *a*-, *e*-, *o*-vowels with *i*- and *u*-vowels.

*eī* fr. *e + i*, *oi* fr. *o + i*. Loc. sg. of *o*-stems partly in -*eī*, Gr. -*ει*, Osc. -*eí*, partly in -*oi*, Gr. -*οι*, OHG. -*e* O.Bulg. -*ě* (compare however § 84 rem. 3).

*oi*, *oi* fr. *ə + i*, *o + i*. Weak form of the opt. of roots in -*ā*, -*ē*, -*ō*. \**stōi-* fr. \**stə-i-* (rt. *stā-* 'stand'): Gr. *σταῖμεν*, Skr. \**sthēma*, instead of which *sthēyāma* was formed after analogy of the sg. *sthēyām* (for regular \**sthayām*). \**dhōi-* fr. \**dhə-i-* (rt. *dhē-* 'place'): Gr. *θεῖμεν* instead of \**θαμεν* (cp. § 109 c.), Skr. *dhēyāma* instead of \**dhēma* after the sg. *dhēyām*. \**dōi-* from \**də-i-* (rt. *dō-* 'give'): Gr. *δοῖμεν* instead of \**δαμεν* (cp. loc. cit.) Skr. *dēyāma* instead of \**dēma* after the sg. *dēyām*. Cp. § 109 a. Opt. tenses with thematic vowel, e. g. \**bhero-i-* fr. \**bhero-i-* (rt. *bher-* 'bear'): Skr. *bhārēṣ*, Gr. *φέροις* etc.

1) Skr. *mā-d*, *vā-d*, *asmā-d* permit the assumption that in the abl. sg. -*a<sup>z</sup>d* and -*d* stood beside each other in the same manner as -*es*, -*os* and -*s* in the gen. sg. Lith. *viško* and Slav. *vluka* 'wolf's', whose ending is to be traced back to an orig. form with *ā* on account of Lith. *ō* (§ 108), can only stand in an indirect relation to Lat. -*ōd* and Gr. -*ω*; they are a problem of a similar nature as Indg. \**juḡā* 'iuga' (§ 113 rem.).

For Gr. *γνοι-* in the Opt. *γνοῖμεν* (indic. *ἔγνων ἔγνωμεν*), which goes back to *\*γνωι-*, a prim. Indg. form *\*ǵnōǵ-* fr. *\*ǵnō-ǵ-* must apparently be assumed. In like manner also for Gr. *πλιστο-* O.Icel. *flester* (fr. *\*fleistr*) *fleire* an Indg. *\*plēis-* fr. *\*plē-is-*. See §§ 611. 614.

#### B. THE VOWELS AS CONSONANTS.

§ 117. Of the vowels ascribed to the prim. language there were two, *i* and *u*, which were employed both as consonants (*i*, *u*) and as consonants (*ǵ*, *u*).

It is not possible in every case to draw a sharp line between Indg. *ǵ*, *u* and the Indg. spirants *j*, *v*. (§§ 554. 598).

*ǵ*, *u* can everywhere be assumed with certainty, where they correspond to an *i* and *u* of other forms of the same form-system, or stand in ablaut relation to *i* and *u*. 3. pl. *\*ǵ-ńti* (Skr. *y-ánti*) beside 2. pl. *\*i-té* (Skr. *i-thá*) fr. rt. *ei-* 'go'. 3. pl. *\*qi-nu-ńti* (Skr. *ci-nv-ánti*) beside 2. pl. *\*qi-nu-té* (Skr. *ci-nu-thá*) fr. rt. *qei-* 'to set in rows'. Nominal suffix *-ǵo-* beside *-i(i)o-*, as *\*medhǵo-* (Skr. *mádhya-s* Gr. Hom. *μέσσο-* fr. *\*μεθǵο-* 'medius') beside *\*pətri(i)o-s* (Skr. *pítriya-s* Gr. *πάτριος* 'patrius'). *\*duó* 'two' (Skr. ved. *dvá*, Gr. *δ(φ)ώ-δεκα*) beside *\*du(u)ó* (Skr. Ved. *duvá*, Gr. *δύω*). Nom. pl. *\*treǵ-es* 'tres' (Skr. *tráy-as*) beside loc. pl. *\*tri-su* (Skr. *tri-śú*). Nom. sg. *\*dǵiēu-s* 'sky' (Skr. *dyāú-ś*, Gr. *Ζεύς*) and loc. sg. *\*dǵi-i* (Skr. *div-i*, Gr. *Δι-ί*). Root form *\*suep-* or *\*suop-* in Skr. *sváp-na-s* 'sleep, dream' beside *\*sup-* in Skr. part. *sup-tá-s*, Gr. *ὑπ-νο-*.

Where *i* and *u* were missing from Indg. times in formations which properly should have weak grade, the probability is for *j*, *v*. E. g. the participles Skr. *tyaktá-s*, Gr. *σεπτό-* exhibit the rt. *tjeg-*, not *tǵeg-* ('step back from something', hence in Gr. 'to be timid, to honour with pious awe'), since from *tǵeg-* the form *\*tiqtó-s* would have to be expected. Skr. *śétē* Gr. *κῆται* 'lies' permits the assumption of the rt. *kej-*. Rt. *ves-* 'clothe', not *ues-*, on account of Skr. pf. mid. *va-vas-ē*, etc. Cp. § 307 ff.

In Greek initial *ζ* and 'decide whether we have to do with *j-* or *ǵ-*, e. g. *ζέω* 'I see' fr. rt. *jēs-*, *ζυγόν* 'yoke' fr.

rt. *jeug-*, but ἅγιο-ς 'holy' fr. rt. *ǰāg-*, ὑμεῖς 'vos' fr. st. \**ǰu-sme-* (Skr. *yu-šma-*).

In every case where the spirantal value of the sound can not be determined with certainty, or with great probability, we write the Indg. orig. forms in this work with *ǰ*, *u*.

In most Indg. languages *ǰ* and *u*, in dissyllabic vowel combinations as *ia*, *ua*, were spoken as glides: *ǰia*, *uia*. This sound must have existed also in the Indg. unitary period. We assume therefore e. g. \**patr-ǰio-s* and \**duǰō* as the Indg. orig. forms of Lat. *patrius*, *duō* etc. Cp. Sievers Phonetik<sup>3</sup> 146, Osthoff Morph. Unt. IV 398 ff. Analogously *ǰ* and *u* also before nasal and liquid sonants, e. g. \**siǰ-ǰt* = O.Lat. *sient* (*sint*) fr. rt. *es-* 'be', \**é-kliǰ-ǰt* = Skr. *ásriyan* and \**ke-kliǰ-ǰtǰi* = Gr. Hom. *κεκλιταε* fr. rt. *kliǰ-* 'lean against'. *ǰ* and *u* in this case corresponded to the *r* in \**is-ǰro-* (Skr. *iširá-s*, Gr. Corc. *ιαρό-ς*) and to the *n* in \**tnn-u-* (Skr. *tanú-š*, Lat. *tenu-i-s*) etc., s. §§ 223, 4. 284, 3.

### Indg. *ǰ*.

#### Prim. Indg. period.

§ 118. Initial *ǰ* only before sonants. Pronominal stem \**ǰu-* (\**ǰu-sme-*) 'ye, vos': Skr. nom. *yūyám* Abl. *yušmád*, Arm. *ǰe-r* 'your', Gr. ὑμεῖς 'ye', Goth. *jus* 'ye', Lith. *jūs* 'ye'. Skr. *yá-ti* 'goes', Av. *jār*<sup>o</sup> n. 'year', Gr. ἔτος 'year' ἄρα 'time', Lat. *jānuā* 'entrance, door', Goth. *jēr* 'year', Lith. *jó-ju* 'I ride' O.Bulg. *jadaq* 'I drive, ride', *jarǰ* m. *jara* f. 'spring'. Skr. *yánti* fr. Indg. \**ǰ-ǰti* (3. pl. of \**éǰ-mi* 'I go').

§ 119. Intersonantal. 1. sg. \**uǰi-ō*: Skr. *váy-ā-mi* 'I weave', Lith. *vej-ù* O.Bulg. *vǰja vǰja* (§ 68) 'I turn, wind'. Nom. pl. in *-eǰ-es* from *eǰ-*stems, e. g. \**tréǰ-es* 'three': Skr. *tráyas*, Gr. *τρεις* fr. \**trǰe(ǰ)es*, Lat. *trēs* fr. \**tre(ǰ)es*, Goth. *þreis* fr. \**Þriǰ(i)z* (§§ 67. 660, 1), O.Bulg. *trǰje trije* (§ 68). Causat. in *-éǰō*, e. g. Skr. *taršáyāmi* 'I let thirst, languish', Lat. *torreō* 'I make dry, parch', etc. Skr. *spháya-tē* 'increases, grows', Lith. *spǰju* 'I am at leisure', O.Bulg. *spǰja* 'I have success'. Lith. *pa-stǰju* 'I become something', Lat. *stō*, O.Ir. *-tau* 'am' fr. \**stā-ǰō*.



Derivative verbs as Skr. *pr̥tanā-yā-mi* 'I fight' fr. *pr̥tanā-* 'fight', *miśra-yā-mi* 'I mix' fr. *miśrā-* 'mixed', Gr. *τιμῶ* fr. \**τιμᾶ-ιω* fr. (Dor.) *τιμά* 'esteem', *φιλῶ* fr. \**φιλε-ιω* fr. st. *φιλε- φίλο-* 'amicus', Lith. *pāsako-jū* 'I narrate' fr. *pāsaka* 'narration', O.Bulg. *laka-ja* 'I deceive' fr. *laka* 'craft', etc.

Present stem \**m̥g-je-* fr. rt. *men-*: Skr. *mānyatē* 'means', Lith. *miniū* O.Bulg. *mīnjā* 'I think'. Derivatives as Skr. *udan-yā-ti* 'streams from' fr. prim. Ar. \**udg-īā-ti*, Gr. *τεκταίνω* fr. \**τεκτη-νω*, Goth. *glitmunja* 'I shine' fr. prim. Germ. \**zlitm̥g-iō* (§§ 223, 2. 225).

Present stem \**m̥g-je-* fr. rt. *mer-* 'die': Av. *mer<sup>o</sup>yēiti*, Lat. *morior*; Gr. *σπαιῶ* 'I struggle convulsively', Lith. *spirū* 'I push with the foot', cpf. \**spg-īō* (§§ 284, 2. 286).

*i* as glide after *i*. For examples see §§ 117. 120.

§ 120. Postconsonantal. Stem forms \**diēu-*, \**dieu-*, \**d̥iu-* 'sky': Skr. nom. sg. *dyāūś* acc. sg. *dyām* (§ 188) instr. pl. *dyū-bhiś*, Gr. *Ζεύς* fr. \**δειυς* \**δειγυς* (§ 611), *Ζῆν* (cp. § 188), Lat. *Jov-* in *Jovis* Osc. Iuv-eí Umbr. Iuv-e 'Jovi' fr. \**diēu-* (§ 65). Root form *siū-* 'sew': Skr. part. *syū-tá-s*, OHG. *siut* m. 'seam' *siu-la* 'awl', Lith. part. *siū-ta-s*, *siū-la-s* 'linen-thread', O.Bulg. part. *šitū* fr. \**siy-tū*, *šilo* n. 'awl' fr. \**siy-lo*. Stem \**medh̥iō-* 'medius': Skr. *mādhyā-s*, Gr. *μέσσο-ς μέσος*, Goth. *midjis*, O.Bulg. fem. *mežda* 'boundary' fr. \**medjā*. Presents in *-īō*, e. g. \**uerg-īō* fr. rt. *uerg-* 'work, effect': Av. *ver<sup>o</sup>zyēmi*, Gr. *ῥέζω* for regular \**ῥαζω* (*ε* for *α* after *ῥξω*, *ῥοδω* etc.) fr. \**Fr̥ag-ιω*, Goth. *vairk-ja* (§ 299).

Postconsonantal *i* often interchanged with *i̇* in prim. Indg. (in the same manner as *u*, *n*, *m*, *r*, *l* with *u̇*, *u̇n*, *u̇m*, *ṙr*, *l̇*, §§ 153. 227. 287). A formative element assumed various shapes not only in different words, e. g. suffix form *-iō-* in \**p̥tr-iō-* (Skr. *p̥triya-s* Gr. *πάτριω-ς* Lat. *patriu-s*) beside *-iō-* in \**medh̥iō-* (Skr. *mādhyā-s* etc., s. above), but also in the same words, e. g. stem forms \**diēu-* \**dieu-* (Skr. nom. *dyāū-ś* acc. *dyām*, Lat. *Diov-e* Osc. *Diúv-eí* *Διουφε* 'Jovi', Lat. *diem*) beside \**diēu-* \**dieu-* (Skr. *dyāū-ś* etc.). In this change it is a question of a difference of ablaut-grade, e. g. \**gi̇i-ā* (Lith. *gijė* 'thread', Gr.

*βίος* 'bow' for older \**βιᾶ*, s. Osthoff Morph. Unt. IV 188) represents the secondary accented (nebentonige) weakgrade form, but \**gi-ā* (Skr. *jyā* 'bow-string') the unaccented (tonlose); cp. §§ 307 ff. and 670.

We shall here confine ourselves to cases in which no ablaut (the opposite of weak and strong grade) can be determined. From the investigations hitherto made concerning the origin of the double forms *i* and *ii* (s. especially Sievers in Paul and Braune's Beitr. V 129 ff., Hübschmann Kuhn's Ztschr. XXIV 362 ff., Osthoff Morph. Unt. IV 353 ff., Zur Gesch. d. Perf. 421 ff.) the following may be given as probable:

After initial consonants the change depended on the nature of the final syllable of the preceding word. In the parent language they may have spoken \**só siēt* = Skr. *sá syāt* 'he may be', but \**tód siēt* = Skr. *tát siyāt* 'that may be' (cp. also Goth. 1. sg. *s-ijáu*). Double forms may also here be shown as pres. st. \**mṛ-īé-* = Av. *mer<sup>e</sup>yē-iti* Lat. *morio-r* beside \**mr-īé-* = Skr. *mriyá-tē*, Opt. st. \**bhu-īē-* = Av. 3. sg. *bu-yā-ḥ*, Gr. Cypr. *φύ-ιη* beside \**bhu-īē-* = O.Pers. 3. sg. *b-iyā* fr. rt. *bheṃ-* 'be, become' (cp. Osthoff Zur Gesch. d. Perf. 426 ff.). \**tód mṛietai* 'that dies' possibly stood originally beside \**só mriietai* 'he dies', impf. \**é mriieto*.

*i* was used medially after short syllables, *ii* after long, especially after consonant groups. This is seen most clearly by the suffix *-iō-*. Cp. on the one hand \**medh-iō-* 'medius' (s. above); \**al-iō-* 'alius' = Arm. *ail* Gr. *ἄλλο-ς* O.Ir. *aile* Goth. *alji-s*; and on the other \**pātr-iō-* 'patrius' (s. above); \**ekū-iō-* 'equinus' = Skr. *áśviya-s* Gr. *ἵππο-ς*; \**ghesl-iō-* (deriv. of \**gheslo-* 'thousand') = Skr. *sa-hasrīya-* 'thousand-fold', Gr. Lesb. *χέλλιοι* 'thousand'; \**mort-iō-* = Skr. *á-martīya-* 'immortal', Gr. *ἀ-μβρόσιο-ς* (*βροτός* for *μορτός* through the influence of \**βρατό-ς* = Skr. *mṛtá-s* 'mortuus'); \**nept-iō-s* = Av. *naptiya-* 'relation', Gr. *ἀνεψιό-ς* 'first cousin', O.Bulg. *netijǎ* 'first cousin' (*-ij-* fr. *-ij-* § 36); \**nāu-iō-* = Skr. *nāvīya-* 'navigable', Gr. *νάο-ς* *νήο-ς* 'belonging to a ship'; also especially the established difference in Goth., e. g.

between gen. sg. *harjis* (*harja-* 'army') and *hairdeis* (*hairdja-* 'shepherd'), cp. § 84 rem 1.

It may be presumed that regular forms occasionally suffered interruption in their development already in prim. Indg. through analogy. This certainly frequently took place in the separate developments of the orig. language, as e. g. Skr. Ved. *gāv-īya-* (beside *gāv-ya-*) 'bovarius' after such forms as *áśvīya-*, Gr. Dor. *-κάτιοι* Arcad. *-κάσιοι* (*διᾶ-κάτιοι* 'two hundred' etc., cp. Skr. *-śatya* 'consisting of a hundred') after *χέλλιοι* (*χίλιοι*). But, besides this, *ī* fr. *ī* arose in Aryan (§ 125) and Lat. (§ 135) by regular development.

§ 121. Anteconsonantal. *ī* only occurred in this position after *a-*, *e-* and *o-*vowels, with which it formed 'diphthongs', e. g. 3. sg. \**uóid-e* 'knows': Skr. *véda*, Gr. *ῥοῖδε*, Goth. *váit*. For the fate of *ī* in these combinations cp. §§ 61—108 and § 150.

§ 122. Finally. *ī* only occurred finally as the second component of diphthongs, cp. nom. pl. \**tóī* 'the' = Skr. *té* Gr. Hom. *τοί* etc., dat. sg. in *-aī* of *a-*stems (§ 101 extr.). The treatment in the individual languages was generally the same as before consonants, cp. e. g. Skr. *té* with *véda* (= Gr. *ῥοῖδε*).

When conditionally final (in the body of a sentence), *ī* also stood after consonants, e. g. Indg. \**protī* *ebherom* may be assumed for Skr. *praty-abharam* Gr. *προς-έφερον* 'I brought forward'. Cp. § 645 finals 2.

### Aryan.

§ 123. Initially. Pronominal stem Skr. Av. O.Pers. *ya-* 'which' (in Iran. also demonstr.), nom. acc. neut. Skr. *ya-d* Av. *ya-ḥ*, Skr. *yá-thā* Av. *ya-ḥa* O.Pers. *ya-ḥā* 'how': Gr. *ὅς* 'qui' *ὅ* 'quod', Goth. *jáins* 'that' (either to Lith. *ji-* in *jī-s*, § 84 rem. 1 or according to Lidén Arkiv f. Nord. fil. III 242 from Indg. loc. \**īoī*, formed like Gr. *ἐκεῖ-νος* fr. *ἐκεῖ*), *ja-bái* 'if', acc. sg. fem. Lith. *jā* O.Bulg. *ja* 'eam' (= Skr. *yā-m*, Gr. *ἄν, ἦν*). Skr. *yájati* Av. *yazaitē* 'honours', Skr. *yájas-* n. 'veneration':

Gr. *ἄζομαι* 'I honour, stand in pious awe of' fr. \**λαζομαι* (§ 131), *ἄγος* n. 'veneration'.

The difference between initial Indg. *ī-* and *j-* is still seen in Skr. ptc. *iṣṭá-* fr. *yaj-* 'honour' (Gr. *ἄγ-ιω-ς*) and *yas-tá* fr. *yas-* 'bubble, seethe' (Gr. *ζέω*) and similar forms. See §§ 117. 318. 598.

§ 124. Intersonantal. Skr. *ā-vay-a-ti* 'drives on, leads to' *pra-vay-ana-m* 'drover's goad', Av. *vay-ēiti* 'drives, scares': Lith. *vej-ù* 'I persecute', O.Bulg. *voj-ī* 'warrior'. 1. sg. Skr. *dhārāyāmi* Av. *dārayēmi* O.Pers. *dārayāmīy* (read *-mi*) 'I hold, keep', Indg. ending of the 1. sg. \**-ejō*. Nom. pl. Skr. *gir-āy-as* Av. *gar-ay-ō* 'mountains' (Nom. sg. Skr. *giri-ś* Av. *gairi-š*, cpf. \**grr-i-s*, § 290).

1. sg. impf. Skr. *āyam* O.Pers. *ayam* (read *āyam*) 'I went' = Indg. \**ēim(m)*, cp. Gr. *ἦα* for \**ḥα* (§ 130), fr. rt. *ei-*. Opt. 3. sg. Skr. *hanyāt* Av. *janyāp* 'he may strike dead', prim. f. \**ghy-īē-t*, fr. rt. *ghen-* 'strike dead'. Opt. 3. sg. Skr. *gamyāt* Av. *jamyāp* 'he may come', prim. f. \**gm-īē-t*, rt. *gem-* 'come'. Av. 3. sg. *mer<sup>o</sup>yeiti*, to Lat. *morior* (§ 119). Skr. 3. sg. *kuryāt* 'he may make' fr. \**kryāt*, prim. f. \**qr-īē-t* (§ 289).

In Av. for final *-ayē* (= prim. Ar. \**-aiāi*) *-ēē* is written and for final *-ayem* (= prim. Ar. \**-aiām*), *-aem*, e. g. dat. sg. *matēē* = Skr. *matāy-ē* (nom. sg. Av. *maiti-š* Skr. *matī-ś* f. 'sense, thought'), 1. sg. impf. *vaēdaem* 'I let know' = Skr. (*á-*) *vēdayam*; prim. f. \**uoideio-m*, rt. *ueid-* 'know'. See Bartholomae Handb. §§ 93. 95. 224. 290.

§ 125. Postconsonantal. Skr. *jyā-* Av. *jyā-* 'bow-string', prim. f. \**gi-ā-*. Skr. *sat-yá-* Av. *haiṣya-* O.Pers. *hašiya-* (read *hašya-*, s. below) 'true'. Skr. *ar-yá-* Av. *airya-* 'faithful, devoted to, Aryan'. 1. sg. Skr. *pás-yā-mi* Av. *spasyēmi* 'conspicio', Indg. \**spek-īō*. Passive Skr. *śas-yá-tē* 'is valued', O.Pers. *pah-yā-mahy* 'we are called'.

In Vedic *ī* often interchanged with *īi*, e. g. *áśv-īya-* 'ἵππιος', *rāj-iyá-m* 'dominion' (cp. Lat. *rēgiu-s*), *mitr-īyá-* 'friendly' but *sat-yá-*; dat. abl. pl. *prajā-bhīyas* beside *prajā-bhyas* (*prajā-*

'posterity') *pitṛ-bhyas* (*pitár-* 'father'), etc. Cp. § 120. In the classical language mostly only *i̇* occurs, e. g. only *-bhyas*, only *rāj-ya-* etc., only opt. *syām* 'sim'. The old grade *i̇̄* remained however e. g. in *mr-īya-tē* 'moritur', *kr-īya-tē* 'is made' (*kar-* 'make') and similar presents; in the opt. (precative) *kr-īyā-t* from *kar-* and similar forms; in the aor. *a-śi-śriy-a-t* fr. *śray- śri-* 'lean against'; in the instr. sg. *bhīyā* fr. *bhī-* f. 'fear' (cp. Ved. part. *bhīy-ānā-*, Lith. *bij-aũ-s* 'am in fear') *striyā* from *strī-* 'wife' (but *i̇* in other than initial syllables: *dātryā* fr. *dātrī-* 'donatrix'). In the popular dialects *i̇̄* frequently appears for the *i̇* of the classical language, without the quantity of the preceding syllable being a criterion in the same manner as in Vedic. In this case it is undoubtedly, partly at least, not a question of Indg. *i̇̄* or analogy, but of a purely regular evolution fr. consonant + *i̇* (as in Lat.), e. g. Pāli *marīyāda* = Skr. *maryāda* 'mark, boundary'; *ariya-* = Skr. *arya-* (*-iy-* very frequently after *r*); *kammaṇiya-* beside *kammañña-* = Skr. *karmanya-* 'operative, active'; Prākṛ. *cōriam* = Skr. *cāurya-m* 'theft'; *uddisia* = Skr. *ud-diśya* absolutive 'by pointing to'. With Prākṛ. *ia* for *i̇a* cp. *ṇiutta-* = Skr. *ni-yukta-* 'bound to'.

Prim. Iran. *h̄i̇* = prim. Ar. *s̄i̇* became *ñh* in Av., but *hy* was still retained in the Gāpā dialect. *vañhō*, Gāp. *vahyō* : Skr. *vás-yas* 'melius', neut. compar. of *vanhu-* : Skr. *vásu-* 'bonus'. Cp. § 558, 3.

Final *-īa -i̇ā*, which was still retained in the Gāpā dial. as *-yā* (i. e. *-ya* and *-yā*, § 649, 1), appears after consonants, especially after *h*, (= prim. Ar. *s*, § 558, 3) as *-e. yehe*, Gāp. *yehya* : Skr. *yá-sya*, gen. sg. fr. *ya-* 'which'.

*-īm* appears for *-yem*. *ainim* : Skr. *anyá-m* 'alium' (Gāp. also *anyēm*). *haiṇīm* : Skr. *satyá-m* 'verum'. Similarly *yesnīm* : Skr. *yajñīya-m* 'venerandum'. Cp. Bartholomae Handb. § 95.

In Av., as in Vedic, the metre shows that *y* is often to be read as *iy* especially after long syllables, e. g. *bāmya-* 'beaming, shining' as *bāmiya-*, dat. pl. *hitaēbyō* = Skr. *sitē-bhyas* 'vinctis' as *hitaēbiyō*. This is further shown by the preceding voiceless

explosives not being changed into spirants, e. g. *dāitya-* 'legal' was *dāitiya-*; because *\*dātīa-* would have become *\*dāiṣya-*, as e. g. *haiṣya-* = Skr. *satyá-* 'true' shows (§§ 353. 473).

In Old Persian *iy* or *īy* mostly occurs (the latter only graphically different from *iy*, s. § 21). In a number of cases in which these spellings are found, the pronunciation may have been *i̇* as in Ved. and Av. But this can only be directly supported in cases where the preceding *t* was not changed to *ś* (§§ 353. 473), e. g. *martiya-* 'homo' = Av. *mašiya-* (§ = *rt* § 260) Ved. *mártiya-* (§ 120 p. 112). In most cases, however, *iy* (*īy*) will have to be read as *i̇*, certainly in *hašiya-* (= Av. *haiṣya-* Skr. *satyá-*) and others, where *ś* was caused by *ṫi*, probably in *aniya-* (= Av. *anya-*, Skr. *anyá-*), *maniyāhy* (2. sg. conj. pres., to Av. 1. sg. indic. pres. *manya*, Skr. 3. sg. pres. indic. *mányatē* fr. Ar. *man-* 'think'), 3. sing. opt. *jamīyā* (= Av. *jamyāḥ* Skr. *gamyāt* 'eat') and others of the same kind.

On the other hand O.Pers. *tya-* 'which' is to be read as *tīā-* on account of the non-change of the *t*, cp. Ved. *tīyá-* beside *tyá-* 'that, the'.

§ 126. Anteconsonantal and finally. The vowel remained *i̇* after *ā* (*āi*) in Sanskrit, whereas in prim. Ar. and prim. Skr. *ȧi* became *ē*. Prim. Ar. and prim. Iran. *ȧi* appears in Av. as *aē* (i. e. *aē*) or *ōi*, finally as *-ōi* and *-ē*, prim. Ar. and prim. Iran. *āi* as *āi*; prim. Ar. *ȧi* and *āi* remained unchanged in O.Pers. (*ai*, written *-aiy -ay* when final, and *āi*).

Prim. Ar. 3. sing. *\*ȧi-ti* 'goes' = Indg. *\*ē̇i-ti*, Gr. *εἶσι* : Skr. *ēti*, Av. *aēti* (fr. *aēti* § 638), O.Pers. *aitiy*. Prim. Ar. 3. sg. *\*bharȧit* 'he may bear' = Indg. *\*bhérȯit*, Gr. *φέρου* : Skr. *bhárēt*, Av. *bārōiḥ*. Prim. Ar. *\*dūrȧi*, loc. sg. of *\*dūra-* 'distant', cp. Gr. *οἴξαι οἴξαι* 'at home' : Skr. *dūrē*, Av. *dūrōi* *dūirē*, O.Pers. *dūraiy dūray*.

3. sg. Skr. *āt*, Av. *aiḥ* 'went', Indg. *\*ē̇it* fr. *\*é̇it*, fr. rt. *ėi-*; O.Pers. *atīy-āiš* 'went beyond' (the ending *-š* from the sigmatic aorist). Instr. Skr. pl. *śatāiḥ* Av. *satai-š* from st. Skr. *śata-*

Av. *sata-* 'centum', Gr. *-οις* (§ 611). Av. dat. sg. *mazištāi* fr. st. *mazišta-* 'maximus': Gr. *μεγίστωρ*.

Cp. §§ 62. 78. 94.

§ 127. The transition of *ǰ* to a palatal spirant.

*y* was probably everywhere a consonantal vowel in Vedic and classical Sanskrit. Whilst initially and frequently also medially it became a spirant in Prākṛit, hence e. g. *ja-* 'which' (𑀧) = *ya-*, *kajja-* n. 'business, trade' (𑀓𑀭𑀮) = *kārya-*.

Bartholomae (Handb. pp. 9. 36 f., cp. also Hübschmann Kuhn's Ztschr. XXIV 354 f.) thinks that it had partly a spirantal function in Iranian. The change of prim. Ar. tenues into spirants seems to have been caused by this in every case. (§ 473).

#### Armenian.

§ 128. It is here difficult to ascertain the sound-laws owing to the scarcity of reliable etymological material. In any case *ǰ* probably did not remain unchanged.

Initial *ǰ* seems to have become a spirant *j* in *je-r* 'your', which is generally connected with Skr. *yu-šma-* Lith. *jūs* 'ye'.

*ǰ* disappeared after consonants. *čü* 'a breaking up', to Skr. *cyü-ti-š* 'quick motion, departure from something'; it is not however clear whether the prim. Indg. rt. is *qiey-* or *qjey-*. Epenthesis appears in *ail*, gen. *ailoy*, 'alius' fr. \**aljo-* (Goth. *alja-* Gr. *ἄλλο-* etc.).

For the rest we refer to Hübschmann Armen. Stud. I 78.

#### Greek.

§ 129. Initially uniformly *ǰ*, which presupposes a voiceless *ǰ* as intermediate stage. *ός* 'who': Skr. *yá-s*. *ἥπαρ* 'liver': Av. *yākar<sup>e</sup>*, Skr. *yakṣt*, Lat. *jecur*. *ἅγιός* 'holy, venerable': Skr. *yajñá-s* 'offering'. *ἰσμίην* 'battle': Skr. *yudh-* 'fight'. Lesb. ' fr. *ἴμμες* 'ye' beside Att. *ἴμμεῖς*, to Skr. *yu-šma-*, cp. Lesb. *ὀ* fr. *ί* = Skr. *sá* § 564.

§ 130. Intersonantal. *ǰ* between vowels, when the first was not *u*, dropped out in prim. Gr. (except when, after *i*, it

served as a glide to the following vowel, s. § 131). *δέος* 'fear' fr. \**δFελ-ος*, Hom. pf. *δείδω* i. e. \**δέδFω* 'I fear' probably from \**δεδFο(ǰ)-α*, rt. *δμεǰ-*. Nom. plur. *τρεις* 'three' fr. \**τρει(ǰ)-εS*: Skr. *tráy-as*. 1. sg. *φοβέω* 'I frighten, scare away': Skr. *bhā-jáyāmi* 'I hunt'. The cases, in which *ǰ* seems to have been retained in this position, are new formations, e. g. Arcad. *τείω* 'I atone for, pay' not = Skr. *cáy-a-tē*, but a formation from *τίω* (Skr. *cī-yá-tē*) after *τείσω* *ἔτεισα* etc., Hom. *ὀκνέω* beside *ὀκνέω* 'I hesitate, linger' not fr. \**ὀκνε-ω* (cp. *ὀκνο-ς* 'hesitation'), but formed after such presents as *τελείω* fr. \**τελεσ-ω* 'I finish' (§ 131).

*ǰ* after *u*: Cypr. opt. *φύ-λη* = Av. *bu-yā-ǰ*, Indg. \**bhu-ǰé-t*; Lesb. pres. *φύίω* fr. \**bhu-ǰō*, rt. *bheǰ-* 'be, become'.

When the second vowel arose from Indg. sonantal nasal: 1. sg. *ῆα* 'went' for regular \**ῆα* (*ǰ̃*-, formed after *ῆμεν* etc.) fr. Indg. \**éi-ǰ*, 3. pl. opt. mid. Hom. *φεροίαιτο* for \**φερούαιτο* (-*ου* after *φερούμεθα* etc.) fr. \**bhéroi-ǰto*, rt. *bher-* 'bear'.

1. sg. *τεκταίνω* 'I make' fr. \**τεκτανω*, \**τεκνη-ω* fr. *τέκτων*. *βαίνω* fr. \**βανω*, \**βαμ-ω*, \**ǰη-ǰō* (§ 204), rt. *gem-* 'go'. Cp. § 234. *σπείρω* 'I struggle convulsively' fr. \**σπαρω*, \**spǰ-ǰō* (§ 293): Lith. *spirù* 'I push with the foot'. *ǰ* palatalised nasals and *ρ* and combined with the preceding *α* to form *αι* (§ 639). On the other hand *σάλλω* 'I stir up, hoe' fr. \**σαλω*, \**sqǰ-ǰō*: Lith. *skilù* (fr. \**skil-ǰu*) 'I strike fire'. Cp. § 131.

### § 131. Postconsonantal.

*sǰ-* became ' : *ὑ-μήν* (*v̄*) 'thin skin' *ὑ-μν-ος* 'hymn, song', to Skr. *syū-man-* 'cord' *syū-tá-s* 'sewed', cp. further the compounds with *κατ(α) κάσσωμα* Att. *κάττυμα* 'anything stitched, leather sole', *νεο-κάττυτος* 'new-soled'.

Postvocalic *s* and *u* became palatalised by a following *ǰ*, then the latter combined with the preceding vowel to form a diphthong (§ 639). Gen. sg. \**το-σλο* 'of the' = Skr. *tá-sya* became \**τοισο*, Hom. *τοῖο*, Att. *τοῖ*. Hom. *τελείω* Att. *τελῶ* 'I complete' fr. \**τελεσ-ω* st. *τέλεσ-* 'end', cp. Skr. *namas-yá-ti* 'honours' from *námas-* 'honour, respect'. Hom. *εἶην* 'sim' fr. \**éσǰην*, cp. Skr. *syām*; the *-i* in the Att. form *εἶην* is due to the



influence of εἶμεν. \*κλαφ-ιω 'I weep' (fut. κλαύ-σομαι) became \*κλαυφω, hence Hom. Att. κλαίω, but \*κλαιφε- Att. κλάε- in κλάεις etc., like δᾶήρ 'brother-in-law' fr. \*δαιφηρ = Skr. *dēvár-*, s. § 96. The double forms κλαίω, and κλάω, as well as καιώ and κᾶω 'I burn, light' (fut. καύσω) are due to levelling: the forms were originally κλαίω κλάεις κλάει κλαίομεν etc.

\*κτεν-ιω 'I kill' became κτένω in Lesb. and κτείνω in Att. (by compensation lengthening). \*ἀμεν-ων 'better' became Att. ἀμείνων Bæot. Ἀμεινοκλεῖος Arcad. Ἀμηνέας Cypr. Ἀμηνία. \*φθερ-ιω 'I destroy' became Lesb. φθέρρω, Att. φθείρω, Arcad. φθήρω. Πείρ-(ανθο-ς) = Lesb. πέρρ-(οχο-ς) fr. \*περξ-. These forms show that Hom. εἶν and ὑπείρ, which arose from \*ἐνκ, \*ὔπερξ before words beginning with a vowel, are due to compensation lengthening. περι- Dor. πηρι- (Πειρί-θοο-ς, Πηρί-θοο-ς) is a mixture of περι + πειρ- (Dor. \*πηρ-), as is also Hom. εἶνι of ἐνι + εἶν. Cp. § 618.

Whereas \*στελ-ιω 'I order' became universally στέλλω, \*ἄλο-ς 'alius' Att. etc. ἄλλος, but Cypr. αἰλο-ς. Cp. §§ 130. 639.

Indg. *qǰ* *ghǰ*, *kǰ*, *ghǰ*, *tǰ*, *dhǰ* appear as σσ, ττ, see § 489; Indg. *gǰ*, *ǰǰ*, *dǰ* as ζ (σδ), δδ, s. § 493.

Indg. *pǰ* became πτ. Verbal stem πτῦ- in πτόω 'I spit' fr. \*(σ)πιῦ-: Lith. *spǰu-jū* O.Bulg. *plǰu-jǰa* (fr. \*(s)plǰū-ia, § 147) 'I spit', Skr. *abhi-ṣṭhyū-ta-* 'bespit' (cp. § 327). χαλέπτω 'I oppress, depress' fr. \*χαλεπ-ιω fr. χαλεπό-ς.

The prim. Indg. duality *ǰ* and *iǰ* was preserved e. g. in μέσσοσ μέσοσ 'medius' (fr. \*μεθ-ιο-ς = Skr. *mādhyā-s*) compared with πάτριος 'patrius' (= Skr. *pītriya-s*), in ῥέζω 'I do, work' (fr. \*Φρεγ-ιω, cp. § 120) compared with ἰδ-ίω 'I sweat'. On the other hand the Lesb. forms μέτερροσ, ἀλλότερροσ = Att. μέτριος 'moderate', ἀλλότριος 'alienus' etc. show a sound-change which took place within Greek itself: μέτριος became \*μετρίος, \*meterίος, thence μέτερροσ (§ 626). It seems to me more probable that the ζ in Lesb. ζά, κόρζα, Ζόννσοσ, Cypr. κόρζα and others, beside διά; καρδία, Διώνσοσ (s. Meister Griech. Dial. I p. 127 ff.) is due to a Gr. change of *i* to *ǰ* than to regard it as an old inherited double form as is the case with μέσοσ and πάτριος.

The Cypr. orthography *Παφίμα*, *ιματῆραν*, Pamphyl. *διδά*, *Εστφέ(ν)δινς* (= *Ἀσπένδιος*) (read *ιδῖ*), and other facts show that the antevocalic *i* was pronounced *-iḡ-* in words like *πάτριος*. The ending *-ιός* was therefore probably the unchanged form of Indg. *-iḡo-s*.

§ 132. Anteconsonantal and finally.

The Indg. anteconsonantal *ei*, *oi*, *ai*, *ēi*, *ōi*, *āi* can all be proved to be pure  $\dot{i}$ -diphthongs up to historical times. E. g. *εἶμι* (= Indg. *\*eimi* 'I go'), *οἶδε* (= Indg. *\*uoide* 'he knows'), *φέρεται* (= Indg. *\*bheretai* 3. sig. mid. fr. rt. *bher-* 'bear'), *ἵππω* *ἵππῳ* (= Indg. *\*ekūōi* 'to a horse'), *χώραι* *χωρά* ('to land' with Indg. ending *-ai*) were, in Attic, still pronounced with *ei*, *oi* etc. about 500 B. C.

But *ei*, *oi*, *ai* underwent manifold changes even at an early period. In certain cases  $\dot{i}$  became  $\rho$ , and in others the consonantal vowel coalesced with the first component to form a simple long vowel. S. §§ 64. 80. 96. In the Middle Ages monophthongs were generally the only forms still met with.

The first component of *ēi*, *ōi*, *āi* was shortened before consonants in prim. Gr., e. g. *ἵπποις* = Skr. *áśvāiṣ* (§ 611). When final, they remained unchanged up to historical times. But then final  $\iota$  became mute at the same time with the new  $\iota$  in the combinations *ηι*, *ωι*, *αι* (*η*, *ω*, *α*) which in the meantime had often arisen before consonants, as *ἦτε* 'ye went', *εἶδος* 'easy'. This process however did not extend itself over the whole language at the same time; it seems everywhere to have taken place with *ηι* earlier than with *αι* and *ωι*. Towards the end of the third Cent. B. C. they were still only spoken as simple vowels in all or most dialects, e. g. *ἵππῳ* as *hippō*, *ἦτε* as *ēte*.

Italic.

§ 133. Initially. Indg.  $\dot{i}$  and *j* fell completely together in  $\dot{i}$ , written *j* in Lat. words, and *i* in Umbr.-Samnitic. Indg.  $\dot{i}$  e. g. in Lat. *jecur* 'liver': Skr. *yakṣt*, Gr. *ἦπαρ*. Cp. Lat. *jugum* 'yoke': Gr. *ζυγό-ν*, with Indg. *j-*. It is frequently uncertain

whether a form represents Indg. *ĭ*- or *j*- : Lat. *jocu-s* 'joke', Umbr. *iuka* 'ioca' : Lith. *jūkas* 'joke'; Lat. *juven-i-s juven-cu-s*, Umbr. *ivengar* nom. 'iuvencae' (*i*- fr. \**iū-*) : Skr. *yuvan-* 'young' *yuva-śā-s* 'youthful', Goth. *juggs* 'young'.

Several centuries after the beginning of the Christian era Lat. *j*- (*ĭ*-) became a spirant which became developed to *dž*-: cp. e. g. Ital. *giovane* Fr. *jeune* with Lat. *juvenis*.

§ 134. Intersonantal. *ĭ* between vowels seems to have disappeared already in prim. Italic<sup>1</sup>), when after *i* it did not serve as glide to the following vowel. Lat. *eā*- 'she', acc. *eam* : Goth. *ijō*- 'she', acc. *ija*; cpf. \**eĭā-*; Umbr. *eam* 'eam' *eaf* 'eas', Osc. *ioek* 'ea'. Nom. pl. Lat. *trēs* 'three' fr. \**tre(ĭ)-es* : Skr. *trāy-as*; Lat. *pontēs*, Umbr. *puntes* 'bridges' : O.Bulg. *patĭje patĭje* 'ways'. Lat. st. *aer-* (gen. *aer-is*) 'ore, bronze' *aēnu-s ahēnu-s* 'brazen', Umbr. *ahesnes* 'aenis' (where *h* only indicates the separation of the vowels in both dial.), fr. \**aĭes-*, \**aĭes-no*- (§ 570) : Skr. *āyas-* 'iron'. Lat. *stō* 'I stand' fr. \**stā-(ĭ)ō*, *stās* fr. \**stā-(ĭ)e-s*, Pelign. *incubat* 'incubat'. Lat. *neō* 'I sew', *neunt* fr. \**nē-(ĭ)ō*, \**nē-(ĭ)o-nt* : OHG. *nāan* 'to sew'. *fleō* 'I weep' : O.Bulg. *blē-jā* 'I bleat'. *sileō* 'I am silent' fr. \**silē-(ĭ)ō*, cp. Goth. 3. sg. *silāiþ* 'silet' fr. \**silē-ĭe-ti* (§ 142). O.Lat. compar. *pleōres* 'plures' : Skr. *prā-yas-*, cpf. \**plē-ĭes-*. Causat. *moneō* 'I cause to remember' fr. \**moneĭō* : Skr. *mānāyāmi*; 2. pl. imper. *monēte* fr. \**mone(ĭ)ete* : Skr. *mānāyata*. Osc. *pūtīad* 'possit' fr. \**pote(ĭ)āt*, to Lat. *potēns potui*. O.Lat. *cluō* 'I am called, named' : Skr. *śrū-yā-tē* 'is heard'. O.Lat. conj. *fuat* 'sit' : Lesb. *qvīw*.

Lat. *fīniō* 'I finish' represents an older \**fīni-ĭō*. from *fīni-s*, just as Skr. Ved. *arāti-yā-ti* 'is hostile, bears ili-will' from *arā-ti-ṣ* 'hostility'. Notwithstanding the orthography *-iō* we must probably assume that *ĭ* was not quite mute. This consonant however disappeared by contraction in *fīnīs*, *fīnīte*, whose original endings were \**i-ĭe-s*, \**i-ĭe-te*. Cp. § 135 concerning *fierī*, *patrius* etc.

1) Some forms, in which *ĭ* was only apparently retained, as in Osc. *stafet*, Umbr. *fuiā* 'fiat' *portāia* 'portet', will be disposed of in the accidence.

Indg. \**gḡ-ḡō* (Gr. *βαίνω*) 'I go' became \**gḡeniō* in prim. Italic (§§ 208. 239), thence Lat. *veniō*; Indg. pres. st. \**mḡ-ḡō*- 'die' (Av. 3. sg. *mer<sup>e</sup>-ye-iti*) became prim. Ital. \**morḡō*- (§ 296), thence Lat. *morior*, s. §§ 120. 135.

§ 135. Postconsonantal. *i* was only retained as a consonant in this position when a consonant had disappeared before it. Lat. *Jov-is*, Umbr. *Iuv-e* Osc. *Iuv-ei* 'Iovi': Skr. *dyāú-ḡ*, Gr. *Ζεύς*. Lat. *ājō* 'I say' fr. \**ah-ḡō* or \**āh-ḡō* beside *ad-āgium*: Skr. pf. 3. sg. *āha* 'said'; *mājor* 'greater' beside *māgnu-s*: Skr. *māhḡyas-* 'greater'; cp. § 510.

In other cases *i* became sonantal, a process which may be compared with the transition of the suffix *-uo-* to *-uo-* (§ 170), of *-clo-* to *-culo-* (intermediate stage *-cḡlo*) etc. (§§ 269. 627). E. g. *mediu-s*: Skr. *mādhyas-*; *alius*: Gr. *ἄλλο-ς*; *acu-pediu-s* 'quick-footed': Gr. *πεζός*; *cōn-spiciō*: Skr. *páśyāmi*; *capīō*: Goth. *hafja*. In like manner also *veniō*, *morior* directly fr. \**veniō*, \**morīōr* (cp. § 134). That *iḡ* was spoken (if only with a weak articulated *i*), is probable in itself, and is vouched for by such spellings as *Fabiū*s, *Corneliū*s (Seelmann *Die Ausspr. des Latein.* p. 237).

The form *socius* fr. \**soku-ḡō-s* (rt. *seq-* in *sequor*, cp. Gr. *ἀ-οσσητήρ* 'helper' with *σσ* = *qi*, §§ 131. 489) is of interest for the chronology of the change of *-ḡ-* to *-ḡi-*, since *u* probably dropped out at a time when *i*, not already *iḡ*, was still spoken.

Further such forms as *capis capit* fr. \**capīes* \**capīet* = Goth. *hafjis hafjiþ*, *cape* fr. \**capī* (like *mare* fr. \**mari*, § 33), the latter fr. \**capīe*, also point to this old *i*, likewise nom. *alis*, *Cornēlis* fr. *-ḡis* cp. Lith. *mēdis* fr. \**medḡis* (§ 84 rem. 1).

Rem. It is hardly probable that we have still an older *i* for *i(i)* in such quantities as *aviū*m (fr. *avi-s*), *prīncipiū*m, *faciās*, found in Roman poets, these possibly follow the prevalent pronunciation of some dialect. It is quite incredible that a similar one holds good for prim. Romance \**medḡus* (Italian *mezzo*) etc. (Diez *Gramm. d. rom. Spr.* I<sup>4</sup> p. 179 ff., Horning *Ztschr. f. rom. Phil.* VII 572 f.).

On the other hand Indg. *iḡ* seems to have remained unchanged in the following cases. Lat. gen. pl. *trium*: Goth.

*trij-ē*, Lith. *trij-ū*, O.Bulg. *trīj-ī* *trij-ǔ*, Gr. *τριών*. *patriu-s*: Skr. *pítriya-*, Gr. *πάτριος*. *rēgiu-s*: Skr. *rājīyá-*<sup>1)</sup>. *siem* (later *sim*): Skr. *siyām*, Goth. *sijáu*. *du-bius* fr. *\*du-bhy-iōs*, *fierī* fr. Indg. *\*bhy-iō*, *fīs* fr. *\*bhy-iē-s*, from rt. *bhey-* (cp. § 120 and Osthoff Zur Gesch. d. Perf. 430 ff.).

We cannot tell whether the *i* was consonantal or sonantal in Umbr. *fašia*, Volsc. *fabia* 'faciat', Umbr. *avie* dat. 'auspiciis', Osc. *mefiai* 'in media', *diuvia-* 'Ioviā-' and other similar forms in the Umbr.-Samnitic dialects. Whereas *iĭ* may be traced in spellings as Umbr. *Vušia-per* 'pro Vocia', Osc. *Iúviiā* 'Ioviam' (cp. Osc. *Meelīkieis* *Μειλίχιου*), and *i* in such as Umbr. *vistiša vestisa* beside *vcstišia vestisia* abl. 'libamento', *spinam-ař* beside *spiniām-a* 'ad spinam'. Osc. *s* from *tĭ* in *Bansae* 'Bantiae', *z* fr. *dĭ* in *zicolom* 'diem' (cp. Lat. *diēcula*). *i* seems to have sprung from older *iĭ* in both forms; the zetacistic process may have been limited to the local dialect of Bantia.

### § 136. Anteconsonantal and finally.

Indg. *eĭ*, *oĭ*, *aĭ* were still diphthongs in prim. Italic. At the beginning of historic times *eĭ* seems to have become an open *ī* in Lat. and Osc., the orthography *ei* was at all events retained for a long time after the diphthong had become monophthong (§ 65). *oĭ* and *aĭ* were certainly still diphthongs at the beginning of historic times. They became in the first instance *oġ* and *aġ*. For their further development s. §§ 81. 97. Prim. Ital. *eĭ*, *oĭ*, *aĭ* are met with only as monophthongs in Umbrian, e. g. *etuetu* 'ito' fr. prim. Ital. *\*eitōd*, *unu* 'unum' fr. prim. Ital. *\*oiġno-m*, *sve* 'si' = Osc. *svai* *svae*.

The first component of *ēĭ*, *ōĭ*, *āĭ* was shortened before consonants in prim. Lat. or prim. Italic, e. g. Lat. *oloes illīs* = Skr. *-āiṣ*, Indg. *\*-ōĭs* (§§ 85. 612).

Final *\*-ōĭ* became *-ō* in Lat., e. g. dat. sg. *equō* = Gr. *ἰππῶ*; Marius Victorinus knew *-oi* ex libris antiquis foederum

1) *nōbis*, *vōbis* probably not fr. *\*-bhiĭes* = Skr. *-bhiyas* in Ved. *prajā-bhiyas* etc. (cp. Stolz Lat. Gramm. § 90), but a transformation of *\*-bhi* after *istīs*, in the same manner as *tibi* was of *\*-bhi* after *istī*, cp. Skr. *tū-bhy-am* 'tibi', *yūṣmā-bhy-am* 'vobis' with particle *-am* (see the accidence).

et legum; perhaps still the old  $-\bar{o}\bar{\zeta}$ .  $-\bar{a}\bar{\zeta}$  became  $-\bar{a}$ , e. g. Dat. *Mātūtā* 'Matutae' like Gr.  $\chi\acute{o}\rho\alpha$ ;  $-\bar{a}\bar{\zeta}$  may still be represented in the oldest inscriptions in such forms as *Menervai*, whilst  $-ae$  is the locative ending of later times. Osc. dat. *Abellanúf* 'Abellano', *deívaí* 'divae'.

### Old Irish.

§ 137. Initially. In most words which come under consideration it cannot be determined whether the initial sound was Indg. *ǵ*- or *j*-, and traces of this Indg. difference have not, so far as I know, hitherto been proved in Keltic. The consonant was dropped in Irish, but was retained in the Gallo-Britannic branch.

Indg. *ǵ*- in *Iud*- ('strife, fight') found in many Britann. proper names, as O.Cymr. *Iud-nerth* (*nerth* 'strength'): Skr. *yúdh*- 'battle, combat', Gr.  $\iota\sigma\mu\acute{\iota}\nu\eta$ .

Whether the following have Indg. *ǵ*- or *j*- is doubtful: O.Ir. *ōac* *ōc* Cymr. *ieuanc* Corn. *iouenc* Bret. *iaouank* 'juvenis' Gall. *Iovincillu-s*, prim. Kelt.  $*\zeta\iota\upsilon\omega\kappa\omicron-s$ : Skr. *yuva-śá-s*; O.Ir. compar. *ōa* (Bret. *iaou*), superl. *ōam*: Skr. *yáv-īyas-*, *yáv-iṣṭha-*. O.Ir. *ēt* 'zeal', Gall. *Iantu-mārus* (cp. Mid. Ir. *edmur* = O.Ir.  $*\acute{e}tmar$  'jealous, zealous' fr. *ēt* + *mār* 'great'). O.Ir. *aig* 'ice', Cymr. *ia* (=  $*\zeta iag$ ) 'ice', Bret. *ien* (=  $*\zeta iagin$ ) 'icy'. Other Gall. proper names with *ǵ*- as *Iura*, *Iuvavum* s. Zeuss-Ebel p. 47.

§ 138. Intersonantal *ǵ* had disappeared.  $-tau$   $-tō$  'I am', 2. sg.  $-tai$ : Lith. *stó-jū-s* 'I place myself'.  $-caru$  'I love' (2. sg. *cari*) fr.  $*cára-ǵō$  or  $*cārā-ǵō$ , a denominative verb like Gr.  $\tau\iota\mu\acute{\alpha}\omega$  fr.  $*\tau\bar{\iota}\mu\alpha-\mu\omega$ , Skr. *pṛtanā-yá-mi*.

§ 139. Postconsonantal. Dat. (instr.) sg. *ailiu* (i. e. *ailiu*) fr.  $*al\bar{i}\bar{o}$ , stem *alio-* 'other'. Compar. *laigiu* (i. e. *laigiu*) 'smaller' fr.  $*lag-ǵō(s)$ : cp. Gr.  $\acute{\epsilon}\lambda\acute{\alpha}\sigma\sigma\omega\nu$  fr.  $*\acute{\epsilon}\lambda\alpha\chi-\mu\omega\nu$ .

$-e$  with palatalisation of the preceding consonant (§ 640) appears for  $-\zeta o-$  in the Indg. endings  $*-\zeta o-s$ ,  $*-\zeta o-m$  and for  $*-\zeta \bar{a}$ , e. g. *aile* 'alius', *aile n-* 'alium'; neutr. *suide n-* 'seat' fr.  $*sod\zeta o-m$ : Lat. *soliu-m*; *nūe* 'new': Skr. *nāvya-s*, Indg.  $*neu-\zeta o-s$  (cp. §§ 66.

154); fem. *aile* 'alia'. This *-e* also appears in cases where according to § 120 we should expect an original *-iǰo-*, e. g. *orpe n-n*. 'hereditas': Goth. *arbi n*. 'inheritance'.

Rem. The process, which gave rise to this *-e*, is not clear. We do not know whether in this case we have also to take into consideration the suffix form *-ǰi-* (§ 84 rem. 1) for the masc. and neut., and for the fem. a suffix form as in Lith. *žolė* 'root, plant'. Thurneysen conjectures that *\*alǰos* first of all became *\*alios* (cp. Lat. *alius*), thence *\*al'eo(s)* (*l'* is to be read as palatalised *l*), *aile*; correspondingly in the fem. *\*alǰā*, *\*aliā* *\*al'ea*, *aile*: cp. Gall. *Alisea* = *Alisia* and similar forms.

§ 140. Anteconsonantal and finally. In accented syllables *eǰ* became *ē* (*ia*) § 66; *oǰ* became *oe*, finally *ī* § 82; *aǰ* became *ae*, finally *ī* § 98.

Rem. Cp. § 657, 4 for final Indg. *-ōǰ*, *āǰ*.

#### Germanic.

§ 141. Initially. Indg. *ǰ-* and *j-* fell together in *ǰ-* in prim. Germ.

Indg. *ǰ-*. Goth. *jēr* OHG. *jār* n. 'year': Av. *yār<sup>e</sup>* n. 'year', Gr. *ἔτος* 'year'. Goth. *jus* (*ū?*) 'vos': Lith. *jūs*, Gr. *ὑμεῖς*.

Indg. *j-*. Goth. *juk* OHG. *joh* n. 'yoke': Skr. *yugá-m*, Gr. *ζυγόν* 'yoke'.

It is uncertain whether we have Indg. *ǰ-* or *j-*: Goth. *juggs* (*jügg(s)?*) OHG. *jung* 'young', prim. Germ. *\*ǰunǰwə-ga-s*: Skr. *yuva-śá-s* Lat. *juven-cu-s*.

Goth. *j-* was *ǰ-*. In OHG. (and OS.) *ǰ-* before *e* and *i* became a spirant, which was written *g*, e. g. *genēr* 'yon', *gehan* 'to say, speak', indic. pres. *gihu*, but pret. *iah iāhun*; s. Braune Ahd. Gramm. § 116, Holthausen Die Soester Mundart § 182. Prim. Germ. *ǰ-* dropped out in O.Norse: O.Icel. *ār*, *ok*, *ungr* = Goth. *jēr*, *juk*, *juggs*.

§ 142. Intersonantal.

Goth. fem. stem *ijō-* 'ea' = Lat. *eā-*, cpf. *\*eǰā-*.

Prim. Germ. *-ǰi-* = Indg. *-eǰ-* (§ 67) became *-ī-* before consonants and finally. Goth. *þreis* OHG. *dri* 'three' fr. *\*þriǰ-(i)z*: Skr. *tráyas*, O.Bulg. *trǰje trije* etc., Indg. *\*tréǰ-es*; likewise Goth. *gasteis* OHG. *gesti* 'guests' fr. *\*zastiǰ-(i)z* = O.Bulg. *gostǰje*

*gostije*, cpf. \**ghostei-es*. 2. sg. imper. Goth. *nasei* OHG. *neri* 'save, nourish' fr. \**nazi- $\bar{i}$ ( $\bar{i}$ )* (Goth. *s* for *z* after the analogy of *nisan* 'to recover, be healed', s. § 581), Goth. *fra-vardei* 'destroy (something)': Skr. *vartāya* 'let something take its course', Gr.  $\phi\acute{o}\beta\epsilon\iota$  'scare' fr. \* $\phi\omicron\beta\epsilon(\lambda)\epsilon$ , Indg. \* $\bar{e}\bar{i}e$ . Cp. §§ 660, 1. 661, 2.

Goth. indic. 1. sg. *nasja*, 3. sg. *nasjiþ* (OHG. *neriu nerit*, Mod.HG. *nähre, nährt*) fr. prim. Germ. \**nazi $\bar{i}$ ō* \**nazi $\bar{i}$ ūdi*, still older \**noz $\bar{e}$  $\bar{i}$ ō* \**noz $\bar{e}$  $\bar{i}$ ēdi*. This  $\bar{e}\bar{i}e$ , younger  $\bar{i}\bar{i}$  became  $\bar{i}\bar{i}$  - $\bar{v}$ - after long closed syllables: Goth. *fravardeiþ*. Cp. Skr. 1. sg. *vartāyā-mi*, 3. sg. *vartāyati* = Indg. prim. f. \**uort $\bar{e}$  $\bar{i}$ ō*, \**uort $\bar{e}$  $\bar{i}e$ -ti*. Goth. *anamahþja* 'I offer violence', 3. sg. *anamahþeiþ*, from *anamahþi*- f. 'reproach', can be traced back to Indg. \* $\bar{i}\bar{i}$ ō, \* $\bar{i}\bar{i}e$ -ti, cp. Skr. Ved. *arāti-yā-ti* 'is hostile' from *arāti*- 'hostility'. Cp. § 635.

It is questionable whether Goth. 1. sg. opt. *bairāu* (indic. *baira* 'I bear') is regularly developed from \**bhero- $\bar{i}$ - $\eta$*  prim. Germ. \**beraiu(n)* (§ 244) (Paul in Paul-Braune's Beitr. IV 378, VI 161, Osthoff Morph. Unt. IV 302, Zur Gesch. d. Perf. 626).

Goth. *siuja* 'I sew': cp. Gr.  $\kappa\alpha\sigma\acute{o}\omega$  fr. \**kar-si $\bar{v}$ - $\lambda\omega$* , O.Bulg. *šija* fr. \**siy- $\bar{i}$ a* (§§ 60. 147), Lett. *schuju*.

Indg.  $\bar{e}\bar{i}$ - appears in Goth. before vowels as *ai-* (*aij-*). *saia* 'I sow', 3. sg. *saiþ* (also *saijiþ*, *saijands*): Lith. *sėju* O.Bulg. *sēja* 'I sow', cpf. \**sē $\bar{i}$ ō*. *armaiō* f. (st. *armaiōn-*) 'compassion' (from *arma* 'I pity', 3. sg. *armáiþ*), prim. Germ. \**armē $\bar{i}$ ōn-*. In unaccented final syllables as  $\bar{a}\bar{i}$ - fr. original  $\bar{e}\bar{i}e$ -: 3. sg. *armáiþ* fr. \**armē- $\bar{i}$ ī- $\bar{d}$ ( $\bar{i}$ )*, \* $\bar{e}\bar{i}e$ -ti; it is here a question of the present-class which is represented in Lat. by *habēre, tacēre, silēre* (Goth. *haban, þahan, silan*). In OHG. we have the forms *sān* (*sāhan*), *sān*, *sāian* ( $\bar{i} = \bar{i}$ ), *sāwan* (OS. *sāian*, Ags. *sāwan*, O.Icel. *sā*) as compared with Goth. *saian* and the form *armēt* as compared with Goth. *armáiþ*.

Rem. 1. The much discussed question as to the history of antevocalic  $\bar{e}\bar{i}$  in Germanic (recently more fully discussed by Paul in Paul-Braune's Beitr. VII 152 ff., Kögel IX 509 ff., Bremer XI 46 ff.) has not yet been completely cleared up. The following seems to me to be the most probable.

\**sē $\bar{i}$ ō* existed up to the end of the prim. Germ. period. The *ai* in Goth. *saia* was the long vowel of the *ai* in *baira*, namely an open  $\bar{e}$ ,



which vowel is certainly to be assumed also in loan words as *hairaisis* = Gr. *αἰραῖσις* (Gr. *ai* was an open  $\bar{e}$  in Ulfila's time); s. Braune Got. Gramm.<sup>2</sup> p. 11. Cp. Goth. *au* before vowels § 179. It is probable that the *j* in *saijiþ* was still prim. Germ.  $-\dot{z}$ -, but it must not be maintained as certain. We may apparently assume for West Germ., where  $\bar{e}$  became  $\bar{a}$  (§ 75), that  $\dot{z}$  partly (before *a* and guttural vowels) regularly dropped out and that then *w* made its appearance before guttural vowels as glide (1. sg. *sāwou*), after which by form assimilation  $\dot{z}$  became also used before guttural vowels and *w* before palatal; and at this stage the different dialects took different directions. One might also assume that those forms in which  $\dot{z}$  regularly dropped out were extended by analogy to all other forms and that  $\dot{z}$  was later generated again as a glide in *sā-is*, *sā-it* etc.

Original  $\bar{e}\dot{z}$ e in unaccented final syllables was treated somewhat differently. 3. sg. *\*armēiđi* became *\*armēiđi* (with open  $\bar{e}$ ), thence Goth. *armāiþ* and OHG. *armēt*. For Goth. 1. sg. *arma*, 1. pl. *armam*, see the coincidence.

Prim. Germ. *\*blōjana-n* 'to blossom' (cp. Lat. *flō-s flō-r-is* 'flower'): OHG. *bluoan* (*bluohan*) *bluoian bluowan*, OS. *blōian*, Afs. *blōwan*; cp. OHG. *sāian sāwan* above. Prim. Germ. 3. sg. *\*frijo-zi-di* 'loves' (= O.Bulg. *prija-je-ti* 'takes care of') became *\*frijođi*, *\*frijođi*, thence Goth. *frijōþ*, analogously OHG. *salbōt* = Goth. *salbōþ* 'anoints'; cp. Goth. compar. *armōza* 'poorer', superl. *armōsts* 'poorest' fr. *\*armō-izō, -ista-z*, which first became *\*armōizō -ōistaz*.

Rem. 2. It is remarkable that  $\bar{o}\dot{z}$  and  $\bar{e}\dot{z}$  were treated differently before consonants, but I see no plausible means of avoiding this assumption.

After short vowels  $-\dot{z}$ - occasionally appears as *-ddj-* in Goth. Gen. pl. *tvaddjē* 'duorum': Skr. *dvayá-*. *daddja* 'I suckle': Skr. *dháyā-mi*. *iddja* 'I went': Skr. *á-yā-m*. To this *-ddj-* corresponded O.Norse *-ggj-*, e. g. O.Icel. *tveggja*: Goth. *tvaddjē*. In Westgerm. the original prim. Germ. 'sound' generated an *z*, which, uniting with the preceding vowel, formed a diphthong, and when the preceding vowel was *i*, an  $\bar{i}$ , e. g. OHG. *zweijo*: Goth. *tvaddjē*, *Frija*: O.Icel. *Frigg*. The conditions for this universal Germ. special treatment of  $-\dot{z}$ - have not been determined. Cp. § 179 and Kögel in Paul-Braune's Beitr. IX 523.

Rem. 3. The consonant, developed before the prim. Germ.  $\dot{z}$ -sound in Gothic-Norse, was a palatal *g*. Nothing stands in the way of our assigning this palatal value to O.Icel. *gg* before *j*. This sound moved further

forward in Gothic and became (dorsal?) *d* (*dd*). See Braune in Paul-Braune's Beitr. IX 545 f.

Indg. Combination *-yī-*. Goth. *glitmunja* 'I shine', like Gr. *σπερμαίνω* 'I sow with seed', Indg. *-my-īō* (§ 245). Goth. *kuni*, st. *kunja-*, n. 'sex, race' fr. *\*gny-īo-*; *sama-kunja-* 'of the same race or family' to Gr. *ὁμό-γμο-ς*, which stand to one another in the same relation as Lat. *morior* to Skr. *mriyē* 'I die' etc. (§ 120 p. 112).

Goth. *-j-* was *-ī-*. The frequent spelling with *g* in OHG. points to a spirantal pronunciation, e. g. *pluogentiū* to *bluoian* 'to blossom', *wart-sāgo* 'seminiverbius' to *sāian* 'to sow', 3. pl. opt. pres. *salbogēn* beside *salboiēn salboēn* from *salbōn* 'to anoint', cp. § 120 extr.

#### § 143. Postconsonantal.

Consonant + *ī* in the initial syllable was not retained unchanged.

Of the Indg. double form of the Opt. *\*siē-m* and *\*siē-m* 'sim' the latter only survived: Goth. *sijáu*. Cp. also *us-kijans* 'sprouted forth' (pres. 1. sg. *us-kei-na*), originally *\*gi-ono-s* fr. rt. *gei-* (Osthoff Morph. Unt. IV 38. 368. 373).

The *ī* of *\*siū-* united with the following *u* to form a diphthong in Goth. *siujan* OHG. *siuwan* 'to sew', OHG. *siula* 'awl' (cp. Skr. *syū-tá-s* 'sewn', Lith. *siū-ta-s* 'sewn', *siūta-s* 'sewing thread'), likewise in OHG. *chiuwan* 'to chew' fr. *\*giū-* (cp. O.Bulg. *šivq šujq* 'I chew' fr. *\*ziūvq \*ziūīq*, §§ 52. 147).

Rem. With *siujan*, as compared with *midjun-gards* 'sphere of the earth' (i. e. *\*midjum(a)-gards* etc., compare *pius* 'servant' fr. *\*pi(a)-z* (gen. *piw-is*) with *sunjus* 'sons' fr. *\*sunij(i)z* (cp. § 179).

#### Medially.

Goth. *midjis midja* 'medius media': Skr. *mādhyā-s mādhyā*. *aljīs* 'alius': Gr. *ἄλλο-ς*. *bērus-jōs* 'parents', properly partic. 'having brought forth': cp. Lith. gen. sg. partic. pf. *sūkus-io* of *sukù* 'I turn'. Opt. *viljáu* 'velim' 1) for orig. *\*uel-īē-m* (with this cp.

1) The ending formed after the analogy of *bairáu*, s. the accident.

*siġau* for orig. \**s-iġē-m*). *hafja* 'I raise': Lat. *capio* fr. \**capio*. Verbs in *-atja* as *káupaſja* 'I give a box on the ears', *svōgatja* 'I sigh' like Gr. verbs in *-άζω* fr. \**-αδ-ω*. Of the nom. sg. *hairdeis* 'herdsman' fr. \**χirđi(i)-z* (cp. 3. sg. *fra-vardeiþ* fr. \**uarđi(i)đ(i)*, § 142) as compared with *harjis* 'army' we have already spoken in § 120, we refer also to § 660 rem. 3; pl. *hairdjōs* fr. \**χirđiōz* like 1. sg. *fra-wardja* fr. \**uarđiō*. Goth. *namnja* 'I name' may be regarded as the representative of a prim. Germ. form \**namn-iġō*, so that it would stand to *glitmun-ja* 'I shine' (§ 142) in the same relation as Skr. *mr-iyá-tē* to Av. *mer<sup>o</sup>-ye-iti* (§ 120 p. 112) and as Gr. *πόνυ-ια* to *τέκταινα* (fr. \**τεκταν-ια* § 234).

In OHG. *ī* had suffered manifold changes the course of which it is to some extent difficult to control, because no difference was made in writing between *ī* (*j*) and *i*, and because the fate of *ī* was connected with the West Germanic consonant-lengthening which arose before this consonant (§§ 215. 277. 529. 532. 535. 540).

*-ri-* after short syllables became by anaptyxis *-ri-*, *-rig-* (*g* signifies palatal spirant, cp. *genēr* § 141, *pluogentiu* § 142). Dat. *herie herige*: cp. Goth. *harja* 'exercitui'. Nom. *ferio ferigo* 'ferry-man': Goth. \**farja*. Cp. § 628.

In other respects postconsonantal *-i-* was still retained in the oldest period, *e*, that is *e*, was also written instead of *i*, and disappeared in the IX cent. *willio willeo* (read *willio willeo*) *willo* 'will, desire': Goth. *vilja* m. *heff(i)an*: Goth. *hafjan* 'to raise', *bitt(i)an*: Goth. *bidjan* 'to beg'.

*ī* had already disappeared before *i* prior to the time of our oldest monuments. 2. sg. *bitis*: Goth. *bidjis* 'thou beggest'. Dat. pl. *herim* fr. \**her-iim* (and further fr. \**-iem*, \**-iom*): Goth. *harjam* 'exercitibus'. More will be found regarding postconsonantal *ī* in OHG. in Braune's Ahd. Gramm. p. 83 ff.

#### § 144. Anteconsonantal and finally.

Indg. *eī* became *iī*, *ī* in prim. Germ. 1. sg. \**stīzō* (Goth. *steiga*) 'I ascend': Gr. *στείχω*. Loc. sg. \**χαιμι* (OHG. *heimi*

*heime*) 'at home' : cp. Gr. *οἶκε* 'at home' (Kögel Zeitschr. f. deutsch. Altert. 1884 p. 118 f.). See § 67.

Indg. *oi* and *ai* fell together and have partly remained *i*-diphthongs up to the present time. 3. sg. Goth. *vāit* OHG. *weiz* Mod.HG. *weiss* : Gr. *φοῖδε*. Nom. pl. Goth. *þái* OHG. *thē dē* 'the' : Gr. *τοί*. OHG. *seita* f. *seito* m. 'string, cord' : Lat. *saeta* 'strong hair, bristle', Lith. *sēta-s* 'cord', from rt. *sai-* 'bind'. See §§ 83. 99.

Goth. dat. sg. fem. *gubái* 'to a gift' fr. orig. *-āi* : Skr. Ved. *-āi*, Gr. *-α*. See §§ 659, 3. 660, 3.

### Baltic-Slavonic.

§ 145. Initially. Indg. *i*- and *j*- fell together in *i*-, which has retained the pronunciation as consonantal vowel in historic times. Acc. sg. fem. Lith. *jā* O.Bulg. *ja* 'eam' : Skr. *yā-m* Gr. *ἄν ἦν* 'quam', Indg. *\*iā-m*. Lith. *jó-ju* 'I ride, drive', O.Bulg. *jada* 'vehor'<sup>1)</sup> : Skr. *yā-mi* 'vehor', Indg. *\*iā-*. Lith. dial. *jeknos* pl. 'liver' : Lat. *jecur*, Gr. *ἦπαρ*. Lith. *jūs* 'vos' : Skr. *yūyām*, Gr. *ὄμειζ*.

In Slavonic initial *ĩ-* became *i-*. *i-že* 'qui' fr. *\*ĩ-že*, beside which *j̃i* (= Lith. *j̃is*, cpf. *\*ĩi-s*, § 84 rem. 1), which was enclitically attached, remained ; cp. especially the 'definite' declension of adjectives, as *dobry-j̃i* and *doblji-j̃i*, and *bereto j̃(i)* = *beret̃i j̃i* with the same change of *ũ* to *o* as in *domoch(ũ)* = *domūchũ* §§ 52, 665, 5. *igo* 'yoke' fr. *\*ĩigo*, older still *\*ĩũgo* : Skr. *yugā-m*, Gr. *ζυγό-ν* with Indg. initial *j-*.

§ 146. Intersonantal. Lith. *vejū* O.Bulg. *vějā vija* 'I turn, wind' : Skr. *váyāmi* 'I weave', cpf. *\*uél̃i-ō*. Lith. *dvej̃i* 'by twos' O.Bulg. *dvoj̃i* 'twofold' : Skr. *dwayā-* 'twofold'. Lith. *sėjū* O.Bulg. *sějā* 'I sow' : Goth. *saia*, cpf. *\*sēi-ō*. Lith. *lójū* O.Bulg. *lajā* 'I bark' : Skr. *ráyāmi* 'I bark'. Lith. *pāsako-ju* 'I relate', O.Bulg. *laka-ja* 'I deceive' : cp. Skr. *prtanā-yā-mi* 'I fight'. Lith. *at-saj-à* 'horse traces' fr. rt. *sai-* 'bind'. O.Bulg. *gostije* *gostije*

1) The orthography *ěda* beside *jada* is due to a false representation of the sound-combination *iā*, which was occasioned by the change of orig. *ē* to *iā* (§ 76).

'guests' fr. *\*-ei-es* : cp. Skr. *ávayas* 'oves'. O.Bulg. instr. sg. *ženojǰa* of *žena* 'wife' : cp. Skr. *jihváyā* fr. *jihvā-* 'tongue'.

Lith. *miniù* O.Bulg. *mǎnjǰa* 'I think', prim. Balt.-Slav. *\*mǎn-ǰō* : Skr. *mányatē* 'he thinks', Indg. pres. st. *\*mǎ-ǰe-*. O.Bulg. *žǎnja* 'I cut off', orig. *\*ghǎ-ǰō* from rt. *ghen-* 'strike, hew'. Lith. *spiriiù* 'I push with the foot' : Gr. *σπαίρω* 'I struggle convulsively', cpf. *\*spr-ǰō*. Lith. *skilù* 'I strike fire' : Gr. *σκάλλω* 'I stir up, hoe', cpf. *\*sqǰ-ǰō*. Cp. §§ 250. 304.

*ǰ* as glide between *i* and a following vowel. Gen. pl. Lith. *trij-ū* O.Bulg. *trǰj-ǰ* *trij-ǰ* 'trium' : Goth. *þrij-ē*, Gr. *τριών*, Lat. *trium*. O.Bulg. *prǰja-znǰ* *prǰja-znǰ* 'love' : Goth. st. *frija-*, nom. sg. *freis* 'free', Skr. *prǰyá-* 'dear', Indg. *\*prǰ-ó-*. O.Bulg. *bratrǰja* *bratrǰja* fem. collect. 'brothers' : Gr. *φρατερία*. Lith. *bij-aũ-s* 'I am afraid' : cp. Ved. part. mid. *bhiy-ānā-s*.

Lith. *j* and Slav. *j* retained the pronunciation *ǰ* between vowels.

#### § 147. Postconsonantal.

Lithuanian. Here a distinction must be made according as a palatal vowel (*e*, *i*) or another followed.

*ǰ* dropped out before palatal vowels already in prim. Baltic (J. Schmidt Kuhn's *Ztschr.* XXVI 331 f. and 339). Voc. sg. *svetē* fr. *\*svet-ǰe*, to nom. *svēcziās* 'guest' fr. *\*svet-ǰa-s*. Comparat. *sald-čs-ni-s* (fr. *satdū-s* 'sweet') fr. *\*-ǰes-nǰi-s*, formed with the comparat. suffix *-ǰes-* = Skr. *-yas-*. Nom. sg. *žēmē* 'earth', Lett. *feme*, Pruss. *semmē*, prim. Balt. *\*žem-ǰē*; see the accident for the relation of this suffix form to *-ǰā* in *gǰria gǰre* 'wood, forest' (beside *gǰrē*), *žiniā žinē* 'tidings' (Lett. *fiņa*) and in O.Bulg. *zemlǰja*, as well as to *martǰ* (gen. *marcziōs*) 'bride' *patǰ* 'spouse'. *gerās-is* 'definite' form of the adj. *gēras* 'good', beside *jās*. Nom. sg. *mēdis* 'tree' (gen. *mēdžio*) fr. *\*mēd-ǰi-s* (*ǰ* retained after vowels : *mō-jis*, gen. *mō-jo*, 'sign, nod'), Indg. *-ǰi-s* (§ 84 rem. 1); whereas *lokys* 'bear' (Lett. *lāzis*) with *-ys* fr. *\*-ǰi-s* like Goth. *hairdeis* fr. *\*χirǰ-ǰi-z*; i. e. we have here a manifestation of double suffixes *-ǰo-* and *-iǰo-*, respectively *-ǰi-* and *-iǰi-* (§ 120), which in Baltic were brought into relation in the nom. sg. with the varying position of the word-accent.

Postconsonantal *ǰ* remained longer before other vowels than before *ě*, *ǐ*. It softened the preceding consonants and then mostly disappeared in this palatalisation, so that the *i*, which is now-a-days written between consonants and following vowels, is simply to be regarded as a sign of the softened pronunciation of the consonant. This softening is more intensive in the south-eastern dialects than in Pruss. Lithuania. *spiáuju* 'I spit': cp. Gr. πῦω fr. \*(σ)πιῦ-ιω (§ 131). *siú-ta-s* 'sewn': Skr. *syū-tá-s*. Gen. sg. *pikió* (*piki-s* m. 'pitch'), st. *pikia-*, orig. \**piq-jo-*: cp. Gr. πῖσα fr. \**πικ-ια*. *ariù* 'I plough': O.Bulg. *orja*. \**tǰ*-, \**dǰ*- became *czǐ*-, *dǰǐ*- i. e. softened *tš*, *dž*, e. g. gen. sg. *tēczió* fr. \**tetiǰō* (*tėti-s* 'father'), *mědžio* fr. \**medǰō* (*mědi-s* 'tree'); this affection is not old; *tǰ*, *dǰ* occur still in the dialect of Memel and are pronounced similarly to softened *k*, *g* etc. Whilst Indg. \**neu-ǰo-s* 'new' (Skr. *návya-s* 'new') became *naūjas* *naūjes*, Indg. \**greu-ǰo-* (Skr. *kravya-m* 'raw meat, carrion') became *kraūjas* *kraūjes* (cp. Pruss. Vocab. *crauyo*).

*ǰ* remained in Slav. after *p*, *b*, *v*, *m*, but in a part of the Slav. languages (amongst which O.Bulg.) a soft *l* was developed. O.Bulg. *pljuti* 'to spit' fr. prim. Slav. \*(s)piǰū-tǐ: Lith. *spiáu-ti*. Indic. pres. 1. sg. *zoblja* 2. sg. *zoblješǐ* etc., inf. *zobati* 'to eat'. Fem. *zemlja* 'earth': cp. Lith. *žėmė*.

*ǰ* palatalised *l*, *r*, *n*, and then disappeared (as in Lith.). *orja* 'I plough': Lith. *ariù*. *tǐlja* 'ground, pavement': cp. Lith. pl. *tǐlės* 'foot-boards in a small boat' (§ 304). *vonja* 'smell' fr. orig. \**aniā* (§ 666, 1) fr. rt. *an-* 'exhale'. The softened consonants are represented in manuscripts by *r̂*, *l̂*, *n̂* or *rĵ*, *lĵ*, *nĵ* or are simply written *r*, *l*, *n*, e. g. *volā*, *volĵa* and *volā* beside *volja* acc. of *volja* f. 'will, wish', *more* beside *morje* 'sea'.

Prim. Slav. *tǰ*, *dǰ* (= older *tǐ*, *dǐ* and *tiǐ*, *diǐ*) became *št*, *žd* in O.Bulg. Pres. 1. sg. *meštā* 2. sg. *meštešǐ* etc. fr. \**metǰa* \**metǰešǐ*, inf. *metati* 'to throw'. *mežda* 'boundary' fr. \**medǰā*: Skr. *mādhyā*. The same sound-combinations arose from *stiǰ*, *zdǰ*. *tlūšta* 'pinguedo' fr. \**tlūstiǰā* (more correctly \**tǐlstiǰā* § 302) from *tlūstū* 'pinguis'. *za-gvožda*, 'I nail fast' fr. \**za-gvozdǰa*, from *gvozdǐ* 'nail'. When an *r* or *v* stood between *t*, *d* and the

following *ǐ*, it did not prevent this process of assimilation. *sū-moštrja* 'I look, consider' fr. \**motr-ǐa*, inf. *sū-motriti*. Adj. neut. *būždrje* 'vigilant' fr. \**būdr-ǐe*. *u-mrištvolja* 'I kill' (part. pret. pass. *u-mrištvoljenū*) fr. \**u-mrištvia* (for the interpolated *l* s. p. 132), inf. *u-mrištviiti*. The form *tlūšta* corresponded to *oštrja* 'acuo' fr. \**ostriǐa*, inf. *ostriti*, derived from *ostrū* 'sharp', the *t* of which was excrescent (§ 545).

Rem. 1. In the phonetic explanation of this influence of *ǐ* on a preceding *t* or *d*, and consonant-groups containing them, we must start from *zdǐ*, *sǐ*, *stri*. The treatment of these prim. Slav. combinations in the Slav. dialects shows that the whole combination preceding the *ǐ* was first of all softened. There arose: \**gvozd'ǐa*, \**tūst'ǐā*, \**ost'r'ǐa* (' indicating the softening); *ǐ* after *t'*, *d'* in the first two forms then became a palatal spirant (*χ'* voiceless, *γ'* voiced): \**gvozd'γ'a*, \**tūst'χ'ā* (pronounce *d'γ* and *t'χ* like Russ. *ДБ* and *ТБ*). In O.Bulg. specially \**ost'r'ǐa* became *oštrja*, and \**gvozd'γ'a*, \**tūst'χ'ā* became first \**gvozd'z'a*, \**tlūs't's'ā* (pronounce *d'z* and *t's* like Polish *dz* and *c*), then \**gvozd'z'a*, *tlūs't's'ā*<sup>1</sup>) and lastly *gvozd'a*, *tlūs't'a* (cp. below for *š'* fr. \**skǐ*).

Analogously \**medǐā*, \**metǐa* became in prim. Slav. \**med'ǐā*, \**me't'ǐa*, and then \**med'γ'ā*, \**me't'χ'a*. Hence specially in O.Bulg. through anticipation of the spirant \**meγ'd'γ'ā*, \**meχ't'χ'a*, further \**mez'd'z'ā*, \**me's't's'a* — \**mež'ā*, \**mešt's'a* — *mež'd'a*, *mešt'a*.

The O.Bulg. forms *sū-moštrja*, *u-mrištvolja*, *būždrje* were also prepared for already in prim. Slav. in so far as *ǐ* had softened the whole combinations *tr*, *tv*, *dr*. But it must here be observed that the *š* and *ž* depending on the anticipation of the palatalism are not always written in the monuments, e. g. *sū-motr(j)enije* beside *sū-moštr(j)enije* n. 'consideration' (Miklosich Vergl. Gramm. I<sup>2</sup> 220). We do not decide as to how this fluctuating orthography is to be judged.

That the O.Bulg. combinations *žd* and *št* were spoken soft (*dž'*, *št'*) follows from such spellings as *nadeždè* (*è* sign for *ja*) beside *nadežda* 'hope', *sqštju* beside *sqštu* 'ovri' dat. sg. of the part. sy. 'šv' met with in most monuments. Cp. rem. 4.

From prim. Slav. *kǐ*, *gǐ* (mostly = Indg. *qi*, *gi*, *ghi*, § 461) arose in prim. Slav. *č* (i. e. *tš*), *dž*, the latter was weakened to *ž* in O.Bulg. *pri-tūča* 'comparison' fr. \**tūkiā*. *lūžī* 'mendacious' fr. \**lūgǐ*: OHG. *lukki* 'mendacious' (prim. Germ. st. \**luziā*); *lūž'a* 'mentior' fr. \**lūgiā*, inf. *lūgati*.

Analogously *skǐ* became *sč* i. e. *stš*, hence by assimilation

1) *ž*, *š* are the softened *ž*, *š*. Cp. Ar. *ž* and *š* §§ 20. 21. 396 and elsewhere.

of the sibilants *štš*, further historic *št* (more correctly *št̃*, cp. rem. 1). *išta išteši* etc. fr. *\*īskīa*, inf. *iskati* 'to seek'.

Rem. 2. Cp. *vūšteti* 'to begin' fr. *\*vūsčētī* = *\*vūz+čētī*. Further on account of the O.Bulg. change of *štš* to *št*, the loc. sg. *člověčistě* beside *člověčiscě* from nom. *člověčiskū* 'human' and inf. *istěliti* beside *is-cěliti* 'to heal' (st fr. *sts*) are instructive.

Beside this treatment of prim. Slav. *k<sub>ž</sub>*, *g<sub>ž</sub>* there is also a change of them to *c* (i. e. *ts*) and *dz*, the latter was weakened to *z* in O.Bulg. in the beginning of the literary period (Miklosich Vergl. Gramm. I<sup>2</sup> 251 ff.). Nom. sg. in *-iči* m., *-ice* n., *-ica* f., e. g. *juniči* 'young bullock' fr. *\*žūnik<sub>ž</sub>*, *srđice* 'heart' fr. *\*srđik<sub>ž</sub>*, *oviča* 'ovis' fr. *\*ovik<sub>ž</sub>*. Neut. *lice* (gen. *lica*) 'face' fr. *\*lik<sub>ž</sub>*. Fem. *stīza* 'way' fr. *\*stīg<sub>ž</sub>*. The treatment here in question took place at a later period of the prim. Slav. language than the one above, viz.: at the same time when the instr. sg. *\*takēmī* (O.Bulg. *takū* 'talīs') became *tacēmī* (§§ 84. 462). Therefore a *\*žūnik<sub>ž</sub>* was only formed to *\*žūnikū* and an *\*ovik<sub>ž</sub>* to *\*ovikā* after the law, whereby *k<sub>ž</sub>* became *č*, had already ceased to operate. The voc. *junīče* still belongs to *\*žūnikū* (cp. *vliče* : *vličkū*), so too *junīči* 'taurinus', *oviči* 'ovinus' are also directly to be referred to *\*žūnikū*, *\*ovikā*<sup>1)</sup>.

Prim. Slav. *s<sub>ž</sub>*, *z<sub>ž</sub>* = Indg. *k<sub>ž</sub>*, *g<sub>ž</sub>*, *gh<sub>ž</sub>* (§ 412) became already in prim. Slav. *š*, *ž*. O.Bulg. pres. *pīša pīšesi* etc. (inf. *pīšati* 'to write') fr. *\*pīš<sub>ž</sub>* *\*pīš<sub>ž</sub>ešī*, rt. *pejšk-* 'to cut, cut straight'. *žuja* and *\*žīva* 'I chew' fr. *\*z<sub>ž</sub>ū-ž<sub>ž</sub>* and *\*z<sub>ž</sub>īva* *\*z<sub>ž</sub>īv<sub>ž</sub>* (§ 52), the latter = OHG. *chiuwu* from rt. *g<sub>ž</sub>ia<sup>r</sup>u*. *liža ližesi* etc. (inf. *lizati* 'to lick') = Lith. *lėžiū* 'I lick', prim. f. *\*leiğh-žō*.

*ž* with a preceding Indg. *s* became *š* in prim. Slav. *šiti* 'to sew' fr. *\*s<sub>ž</sub>itī*, *\*s<sub>ž</sub>ytī* = Lith. *siūti* 'to sew' (§ 60). Adj. *naši* 'noster', to gen. *nasū* 'nostri' (fr. *\*nās-sū*). Part. neut. *byšašte-je* 'τὸ μῆλλον', to an obsolete fut. indic. *\*b<sub>ž</sub>y-š<sub>ž</sub>* : Lith. *bū-siu* 'I shall be'. Part. pf. gen. sg. masc. *nesūša* (indic. pres. *nes<sub>ž</sub>* 'I carry'): Lith. *nėsz-us-io*, cp. Goth. nom. pl. *bēr-us-jōs* 'parents' ('those who have brought forth').

1) No direct historic connexion, consequently, exists between *junīči* and Lith. *jaunikis*, gen. *jaunikio* 'bride-groom' (properly 'juvenculus') in spite of their similar suffix formation.



Rem. 3. In those cases where Indg. *s* had passed into *ch* in prim. Slav., *š* is not to be traced back directly to *si*, but first of all to *chĭ* (cp. *snūšiniŭ* 'like a daughter-in-law' adj. fr. *snūchĭniŭ* from *snūcha* 'nurus': Skr. *snušā*, Indg. \**snusā*). Cp. § 588, 2. 3.

These affections of prim. Slav. *s* (= Indg. *h̄*, *s*) and *z* (= Indg. *ǵ*, *ǵh*), caused by *ĭ*, took place also when an *l* or *n* stood between them. O.Bulg. *myšljā* : inf. *mysliti* 'to think'. *blaznja* : inf. *blazniti* 'to lead astray'. Here *ĭ* first palatalised *l*, *n* and thus extended its influence to *s*, *z*, but disappeared in the softened *l*, *n*, according to the remarks made above under *ri*, *li*, *ni*. Cp. *ostrja* (inf. *ostriti*) fr. \**ostrja* above, rem. 1. *myšljā* : *piša*, *nesūša* = *ostrja* : *tlūšta*.

Rem. 4. That O.Bulg. *č*, *ž* = orig. *qĭ*, *gĭ*, *ghĭ*; *c*, *dz* = orig. *qĭ*, *gĭ*, *ghĭ*; *š*, *ž* = orig. *h̄ĭ*, *ǵĭ*, *ǵhĭ* and *š* = orig. *sĭ* were spoken soft, follows from the spellings with a following *j*, found in most monuments, as *maq̄žu* beside *maq̄zu* dat. sg. of *maq̄zi* 'man' (st. *maq̄ze*- fr. \**maḡje*-), *dušja* beside *duša* acc. sg. of *duša* 'soul'. Cp. rem. 1 extr.

#### § 148. Anteconsonantal and finally.

Indg. *eĭ* = Lith. *ei* and *ë*, Slav. *i*. Inf. Lith. *eĩ-ti*, O.Bulg. *i-ti* 'to go' from rt. *eĭ*-. Lith. *žė-mà* O.Bulg. *zi-ma* f. 'winter': Gr. *χεῖμα*. S. § 68.

Indg. *oiĭ* and *aiĭ* = Lith. *ai* and *ë*, Slav. *ě* (initially *i*, finally *ě* and *i*). Lith. *snėga-s* O.Bulg. *snėgŭ* 'snow': Goth. *snāivs*, cpf. \**snoiǵho-s*. Lith. *v-ėna-s* O.Bulg. *inŭ* 'unus': O.Lat. *oino-s*. Lith. *tė* O.Bulg. *ti* 'the' nom. pl.: Gr. *τοί*. Lith. *ait-laika-s* O.Bulg. *otŭ-lėkŭ* 'remnant': Gr. *λοιπό-ς*. Lith. *pá-saiti-s* m. 'binding thong' *sėta-s* 'cord', O.Bulg. *sėtŭ* f. 'cord', rt. *saiĭ*- 'bind'. Nom. du. fem. Lith. *tė-dvi* ('the two') O.Bulg. *tė* from Indg. st. \**tā*- 'the': Skr. *tė*, Indg. \**tái*. S. §§ 84. 100.

Final Indg. *-oiĭ* retained the *ō* down to the Lith. language period, hence Lith. dat. sg. *vilkwī* 'to a wolf', Gr. *λύκω* (§ 664, 4). Whilst the instr. pl. *vilkaīs* = Skr. *vīkaiṣ* presupposes the change of *oiĭ* to *oi* in an earlier period; s. § 615.

#### Loos of *ĭ* in the primitive Indg. period.

§ 149. *ĭ* after an initial consonant has frequently been dropped in the different Indg. languages, without its loss being

able to be explained by the sound-laws of the languages in question. E. g. from rt. *sia<sup>x</sup>u-* 'sew', Skr. *sū-tra-m* 'yarn, string', Lat. *suō sūtū-s*, OHG. *sou-m* O.Icel. *sau-m-r m.* 'hemmed edge, seam' beside Skr. *syū-tá-* 'sewn', OHG. *siuwan* 'to sew', *siut* 'seam'. Upon this Osthoff bases his neat conjecture (Morph. Unt. IV 19) that the first *i* in pres. forms like *\*sü-ĩō* 'I sew' *\*spiü-ĩō* 'I spit' disappeared by dissimilation already in the Indg. period, so that now *\*sü-ĩō* stood beside *\*sü-to-s* (part.). *sü-* was then transferred by analogy to pres. forms also, hence e. g. O.Bulg. *šija* i. e. *\*sij-ia* after forms like inf. *šiti* i. e. *\*sij-ti* (§ 147), and vice versa *sü* to non-pres. forms, hence e. g. Skr. *sū-tra-m* instead of regular *\*syū-tra-m*.

§ 150. According to Joh. Schmidt (Kuhn's Ztschr. XXVII 305. 369 ff.) and W. Schulze (ibid. 420 ff.) antec consonantal *i* was dropped after long vowels in the Indg. prim. language. Nom. sg. *\*rēs* = Skr. *rās* 'possessions, treasure' Lat. *rēs* 'possessions, thing' fr. *\*rē-s* : cp. Skr. nom.pl. *rāy-as*. Indg. *\*pō-* fr. *\*pōi-* 'drink' in Skr. inf. *pā-tu-m*, Gr. *πῶ-μα* 'potion', Lat. *pō-tu-s* *pō-culu-m*, Lith. *pū-ta* 'drinking bout' : cp. Skr. *pāy-ana-m* 'watering of cattle' *pī-tá-* 'drunk', Gr. *πί-νω* 'I drink'. Indg. *\*dhēlu-s* = Skr. *dhārú-ṣ* 'sucking' Gr. *θηλυ-ς* 'suckling, female' fr. *\*dhēi-lu-s* : cp. Skr. *dhēnā* 'milk-cow'. Gr. Dor. *τατάομαι* 'I am bereft, want', O.Ir. *táid* 'thief' (prim. f. *\*tāti-*), O.Bulg. *tāi* 'thief' fr. *\*tāi-* : cp. Skr. *stē-ná-s* beside *stāyú-ṣ tāyu-ṣ* 'thief'.

Our assumption of *-ōis* as the ending of the instr. pl. of *o*-stems, and of *\*ēis* 'thou wentest' (Skr. *āiṣ*) etc. for the prim. period (§§ 69. 85. 101) would not contradict these combinations. In these latter cases we should only have to assign the first appearance of the monosyllabic form from an older dissyllabic form (*-ōis* perhaps fr. *-o-a<sup>x</sup>is*; *\*ēis* fr. *\*é eis*) to a later period of the prim. language, in which the sound-law, whereby *\*rēis* became *\*rēs*, no longer operated.

Nevertheless the above hypothesis still requires further support before it can be set up in any degree as certain. Cp. also Hübschmann Das idg. Vocalsystem p. 24 and elsewhere.

Indg. *u*.

## The prim. Indg. period.

§ 151. Initial *u* before sonants and consonantal liquids. Pres. \**uégħ-ō* 'veho': Skr. *vāhami*, Gr. Pamph. *φέχω* Ion. Att. *ὄχο-ς*, Lat. *vehō*, O.Ir. *fēn* 'plaustrum' fr. \**fegn* (§ 527), Goth. *ga-viga* 'I move', Lith. *vezū* O.Bulg. *vezaq* 'veho'. Rt. \**ueq-* 'speak': Skr. *vācas-* n. 'speech', Gr. *φέπος*, Lat. *vocāre*, O.Ir. *iar-mi-foig* 'he asks', OHG. *gi-wahanen* 'to remember, mention', Pruss. *en-wackēmai* 'we call to'. Rt. *ueid-* 'see, know': Skr. *vēda* 'he knows', Arm. *gitem* 'I know', Gr. *φοῖδε*, Lat. *videō*, O.Ir. *ad-fiadat* 'narrant', Goth. *vāit* 'he knows', Lith. *vēida-s* 'face, countenance', O.Bulg. *vidēti* 'to see'. \**uġ-nā* 'wool': Skr. *ūrṇā* 'wool', Lat. *lāna* fr. \**ulānā*, cp. Gr. *οὔλο-ς* 'crisp' (§§ 157. 204. 306). Partic. \**urē-to-* 'decided, settled': Av. *urva-ta-* n. 'determining, command' fr. \**urā-ta-* (§ 157), Gr. *φοητό-ς ῥητό-ς* 'specified, settled' *φοητόρᾱ* (El. *φοάτορᾱ* § 72) *ῥητόρᾱ* 'agreement, saying'.

§ 152. Intersonantal. Pres. 3. sg. \**sréu-e-ti* 'flows': Skr. *sráv-a-ti* Gr. *ῥέ(ς)-ει*; Skr. *srāva-s* 'river, efflux', Gr. *ῥοφά ῥοή* 'river, flood', Lith. *srav-à* 'issue of blood' *sravēti* 'to flow gently', O.Bulg. *o-strov-ŭ* 'island' (properly 'flown round'). \**neuo-s* 'new': Skr. *nāva-s*, Gr. *νέφο-ς*, Lat. *novo-s*, O.Bulg. *novŭ*. Loc. sg. Skr. *div-í*, Gr. *Δι-ί*, Indg. \**dīu-i*. Skr. *ávi-ṣ* Gr. *ὄ(ς)ι-ς* Lat. *ovi-s* 'sheep', Goth. *avēpi* n. 'herd of sheep', Lith. *avī-s* O.Bulg. *ovī-ca* 'sheep'. \**qǔ-uo-s* 'quick, alive': Skr. *jīvā-s*, Lat. *vīvo-s*, Cymr. *byw*, Goth. *qīva-* (nom. sg. *qīus*), Lith. *gýva-s* O.Bulg. *živŭ*. Nom. pl. of *eu-*stems in *-eu-es*: Skr. *sūndv-as* O.Bulg. *synov-e* 'sons', Gr. *ἡδέ(ς)-ες* 'suaves'. Suffix of the pf. part. act.: Skr. *babhū-vān*, Gr. *πεφv-(ς)ώς*, Lith. *bū-ves* O.Bulg. *by-vŭ* from rt. *bheu-* 'become'. Personal ending of the 1. du.: Skr. *vāhā-vas*, Lith. *vėža-va* O.Bulg. *veze-vě* from rt. *uegh-* 'vehere'.

Skr. Ved. pf. part. act. *jaghan-vān* (beside the st. form *jaghn-uṣ-*) 'having struck' fr. Indg. \**ghe-ghu-uo-s* (§§ 225. 229), *cakṣ-vān* (beside *cakr-uṣ-*) 'having made' fr. Indg. \**qe-qṣ-uo-s*.

\**p̄r̄-uo-s* 'the front, earlier': Skr. *pūr-va-s*, Gr. Dor. *πρᾶν* fr. \**πρωφᾶ-ν* (Ion. Att. *πρωήν*), s. § 306. \**neuy* 'nine', \**neuy-tó-* 'ninth', \**neuy-tí-* 'the number nine': Skr. *náva navatí-ṣ*, Gr. *ἐννέ(φ)α* (compounded of \**ἐν νέφα* 'nine in all, fully nine', s. Wackernagel Kuhn's Ztschr. XXVIII 132 ff.), Lat. *novem* (-em for -en after *septem, decem*), O.Ir. *nōi n-* Cymr. Corn. *naw*, Goth. *niun niunda*. Lith. *deviñta-s*, O.Bulg. *devētū devētī* (Lith. Slav. initial *de-* after the numeral for ten *desziñta-s, desetū*; the regular form would be Lith. \**naviñta-s*, O.Bulg. \**novētū*), cp. §§ 224. 233.

*u* as glide after *u*. Examples s. §§ 117. 153.

§ 153. Postconsonantal. St. \**d̄uo-* 'two', \**d̄ui-* (in \**d̄ui-s* 'twice' and in compounds): Skr. *dvā dvāú, dvi-*, Gr. *δί-δεκα, δι-*, Lat. *bi-*, O.Ir. *dā*, Goth. *tvái*, Lith. *dù* (masc., fr. \**d̄uī'*, § 184) *dvi* (fem.), O.Bulg. *dva*. Nom. sg. \**suēsō(r)* 'sister': Skr. *svásā*, Lat. *soror* (*so-* from \**suē-* § 172, 3), Cymr. *chwaer*, Goth. *svistar*, Pruss. *swestr-o*, Lith. *sesū*, O.Bulg. *sestr-a* (for the -*t-* in Germ. Pruss. and Slav. s. §§ 580. 585, 2). \**ek̄-uo-s* 'horse', fem. \**ek̄-ua*: Skr. *áśva-s áśvā*, Gr. *ἵππο-ς*, Lat. *equo-s*, Gall. *epo*. O.Ir. *ech*, Goth. *aihva-* (in *aihva-tundi* fem. 'βάτος'), Lith. *aszvā*. St. \**qet̄yer-* 'four': Skr. *catvār-as*, Gr. Ion. *τέσσαρ-ες*, Lat. *quat-tuor*, O.Ir. *cethir* O.Cymr. *petguar* Mod.Cymr. *pedwar* Corn. *peswar* Bret. *pevar*, Goth. *fidvōr*, Lith. *ketverī* 'by fours', O.Bulg. distrib. *četvero*. Part. pf. Skr. *vid-vān*, Gr. *εἰδ-(φ)ώς* from rt. *ueid-* 'see, know'. Suffix -*tyo-*, -*tyā-*: Skr. *priya-tvā-m* 'the being loved', Goth. *frija-þva* 'love', O.Bulg. *mrī-tvū* 'mortuus' *goni-tva* 'persecution'. St. \**per-uen-*: Skr. *párvan-* n. 'knot, node', Gr. *ἄπειρων* 'boundless' fr. \**ἄπερφων*, cp. *πῆραρ*, pl. Lesb. *πίρ-ρατα* (§ 166). \**daīuér-* 'husband's brother': Skr. *dēvár-*, Arm. *taigr* etc., s. § 95; loc. pl. Skr. *dēv̄ṣu*, Indg. \**daīuy-su*. Gr. *αἰ(φ)ών* 'time' *αἰφεί* 'ever', Lat. *aevo-m*, O.Ir. *aes ois* gen. *aesa* (Cymr. *oes*) 'age' fr. \**āīues-tu-s*, Goth. *áivs* 'time'.

*uy* stood beside *u* on the same principles as Indg. *ī* beside *ī* (s. § 120).

First after initial consonants. \**d̄uyó* beside \**d̄uó* 'two': Skr. Ved. *duvā*, Gr. *δύ(φ)ω*, Lat. *du(v)o*. From rt. *gha<sup>xu</sup>-* 'call' partly *ghuy-*, and partly *ghu-* as weak grade form (§ 312):

Skr. Ved. 1. pl. opt. *huv-é-ma* Av. 3. sg. indic. *zuv-aye-iti*, O.Bulg. inf. *zŭv-ati* beside 3. sg. indic. Skr. *hv-áya-ti* Av. *zb-aye-iti*, nominal st. Skr. *hv-atar-* Av. *zb-atar-* 'shouter, panegyrist', O.Bulg. *zv-onŭ* 'sound, noise', *zv-atelŭ* 'crier'.

After initial *i* or *j* and initial double consonants only *uu*. St. *\*iuu-en-* or *\*juu-en-* 'young', *\*iuu-v-kós* or *\*juu-v-kós* 'juvenile' (cp. Comparat. Skr. *yáv-tyas-*) : Skr. *yúv-an- yuv-a-śá-s*, Lat. *juv-en-i-s juv-en-cu-s*, Goth. *juggs* fr. prim. Germ. *\*iuu-ua-ga-s*. Antesonantal st. form *\*bhruu-* 'brow' : Skr. gen. *bhruv-ás*, Gr. gen. *ὄφρυ(φ)-ος*, O.Bulg. nom. *brŭv-ŭ*.

Medial *uu* after long syllables, especially after double consonants. Prim. Indg. is the contrast, e. g. between Skr. 3. pl. *aś-nuv-ánti* (1. sg. *aś-nó-mi* 'I attain'), Gr. *ἀγ-νί(φ)-ᾱσι* (1. sg. *ἄγ-νῶ-μι* 'I break') on the one hand and Skr. 3. pl. *su-nv-ánti* (1. sg. *su-nó-mi* 'I press the soma-juice out') 3. sg. *ḡ-nv-á-ti* 'puts in motion', Gr. Att. *φθίνω* 'I waste away, decay' fr. *\*φθι-νφ-ω* (cp. *φθι-νύ-θω*), Goth. *rinna* 'I run' fr. *\*ri-nu-ō* (§ 180) = Skr. *ri-ṇv-a-mi* 'I let flow, run' (not found) on the other, cp. § 313.

§ 154. Anteconsonantal medially. Very frequent after *a-*, *e-* and *o-*vowels, with which *u* formed diphthongs, e. g. st. *\*aug-men-* (rt. *aug-* 'grow') : Skr. *ōjmán-* m. 'strength, power', Lat. *augmen*, Lith. *augmũ* (gen. *augmeñs*) 'growth, excrescence'. *\*diēu-s* 'sky' : Skr. *dyāúš*, Gr. *Ζεῦς*. Cp. §§ 61—108.

The treatment of *u* before *i* was often different from that before other consonants. Whilst e. g. the *eu* in Indg. *\*neu-ĭo-s*, a further formation of *\*neuo-s* (Skr. *náva-s* etc.), appears developed in the same manner as before other consonants in Lith. *naũja-s* and Goth. *niuji-s*, Skr. *návya-s* shows the heterosyllabic form of Indg. *eu*. Analogously in Gr. e. g. *ἐκατόμβοιο-ς* fr. *\*-βοφ-ιο-ς* (cp. Skr. *gávya-s* 'bovarius') in contrast e. g. to *βοοί*. The manner of dividing the syllables before *i* therefore took different ways : Lith. *naũjas* represents a *\*neuĭjos*, Skr. *návya-s* a *\*neĭvijos*. Cp. also Skr. *gávya-* with Av. *gaoya-* (§ 160).

A diphthong was frequently not formed before nasals and liquids in cases where it might be expected, e. g. Skr. *vavnúš-* beside *maghón-* (§ 160), Gr. *ἐφράγη* (*ἐροράγη*) beside (Lesb.)

εὐάγῃ (§ 167). The various modes of syllabic formation were also here the criterion.

Anteconsonantal *u* seldom occurred after *i*-vowels from the very beginning e. g. Skr. *div-yá-* 'celestial'; Skr. *pī-vn-* 'fat', weak antevocalic st. form beside *pī-van-*, e. g. gen. pl. *pī-vn-ām*; Av. *jīvya-* 'belonging to life'. Diphthongs were only formed in Germ., e. g. Goth. *ga-giuman* 'to come to life again' from st. *qiva-*, which, of course, is not an old inherited formation, cp. §§ 179. 181.

§ 155. Interconsonantal *u* was not, at it seems, permitted in prim. Indg. E. g. antesonantal \**qetur-* ('four') for \**qetur-* (Skr. acc. *catūr-as*) beside anteconsonantal \**qetur-* (Gr. Hom. *τέτρασι τέτρατος* fr. \**τετρασι-το-ς*, Lith. *ketvīrta-s*). Cp. also prim. Ar. \**atharun-* ('fire priest') for \**atharyn-* (Av. dat. sg. *aḥarun-ē*) beside \**atharua-* = \**atharuy-* (Skr. dat. abl. pl. *átharva-bhyas*), Skr. instr. *áyun-ā* ('life') beside Gr. *αἰ(F)έν αἰ(F)ών* etc. (The author Morph. Unt. II 189 ff).

Rem. I, therefore, conjecture that Skr. instr. sg. *dēvr-ā* (fr. \**daiṃér-* 'husband's brother') does not represent an Indg. \**daiṃr-*, but a special Sanskrit new formation \**daiṃer-*, \**daiṃr-* and \**daiṃr-* may have existed side by side of each other in Prim. Indg. The spondaic form *δαίρων*, Ilias  $\Omega$  769, can equally well be read *δαιρῶν* (fr. \**daiṃrῶn*) as *δαιρῶν*, conjectured by Ebel.

§ 156. Finally. *u* only occurred as an absolute final in the second component of diphthongs. E. g. voc. Skr. *sūnō* Lith. *sūnaũ* O.Bulg. *synu* 'O son', Indg. \**sūney* or \**sūnoy*; loc. Skr. *sūndāu* O.Bulg. *synu* 'in filio', Umhr. *manuv-e* 'in manu', Indg. \**sūndū* (cp. § 85). Its treatment in the individual languages was almost entirely the same as that of anteconsonantal diphthongs. *u*, when conditionally final, also stood after consonants, perhaps \**médhu esti* = Skr. *mádhv asti* 'mel est'. Cp. § 645, 2.

### Aryan.

§ 157. Initially. Skr. *váyam* Av. *vaem* O.Pers. *vayam* 'we': Goth. *veis*. Skr. *viś-* Av. *vis-* O.Pers. *viš-* 'clan': O.Bulg. *vīs-i* 'vicius'. Skr. Av. O.Pers. *vā* 'or': Lat. *-ve*.

Initial *u* was lost before *u* and *ū* in Skr. *urú-ṣ* 'broad' fr. *\*ur-u-ṣ*, prim. f. *\*urr-u-s* (§ 290). *ūrṇā* 'wool' fr. *\*ūrṇā*, Indg. *\*ūr-nā* (§§ 151. 306).

*ur-* was transposed in Av. with *u*-prothesis. *\*rvāta* n. 'decree, command': Gr. *Φροτός* 'decreed'. Part. pres. mid. *\*rvāzemma-* 'powerful' (*z = d̄*) to Skr. *vrādh-* 'to be great, powerful'. Cp. §§ 260. 624.

§ 158. Intersonantal. 3. sg. impf. Skr. *á-bhav-a-t* Av. *bav-a-p̄* O.Pers. *a-bav-a*, Indg. *\*é-bheṃ-e-t* from *bheṃ-* 'become, be'. Nom. pl. Skr. *bāhāv-as* Av. *bāzav-ō* 'arms': Gr. *πήχε-εσ* *πήχεις* fr. *\*πηχεF-εσ*.

Part. pf. act. Skr. *vavan-vān* Av. *vavan-vā* 'victorious' (antersonantal weak stem form Skr. *vavn-úṣ-* Av. *vaon-uṣ-*) fr. orig. *\*ve-uṅ-μός*; Skr. *jagan-vān* 'having come' (anteson. weak st. *jagm-úṣ-*) fr. Indg. *\*ge-gṃ-μός*, see §§ 225. 229. Skr. *ṃ-vānt-* 'rich in men'. Skr. Av. suffix form *-vat-* fr. Indg. *-uṃt-*, e. g. in loc. pl. Skr. *viśá-vat-su* Av. *viśa-vasū*, loc. pl. from *viśá-vant-* *viśa-vant-* 'poisonous' (cp. Gr. *ίόεις* 'rusty'). 1. sg. impf. Skr. *ákṛṇav-am* O.Pers. *akūnav-am* (read *ū* as *u*, cp. § 228) 'I made', fr. orig. *\*é-qr-neṃ-ṃ(m)*.

*uṃ*, with *u* as glide. Ved. *svá-* Av. *hwa-* (beside *svá-*, *xwa-*) 'suus'. Ved. *tuám* Av. Gāp. *tuwēm* (beside Skr. *tvám*) 'thou'. Gen. sg. Skr. *bhruv-ás*: Gr. *ὄφρύ-ος* 'of an eye-brow'. 3. pl. *aśnuv-ánti*, like Gr. *ἀγνύ-ᾱσι*. Cp. § 159.

*-aom* is written in Av. for *-avem* = prim. Ar. *-aṃam*, e. g. *ker<sup>e</sup>naom* = Skr. *ákṛ-ṇav-am* 'I made'. In like manner *drūm* for *druvem* = Skr. *dhruvā-m* 'firmum'. Cp. Bartholomae Handb. § 95.

§ 159. Postconsonantal. Skr. *svá-* Av. *xwa-* 'suus': Gr. *Φός ὄς*, Indg. *\*suó-s*. Skr. *hv-atar-* Av. *zb-atar-* 'crier': O.Bulg. *zv-atelā*, from rt. *gha<sup>u</sup>*. Skr. *catvār-as* Av. *caṃwār-ō* 'four': Goth. *fidvōr*. Skr. *kr-ṇv-ánti* Av. *ker<sup>e</sup>nvanti* 'they make', orig. *\*qr-nu-ṃti*. Skr. *sárva-* Av. *haurva-* O.Pers. *harūva-* (read *harva-*, s. below) 'all': Gr. *ὄλος ὄλος* fr. *\*ὄλοF-ος*. Skr. *dēvā-s* 'god', Av. *daeva-* 'devil': Pruss. *deiva-s* 'god', Indg. *\*deīmo-s*.

*u* often interchanged with *uu* in Ved. (cp. §§ 120. 125. 153). In the initial syllable, e. g. *dvā* and *duvā* like Gr. δώ-δεκα and δώω; śván- and śuván- 'dog', cp. Av. *span-* Lith. nom. *szū̃* fr. \*szuū̃ and Gr. κῶν κῶν. As this interchange dates back to the prim. Indg. language, *uu*, after a long syllable in the same word, may perhaps be regarded everywhere as an old inherited form, e. g. *rakṣas-tuvā-m* 'damage' beside *dēva-tvā-m* 'divinity'; part. pf. *dāś-uvān* 'doing homage' beside *vid-vān* 'knowing'; 2. pl. mid. impf. *áyug-dhuvam* (*yuj-* 'yoke, harness') beside *ákrynu-dhvam* (*kar-* 'make'). In the classical language *-u-* for the most part only appears, e. g. only *-tva-*, *-dhvam*. The old stage *uu* remained, e. g. in gen. *bhuv-as* from *bhū-* 'world', *bhruv-as* from *bhrū-* 'brow', and in non-initial syllables in 3. pl. in *-nuv-anti* after consonants beside *-nv-anti* after sonants, aor. *a-su-sruv-a-t* 'flowed' from *srav-sru-* (cp. § 313). In the popular dialects *uu* frequently made its appearance again where the classical Skr. only had *u*. We may have old forms, e. g. in Pāli *tuvaṃ* (beside *taṃ* = Skr. *tvām*) 'thee'; nom. acc. *duvē* (Prākr. written *duē* and *duvē*) beside *dvē* 'two'; *suván-a-* beside nom. *sā* 'dog'.

Various assimilations took place in Iranian in the combination consonant + *u*. For O.Pers. we must premise that *uv* or *ūv* was written for *v* after consonants, e. g. *ḫuvām* for *ḫvām* = Skr. *tvām* 'thee', *harūva-* for *harva-* = Skr. *sārva-* 'all'; cp. the orthography *-iy-* and *-īy-* for *-y-* p. 116.

Indg. *kyu* (= Skr. *śv*) became Iran. *sp*. Av. O.Pers. *aspa-*: Skr. *áśva-* 'horse', Indg. \**ekyo-*. Av. *span-*: Skr. *śván-* 'hound, dog', Indg. \**kyon-*.

In like manner Indg. *ghu*, *ghu* (= Skr. *ḡv*, *hv*) became Av. *zb*. *zb-atar-*: Skr. *hv-atar-* O.Bulg. *zv-atelī* 'crier'.

Indg. *tu* (= Skr. *tv*) appears in Av. as *ḫw* (*w* was spirant), and in O.Pers. as *ḫuw*; that the *uv* in the latter combination was a consonant, follows directly from the change of *t* into *ḫ* (§ 473). Av. *ḫwām* O.Pers. *ḫvām*: Skr. *tvām* 'thee'. Gen. sg. Av. *xraḫw-ō*: Skr. *krátv-as* from st. *xratu-*: Skr. *krātu-* 'power, understanding'.

Indg. *du*, *dhv* (= Skr. *dv*, *dhv*), which, in prim. Iran., fell



together in *du* (§ 481), appear in Av. initially as *dv* and *ḍb* (Gāp. *db*), *b*, medially as *ḍv* and *ḍw*. Initially, *dvaṣah-*: Skr. *dvēṣas-* n. 'bearing enmity, hatred'; *ḍbiš-*, Gāp. *d<sup>a</sup>biš-*: Skr. *dviṣ-* 'hate'. *bitīm*, Gāp. *d<sup>a</sup>bitīm*: Skr. *dvitīya-m* 'secundum' 1). Medially, part. pf. *evīḍvā*: Skr. *á-vidvān* 'not knowing, unwise'. *er<sup>e</sup>ḍva-*: Skr. *ūrdhvá-* 'upright' (cp. §§ 288. 306). So also side by side of each other Gāp. *-dūm* (i. e. *-dvem* s. below) and late Av. *-ḍvem* = Skr. *-dhvam*, ending of 2. pl. mid. O.Pers. *dūvitiya-* 'secundus', whose *ūv* (to be read as consonant) was either *u* or spirant.

Indg. *pu* became *\*fw*, thence *f* in Av. Acc. sg. *āfentem* 'aquosum' fr. prim. Ar. *\*āp-yant-am*.

Indg. *su* (Skr. *sv*) became in Av. *xw* (init. and med.) and *vuh* (medially). *xwa-*: Skr. *svá-* 'suus'. *xvaṣhar-*: Skr. *svásar-* 'sister'. *haraxwaiti-*: *sárasvatī* prop. name. 2. sg. imper. *bara-vuha*: Skr. *bhára-sva*, from Ar. *bhar-* 'bear, bring'. The pronunciation of *-vuh-*, which is mostly not sonantal, has not been determined. For *xw* and *vuh* in the Gāpās *hv* also occurs: *hva-* 'suus', 2. sg. imper. *gūša-hvā* 'hear'. In O.Pers. *uv* = prim. Ar. *su*. *uva-*: Av. *xwa-* Skr. *svá-* 'suus'. 2. sg. imper. *pati-payavā* 'protect thyself': cp. Skr. *bhára-sva*. Acc. sg. *harawatim* = Skr. *sárasvatim*. Cp. § 558, 3.

*-ūm* is written for *-vem* in Av. Acc. *pourum*: O.Pers. *parūvam* (read *parvam*) Skr. *pūrva-m* 'priorem'. 2. sg. imper. Gāp. *dazdūm*: Skr. *daddhvām*, from Ar. *dad-* 'give', etc. See Bartholomae Handb. § 95 a.

*v* in Av. is often to be read as *uv*, especially after long syllables, just as in Ved., e. g. gen. sg. read *zantuv-ō* for *zantvō* from *zantu-* 'district', cp. Ved. gen. *dhyṣṇuv-ás* from *dhyṣṇú-* 'repose'.

### § 160. Anteconsonantal medially and finally.

1) For an uncertain conjecture concerning the reason of the change *dv-* on the one hand and *ḍb-*, *ḍb-* on the other, see Osthoff Morph. Unt. IV 371 ff.

The vowel remained in Sanskrit as *y* after *ā* (*āu*), whereas prim. Ar. *ay* became *ō*. Prim. Ar. prim. Iran. *ay* appears as *ao* (i. e. *aq*) or *ēu* in Av., prim. Ar. prim. Iran. *āy* remained (*āu*); prim. Ar. *ay* and *āy* remained unchanged in O.Pers. (*au*, written *auv* when final, and *āu*). Skr. *drógha-* 'insult, grief', Av. *draoya-* O.Pers. *drauga* 'untruth'. Gen. sg. Skr. *krátōṣ* Av. *xrataoṣ xrateuš* from st. *krātu- xratu-* 'power, understanding', O.Pers. *kūrauš* from *kūru-* 'Cyrus'. Nom. sg. Skr. *gāū-ṣ* Av. *gāu-ṣ* 'bullock'. Loc. sg. Skr. *vásāu* Av. *vanhāu* from st. *vásu- vanhu-* 'good'. O.Pers. nom. sg. *dahyāuš* 'country, district' (cp. nom. pl. *dahyāv-a*), formed like Av. *bāzāuš* 'arm'. Cp. §§ 62. 78. 94.

In Skr. *v* is also found before consonants, viz. before *y*, *r*, *n*, e. g. *div-yá-* 'celestial', *dēvr-ā* instr. sg. from *dēvár-* 'brother-in-law', *pīvn-ām* gen. pl. from *pīvan-* 'fat', *ṛtāvn-ām* from *ṛtāvan-* 'holy, pious', *va-vn-úṣ-* weak st. form of the pf. part. act. 'triumphant', but *maghón-ā* instr. sg. from *maghāvan-* 'distributor'. In Av. *v* only before *y* after *v̄*: *jīvya-* 'belonging to life'; but diphthongic in *gaoya-*: Skr. *gāvya-* 'bovinus'; *vaorāzaḥa-* n. 'friendliness' for \**va-vrāz-aḥa-*; *vaonuš-*: Skr. *va-vn-úṣ-*; *aṣḍaun-am*: Skr. *ṛtāvn-ām*. That diphthongisation does not appear in Skr. in cases where it was possible (cp. *vavnúṣ-* with *maghón-ā*), depends on a different mode of forming syllables, in which other forms of the same system may have to some extent set the type (cp. *va-van-* beside *va-vn-*). Cp. § 154.

### § 161. *y* as spirant.

*y* seems in Skr. to have become labiodental and spirantal already in the classical period, s. Whitney Skr. Gramm. § 57. Also forms of the popular language as Pāli *dibba-* = *divya-*, *pabbata-* = *parvata-* presuppose the change of *y* to *v* spirant.

As to whether orig. *y* also in other cases than *ḥvaṃ*, *aspa-* etc. (159) had acquired a spirantal pronunciation in Av. (the *p* in *aspa-* was developed from a spirant), we leave undecided, and refer to Hübschmann Kuhn's Ztschr. XXIV 354 f. and Bartholomae Handb. 9. 36 f.

## Armenian.

§ 162. Indg. *u* appears partly as *v*, and partly as *g* fr. \**gu* (cp. Italian *guastare* 'vastare', Cymr. *gweddw* 'vidua'), without the conditions for this difference of treatment being clear.

1. *v. vasn* 'on account of': Av. *vasna-* m. 'wish, intention', Gr. ἐκὼν 'voluntarily', rt. *uek-*. *kov*, gen. *kovu*, 'cow': Skr. *gav-*, Gr. βοϝ-, Indg. \**gou-*. *veç* 'six': Gr. ἑξ ἑξ, Cymr. *chwech*, cp. § 589, 3.

2. *g. gorc* 'work': Gr. *ἔργον-v. gitem* 'I know': Skr. pf. *véda. loganam* 'I bathe myself': Lat. *lavō. taigr*, gen. *taiger*, 'brother-in-law': Skr. *dēvár-*.

*k(u)* appears for *g(u)* after voiceless explosives and spirants. So *sk-* fr. \**su-* (= orig. *kū-*, § 408) in *skesur*, gen. *skesri*, 'mother-in-law'; prim. Arm. \**smes-* arose from Indg. \**smek-* (cp. Goth. *svaihrō*, Gr. ἐκυρά) through assimilation of *s-* to the following *k̄* (§ 562). Indg. \**su-* and \**tu-* became *k-*: *koir*, gen. *ker*, 'sister': Skr. *svásar-*; *ko* 'tui' *kez* 'tibi': Skr. *tva-*; cp. §§ 560. 360.

## Greek.

§ 163. Indg. *u* was retained as *f*, which was generally spoken as a vowel, not as a spirant. It was sometimes also incorrectly written *v* and *β*. The sound remained in most dialects until far into historic times, as inscriptions show. *f* first disappeared in Ion.-Att. It generally disappeared earlier medially than finally.

§ 164. Initially. Bœot. etc. *ἑίκατι* Dor. *ἑείκατι* Ion. Att. *εἴκοσι* 'twenty': Skr. *viśatī-*, Lat. *vīgintī*, O.Ir. *fiche*. Cret. *ἑίσφο-ς* Bœot. etc. *ἑίσο-ς* Att. *ἑῖσο-ς*, probably to Skr. *viṣu* adv. 'in both directions'. *ἑέτος ἑτος* 'year': Lat. *vetus* 'old', Skr. *vats-á-* 'year', O.Bulg. *vetüchü* 'old'. *ἑέπος ἑπος* 'word': Skr. *vácas-*. *ἑοῖκο-ς οἶκο-ς*: Skr. *vēśá-s* 'house', Lat. *vīcus* Goth. *veihsa-* 'spot', O.Bulg. *vīšī* 'village'. *ἑάστν ἑάστν* 'city': Skr. *vástu* 'seat, place', *vástu* 'place, ground, house'. St. form *ἑαρ-ν-* 'ram' in the Bœot. proper name *ἑάρωνων*, in *ἑαρν-ός ἑρν-ί* etc., fr. orig. \**uṛ-n-*; beside \**fṛ-ην-* in *πολύ-ῥῥην* 'rich in sheep'. *οῦλο-ς* 'fleece, twined' fr. \**uḷno-*

through the intermediate stages \**Fωλνο-* \**Fολνο-* \**Fολλο-* (§ 306): Skr. *ūrṇā* 'wool' (§ 157).

Rem. The *ε* of *ἐλω* 'I draw', which word can not be separated from *αἶλαξ* 'furrow' and Lith. *velkè* 'I draw', is perhaps to be explained on the ground that an attraction to *ἐλκ-* *ὄλκ-* (with *ε* fr. *σ-*, § 564), corresponding to Lat. *sulcu-s* and Ags. *sulh* 'plough', took place.

El. *Φῶτρᾶ* Att. *ῥήτρᾶ* 'covenant': Av. *\*rṇātā-* n. 'decree, commandment' (§ 157). In Lesb. *βρ-* fr. *Fρ-*: *βρήτωρ*, to El. *Φῶτρᾶ*. On Att. *ῥ-*, cp. § 226.

§ 165. Intersonantal. Loc. sg. *ΔιF-ί* *Δί:* Skr. *div-ί*, Indg. \**diu-ί* 'in the sky'. *κλέφος* *κλέος* 'glory, renown': Skr. *śrāv-as* 'renown', O.Bulg. *slovo* 'word'. Corcyr. *ρhof-αί* Hom. *ῥο-αί* 'floods': Lith. *sran-à* 'flowing, bleeding' (nouns). Corcyr. *στονόFισαν* (read *σ* as *σσ*) Hom. *στονόεσσαν* fem. 'lamentabilem': cp. Skr. *bāla-vatī* fem. 'robusta'. St. *στῆᾱτ-* (*στῆᾱτ-ος*) 'stiff fat' fr. \**στηᾱτ-* (§ 611), \**στᾱFατ-*, prim. f. \**stā-μη-t-* (§ 233). Aor. *ἔχεα* 'I poured out' fr. \**ε-χεFη* (§ 233), active to *χύ-το*.

In Lesb. *u* combined with a preceding short vowel to form a diphthong, i. e. heterosyllabic *au*, *eu*, etc. became tautosyllabic, or still more precisely: *αυα* became *a<sup>u</sup>-<sup>u</sup>a* (cp. Sievers Phonetik<sup>3</sup> 146). This also occurs in Hom. as an Aeolic peculiarity. *σεῖω* 'I drive, hunt': Skr. mid. *cyāv-atē* 'moves himself, withdraws', Indg. 1. sg. act. \**qjéu-ō* or \**qjéu-ō*. *εὔιδον* 'I saw': Att. *εἶδον*, Skr. *ávida-m*, Indg. \**é uidóm*. *αὔηρ* 'air' *αὔελλα* 'gust of wind': Ion. *ἀήρ* *ἄελλα*, to *ἄ(F)ημι*, Skr. *vāmi* 'I waft, blow'.

§ 166. Postconsonantal. *νF*, *ρF*, *λF* remained unchanged in some dialects until after the beginning of historic times. In Lesb. and Thess. *νν*, *ρρ*, *λλ* arose, in other didects (Ion. Bœot. Dor.) the double consonants were simplified with 'compensation-lengthening', whilst in Att. *F* was elided without compensation-lengthening. Fr. \**γονFa* 'knees' (cp. Av. *zanv-a*, Lat. *genu-a*): Lesb. *γόννα*, Ion. *γοῦνα*, Att. *γόνα-τα*. Corcyr. *πρό-ξενFος*: Lesb. *ξέννος* Ion. *ξείνος* Att. *ξένος* 'foreign'. Fr. \**φθα-νF-ω* 'I come first', \**τι-νF-ω* 'I pay penalty' (cp. Skr. *γ-ṇv-á-ti* 'puts in motion'): Ion. *φθάνω*, *τίνω*, Att. *φθάνω*, *τίνω*. Fr. Indg. stem \**per-uen-*: pl. Lesb. *πέρρα-τα* Ion. *πείρα-τα* 'the ends, furthest point' *ἀ-πειρων* 'unbounded', Att.

πέρας περαίνω, to Skr. *párvan-* 'node, knot'. Inscrip. (Thessal.?) *κόρφᾶ* : Ion. *κούρη* Dor. *κώρᾶ* Att. *κόρη* 'girl'. Fr. \**όλφο-ς* = Skr. *sárva-s* 'whole, all' : Hom. *όλος*, Att. *όλος*. With the forms having compensation-lengthening cp. § 618.

*ἵμ*. *ἵππος*, dial. *ἵκκος* (handed down by the grammarians; dialect unknown) : Skr. *ásva-s*, Indg. \**έκμο-s* 'horse'. *πᾶς παντός* 'complete, entire' : Skr. *śá-śvant-* 'complete, entire, each' (§ 557, 4), Indg. \**ἕμ-ήτ-* (cp. the author's Griech. Gramm. p. 120). *κκ* = *ἕμ* also in *πελεκκάω* 'I hew' *πέλεκκο-ν* 'axe-handle' beside *πέλεκυ-ς* 'axe' : Skr. *paraśú-ṣ* 'axe'.

Rem. *ππ* beside *κκ* is perhaps so to be explained that the latter process of assimilation belonged to a later period than the former. On account of *ἵκκο-*, it would then have to be assumed that also \**έκυ-* existed beside \**έκμο-*, which was not transferred to the *ο*-declension until after the first appearance of the form *ἵππο-ς*.

*τυ, δι, διμ*. Cret. *τφέ* (in Hesych. wrongly written *τρε*) Dor. *τέ* Lesb. Ion.-Att. *σέ* 'thee' : Skr. *tvá-*. Bœot. *πέτταρες* Att. *τέτταρες* Hom. *τίσσαρες* etc. 'four' : Skr. *catvār-as*. Cp. § 489. Corinth. *Δφεινιάς*, Hom. *έδδεισεν δέδδμεν θεοδδής* (the spellings *δειδμεν, θεοδδής* are wrong), in case *δφ* was not still spoken in the time of Hom., Att. *δεινός δέδοικα*, from rt. *δμεξ-* 'fear'. *δώ-(δεκα) δί-ς* : Skr. *dvā dvī-ṣ*. *όρθός* : Skr. *urdhvá-s*, Indg. \**ḡdhwó-s* 'upright' (§ 306).

*ρυ, βημ*. *νήπιος* (beside *νη-πύ-τιο-ς* 'unintelligent, under age') fr. \**νη-πφ-ιο-ς*. *ύπερ-φίαλος* 'overbearing' fr. \**ύπερ-φφ-ιαλο-ς*, just as Lat. *superbia* fr. \**super-fy-iā*, from rt. *bheμ-* (cp. § 312).

Initial *σμ* became voiceless *φ*, which became *h*. *φοῖ φέ, οῖ ε* 'sibi se', *φε-κάς εκάς* 'apart, separated' : Skr. *svá-*. *φεξξ εξξ* 'six' : Cymr. *chwech*. The voicelessness of *φ* is indicated in Bœot. inscrip. by *h*, *φηεκα-δάμοε*, cp. *ρη* = voiceless *ρ* § 266. Concerning medial *σμ*, which probably became *σσ σ*, as in *ἴσσο-ς ἴσο-ς*, and the initial *σ* of *σάλος* and others see § 563, 7.

Concerning *υ*-epenthesis § 639.

*ἰμ*. *οἴφο-ς οἴο-ς* 'alone' : Av. *αενα-* 'unus'. *αἰφεί αἰεί* 'ever' : Lat. *aevno-m*. *λαίός* 'left' : Lat. *laevo-s*. For the *α* in *αἰεί, δαήρ* 'brother-in-law' = Skr. *dēvár-* etc. see §§ 96. 131.

Change between *υ* and *υμ* (cp. §§ 120. 131. 153). δώδεκα and δύο 'two'. Παν-όψια and Sam. Κναν-οψιών (cp. κνάμο-ς with *m*-suffix) exhibit the double forms πανο- and κνανο- 'bean' (πύανο-ς is a later contamination form) from rt. *h̄a<sup>u</sup>υ-* 'swell'. 3. sg. pret. ἐ-φύ-η 'arose', but ὑπερ-φ(Ϝ)-ιάλο-ς (s. above) and O.Bulg. бѣ 'was' fr. \**by-ē-ti*. κίων 'hound, dog': Skr. Ved. *śuvā*; fr. \**υFων* = Skr. *śuvā* Lith. *szū* probably became \**πων* and this form was then given up owing to its formal severance from κυν- (in κυνός etc.). 3. pl. ἀγνύ-ασι like Skr. *aśnuv-ānti* (beside *sunv-ānti*). 3. sg. ἐρούη like Skr. *ásusruv-a-t* from rt. *srey-* 'flow'. Cp. also §§ 312. 313.

Spellings like Cypr. *δυFάνοι*, Chalc. *ΓαρνFόνης* prove that the *υ* from *υμ* was not quite mute in Greek.

#### § 167. Anteconsonantal medially and finally.

The Indg. diphthongs *ευ*, *αυ* remained diphthongic. πεύ-θεται : Skr. *bṛdhatē*, Indg. \**bhēydhetai* from *bheydh-* 'wake, mark'. Voc. Ζεῦ fr. Indg. \**dīeyu*. αὖ αὔ-τε 'again': Lat. *au-t au-tem*. S. §§ 61. 96. Whilst *ου*, e. g. in loc. pl. βοῦοι (Skr. *gōṣu*), passed into *ū* already at an early period, s. § 80.

The first component of anteconsonantal *ευ*, *δυ*, *αυ* underwent shortening in prim. Gr., e. g. Ζεύς fr. \**dīeyu-s* (§ 69), βοῦς 'bullock' fr. \**gōy-u-s* (§ 85), ναῦς 'ship' fr. \**nāy-u-s* (§ 101), s. § 611. They thus fell together with orig. *ευ*, *ου*, *αυ* and became subject to the same changes as these.

Ion. Att. ἄ-ρορητο-ς 'unspoken' fr. \**á-Fρητο-ς*, πολύ-ρορην 'rich in sheep' fr. \**-Fρην*, aor. ἔ-ρορηξα 'I broke' (trans.) from (Cypr.) ἔ-Fρηξα. Whereas in Lesb. (and in Hom.) *F* before *ο*, *λ* united with the preceding vowel to form a diphthong: αὔρηκτος = ἄρηκτος 'not to be broken', εὔράγη = ἐρράγη 'he broke' (intr.), ταλαύρινο-ς 'shield-bearing' (cp. *Fρίνος*: δέριμα Hysych., written *γοῖνος* in the Cod.), εὔληρα 'reins' (cp. αὔληρον and ἄβληρα in Hesyech.).

ῥι. δαίω 'I kindle' fr. \**δαF-ιω*, κλαίω 'I weep' fr. \**κλαF-ιω*. Hom. πλείω 'I sail' fr. \**πλεF-ιω*. See § 131 p. 118 and § 639.

## Italic.

§ 168. Initially. Lat. *vehō*, Umbr. *ař-veihtu* 'adicto', Osc. *veiatura* 'vectura' (Paulus F.) : Skr. *vāhāmi* 'veho', Indg. \**uēghō*. Lat. *vertō*, Umbr. *ku-vertu co-vertu* 'convertito', Osc. *Ἐρσορε* 'Versori, Τροπαίω' : Skr. *vārtatē* 'turns himself', Indg. \**uértō*. Part. Lat. *vorsu-s*, Umbr. Osc. *vorsum* ('quod Graeci πλέθρον appellant, Osci et Umbri vorsum', Frontinus de limit. p. 30, 9) : Skr. *vṛttā-s*, Lith. *viřsta-s*, Indg. \**uřt+tō-* (§ 295). Lat. *vir*, Umbr. *viro veiro* 'viros', Osc. *vereias* 'iuventutis' : Goth. *vair* 'man', Skr. *vīrā-s* 'hero'.

Lat. *rādix* 'root' fr. \**urād-*, \**uřd-* (§ 306) : Goth. *vairts* 'root'. Lat. *lāna* 'wool' fr. \**ulānā*, \**uļ-nā* : Skr. *ūrṇā* (§ 306). Lat. *rēpō* 'I creep, crawl' probably fr. \**urēpō* : Gr. *ρέπω* 'I incline' (of the scale of a balance) fr. \**Frépō*, cp. *καλα-ῤρονον* 'shepherd's crook' *ἀντί-ροπο-ς* 'counterpoising'. *lōru-m* 'reins', to Gr. *εὔληρα* (§ 167).

§ 169. Intersonantal. Lat. *ovi-s*, Umbr. *ovi* acc. 'oves', Osc. *Ovius* : Lith. *avi-s* 'sheep'. Lat. *Jov-is*, Umbr. *Iuve* Osc. *Iuvei* 'Iovi' : Skr. loc. *dyāv-i* 'in the sky', Indg. st. form \**diēu-*. Lat. *vivo-s*, Osc. *bivus* nom. 'vivi' : Skr. *jivā-s*. Lat. *juven-cu-s*, Umbr. *ivengar* nom. 'iuvencae' : Skr. *yuva-śā-s* 'youthful', Indg. \**juuņ-kō-s* or \**juuņ-kō-s* (§ 133). Lat. *novem*, for \**noven* (after the analogy of *septem*, *decem*) : Skr. *nāva*, Indg. \**neueņ*.

The *u* of the Indg. combination *uņ* in \**duuō* 'two' etc. was not so strongly articulated in Lat. as to be represented; forms like *instituit*, *suvo*, *mortuva* did not make their appearance until after the end of the classical period (Schuchardt Voc. II 520 f.). Whereas Umbr. *tuva* neut. 'duo' *tuves* 'duobus' beside *duir* 'duobus'; *kastruvuf* beside *castruo* 'fundos'; Osc. *eitiuvam* beside *eituam* 'pecuniam'. Cp. § 170.

§ 170. Postconsonantal. Such an *u* partly remained consonantal in Italic, and partly became sonantal.

Lat. *tenuis* : cp. Skr. *tanv-ī* fem. 'long, stretched'. Lat. *genua* : cp. Av. *zanv-a* Gr. Lesb. *γόννα* 'genua'. Lat. *arvo-m*, Umbr. *arvam-en* 'in arvom' *arvia aruvia arvio* pl. n. 'fruges' :

Cymr. *erw* 'piece of land' Bret. *erv* 'furrow'. Lat. *ferveō* : O.Ir. *berbaim* 'I seethe, cook, melt'. Lat. *salvo-s*, probably connected with Skr. *sárva-s* Gr. *ὄλο-ς ὄλο-ς* (Thurneysen Kuhn's Ztschr. XXVIII 160), Umbr. *salvom saluom, salva saluwa*. Lat. *helvo-s* : OHG. *gelo*, inflected *gelawēr*, 'yellow', cpf. *\*gheluo-s*.

Rem. Lat. *ll* fr. *ly*, in illustration of which *pallidu-s* beside Lith. *paľva-s* 'pale-yellow' and other are quoted, seems to me very uncertain. See W. Meyer Kuhn's Ztschr. XXVIII p 163.

Lat. *equo-s* (Umbr. *ekvine* loc. 'equini' loan-word?) : Skr. *áśva-s*, Indg. *\*ekuo-s*. Lat. *queror questus* : Skr. *śvās-i-mi* 'I breathe, wheeze, sigh' Indg. *\*kues-*. Lat. *quatuor quatuor (quattuor)* : *catvār-as* 'four'. Lat. *mortuo-s* : O.Bulg. *mr̄tōvā* 'mortuus'. Lat. *bi-s, bi-dēns* : Skr. *dvī-ṣ* 'twice'. Lat. *bonus bene* fr. *\*du-ono-s* rt. *da<sup>x</sup>u-* 'honour, acknowledge' : cp. Skr. Ved. *dūv-as* n. 'mark of respect'. *derbiōsu-s* 'scabby', fr. *\*derdu-* : Skr. *dardā-* 'eruption on the skin, leprosy'. Lat. *suāvi-s* fr. *\*suādu-i-s* (§ 506) : Skr. fem. *svādv-ī* 'suavis'. Lat. *foru-m* fr. prim. Ital. *\*puro-* : Lith. *dvāra-s* O.Bulg. *dvorū* 'court'. Lat. *suf-fiō* from prim. Ital. *\*pu-ūō* : Gr. *θύω* 'I sacrifice'. Lat. *arduo-s* fr. prim. Ital. *\*arpuo-s* : Skr. *ūrdhvā-s* 'upright', Indg. *\*rdhuó-s* (§ 306). 2. sg. *fīs* fr. *\*fiis, \*fu-iē-s*, like O.Pers. opt. *b-iyā* fr. *\*bu-iyā(t)*, rt. *bheu-* (Osthoff Zur Gesch. d. Perf. 430 f.); hence *du-bius* from *\*du-bhu-ūō-s, -bō -bam* in *calē-bō, -bam* (Osc. *fu-fans* 'erant') fr. *\*bhu-ō \*bhu-ā-m* etc.

*su-* appears variously treated, but the reason of this diversity has not hitherto been discovered. Lat. *suāvis* : Skr. *svādū-* OS. *swōti* 'sweet'. Lat. *sī*, Osc. *svaī svae* Umbr. *sve* 'si', Volsc. *se-pis* 'si quis', related to Goth. *sva* 'so' *svē* 'how'. Lat. *sex* : Gr. *ἑξ ἑξ* Cymr. *chwech* 'six'. Lat. *ser-ēnu-s* : Skr. *svār-* 'splendour, sky'. O.Lat. *sīs* 'suis' : Gr. *φός ὄς* Skr. *svā-* 'suus'. The elision of the *u* in Lat. *sūdor sūdāre*, fr. *\*suūd- \*suoid-* according to § 81 p. 74 (cp. OHG. *sweiz* OS. *swēt* Skr. *svēda-s* 'sweat'), may be directly due to the following *ū*. By the side of this *so-* fr. *\*sue-* in *soror* etc. § 172. Medial *-su-* : *Menerva Minerva* fr. *\*Menes-uā*, to Gr. *μένος* n. 'sense'; cp. § 569.

*iu-* Lat. *deivos dīvos*, Umbr. *deveia* 'divina', Osc. *deivai*



'divae': Pruss. *deiwa-s* Skr. *dēvá-s* 'god', Indg. \**deiuo-s*. Lat. *aevo-m*: Gr. *αἰεὶ* 'ever' *αἰ(φ)ών* 'time'.

Indg. *u* had become sonantal in such forms as *tenuis mortuos*, like *ġ* (§ 135) and *l* (§ 269). Poets occasionally, as it seems, made use of forms not usual in the ordinary language, e. g. *suādent* trisyllabic = *svādent* in Lucret. (Christ *Metrik*<sup>2</sup> 43 f.). When, on the other hand, they employ also *tenuis*, *genva* etc. (Christ as above p. 32, Kühner *Ausf. Grammat.* I 94), this pronunciation may be due to some dial. peculiarity, but it can hardly represent Indg. *u*. This is still less the case in O.Fr. *tenve* 'tenuis', Italian *belva* 'belua', Ital. *morto* Sp. *muerto* 'mortuus' (-to fr. -*tvo*) etc. (Diez *Gramm. d. rom. Spr.* I<sup>4</sup> 187 f., Horning *Ztschr. für roman. Phil.* VII 572 f.)

On the other hand Indg. *uu* seems to occur unchanged e. g. in *duō dvis dui-dēns* beside *bi-* (cp. Skr. Ved. *duvā dviṣ* beside *dvā dviṣ* etc.); O.Lat. *duonōro* 'bonorum' (cp. Skr. Ved. *dív-as-*); *su-ís su-ī su-īnu-s* (cp. Gr. *ῥ-ός ῥ-ί* with e. g. Goth. *sv-ein* 'pig' O.Bulg. *su-inŭ* 'suillus'); *Fā-tuo-s* 'prophet', *mū-tuo-s* 'changeable' (cp. Skr. Ved. *jē-tuva-s* 'to be won'). *suo-s* may have arisen from *sovos* = Indg. \**seuo-s* (§ 172), but it may also be identical with Skr. Ved. *svá-s* (beside *svá-s*).

Umbr. forms like *saluom* show the same change of *u* to *uu* as Lat. *quatuor* etc.

§ 171. Anteconsonantal medially and finally. Prim. Ital. *ou* (= Indg. *eu* and *ou*) became *ū* (*ō*) in Lat., *ō* in Umbr., *ov* in Osc.: e. g. gen. sg. Lat. *tribūs*, Umbr. *trifor* 'tribus', Osc. *castrovs* 'fundī', s. §§ 65. 81. Prim. Ital. *au* became Lat. *au*, Umbr. *ō*, Osc. *av*: e. g. *aut*, *ote*, *avti* s. § 97. Umbr. *manuv-e* 'in manu' (*v* was a glide) is traceable to Indg. *-ōu*, and perhaps also Lat. *ūsū* used as loc., cp. Skr. *sūnāú* loc. sg. of *sūnī-ṣ* 'son', s. § 85.

Osc. *v*, *f* in *avt avti* 'aut', *Avfi* 'Aufus', *castrovs* 'fundī', *túvtíks* 'publicus', *tovto τωFro* 'civitas', *Lúvkanateís* 'Lucanatis', *Luvkis* 'Lucius', *Lúvfreís* 'Liberi', *Núvlanús* 'Nolani', and others, point to a sharper division of the two components than in the usual pronunciation of diphthongs, i. e. an articulation

similar to the Mod. Gr. pronunciation of *av* and *ev* (in *αὐλή*, *αὔριον*, *εὔνοος*, *εὐγνώμων* etc.).

§ 172. *v* = Indg. *u* was certainly spoken as a vowel, not as spirant in Lat. prior to and during the classical period, probably also in the other Ital. dialects. Lat. *v* did not become a spirant until the second cent. A. D.

By the vocalic pronunciation of the Lat. *v* are to be explained the following changes which have not been given above.

1. *-u-* in unaccented syllables (§ 680) fr. *-ou-* (§§ 65. 81), *-au-* (§ 97). *dē-nuō* fr. *dē novō*. *ind-uō* fr. *\*ind-ovō* : Umbr. *anovichimu* 'induimino', Lith. *au-nū* (Inf. *ai-ti*) 'I put on feet-covering'. *impluō* fr. *\*im-plovō* beside *plovō*, Gr. *πλέ(φ)ω*. *abluō ē-luācru-s* beside *lavō lavācru-m*. Cp. Osthoff Morph. Unt. IV 80. 158. 391. Zur Gesch. d. Perf. 259.

2. *-u-* from *-uo-*. *ecus* (class. period) from *equo-s* (corresponding to *aecus* fr. *aequos* with *qu* = Indg. *q*, s. § 341 a). *Gnaeus* from *Gnaivo-s*. *deus* fr. *deivo-s*. Cp. also inscrip. *vius* (*v*) = *vīvos*, *aevum* = *aevom* etc. The postclass. form *equus* is a new formation made after the analogy of *equū* etc., class. *dīvos* (*divus*) after *dīvī* etc., vice versa *Gnaei*, *dei* after *Gnaeus*, *deus*. Cp. Bersu Die Gutturalen 53 ff., Thurneysen Kuhn's Ztschr. XXVIII 155 f. In a similar manner probably also *con-cutiō* fr. *\*con-quatiō* (§ 97).

3. *-o-* fr. *-ue-*. *soror* fr. *\*suesōr* : Skr. *svāsar-* 'sister'. *socrus* fr. *\*suecru-s* : Skr. *śvaśrū-* fr. *\*syaśrū-* (§ 557, 4), Gr. *ἐκυρά* 'mother-in-law'. *somnu-s* fr. *\*suepno-s* : Skr. *svāpna-s* 'sleep'. *combr-ētum* 'a kind of rush' : Lith. *szeveñdrai* pl. 'a kind of reed', cpf. *\*kūendhro-* (§ 370). Correspondingly *coquō* fr. *\*quequō* etc. with *qu* = Indg. *q*, s. § 431 a.

4. Changes with loss of a medial syllable. *au-spex* fr. *\*avi-spex*. *claudō* fr. *\*clāvidō*. *ō-piliō ū-piliō* fr. *\*ovi-piliō*. *noundinae nūndinae* fr. *\*noven-dinae*. *prūdēns* beside *prō-vidēns*. *aetās* fr. O.Lat. *aevitās*. *praedēs* pl. fr. O.Lat. *praevidēs*. *mālō mālim* beside O.Lat. *māvolō māvelim*, etc. Cp. § 633.

Cp. Umbr. *bue* 'bove' *buo* 'boum', *courtust* beside *covortus* 'converterit'.

## Old Irish.

§ 173. Initially *f-* *fēn* 'wain': rt. *uegh-* 'vehere' (§ 526). *fedim* 'I bring, lead': Skr. *vadhū-* 'bride, young woman', Lith. *vedū* O.Bulg. *vedā* 'I lead'. *fer* 'man': Lat. *vir*. *fiss* 'scientia' fr. *\*uissu-s*, *\*uid+tu-*: Skr. *vēda* 'he knows', Lat. *videō*. *frass* f. 'shower of rain': Skr. *varṣā-s* 'rain', Gr. Hom. *έέροη* 'dew' (cp. § 274). *flaith*, gen. *flatha*, f. 'dominion, sway': Goth. *valda* O.Bulg. *vladā* 'I wield, rule' (cp. § 274).

Concerning *f̄*, when conditionally initial, e. g. *ā f̄ir* 'O man', s. § 658, 1.

*l-* fr. *\*ul-* in *lingim* 'I jump', to Skr. *vālgāmi* 'I jump, hop' (s. § 285 rem.)? Otherwise Thurneysen Keltor. 85 f.

*v-* (i. e. *u* or spirant?) still appears in Gall., and also in Britannic names of the Roman period, later in Brit. *gu-* (*gu- gw-*). Gall. *vergo-bretus* 'cuius iudicium efficax est', O.Cymr. *guerg* 'efficax': O.Ir. *ferg ferc* 'ira', to Gr. *όργή* 'impulse, anger'. Cymr. *gweddw*: O.Ir. *fedb* 'widow', Lat. *vidua* (cp. § 174). O.Cymr. *gulat* Mod. Cymr. *gwlad*, Bret. *glat*: O.Ir. *flaith*.

Rem. *b* i. e. voiced spirant (cp. § 175) for medial *f* after the preposition *com-*, which lost its *m*. *co-bsud* 'stabilis' to *fossad* 'quiet, fast' from *foss* 'a remaining, quietness': Skr. *vāsāmi* 'I sojourn, dwell', Goth. *visa* 'I remain'. *coibnes* 'affinitas' fr. *\*co(n)-bines* from *fine* 'relationship': OHG. OS. *wini* 'friend'. Cp. §§ 212. 513. 658.

§ 174. Interconsonantal *u* partly underwent contraction with the preceding vowel and formed a long vowel, and partly entirely disappeared, whilst *u* remained in the Britan. branch. *clū* 'fame, renown', Cymr. *clyw* 'hearing': Gr. *κλέφος* Skr. *śrāvas-* 'renown'. Plural *clōi* 'nails': Lat. *clāvī*. *ōi* 'sheep': Lat. *ovi-s*. Perf. *bōi* 'fuit' fr. orig. *\*(bhe-)bhoy-e*: cp. Av. *ba-vāv-a*, rt. *bhey-*. Gen. pl. *bō n-* 'bourn': Gr. *βο(φ)-ών*; *Boind*, a river in the south of Ireland, in Ptolem. still *Βουονίνδα* (*Bwinda*). *ōac* *ōc* (compar. *ōa*, superl. *ōam*) Cymr. *ieuanic* 'iuvenis', prim. Kelt. *\*iowəko-s*: cp. Skr. *yuvaśā-* comparat. *yāvīyas-* (§ 137). *l̄i* cymr. *lliw* O.Corn. *liu* Mod. Corn. *lyw* 'color, splendor': Lat. *livor*. *biu* *beo* (nom. pl. *bī*) Cymr. *byw* 'alive', O.Corn. *biu* Mod. Corn. *bew* 'vita': Gr. *βίος* 'life', Goth. *giu-s* Lith. *gýva-s*

Lat. *vīvo-s* 'quick, alive', Indg. \**ǵīwo-s*. *nōi n*- Cymr. *naw* Corn. *naw* 'nine': Skr. *nāva*, Indg. \**néyū*.

In *fedb* 'widow' (Skr. *vidhāvā*, Lat. *vidua* fr. \**vidovā* by § 172, 1, O.Bulg. *vidova*) -*doŷ*- became -*dy*- at an early period (§ 634), from the latter -*db*- (cp. § 175).

§ 175. Postconsonantal. *marb* 'dead' *marbaim* 'I kill', Cymr. *marw* Corn. *marow* Bret. *marv marf* 'dead': OHG. *maro*, inflected *marawēr* 'ripe, mellow, fragile'. *tarb* 'ox', Gall. *tarvo-s* Cymr. *tarw* Corn. *tarow* Bret. *tarv tarf* 'ox': Gr. *ταῦρο-ς* probably fr. \**ταρφο-ς* (§ 639). *berbaim* Cymr. *berwaf* 'I seethe': Lat. *ferveō*. Cp. also *debb* 'figure, form' Cymr. *delw* and *danb* 'sus' Cymr. *banw* fr. \**bandva*. This *b* after *r*, *l*, *d* was a voiced spirant like intervocalic *b* (§ 522).

*ech* 'horse', Gall. *epo-*, prim. Kelt. \**ekyo-s*: Skr. *áśva-s* (cp. O.Ir. *c* Britt. *p* = Indg. *g* § 435). *cethir* 'four', O.Cymr. *petguar* Mod. Cymr. *pedwar* Corn. *peswar* Bret. *pevar*, in Ptolem. *Πετροαρία*, a town in Britain: Skr. *catvār-as*, Goth. *fidvōr*. *dā dau* 'two', O.Cymr. M.Bret. *dou*: Skr. *dvā dvāi*. *biu* 'I am' like Lat. *fīō* goes back to a prim. Indg. \**bhy-īō*, rt. *bhey-* (§ 170).

*sy-* appears as *s-* and as *f-*, Cymr. *chw-*. *siur fiur* 'sister', Cymr. *chwaer*: Skr. *svāsar-*. *se* 'six' *seser* 'six men', *mōr-feser* 'magnus seviratus' i. e. '7', Cymr. *chwech*: Gr. *ἑξ ἑξ* fr. \**σφεξ*. *do-sennat*, 'they hunt, drive' from a rt. *syend-*. *f* and *b* = *sy* appear after vowels; *b* is written before voiced consonants and finally. Redupl. pf. 3. sg. *do-sefainn* = \**sesyonde*, 3. pl. *do-sefnatar*, pres. 3. sg. imper. *toibned* from \**to-fenned*, related to *do-sennat*, given above. Gen. *feibe* dat. acc. *feib* 'excellence, suitability, worthiness' fr. prim. Kelt. gen. \**yesy-iās* dat. -*ī* acc. -*in* beside nom. *fiu* fr. \**uisu-s* \**yesu-s*. We must accordingly assume that initial *f-* = *sy-* in *fiur* did not arise in absolute initiality<sup>1</sup>). Cp. § 658, 1. Medial *sy* after *k̄* probably

1) The form *fiur*, as Thurneysen remarks, does not occur as an absolute initial.

in *dess* 'to the right, southerly' fr. \**deksyo-*, O.Cymr. *dehou* : Goth. *taihsva* 'to the right', cp. Gall. *Dexsiva*.

*iu. dia*, gen. *dē* voc. *dē*, 'god' (hereto *diade* 'godly'), O.Cymr. *duiu* Mod. Cymr. *duw* 'god', Gall. *Δειονορα Δεβο-γνᾶτα* : Pruss. *deiwa-s* Skr. *dēvā-s* 'god', Indg. \**dejuo-s*.

§ 176. Anteconsonantal medially and finally. Indg. *eu* and *ou* fell together in *ō* (*ua*) in accented syllables, e. g. *lōche* 'fulmen', *tuath* 'folk', *ruad* 'red'; from *au* *ō*, e. g. *au* *ō* 'ear'; s. §§ 66. 82. 98. *dau* *dō* 'two' : Skr. *dvāu*, Indg. \**duōu*, s. § 85.

### Germanic.

§ 177. Indg. *u* was, as it seems, still generally a consonantal *u* in prim. Germ. This pronunciation remained in Goth. (written *v*), likewise in OHG. (written *uu*, *w*); but in the MHG. period *u* became a spirant, spoken as in Mod. HG.

§ 178. Initially. Goth. *ga-vigan* 'to move', OHG. *wegan* Ags. *wegan* 'to move oneself', O.Icel. *vega* 'to be in motion' : Skr. *vāhāmi* 'veho', Indg. \**ueghō*. Goth. *vatō* n. (gen. sg. *vatins*, dat. pl. *vatn-a-m*) OHG. *wazzar* OS. *watar* O.Icel. *vatn* n. 'water' : Lith. *vandū*, gen. *vandēns*, O.Bulg. *voda* 'water', cp. Skr. *ud-ān-* 'water' with Indg. weak grade form of the root syllable (§ 221). Goth. *vitan* OHG. *wizzan* 'to know' : Gr. *ἴδεῖν ἰδεῖν*, Skr. *vidmā* 'we know'. Goth. *vulf's* OHG. *wolf* prim. Germ. \**uulfa-z* 'wolf' (concerning *f*, s. § 444), Skr. *vṛka-s* Lith. *viška-s* O.Bulg. *vlūkū* 'wolf', Indg. \**ulgo-s*.

Goth. *vráigs* 'slant, crooked' : Gr. *ῥαῖβός-ς* 'crooked, crook-legged' fr. \**ῥαῖβος-ς*. Goth. *vrits* m. 'line, point', OHG. *riz* 'line, stroke, letter', OHG. *rīzan* OS. *writan* 'to cut, scratch into' (rt. *ureid-*, not found except in Germ.). Goth. *vlits* m. 'look, face', OS. *wliti*; represented in OHG. by *ant-lizzi* n. 'countenance' (cp. Ags. *and-wlita* m.), which arose from a contamination with *ant-lutti* n. (Goth. *ludja* fem. 'face') and represented regular \**ant-liz*. *wr-* occurs in OHG. only a few times in Frank. monuments as *wreghan* 'exulem', to the verb *rehhan* 'to punish' = Goth. *vrikan* 'to persecute'.

§ 179. Intersonantal. Goth. *avēpi* n. 'herd of sheep', OHG. *au* (nom. pl. *awi*) 'sheep': Lat. *ovi-s* Lith. *avi-s* 'sheep'. Goth. *suniv-ē* 'of sons': cp. O.Bulg. *synov-ŭ*, Gr. *πρῆλων* fr. *\*πρῆλων*. Prim. Germ. *\*iūwaga-z* (= Skr. *yuvaśā-s*, Lat. *iuvencu-s*) became *\*iūwaga-z*: Goth. *juggs* (still spoken with *ū*? cp. § 614) OHG. OS. *jung* O.Icel. *ungr* 'young'. Correspondingly *u* fr. *uu* in Goth. OHG. *nūn* 'nine', cp. Skr. *nāva* etc., Indg. *\*neun* (cp. § 659, 6).

Indg. *ōu-* and *āu-* = prim. Germ. *ōu-* (§§ 91. 107) became *au-* in Goth. before vowels. *staua* f. 'judgment', *staua*, gen. *stauins* 'judge': O.Bulg. *staviti* 'to place, stop' *pri-stavū* 'an official man', Lith. *stóviu stovėti* 'to stand'. *af-dauīps* 'exhausted': O.Bulg. *daviti* 'to strangle', Lith. *dōvyti* 'to put in continual motion'. This *au* was probably an open *ō*, viz. the long of *ai* (*baúrans* 'carried'), like the *au* in loan-words as *Trauadái* 'Τρωάδι', *praitauria* beside *praitōria* f. 'praetorium' (Braune Got. Gramm.<sup>2</sup> p. 13). Cp. the *ai* in *saián* § 142. The questions connected with antevocalic *au* in Goth. and its representation in HG. have not as yet been fully settled, see Paul in Paul-Braune's Beitr. VII 152 ff., VIII 210 ff., Kögel ibid. IX 513 ff.

Goth. *av* and *iv* before a vowel passed into the diphthongs *áu* and *iú*, when this vowel was elided and *v* consequently became final or stood before a consonant. *snáu*, 3. sg. pret. of *snivan* 'to hurry', fr. *\*snav(i)*, prim. f. *\*se-snóu-e*. *triu* 'stick, stake' (gen. *trivis*) fr. *\*triū(am)*, prim. f. *\*drey-o-m*. *qius* 'vivus' (gen. *qivis*) fr. *\*qiū(a)z*, prim. f. *\*qiūo-s*; *ga-qiuja* 'I quicken' fr. *\*qiū(i)jō*, prim. f. *\*qiūeiō* (cp. § 142). Such an *-iu-* became *-ju-* in unaccented syllables: nom. pl. *sunjus* 'sons' fr. *\*sunius* *\*sunijuz* *\*suney-es*: Skr. *sūnāv-as* 'sons' (cp. § 143 rem.). Here belongs also the change of *-ōuī-* to Goth. *-ōj-*: the diphthong *ōu* became (close) *ō*. *stōja* 'I judge' fr. *\*stōuīō*, prim. Germ. *\*stōuīō*, pret. *stauida* (see above): O.Bulg. 1. sg. *stavljā* (with excrement *l*, § 147 p. 132) 2. sg. *staviši*, inf. *staviti* 'to place'.

With this cp. *lēv* n. 'opportunity, occasion' fr. *\*lēu(a-m)*, *lēvja* 'I betray'; nom. *áivs* acc. *áiv* 'time' (Lat. *aevo-m*) fr. *\*aiū(a)-z* *\*aiū(a-m)*.

*-ggv-* (the first *g* is not to be read *u* as in other cases) fr. *-u-* is parallel to Goth. *-ddj-* fr. *-ǰ-* (§ 142 p. 127). In Norse likewise *-ggv-* (*-gg-*), whilst the orig. prim. Germ. sound generated an *u* in West Germ., which united with the preceding vowel to form a diphthong, or *ū* (when the preceding vowel was *u*). Goth. *triggva* f. 'covenant' *triggvōs* 'true, faithful', O.Icel. *tryggr* acc. *tryggvan* = Goth. *triggvana*, OHG. *treuwa triuwa* 'loyalty': cp. Pruss. *druwi* f. 'faith, belief', Gr. *δοσόν* 'ἰσχυρόν. Ἀσθενῆου Hesych. Goth. *glaggvō* adv. 'carefully, exactly', adj. O.Icel. *gloggr* OHG. inflected *glauwēr* 'exact, clear'. Goth. *skuggva* 'mirror', O.Icel. *skugge* OHG. *scāwo* 'shadow'. The conditions for this special Germ. treatment of *u* as well as that of the corresponding *ǰ* have not been determined. Cp. Paul in Paul-Braune's Beitr. VII 165 f., Kögel ibid. IX 523 ff., J. Schmidt Anz. f. d. Alt. VI 125 f.

§ 180. Postconsonantal. Goth. *aihvā-tundi* 'βάτος': Lat. *equo-s*, Indg. *\*ek̑wo-s* 'horse'. *mavi* f. 'girl' fr. *\*ma(ǰ)u-ī* (§ 444 c) to *magu-s* 'boy', like Skr. *svādv-ī* f. to *svādú-ṣ* 'sweet'. Suffix *-īva*, e. g. *frija-īva* f. 'love': Skr. *priya-tvā-m* n. 'being agreeable, pleasing'. *fidvōr* 'four': Skr. *catvār-as*. Pl. *tvái* 'two': Skr. du. *dvā dvāú*. *svistar* 'sister': Skr. *svāsar-*. *faur-valveiþ* 'he rolls before': Lat. *volvō*.

*w* remained in OHG. in combinations at the beginning of words. *dwahan* 'to wash': Goth. *īvahan*. *zwēne* 'two': Goth. *tvái*. *swester* 'sister': Goth. *svistar*. Sometimes with anaptyctic vowel after *s-*, *z-*: *sowarz* beside *swarz* 'black', Goth. *svarts*; *zoweōn* beside *zweōn* 'to doubt'; in other cases seldom, e. g. *thowahan* beside *thvahan dwahan*. *w* remained in medial combinations only when preceded by *r*, *l*, *s* in which case a vowel was developed. *marawēr* (inflected form to *maro*) 'mellow', prim. Germ. st. *\*marwa-*: O.Ir. *marb* Cymr. *marw* 'dead'. *gelawēr* (inflected form to *gelo*) 'yellow': Lat. *helvo-s*. *zesawēr* *zesewēr* (infl. form to *zesō*) 'dexter': Goth. *taihsva*. *w* disappeared after other consonants. *selida* 'shelter': Goth. *salīþva*. *wahta* 'watch': Goth. *vahtvō*.

Rem. 1. *scato*, gen. *scatawes*, m. 'shade', to Goth. *skadu-s* is generally given as an exception. The form, however, seems to go back to a st. \**skadūya-*, cp. OHG. *witawa* : Goth. *vidwō*.

Rem 2. On the forms containing anaptyctic vowels cp. § 628.

-*ny-* became -*nn-* in prim. Germ. Goth. *minniza* OHG. *minniro* 'minor' fr. \**miny-iz-ō* from \**minu-* : Gr. *μνί-θω*, Lat. *minu-ō*. Prim. Germ. \**mann-* 'man' fr. \**many-*, dat. (loc.) sg. Goth. *mann* OHG. *man* fr. \**mann-i*, gen. pl. Goth. *mann-ē* OHG. *mann-o* etc. : Skr. *mānu-ṣ* 'Manu'. Goth. OHG. *rinnan* 'to run' from \**ri-ny-ana-n* : Skr. *ri-ny-a-ti* 'he lets flow' (not found in the texts), cp. the close of § 153.

*iu*. Goth. *áivs*, gen. *áivis*, m. 'a long time' *áiveins* 'eternal', OHG. *ēwa* f. 'long time, order' *ēwīn* 'eternal' : Lat. *aevom*, cpf. \**aiuo-*. Goth. *hldiv* n. 'tumulus', OHG. *hlēo* gen. *hlēwes*, prim. f. \**kloi-uo-s* from rt. *klei-* 'lean' : cp. Lat. *cli-vo-s*.

Postconsonantal -*yu-* became -*u-* in prim. Germ. O.Icel. *sund* n. Ags. *sund* m. 'swimming' from prim. Germ. \**syum-da-* (§ 214), to O.Norse *svima* 'to swim' part. *sumenn*. Goth. *hunsel* Ags. *hūsel* O.Icel. *hūsl* n. 'offering, holy service' from prim. Germ. \**χyunt+tla-m* from Indg. \**k̑u-ŋt-* : cp. Av. *spent-a* O.Bulg. *svetū* 'holy'. OHG. part. *gi-dungan* (to *dwingan* 'to squeeze, press'), *dūhan* 'to squeeze, press' (weak verb) fr. prim. Germ. \**purag- \*purax-* fr. \**pyurag- \*pyurax-* (§ 214), rt. *tyerag-* : Lith. *tvenkia* 'it is sultry, gives pain'. Cp. OHG. *koman* 'come' pp. fr. prim. Germ. \**kumana-*, older \**kymmana-* etc. with Indg. velar explosive, § 444 b.

§ 181. Antec consonantal medially and finally. *eu* : Goth. *piuda* OHG. *deota diota* 'folk' : O.Ir. *tuath*, cpf. \**teytā*, § 67. *ou* : Goth. *ráuþs* (st. *ráuda-*) OHG. *rōt* 'red' : O.Ir. *ruad*, cpf. \**roudhos*, § 83. *au* : Goth. *áuk* 'for, but' *áukan* 'to increase, grow', OHG. *auh* 'also' : Lat. *augeō*, rt. *aug-*, § 99. *ōu* : Goth. *ahtáu* 'eight' : Skr. *aṣṭāú*, cpf. \**oktōu*, § 659, 3.

Goth. *iu* and *áu* before *j* are also specially to be noted (§ 154). *niuji-s* 'new' : Skr. *návya-s* 'new', Indg. \**ney-jo-s* (cp. on the other hand OHG. *niwi*, like Goth. part. *ana-niviþs* 'renewed'). *háujis* gen. of *havi* n. 'hay', prim. st. \**qou-jo-* or



\**qau-jo-*, to OHG. *houwōn* O.Icel. *hoggva* 'to hew', O.Bulg. *kova kovati* 'to hew, strike, slay'. Cp. *iu* in *ga-giuja* § 179 p. 156.

Rem. The supposition of several scholars, that *ō* also arose from *ōu* before other consonants than *ī* (cp. Goth. *stōjan* § 179) in prim. Germanic, e. g. in Goth. *fōdus* OHG. *fluot* 'flood, tide', rt. \**plōu-*, is not sufficiently founded.

### Baltic-Slavonic.

§ 182. Initially. Lith. *vežū* O.Bulg. *veza* 'veho': Skr. *vā-hāmi*, Indg. \**ueghō*. Lith. *valdaū* O.Bulg. *vlada* 'I govern, rule': Goth. *valda* 'I rule, wield'. Lith. *vý-ti* O.Bulg. *vi-ti* 'to wind, turn': Lat. *vieō vīti-s*. Lith. *vėida-s* 'face', O.Bulg. *vidū* 'look': Lat. *videō*. Lith. *vėja-s* 'wind', O.Bulg. *vėja-ti* 'to blow': Skr. *vā-ti* 'blows' *vāyú-ṣ* 'wind'. Lith. *vilni-s* f. O.Bulg. *vlīna* 'wave', prim. f. \**uļ-ni-s* \**uļ-nā*, rt. *uļ-* 'turn, wind, roll' (Gr. *ἐλώω*, Lat. *volvō*). Lith. *virszū-s* O.Bulg. *vrīchū* 'the upper end, point', prim. f. \**uys-u-s*: Skr. *vārṣ-iṣṭha-* 'the highest, topmost'.

§ 183. Intersonantal. Lith. *avī-s* O.Bulg. *ovī-ca* 'sheep': Lat. *ovi-s*. Lith. *sraună* 'the act of flowing', O.Bulg. *o-strovū* 'island': Gr. *ῥοῦά ῥοή* 'stream', Skr. *srāva-s* 'river, efflux' *srāva-ti* 'flows', rt. *srey-*. Lith. *gy-va-s* O.Bulg. *ži-vū* 'alive': Lat. *vī-vo-s*, Indg. \**gi-uo-s*. Part. pf. Lith. *dā-ves* O.Bulg. *da-vū* 'δεδωκός' (Lith. *dā-* = Indg. \**dō-*, O.Bulg. *da-* = Indg. \**dō-*): cp. Skr. *bi-bhī-vān* (*bhī-* 'fear'). 1. du. Lith. *vėža-va* O.Bulg. *veze-ve* 'we two ride': Skr. *vāhā-vas*. O.Bulg. nom. pl. *synov-e* 'sons': Skr. *sūnāv-as*. Lith. *deviūta-s* Pruss. *newints* O.Bulg. *devētū* 'ninth' m. (concerning the transformation of the initial see § 68): Goth. *niunda*, Indg. \**neup-tó-s*.

. *uy*. Lith. *krūv-ina-s* O.Bulg. *krūv-īnū* 'bloody', O.Bulg. *krūv-ī*, gen. *krūv-e*, 'blood': Lat. *cru-entu-s cru-or*, Av. *xruv-iye-m* 'stain, horror' beside Skr. *krav-ya-m* 'raw meat, flesh' Gr. *κρέ(ῥ)-ας*, rt. *grey-*. Lith. *buv-aū* 'I was' *būv-us-i* fem. part. pf., O.Bulg. *za-būv-enū* 'forgotten': cp. Gr. *περνούα*, Skr. *bhūv-ana-m* 'being, world'. Lith. *bruv-i-s* m. O.Bulg. *brūv-ī* f. 'brow': Skr. st. form *bhrūv-* in gen. abl. sg. *bhrūv-ās* etc. O.Bulg. *zūv-a-ti* 'to call': Skr. *huv-ā-ti* 'calls'. O.Bulg. *svekrūv-e* gen. sg. of *svekry* 'mother-in-law': Skr. Ved. loc. sg. *śvaśruv-ām*.

§ 184. Postconsonantal. Lith. *szvitėti* O.Bulg. *svītēti* 'to shine brightly': Skr. *śvit-rá-s* 'shining', rt. *k̄yejt-*. Lith. *aszvò* 'mare', Pruss. *aswina-m* 'equinum, horse-milk': Skr. *áśva-s*, Indg. *\*ék̄yo-s*. Suffix *-t̄yo-*, O.Bulg. *mr̄i-tvū* 'mortuus' *množ̄i-s-tvo* n. 'crowd', Lith. *senā-tvė* f. 'old age'. Lith. *ketverì* O.Bulg. *četvero* 'four' (distrib.), Lith. *ketvīrta-s* O.Bulg. *četrvītū* 'fourth' m. prim. f. *\*getȳ-to-s*. Lith. *dvì* O.Bulg. *dvě* 'duae': Skr. *dvē*, cpf. *\*dyā̄*. Lith. 1. du. *ėd-va* 'we two eat': Skr. *ad-vas*. O.Bulg. *bě* 'thou wast' *bě* 'he was' fr. *\*by-ě-s* *\*by-ě-t* fr. *bhey-* 'to become' (§ 312); cp. *obiti* 'to wind round' fr. *\*ob-viti* etc.

Pruss. *swaiš* O.Bulg. *svoj̄* 'suus': Skr. *svá-* 'suus'; Lith. *svōtai* 'parents of the bride, related by marriage' from the same Indg. stem has the suspicion of having been borrowed from Slav., O.Bulg. *svatū* 'affinis'. Lith. *svilti* 'to take fire, to burn without flame': Ags. *swelan* 'to glow' OHG. *swilizōn* 'to burn slowly away'. O.Bulg. *sv-inū* 'suillus': Goth. *sv-ein* 'pig'. Lith. *ės-va* O.Bulg. *jes-vě* 'we two are': Skr. *s-vás*.

*u* is occasionally elided before initial *s-* (*sz-*), without the reason of its elision being clearly known (cp. Osthoff Zur Gesch. d. Perf. 456). Lith. *ses̄* O.Bulg. *sestra*, but Pruss. *swestro* 'sister': Goth. *svistar*. Lith. *sāpna-s* 'dream': Skr. *svāpna-s*. Lith. *szeszura-s*, by assimilation from *\*szeszura-s* (§ 587, 2): O.Bulg. *svekrū* Goth. *svaihra* Skr. *śvāšura-s* fr. *\*svašura-s* (§ 557, 4) Gr. *ἐνυό-ς* 'father-in-law'.

In Lith. *szū* 'dog' fr. *\*szū̄* = Skr. *śvā* and in *dū* 'two' fr. *\*dū* (§ 664, 3), the latter fr. *\*dyū*, the elision of the *u* was caused by the following *ū*.

Lith. *kárvė* O.Bulg. *krava* fr. *\*korvā* (§ 281) 'cow', related to Lat. *cervo-s*. O.Bulg. *sū-dravū zdravū* (§ 588, 5) 'healthy', *-dravū* fr. *\*dorvū* (§ 281): Skr. *dhr-uvá-* 'fast' with weak grade form of the root syllable and dissyllabic form of the suffix *-yo-*. Lith. *paľva-s* (Slav. loan-word?) O.Bulg. *plavū* 'whitish, pale' (§ 281): OHG. *falo* (inflected *falawēr*) 'fallow', cpf. *\*pol̄yo-s*.

Old *-ny-* perhaps in Lith. dial. *tenva-s* Lett. *tīvs* (*i* regularly fr. *en*) 'thin', to O.Bulg. *tīn-ī-kū* 'thin': Skr. *tanū-* *tanv-* 'long, stretched'; the Baltic words probably with vowel form of the

comparative in the rt. syllable, as *leñgva-s* beside *lengvù-s* 'light' (cp. comparative Av. *renj-yō* neut. 'lighter' and Skr. pos. *laghú-laghv-*, Gr. *ἐλαχύ-*). Slav. *-n-* fr. *-ny-* : compar. *mñnjí-jǐ*, gen. *mñnjǐša*, 'minor' : cp. Goth. *minniza* fr. *\*minny-iz-ō*.

*iu*. Lith. *dēver-ì-s* O.Bulg. *dēver-ǐ* 'brother-in-law' : Skr. *dēvár-*, Indg. *\*daiuer-*.

The change between *v* and *ǔv* in O.Bulg. *dva* beside *dǔva* 'two' (Skr. Ved. *dvā* and *duvā*), *zvati* beside *zǔvati* 'to call' (Av. *zwayēiti* and *zuvayēiti* 'he calls'), *bě* 'he was' fr. *\*bǔě* beside *za-bǔv-enǔ* 'forgotten' (Skr. *á-bhv-a-* 'not being, monstrous' and *bhív-ana-m* 'the being, world') etc., may be regarded as old inherited. Cp. the end of § 183.

§ 185. Anteconsonantal medially and finally. Indg. *ey* and *oy* fell together in *oy* in the prim. Baltic-Slavonic period. Inf. Lith. *pláuti* 'rinse, wash' O.Bulg. *pluti* 'to flow' : Gr. *ἔπλεν-σα*. Gen. sg. Lith. *sūnaūs* O.Bulg. *synu* 'son's' : Goth. *sunáus*, Indg. *-ous*. Voc. Lith. *sūnaũ* O.Bulg. *synu* 'O son' : Skr. *súnō*. Cp. §§ 68. 84. Further this prim. Baltic-Slav. *oy* also fell together with Indg. *ay*. Lith. *saũsa-s* O.Bulg. *suchǔ* 'dry' : Gr. *αῦω* 'I dry, wither', cp. § 100.

O.Bulg. loc. sg. *synu* 'in filio' : Skr. *sūnāú*, see § 85.

Diphthongs with the first component short before Indg. *i*. Lith. *pláuju* 'I rinse, wash', O.Bulg. *pluja* 'I flow' : Gr. Hom. *πλείω* fr. *\*πλεFιω* (§§ 131. 639), cpf. *\*pleu-ǐō*. Lith. *naũja-s* 'new' : Skr. *návya-s*, cpf. *\*neu-ǐo-s*. Lith. *kraũja-s* 'blood' : Skr. *kravya-m* 'raw flesh', cpf. *\*qreu-ǐo-*. O.Bulg. *šujǐ* 'to the left' fr. *\*sǔǔǐ* (§ 147) : Skr. *savyá-s* 'to the left'; *ǐu* for *ũ* with the same regular, but still unexplained *ǐ* as in *bljudǎ* and others (J. Schmidt Kuhn's Zeitschr. XXIII 348).

Rem. That O.Bulg. *jaje* u. 'egg' has arisen from *\*ǎy-ǐe* (Lat. *ovom*, Gr. *ᾠόν*), is very uncertain.

§ 186. Indg. *y*, where it remained an independent consonant, has now become a spirant, probably throughout the Baltic-Slav. languages, certainly in a great part of them. I

leave it undecided as to whether the sound was still *u* consonant in the O.Bulg. period.

Loss of *u* in the prim. Indg. period.

§ 187. The Indg. parent language had an enclitic case of the pronoun of the 2. person \**to*<sub>2</sub> = Skr. *tē* Av. *tē tōi* O.Pers. *taiy* Gr. *τοῖ* O.Bulg. *ti* beside accented \**tu*<sub>2</sub> = Skr. *tvé* Av. *ḫwōi* Gr. *σοί* fr. \**τφοι* (cp. also O.Bulg. *twojǐ* 'tuus'). Perhaps also of the reflexive stem a \**so*<sub>2</sub> = Prākṛ. *sē* Av. *hē hōi* O.Pers. *saiy* O.Bulg. *si* beside \**su*<sub>2</sub> = Gr. *φοῖ*. It is not improbable that the *u* in the enclitic forms first disappeared after certain consonants. See Wackernagel Kuhn's *Ztschr.* XXIV 592 ff.

§ 188. *u* seems further to have disappeared between long vowels and (antesonantal) *m*. Acc. sg. Skr. *dyām diyām*, Gr. *Ζῆν*, Lat. *diem*, Indg. \**dīem* \**dīēm* (cp. § 120) beside nom. \**dīēus* 'clear sky' = Skr. *dyāúś* etc.; Skr. *gām*, Gr. *βῶν*, OHG. *chuo* OS. *kō*, Indg. \**gōm* beside nom. \**gōus* 'ox' = Skr. *gāúś* etc., cp. §§ 192. 645. OHG. *guoma* Ags. *zōma* O.Icel. *gōmr* 'palate', Lith. *gomurỹs* 'palate' (beside OHG. *caumun* Mod.HG. *gaumen*) fr. \**ghā(u)-mo-* or *-men-* (Gr. *χῆμη*?, *χᾶν-vo-ς* *χάος*). Some assume such a loss of *u* before other consonants also. See, among others, Osthoff *Morph. Unt.* IV 311, Thurneysen *Bezz. Beitr.* VIII 285, Schulze Kuhn's *Ztschr.* XXVII 427 ff. Cp. also Indg. final *-ō* fr. *-ōu*, § 645, 1.

## NASALS.

### A. THE NASALS AS CONSONANTS.

#### Prim. Indg. period.

§ 189. The Indg. parent language possessed four different kinds of nasals; labial *m*, dental *n*, palatal *ñ* (corresponding to *k̄*), and velar *ŋ* (corresponding to *q*).

#### § 190. Initial *m*.

Antesonantal. \**māter*- 'mother': Skr. *mātā*, Arm. *mair*, Gr. *μήτηρ*, Lat. *māter*, O.Ir. *māthir*, OHG. *muoter*, Lith. *motė* ('wife'),

O.Bulg. *mati*. \**m̄y-tó-s* part. from rt. *men-* 'think': Skr. *matá-s*, Gr. *ἀπό-ματο-ς*, Lat. *com-mentu-s*, Goth. *ga-munds*. \**m̄y-ti-s* 'dying, death': Skr. *m̄y-ti-ṣ*, Lat. *mors* gen. *mortis*, Lith. *mirtl̄-s*, O.Bulg. *sū-mr̄ĩl̄ĩ*.

Anteconsonantal, probably before *n* and liquids. \**mnā-* to *men-* 'think': Skr. part. *mnā-ta-s*, Gr. fut. *μνή-σω*, Arm. *mma-m* 'I remain, expect' (Hübschmann Arm. Stud. I 43). \**mlā-* 'pass away, wither': Skr. pres. *mlāya-ti* part. *mlā-ta-s*, Gr. *βλά-ξ* -κός, *βλη-χρό-ς*. 2. pers. sg. imper. Skr. *brū-hí* (fr. \**mrūhi*) Av. *mrūidi* 'speak'.

### § 191. Medial *m*.

Intersonantal. Rt. *uem-* 'vomit' Skr. *vámāmi* *vámimi*, Gr. *ἐμέω*, Lat. *vomō*, Lith. pl. *vemataĩ* 'that which is vomited'. 1. pl. ind. pres. from rt. *bher-* 'carry': Skr. *bhārā-mas*, Gr. *φέρο-μεν*, Lat. *feri-mus*, O.Ir. *berme* fr. \**beromi* \**bero-mes-i*, Goth. *baíra-m*, O.Bulg. *bere-mū*. Formations with the nominal suffix *-m̄y-*, e. g. Skr. *dhāma* 'place', Gr. *ἀνά-θημα* 'that which is set up, votive offering' cpf. \**dhē-m̄y*; Gr. *ῥίμα* 'throw', Lat. *sēmen* 'seed', cpf. \**sē-m̄y*.

*m* in the combination *nm* as consonantal glide (§ 223, 4).

\**sn̄m-o-* 'any one': *sam-a-*, Gr. *άμ-ό-*, Goth. *sum-a-*.

Postconsonantal. *smei-* 'smile, be astonished': Skr. *smāy-a-tē* 'smiles', Gr. *φιλο-μειδής* 'laughter-loving' *μειδάω* 'I smile', Lat. *mīru-s* 'wonderful', Engl. *smile*, Lett. *smīt* 'to laugh', O.Bulg. *smijati se* 'to laugh'. \**ghor-mo-*: Skr. *ghar-má-s* 'glowing fire', Lat. *formu-s* OHG. *warm* 'warm', Pruss. *gorme* 'heat', cp. also Arm. *ǰerm* Gr. *θερμό-ς* 'warm' with a different grade of the root vowel. \**aug-men-*: Skr. *ājmán-* m. 'power, strength', Lat. *augmen* *augmen-tu-m* 'increase', Lith. *augmā*, gen. *augmė̃s*, 'growth'. \**gheĩ-men-*: Skr. *hēman-* 'winter', Arm. *ǰiun* (gen. *jean*) 'snow' fr. \**ǰivn* with *v* = *m* (§ 202), Gr. *χεῖμα* 'storm, pouring down of rain' *χειμών* 'winter'; hereto Lith. *žėmà* O.Bulg. *zima* fem. 'winter' with *-mā-* for *-men-*. \**k̄ley-men-* \**k̄ley-m̄y-to-*, rt. *k̄ley-* 'hear': Skr. *śrómata-m* 'a hearing', Av. *sraoman-* n. 'hearing', Goth. *hliuma*, gen. *hliumins*, 'hearing', OHG. *hliumunt* 'renown'.

Anteconsonantal. \**ḡombho-s* : Skr. *jámbha-s* 'tooth', Gr. γόμοϛ 'tooth, bolt', O.Bulg. *zabŭ* 'tooth'. \**rump-é-ti* 'he breaks' : Skr. *lumpáti*, Lat. *rumpit*. \**gentu-s* 'a going' from rt. *gem-* 'go, come' : Skr. *gántu-ṣ*, Lat. *ad-ventu-s*. Nominal suffix *-mn-* : Skr. *nā-mn-ā* instr. to *nāma* 'name', Gr. *νόων-μν-ο-ς* 'nameless', Goth. pl. *na-mn-a* 'nomina'. \**dem-s* 'of a house' : Skr. Ved. *dán* (§ 198), Gr. *δεσ-* in *δεσ-πότης* (§ 204).

§ 192. Final *m*. Acc. sg. in *-m*, e. g. \**to-m* 'the' : Skr. *tá-m*, Gr. *τό-ν*, Lat. *istu-m*, Goth. *þan-a*, Lith. *tã*, O.Bulg. *tŭ*; O.Ir. *fer n-* 'virum'. *-m* probably occurred after consonants only when the following word began with a sonant, e. g. acc. sg. \**bhrátorm a-* beside \**bhrátorm t-*, the former represented by Goth. *brōþar* (§ 659, 5), the latter by Gr. *φράτορα* (§ 233). \**dīēm* 'serene sky' and \**ḡóm* 'bovem' have probably also arisen in this manner from anteconsonantal \**dīēum*, \**ḡóm* (§ 188).

§ 193. Initial *n*. \**neuo-s* \**neūio-s* 'new' : Skr. *náva-s* *návya-s*, Arm. *nor* (with *r*-suffix), Gr. *νέο-ς*, Lat. *novo-s*, O.Ir. *nūe*, Goth. *niuji-s*, Lith. *naũja-s*, O.Bulg. *novŭ*. Loc. pl. \**ny-su* from *ner-* 'man' : Skr. *nŕ-ṣu*, Gr. *ἀνδρά-σι*. Perhaps anteconsonantal in the combination *nr-* : cp. Skr. *nr-asthi-* 'human bone' from *nar-* (dat. *nár-ē* Av. *nairē* were new formations after the st. form *nar-* in the acc. sg. etc.), Gr. *δρ-ώψ* · *ἄνθρωπος* Hesych., *ἀνδρ-ός* gen., *ἀνδρ-άγρια* 'the spoils of a slain enemy'.

#### § 194. Medial *n*.

Intersonantal. \**seno-s* 'old' : Skr. *sána-s*, Arm. *hin* (gen. *hnoy*), Gr. *ζηνη*, Lat. *senex*, O.Ir. *sen*, Goth. superl. *sinista*, Lith. *sėna-s*. Nominal suffix *-men-* : Skr. Ved. dat. (inf.) *vid-mán-ē* 'get to know', Gr. *ἴδ-μεν-αι*, Lat. *nō-min-ī*, Goth. gen. *na-min-s* 'nominis' (§ 660, 1), gen. Lith. *ak-meñ-s* (§ 664, 2) O.Bulg. *ka-men-e* 'lapidis'. \**p̄l̄-no-s* \**p̄l̄-no-s* 'full' (§§ 285, 306) : Skr. *pūrṇá-s* (ḷ), Av. *per<sup>e</sup>na-* (ḷ), Gr. *πολλοί* (ḷ), O.Ir. *lan* (ḷ), Goth. *fulls* (ḷ), Lith. *pilna-s* O.Bulg. *plünŭ* (ḷ). 3. sg. mid. \**ty-nu-tái*, rt. *ten-* 'stretch, extend' (§ 224) : Skr. *ta-nu-tē*, Gr. *τά-νυ-ται*.

*n* in the combination *yn* as consonantal glide (§ 223, 4). \**ty-n-u-* 'stretched, thin' : Skr. *tan-ú-ṣ*, Gr. *ταν-ύ-* *ταν-αό-ς*, Lat. *ten-u-ī-s*, O.Ir. *tan-a* Corn. *tan-ow*.

Postconsonantal. Rt. *sneigh-* 'snow': Av. *snaežaiti* 'it snows', Gr. Hom. ἀγά-νυφος 'much snowed upon' Hes. νίφα 'nivem', Lat. *ninguit nix*, O.Ir. *snechta* 'snow', Goth. *snáivs* Lith. *snėga-s* O.Bulg. *snėgŭ* 'snow'. \**gnō-* 'know': Skr. part. *jñā-tá-s*; Gr. part. γνω-τό-ς, Lat. *gnōscō nōscō*, O.Ir. *gnáth* 'solitus', OHG. *be-cnuodelen* 'to give a countersign', O.Bulg. inf. *zna-ti*. \**sup-no-* \**smep-no-* \**smop-no-* 'sleep, dream': Skr. *svápna-s*, Arm. *kun*, Gr. ὕπνο-ς, Lat. *somnu-s*, O.Ir. *suan* O.Cymr. *hun*, O.Icel. *svæfn*, Lith. *sāpna-s*, O.Bulg. *sŭnŭ*. \**qoi-nā-* 'requital' (rt. *qei-*): Av. *kaeṇā-* 'penalty', Gr. *ποινή* 'requital, penalty, reward', O.Bulg. *cěna* 'pretium'.

Anteconsonantal. Rt. *bhendh-* 'bind': Skr. *bándhana-m* 'a binding' *bándhu-ṣ* 'relation', *πενθερό-ς* 'father-in-law', Lat. *offendimentu-m* 'chin-cloth', Goth. *bindan* 'to bind'. Participial suffix *-nt-*: acc. sg. Skr. *bhárantam* 'ferentem', Gr. *φέρωντα*, Lat. *euntem*, Goth. *giband* 'datorem', Lith. *vėžanti* 'vehentem'. \**ghans-* 'goose': Skr. *hásá-s*, Gr. *χρήν χην-ός*, Lat. *anser*, OHG. *gans*, Lith. *žasi-s*; concerning O.Bulg. *gasi* s. § 467, 2. Present st. suffix *-ny-*: Skr. 3. pl. *ci-nv-ánti* 'they string together' 3. sg. *ṛ-nv-á-ti* 'brings, sends', Gr. Hom. *τίνω* Att. *τίνω* 'I atone for' fr. \**ti-vF-ω*, Goth. *rimna* 'I run' fr. \**ri-ny-ō*.

§ 195. Final *n*. Voc. of *n*-stems: Skr. *takṣan* Gr. *τέκτον* 'carpenter', Skr. *śvan* Gr. *κύων* 'dog'. Loc. sg. of the same st. class: Skr. *kár-man* ('business') *udán* ('water'), Gr. *δό-μεν* (inf. 'to give'), *αἰέν* ('ever' to *αἰών*). Ending *-ēn -ōn* in the nom. and acc. of neuter *n*-stems: Av. *nāmṇ* 'names', prim. Ar. \**-ān*, Goth. *namō* (sg.) prim. Germ. \**-ōn*, O.Bulg. *imę* (sg.) prim. Slav. \**-ēn*. \**en* 'in': Gr. *ἐν*, Ital. *en*, Germ. *in*, Pruss. *en* Lett. *ī*, perhaps also O.Bulg. *-e* in the loc. sg. *kamen-e* (§ 219).

§ 196. In the primitive period *ñ* and *ṛ* only occurred before *k-* and *q-*sounds. Skr. pf. *ānáśa* 'he attained', *áśa-s* 'share, lot', Gr. *ἤνεγκο-ν* 'I brought', Lat. *nanc-īscor*, O.Ir. *con-icc* 'he can'. Rt. *añgh-* 'tie together, straiten': *áhas-* Av. *aṣah-* n. 'distress, need', Arm. *anjuk* (*ancuk*) 'narrow', Gr. *ἄγχω* 'I tie, strangle', Lat. *angō angor*, O.Ir. *cum-ung* 'narrow', Goth. *agg-vu-s* 'narrow' (with *v* from the other cases), O.Bulg. *aṣa* 'string,

fetter'. \**penqe* 'five' : Skr. *pāñca*, Arm. *hing*, Gr. *πέντε*, Lat. *quīnque*, O.Ir. *cōic* O.Cymr. *pimp*, Goth. *finf*, Lith. *penkì* (-ì a Lith. new formation). Skr. *āñjas-* 'salve', *āñj-ānti* 'they smear, anoint', Lat. *unguō*, O.Ir. *imm* (gen. *imme*, stem \**imben-*) 'butter', OHG. *ancho* 'butter'.

The numerous deviations of the *k̄*- and *g*-sounds from their original place of articulation and the dependence of the nasals upon the particular organ producing the following explosives and spirants were accompanied, in the later individual developments, by frequent changes in the method of production of original *ñ* and *ṇ*.

### Aryan.

§ 197. Skr. Av. O.Pers. prohibitive particle *mā* : Gr. *μή*. Skr. Av. O.Pers. *ni-* 'down' : OHG. *ni-dar*. Skr. *nāma* Av. *naṃa* O.Pers. *nāmā* 'name' : Lat. *nōmen*. Skr. *jāñghā-* f. Av. *zanaga-* m. 'heel-bone' : Goth. *gagga* 'I go', Lith. *žengtiū* 'I stride'. Skr. *pāñca* Av. *panca* 'five' : Gr. *πέντε*, Indg. \**penqe*.

Rem. Nasals before explosives and final *n* remained unwritten in O.Pers. e. g. *Kabujya* for *Kamb-Καμβύσης*, 3. pl. *baratiy* for *barantiy* = Skr. *bhāranti* 'ferunt', *abara* for *abaran* = Skr. *ābharan* 'ferebant'.

§ 198. Prim. Ar. *-nt-* fr. Indg. *-mt-*. 3. sg. imper. Skr. *gāntu* Av. Gāp. *jantū*, prim. Ar. \**jantu* (Skr. *g-* for *j-* after *gahí* etc., § 451 rem.) fr. Indg. \**gem-t-u*, rt. *gem-* 'go'. Probably also prim. Ar. *-ns-* fr. *-ms-*. \**ansa-* 'shoulder' (Skr. *ása-s*) fr. \**amsa-*, Indg. \**omso-* : Goth. *ams* (st. *amsa-*). Skr. gen. sg. *dán* 'of a house' = Gr. *δεσ-* in *δεσνότης* (§ 204), Indg. \**dem-s*. Skr. *ágan* 2. sg. pret. from *gam-* 'go', fr. orig. \**é-gem-s*.

In like manner it may be conjectured that *n* in the combination *ānt* was dropped already in prim. Ar. in the syllable before the chief accent, e. g. gen. sg. *yāt-ás* beside acc. sg. *yānt-am*, part. of *yā-mi* 'I go'. The accent had here a similar influence as in *sat-ás* fr. \**s-ṇt-ás* beside *sānt-am* fr. \**s-ṇt-ṇ(m)* (§§ 228. 230), part. of *ás-mi* 'I am' (Hübschmann Das idg. Vocal-syst. 86).



## § 199. Sanskrit.

Sonant + nasal became nasalised sonant before prim. Ar. spirants, and those specially developed in Skr. *dāsas-* n. 'noble deed' fr. prim. Ar. \**dansas-*: Av. superl. *dāhišta-* = Skr. *dāsiṣṭha-*, Gr. *δῖρος* 'resolution, counsel' (§ 565). *āhas-* n. 'distress, need' fr. prim. Ar. \**añžas-*: Av. *azō* 'distress', Lat. *angor*, rt. *añgh-*. *dṛhāti* (beside *dṛhati*) 'he fastens' fr. prim. Ar. \**dhyñṣhāti*, rt. *dhergh-*, a present form like *kṛntāti* 'severs, splits' rt. *qert-*, *piśāti* 'cuts straight, trims', rt. *peik-* (cp. § 221). *raḥayati* 'he hastens' fr. prim. Ar. \**rañjhayati*: Av. *renjayēiti* 'he quickens, hastens'.

Rem. 1. The nasal vowel both in Skr. and Iran. is generally considered as prim. Ar. But it is in itself very improbable that the *a* in Skr. *raḥayati* and Av. *maḥpra-* (§ 200), which cannot be prim. Ar., is historically to be separated from the *a* in Skr. *dāsiṣṭha-*, Av. *dāhišta-* etc. The question is decided by the fact that Skr. *dān* and *āgan* (§ 198) can only be explained fr. prim. Skr. \**dans* and \**agans* (not fr. \**das* and \**ags*). The dropping of the *s* in *dān*, *āgan* was specially Skr., and older than the first appearance of nasalised vowels, s. § 647, 7. Forms like *piśānti* 'they bruise', *-ṣī -ṣī* endings of the nom. acc. pl. (*havṣī*, *āyṣī*) cannot, by taking into consideration the change of *s* to *ṣ* in the prim. Ar. period, be considered as a proof that *n* was, already at this period, absorbed in the preceding vowel (cp. § 556, 1).

*n* became *ñ* after *j*, c. *yajñā-s* 'veneration': Gr. *ἅγρός* 'holy', Indg. \**jaḡ-no-s*. *yācñā* 'desire, begging', a Skr. new formation to *yācati* 'he desires, begs'.

The same nasal became cerebral nasal (*ṇ*) after the cerebral sounds *ṛ, r, ṣ*. *mṛ-ṇā-mi* 'I bruise, beat in pieces': Gr. *μάρ-να-μαι* 'I fight', Indg. \**mṛ-ṇā-mi*. *kṛṣṇā-s* 'black': Pruss. *kirsna-* O.Bulg. *črñū* 'black', Indg. \**qrsno-s*. This assimilation occurred also, under certain conditions (Whitney Skr. Gramm. § 189 ff.), when the two sounds were more widely separated e. g. part. mid. *bhāra-māṇa-s*: Gr. *φερό-μενο-ς*. In this case the tongue, which had been brought into the cerebral position by *ṛ, r, ṣ*, retained this position until the production of the nasal.

Initial *mr* became *br*. *brū-* 'speak': Av. *mrū-*. Cp. Gr. *βροτό-ς* fr. \**μροτό-ς* etc. § 204. For exceptions like *mriyātē*

'moritur' cp. Osthoff Morph. Unt. IV 55. *-mbl-* from *-ml-* in *ambla-s* beside older *amlá-s* 'sour, sourness': cp. Lat. *amāru-s*.

Rem. 2. Is the change of *my* to *ny* specially Skr.? The question must be raised on account of the 1. du. mid. injunct. *gánvahi*, part. perf. act. *jaganvān* from *gam-* 'go', *rañvá-* 'delightful' from *ram-* 'to be delighted'. The process might eventually have to be referred to prim. Aryan — corresponding examples from Iranian have not been handed down to us —, and since Indg. *ny* is the basis of the forms in question (§ 225), we must further ask whether the dental articulation was not already in existence before the consonantal nasal arose from *ny*.

### § 200. Iranian.

Sonant + nasal became nasalised sonant before prim. Ar. spirants and those which were specially developed in Iran. (§§ 473. 475). We have already mentioned Av. *dahišta-* and *azō* in § 199. Other examples: Av. *maṣpra-* 'saying': prim. Ar. and Skr. *mántra-*; *qxnā-* 'reins': Skr. *avakháyati* 'he clings to something'; *tašyā* 'stronger' fr. prim. Ar. *\*tañcyās*, compar. to *tancišta-* 'strongest'. Concerning the treatment of *r* + *n* before spirants I may refer the reader to Bartholomae's Handb. pp. 14. 21.

It is a mere conjecture that a nasalised vowel was also spoken in these cases in O.Pers. The written language was not in a position to represent nasalised vowels as such.

Rem. We have seen in § 199, rem. 1. why the *a* in *dahišta* etc. is to be regarded as a special Iran. and not a prim. Ar. development. Compare also Av. *praṣṭā-* 'satisfied' = prim. Ar. Skr. *\*ṛṣṭhā-* (§ 475) with *m<sup>h</sup>raṣṭyāi* inf. 'stripe, strip off' = prim. Ar. *\*mṛñṣāhīāi* (pres. Av. *mar<sup>h</sup>-zaiti*); in both instances *ra* is the representative of *r*.

Av. *n* before palatal explosives = Skr. prim. Iran. *ñ*. *panca* 'five': Skr. prim. Ar. *pāñca*. *renjayēiti* 'he hastens': prim. Ar. *\*rañjhayati* (Skr. *rañhayati*, § 199). Cp. Av. *-sc-* = Skr. *-śc-*, e. g. *manas ca* = Skr. *mānaś ca* (Gr. *μένος τε*) 'and mind', § 556, 2.

*n* became palatalised in Av. before *y* and *i, ī*. This modification is however only exhibited in a few Mss. *aniya-*: Skr. *anyā-* O.Pers. *aniya-* 'other'. Verbal prefix *ni-*: Skr. *ni-* 'down'.

Prim. Iran. final *-ān, -ām* became in Av. *-ā*, written *-a* and *-aṇ -am*. 3. pl. conj. *barā* (*barān, barāṃ*): Skr. prim. Ar.

*bhārān* 'ferant', prim. f. \**bherānt*. Acc. *ḫwā* (*ḫwām*) : Skr. prim. Ar. *tvām* O.Pers. *ḫwām* 'thee'. Spellings like \**rvān-ō* beside \**rvān-ō* (nom. pl. of \**rvan-* m. 'soul'), *dama* beside *dāma* 'creature' (= Skr. *dhāma* 'effect, stead, place'), where *a* is likewise to be read as *ā*, show that *-ān*, *-ām* were the previous stages. Cp. Bartholomae Handb. §§ 14. 78, 4. 79, 3.

#### Armenian.

§ 201. *mi* 'lest' : Skr. *mā* Gr. *μή*. *armukn*, gen. *armkan*, 'elbow, bow' : Lat. *armu-s*, Goth. *arms*.

*nist* 'seat' *nsti-m* 'I sit' : Skr. *nīdā-s* 'place of rest', Lat. *nīdu-s*, OHG. *nest* 'nest', Indg. \**ni-zd-o-* from \**ni-sed-* 'sit down'. *nu* 'daughter-in-law' : Skr. *snuṣā* OHG. *snur* O.Bulg. *snūcha* etc. *kun* 'sleep' fr. \**kun*, \**kupn* (*k-* fr. *su-*, § 162) : Skr. *svāpna-s* Lat. *sommu-s*. *ar-nu-m* 'I take' : Gr. *ἀρ-νν-μαι*. *anjuk* (*ancuk*) 'narrow' : Skr. *āhū-ṣ* etc., rt. *añgh-*. *hing* 'five' : Skr. *pāñca* etc., Indg. \**peṇge*. Cp. § 196.

§ 202. The change of *m* to *v* (*u*). *anun* (gen. *anuan*) 'name' fr. \**anvan*, \**anman* (cp. § 232). *jiun* (gen. *jean*) 'snow' fr. \**jivn* : Skr. *hēman-*, Gr. *χεῖμα χεμῶν*. See Hübschmann Arm. St. I 75.

*m* and *n* disappeared before *s*. *us*, gen. *usoy*, 'shoulder' : Goth. *ams* m., Skr. *āsa-s*, Umbr. *onse* 'in umero'. *mis*, gen. *msoy*, 'flesh' : Goth. *mimza-* n., O.Bulg. *męso*. *amis*, gen. *amsoy*, 'month' : Lat. *mēns-i-s*, O.Ir. gen. *mīs* (prim. Kelt. st. \**mēns-*). Acc. pl. *eris* 'tres' : Goth. *ḫri-ns*, Gr. Dor. *τρῆς* fr. \**τρι-νς*; concerning the initial element of *eris* s. § 263. Acc. pl. *z mards* 'homines' fr. \**mṛto-ns* : cp. Goth. *vulfa-ns* 'lupos', Gr. Cret. *νόμο-νς* 'leges'.

Final postvocalic *-m* disappeared. *z mard* 'hominem' : Skr. *mṛtā-m*, Lat. *equo-m*, Gr. *βοτό-ν*. Cp. § 651, 2.

#### Greek.

§ 203. *μè* 'me' : Goth. *mi-k*, Skr. *mām*, Lat. *mē*. *ἡμι* 'half' : Skr. *sāmi-*, Lat. *sēmi-*. *ἄκμων* 'anvil' : Skr. *āśman-* 'stone, thunderbolt'. *ἀμφί* 'about' : Lat. *amb-*.

*νέφος* 'cloud': Skr. *nábhās* 'cloud, atmosphere', O.Bulg. *nebo* 'atmosphere sky'. *πότνια* 'mistress': Skr. *pátñī*. Dor. *φέρουσι* (Att. *φέρουσι*) 'they bear': Skr. *bháranti*.

*ἐνεγκεῖν* 'to bring': Skr. pf. *ānáśā*. *ὄγκος* 'hook': Skr. *anākā-s*. *πέντε* 'five': Skr. *pāñca*; *πέμπτος* 'fifth': Lith. *peñkta-s*.

Rem. The guttural nasal was, as it seems, originally represented in writing by *ν*. Thus inscrip. e. g. *ἀνκυρα*, *ἐνγύς*. The representation of it by *γ* first made its appearance, after the *g* in *gn*, *gm* (*στηγνό-*, *ἀγμό-*) had become *ῆ* (§ 492).

### § 204. Prim. Greek changes.

*-ντ-* from *-mt-*. *γέντο* 'he grasped' to *ὔγ-γεμος* 'συλλαβή' Hesych. *ἄν-τλο-ν* 'bilge-water', to *ἀμάω* 'I gather in'. Probably also *-νς* from *-ms*. *ένς* (Cret., thence Att. *εἶς*) fr. *\*sem-s*: cp. *μῶνυξ* fr. *\*σμ-ωνυξ*, *όμ-ός*, Lat. *sēm-el*.

*-νι-* from *-mī*. *κοινό-* 'common' fr. *\*κονιό-* *\*κομιό-*: Lat. *cum*. Cp. *βαίνω* 'I go' fr. *\*βανιω*, Indg. *\*gñi-ḡ*: Lat. *veniō*. On the *i*-epenthesis s. §§ 131. 639.

*-μφο-*, *-μβλ-*, *-νδο-* fr. *-μο-*, *-μλ-*, *-νο-*. The initial nasal disappeared with the development of the explosive. (*ἄ-μβροτο-* 'immortal', *βροτό-* 'mortal' <sup>1</sup>); *\*μοροτό-* was a contamination form of *μοροτό-* Hesych. (Skr. *márta-s*, Indg. *\*mórto-s*) and *\*μορατό-* (Skr. *mṛtá-s*), and *μοροτό-* itself was also such a form with regard to its accent. *μέμβλωκα*, *βλώσκω* ('I come') with *\*μλω-* = orig. *\*mī-* (§ 306), aor. *ἐμολο-ν*. *βλίττω* 'I cut out the comb of bees' to *μέλι μέλιτος* 'honey'. *άνδρο-ός* *-ών* (nom. *άνήρ* 'man'), *δρο-ώψ* *ἄνθρωπος* Hesych., *δρο-τήτα* acc. 'manhood' (thus with Clemm probably to be read for *άνδροτητα* in Hom. II 857, X 363): cp. Skr. *nr-asthi-* 'human-bone'.

*-λν-* became *-λλ-*. When the preceding vowel was short, so called compensation lengthening took place later (cp. § 618). Prim. Gr. *\*γ<sup>h</sup>ολνεται* (prim. f. *\*g<sup>h</sup>né-tai*, § 306) became Lesb. *βόλλεται*, Att. *βούλεται* and prim. Gr. *\*γ<sup>h</sup>ελνεται* (prim. f. *\*g<sup>h</sup>él-ne-tai*) Thess. *βέλλεται* (concerning *β-* cp. § 428 rem.) Dor. *δήλεται*, Locr.

1) *ἄ-βροτο-* beside *ἄ-μβροτο-* was a new formation from *βροτό-*. Cp. Prākṛ. *a-rīṇa-* 'guiltless' as a later compound beside *an-irīṇa-* = Skr. *an-ṛṇa-*.

Delph. *δέιλεται* 'he wishes', rt. *gel*-. Hom. *οὔλο-ς* 'crisp, fleecy' fr. \**Fολνο-ς*, prim. f. \**ῥῥῥνο-s*: Skr. *ūrṇā* fr. \**ῥῥῥ-nā* (§§ 151. 157. 306). Lesb. *ἀπ-έλλω* Dor. *φήλω* Hom. *εἶλω* 'I press tight' fr. \**Fελ-νω*. Later, but also probably already prim. Gr., was the assimilation of *-λν-* to *-λλ-* in *ἄλλῶμι* 'I destroy' fr. \**ὄλ-νῶ-μι*; *έλλό-ς* 'a young deer' fr. \**έλ-ν-ο-ς*, cp. *έλα-φο-ς* fr. \**ελῶ-βηο-s*, Lith. *έln-i-s* m. 'stag', O.Bulg. *jelen-ě*, gen. *jelen-e*, 'stag'; *ὠλλόν·τήν τοῦ βραχίονος καμπήν* (Hesych.) fr. \**ὠλ-ν-ο-ν*, to *ὠλήν -ένος* (cp. the author Morph. Unt. II 173).

Rem. 1. If, as we conjecture, the *-λλ-* in the three last named words was likewise already prim. Greek, the *-λλ-* in *βόλλομαι* etc., before 'compensation lengthening' took place, was pronounced somewhat differently from that in *ἄλλῶμι* etc. The forms *πλάμαι* (to *πέλας*) and *πλό-ν·φαίον* Hesych. (to *πέλος, πελός*) may have only come into existence after the law, whereby \**δλνῶμι* became *ἄλλῶμι*, had ceased to operate.

*ν* disappeared before *σ* + consonant without 'compensation lengthening'. *κεστό-ς* 'pierced, embroidered' fr. \**κενστο-ς*, to *κεντέω*. *δεσ-* in *δεσ-πότης* fr. \**δενς*, Indg. \**dem-s* 'of a house': Skr. *dān*. 3. pl. imper. mid. *φερόσθων* fr. \**φερωνσθων*. *Ἀθήνᾳζε* 'towards Athens' fr. \**Ἀθᾶνᾶνζ-δε*. *δικασπόλο-ς* 'law-giver', fr. \**δικανς-πολο-ς*, an irregular compound with acc. pl.; likewise *μογοστόκος* 'causing pains' fr. \**μογονς-τοκος*. Here belong also the various dialectical forms of the acc. pl. of *-ο-* and *-ᾶ-* stems, as *τός, θεός, τᾶς καλᾶς* (beside *τόνς τάνς, τούς τᾶς*) and *ές* from *ένς* 'into', which arose before initial consonants: the regular forms were *τός παῖδας* beside *τόνς (τονς) ἄνδρας, ές τοῦτο* beside *ένς (είς) αὐτό*. Lastly *πίσσω* 'I pound' fr. \**πινσ-ιω*: Lat. *pñsiō*, and Hom. *νίσσομαι* 'I come' fr. \**νι-νσ-ιο-μαι* (redupl. pres.), beside *νέομαι* fr. \**νεσ-ο-μαι*, cp. *νόσ-το-ς*, rt. *nes-* (§ 563, 4).

Rem. 2. Where in the course of the individual dialects *νσ* + cons. came into existence again, those dialects, in which *ν* disappeared before *σ* with 'compensation lengthening' (cp. §§ 205. 618), show this lengthening. Thus Att. *ἔσπεισμαι ἔσπειστο* (from *σπένδω* 'I deal out') was a new formation after *ἔσπεισα* (Cret. still *ἔσπενσα*) and *σπεισῶ*; Ion. *πείσμα* 'rope' fr. \**πεν(θ)-ομα*, a new formation for prim. Gr. \**πενθ-μα* (cp. Lat. *offendimentu-m*), like *ζῶμα* for older *ζῶμα* etc.

*-m* became *-ν*. Acc. sg. *τόν* 'the': Skr. *tā-m*, Lat. *is-tu-m*; *ῶν* 'sheep': cp. Skr. *ávī-m*. Gen. pl. *ἱππων* 'equorum': cp. Skr.

Ved. *dēvām* 'deorum', Lat. *virum*. 1. sg. impf. ἔφερον 'I carried': Skr. *ābhara-m*. ἔν 'unum' fr. \**sem*; concerning ἔνς in this §, cp. p. 170. χθών 'earth', χιών 'snow' fr. \**χθωμ*, \**χιωμ*: cp. *χθαμ-αλό-ς*, Skr. *kṣām-* and Lat. *hiem-* Gr. δύς-χιμο-ς. The *ν* in ἔν (and ἔνς), χθών, χιών was transferred to the other cases also: ἔν-ός, χθον-ός, χιον-ός for the regular forms \**έμ-ος*, \**χθομ-ος*, *χιμομ-ος*.

Concerning prothesis before initial nasals as in ἀμέλγω 'I milk': Lith. *mélžu* s. § 626.

### § 205. Individual dialectal peculiarities.

The uniform omission in writing of the nasal before consonants in Cypr. and Pamphyl., permits the conclusion that a nasal vowel was spoken in these dialects. Cypr. *o-ka-to-se* = Ὀ(γ)κα(ν)τος, *a-ti* = ἄ(ν)τί, *pe-ra-me-ro-ne* = πε(μ)ραμέρων; thus also *to-ko-ro-ne* = τό(γ)χώρον, *na-o-to-te* = ναό(ν) τό(ν)δε etc. (§ 653, 3). Pamph. *πέδε* = Att. *πέντε* (§ 487).

Prim. Gr. -*μμ-* became -*ππ-* in Lesb., elsewhere -*μμ-*. Lesb. ὄππατα pl., Hom. etc. ὄμμα 'eye', to ὄπ-ωπ-α ὄφομαι. Lesb. ἄλιππα beside Att. ἄλειμμα 'salve', to λίπ-α ἀλείφω.

*ν* only remained in Cret. and Argive before -*ς* and the voiceless -*σ-* which arose from assimilation (§§ 489. 490). τό-νς 'the': Goth. *þa-ns*, Indg. \**to-ns*. θένς fr. *θεντ-ς*, part. to *θεῖναι* 'to place' *πρέπονσα* fr. \**πρεποντ-ια*, fem. to *πρέπων* 'becoming, fitting'. ἔσπενσα fr. \**ἔσπεννισα*, aor. of *σπένδω* 'I pour out'. *πρέπονσι* fr. \**πρεποντ-σι* loc. pl. to *πρέπων*. μηνσί fr. \**μηνσ-σι* loc. pl. to gen. sg. Lesb. *μῆνν-ος* 'of a month'. Elsewhere *ν* disappeared, since in most dialects it became with the preceding vowel a long nasal vowel (i. e. short vow. + *ν* became long nasal vowel) and then the nasal sound disappeared. Dor. τώς, *πρέπωσα*, θής, ῆς (ἔνς); Ion. Att. τούς, *πρέπονσα*, θείς, εῖς; Dor. Att. μηνσί, τᾶς (τάνς), πᾶσα (πάνσα); Att. 3. pl. ἄγουσι, ἄγωσι (Dor. and prim. Gr. ἄγοντι, ἄγωντι). *i*-diphthongs arose in Lesb.: τοίς, *πρέποισα*, θείς, εῖς, ταίς, παῖσα, ἄγοισι, ἄγωισι; here the *s*-sound must have been the chief factor in the generation of the *ι*. In Elean, *i*-diphthongs arose in the endings -*ους*, \**ανς*, prim. El. -*ουζ*, -*ανζ* (cp. Osthoff Zur Gesch. d. Perf. 26 ff.): τοίρο, καταξίαιρο, but διδῶσσα, πᾶσα.

Rem. 1. The stage of nasalisation of the vowel which preceded entire loss of *v* is perhaps represented by the Cretan and Argive of the historical period. For we are justified in supposing that the pronunciation was nasal vowel (no longer vowel + nasal), but that the spelling with *v* was retained from an older period. Cp. French *tonsure, mensonge*.

Rem. 2. Arcadian preserved the *vo* which arose by transition of *-vι* to *-οι* (e. g. conj. *κελεύωνσι*), but had alongside it e. g. acc. pl. *δραχμάς* 'drachmas'. Consequently the activity of the law which produced *δραχμάς* was already extinct at the time *-voι* arose from *-vι* in this dialect. Cp. in Attic the new forms *θέρμανσις, ὑφανσις* etc. which originated after the completion of 'compensation lengthening' (*πᾶσα* from *πᾶvσα*).

Rem. 3. *ει* and *ου*, produced by 'compensation lengthening', never were diphthongs. The *ει* in Ionic-Attic and Bœot. *εἶς θεῖσα* is only graphically like the *ει* in Lesh. *εἶς θεῖσα*; the latter was a diphthong. Cp. the other phenomena of compensation lengthening § 618.

### Italic.

§ 206. Lat. *magis*, Umbr. *mestru* 'maior', Osc. *mais* 'magis': Skr. *mahān* 'magnus'. Lat. *homō*, Umbr. *homonus* 'hominibus', Osc. *humuns* nom. 'homines': Goth. *guma* 'homo'. Lat. *termō termen*, Umbr. *termnom-e* 'ad terminum', Osc. *terremnattens* 'terminaverunt': Skr. *tārman-* n. 'point of the sacrificial rod', Gr. *τέρομον* 'boundary' *τέρομα* 'goal'. Acc. sg. Umbr. *tota-m*, Osc. *topta-m* 'civitatem', Lat. *equa-m*: Skr. *áśvā-m* 'equam'.

Lat. *ne nē*, Umbr. Osc. *nei-p* 'neque, neve, non': Skr. *ná* Goth. *ni* Lith. *nė* 'non'. Lat. *dō-nu-m*, Umbr. *řunu* Osc. *dúnúm* 'donum': Skr. *dā-na-m* 'gift'. Lat. *cor-n-ix*, Umbr. *cur-n-ac-o* 'cornicem': cp. Gr. *κορών-η* 'crow'. 3. pl. Lat. *feru-nt*, Umbr. *furfa-nt* 'februant', Osc. *kara-nter* 'vescuntur': Skr. *bhāra-nti* 'ferunt'. Lat. *mēns-is*, Umbr. *menzne* 'mense': Gr. Lesb. *μηνν-* Att. *μην-* fr. *\*mēns-*.

Lat. *angō angor*: Gr. *ἄγχω* 'I press tight, strangle', Av. *azah-* 'distress', rt. *añgh-*. Lat. *quīnque*, Umbr. *pumperias* Osc. *pumperias* 'quintiliae', Osc. *Πομπτιες* 'Quinctius', prim. Ital. *\*kwerokwe* fr. *\*perokwe* (§ 336): Skr. *pāñca*, Indg. *\*perəqe*.

Rem. The guttural nasal is represented in the Ital. languages by the letter *n*.

## § 207. Prim. Italic changes.

Prim. Ital. *-mt-*, the *m* of which goes back partly to Indg. *ṃ* (§§ 237. 238), became in the prim. Ital. period *-nt-*, and in like manner *-md-* became *-nd-*. This change seems also to hold good for the *-mt-* which arose later in the course of individual dialects. Lat. *con-trā contrō-versu-s*, Osc. *con-trud* (prep. with loc.) 'contra', to Lat. *cum* Osc. *com*. Lat. *ad-ventu-s* : Skr. *gántu-ṣ* 'a going', Indg. *\*gém-tu-s*; Lat. *in-ventu-s* : Skr. *gatá-s*, Gr. *βατό-ς*, Indg. *\*gṃ-tó-s*, rt. *gem-* 'go'. Lat. *centum* : Lith. *szimta-s* 'hundred', Indg. *\*kṃtóm*. O.Lat. *quan-de* 'quam', Umbr. *pane* 'quam', Osc. *pan* 'quam', to *quam*. Lat. *quon-dam*, Umbr. *ponne pone pune* Osc. *pún pon* 'quom', to *quom*. Further Lat. *fren-dō* beside *frem-ō* (cp. § 349), *septen-triōn-ēs septendecim* (*septem*), *vērun-tamen* (*vērum*), *eun-dem* (*eun*), *vēnum-dō* (*vēnum*), *quan-diū* (*quam*); Umbr. *hōn-dra* 'infra' *hōn-domu* 'infimo', Osc. *hu[n]-truis* 'inferis' to Lat. *hum-u-s* Gr. *χαμ-αί* (Danielsson Pauli's *Altit. Stud.* III 143), Umbr. *desen-duf* 'duodecim'. Cp. also Osc. *Púntiis* beside *pomtis* 'quinqües' and *Πομπτιες* (latinised *Pontius Pomptius*): Lat. *Quinctiu-s*.

Many exceptions to this law were created through analogy and new formations. E. g. Lat. *quamde*, *quamdiū*, *vēruntamen* after the simple forms *quam*, *vērum*. Of later origin are also Lat. *ēm-p-tu-s*, Umbr. *emps* 'emptus' (cp. *da-etom* 'demptum'), Lat. *sūm-p-tu-s* with excrement *p* (§ 208).

Further *\*kṃom kue* probably also became *\*kṃon-kue* already in prim. Ital. (Lat. *quonque cunque*, Umbr. *pumpe*) etc. Cp. also Lat. *singulu-s* fr. *\*sem-clo-s*, *prīnceps* fr. *\*prīm(i)-ceps* (§ 633). Lat. *quomque cumque* was formed in the same manner as *quamde*.

Analogously *-ms-* probably became *-ns-*. Cp. § 568 rem., § 570 concerning *tenebrae*.

## § 208. Latin.

*-mī-* became *-nī-*. *quoniam* fr. *\*quom-iam*. *con-jectu-s*, *con-jungō*, *con-jūrō* fr. *\*com-ī-*. *veniō* fr. *\*(g)uem-īō*, Indg. *\*gṃ-īō*, from rt. *gem-* (§ 239).



-*p*- as glide in *-mpt-* (§ 207), *-mps-*, *-mpl-*: *ēm-p-tus*, *sūm-p-si*, *ex-em-p-lum*. Cp. Umbr. *emps* 'emptus'.

-*ln-* became *-ll-*. *collis* fr. *\*col-n-is*: Lith. *kál-n-a-s* 'mountain', Gr. *κολων-ός* 'hill', orig. st. form *\*golen-*. *pollen* (beside *polen-ta*), developed fr. *\*polen*, gen. *\*poln-os* (see W. Meyer Kuhn's *Ztschr.* XXVIII 162): Gr. *πάλη* 'finest meal' or 'flour'. *pullu-s* 'young animal, young' fr. *\*pol-n-o-s*: Goth. *fula*, gen. *fulin-s* 'foal', from a stem *\*pll-en-*. *vellus* 'fleece': Lith. *vìtna* 'a single hair of wool' etc. The reason is not clear why assimilation did not take place in *volnus*, *ulna*, *pōpulnus* and others.

-*nl-* became *-ll-* in diminutives: *asellu-s* fr. *\*asen-lo-s*, to *asinu-s*; *homullu-s* fr. *\*homōn-lo-s*, cp. *homun-culu-s*.

Rem. These affections may partly or entirely be ascribed to the prim. Ital. period. The Umbr.-Samn. dialects do not furnish sufficient material for the determination of the chronology.

Prim. Lat. *-ns-*. The nasal was often unwritten already in the oldest inscriptions, e. g. *mesibus*, *cesor*, *cosol*, *cosentiant*; further also in writers *vicesimus* and *vicensimus*, *quoties* and *quotiens*, *pisare* and *pinsare* etc. Combining this with the clearly ascertained fact that short vowels were spoken long before *-ns-* (§ 619), it follows that a long nasal vowel was spoken, perhaps leaving the sound of a reduced consonantal element. It is not possible to gain an insight into the course of the process and its extent, owing to the inconsequence and inaccuracy in the representation of the sounds, and the possibility that *n* as full consonantal nasal was restored from other forms of the form-system (cp. e. g. *scānsum*, *dēfēnsor* *dēfēnstrīx*)<sup>1</sup>). In two cases the nasal was apparently entirely lost already at the beginning of historic records.

1. In the case of final *-ns*, when *-s* had not arisen from an older *-ts* (cp. § 501). Acc. pl. *equōs*, *ovīs*, *fructūs* fr. *\*-o-ns*, *\*-i-ns*, *\*-u-ns*, *pedēs* fr. *\*-ens* = Indg. *\*-ŋs* (§§ 224. 238). Nom. *sanguās* fr. *\*sanguins*, a new formation for older neut. *sanguen*.

2. In forms with prim. Lat. *-nsl-*. *pīlu-m* 'pestle' fr. *\*pinslo-m*. *prēlu-m* 'press' fr. *\*prenslo-m*, older *\*prenslo-m* (cp. *cōnsequor*

1) Cp. among others Seelmann *Die Aussprache des Latein* p. 273 ff.

fr. \**com-sequor*, inscrip. *quansei* and § 207 extr.). *ālu-m* 'wild garlic' (hereto *hālāre*, *an-hēlāre* with inorganic *h-*, s. Osthoff Zur Gesch. d. Perf. 491) from rt. *an-* 'breathe', fr. \**an-slo-* or \**ans-lo* (cp. O.Bulg. *ačh-ati* 'to exhale' fr. \**on-s-ātī*, §§ 219. 588 rem. 2). *scāla* 'ladder' fr. \**scan(t)slā*, to *scandō*. *an-hēlō* fr. \**an-(h)enslō*, like *scandō* : *cōn-scendō* (Osthoff loc. cit. 115), shows that the dropping of the nasal in the combination *-nsl-* is younger than the weakening of *a* to *e* in the second member of compounds. Here probably also belongs *īlicō* fr. \**in slocō*, § 570.

Prim. Lat. final *-m* (partly coming from Indg. *-m̄* § 238). The orthography fluctuated already in the oldest inscriptions, e. g. *pocolo* beside *pocolom poculum*. The sound was greatly reduced before words beginning with a vowel. After the close of the vowel in the last syllable there only followed a very imperfect lip-closure. Hence the vowel elision in poets, as Verg. Aen. VIII 386 *fērru(m) acudnt*. Cp. Danielsson Zur Altital. Wortforschung (a separate reprint from Pauli's Altital. Stud. III and IV) p. 14, Seelmann Die Aussprache d. Lat. 356 ff.

### § 209. Umbrian and Oscan.

Prim. Umbr.-Osc. *-ns-* became *-nts-* (cp. *-mps-* in Umbr. *emps* 'emptus'). This sound-combination was expressed in the native alphabet by *-nz-* (or *-nzs-*). Umbr. *menzne* 'mense'. *anzeriatu* (beside *anseriato*) 'observatum', cp. Lat. *am-putāre an-quārrere*. *uze* (beside *onse*; on the omission of the *n* in *uze* see below) loc. 'in umero' : Goth. *ams* m. 'shoulder', Indg. \**omso-* : cp. however also § 568, 3 for the Ital. form of this word. Osc. *kenzsur keenzstur* (beside *censtur*, *censaum*) 'censor'.

*-mbr-* fr. *-mr-* is probably to be assumed in Umbr. *ambr-* beside Osc. *amfr-*, to Lat. *amb-* Gr. *ἀμφί*. Either \**amfer*, a new formation after *ander* 'inter' etc., first became \**amer-* (cp. *umen* fr. \**umben*, § 432 a.) by assimilation, then \**amr-*, *ambr-*, or else \**amer-* was an Umbr. new formation from *am-*, which then led to *ambr-*.

Prim. Ital. *-ns* became Umbr. *-f*, Osc. *-ss*. Umbr. acc. pl. *abrof* 'apros' eaf 'eas' avif 'aves', *trahaf traf* 'trans'; Osc. acc. pl. *feihúss* (st. *feihō-*) 'fines', *víass* 'vias'. Likewise Umbr. *zeřef* 'sedens' fr. *\*-ens* = *\*-ents*. Cp. Danielsson Pauli's *Altit. Stud.* III 146 ff. Umbr. *Ikuvins* 'Igovinus', Osc. *Púmpaiians* 'Pompeianus' etc. show that these changes are older than the dropping of short vowels before the *-s* of the nom. sg. Regarding Umbr. *f*, which goes back in the first instance to *ḫ*, cp. *trahvorfi* 'transverse' (§ 501).

That *n m ṁ* were reduced in Umbr. before explosives and spirants, follows from their being frequently omitted in writing. *us-tetu* beside *ustentu* 'ostendito'. Stem *azeriato- aseriatō-* beside *anzeriato- anseriatō-* 'observatus'. *hutra* beside *hondra* 'infra'. *dirsas* beside *dirsans* 'dent'. *Sa'se* beside *Sansie* voc. 'Sanci'. *apr-etu* beside *ampr-ehetu* 'circumito' *ambr-efurent* 'circumierint'. *iveka* beside *ivenga* 'iuvenca'.

In like manner prim. Ital. final *-m* and *-n* must have been greatly reduced in Umbr., perhaps only a nasalised vowel was spoken. For they often also here remained unwritten and the letter *m* stepped into the place of *n*: *-e* beside *-en* 'in', *nome* 'nomen', *puclu poplo* beside *puclum poplom* 'populum'; *-em* 'in', *numem* 'nomen'.

In Osc., *-n* is uniformly written and *-m* only seldom omitted, mostly in later monuments, e. g. *vía* (beside *víam*) 'viam', *ísídu* (beside *ísídum*) m. 'idem', *íní* (beside *íním inim*) 'et'. If *fíísním* (Zvetaieff *Syll.* n. 17, 8) contains *-ím* = *-ín* 'in', the same sound-development is to be assumed as in Umbr.

For the development of anaptyctic vowels from nasals in Oscan see § 627.

### Old Irish.

§ 210. *menme*, gen. *menman*, 'mind' (prim. f. *\*men-ə-men-* § 110): cp. Skr. *mán-man-* n. 'mind', Gr. *μῆνος* 'mind', rt. *men-nem* (gen. *nime*) n. 'sky', *nemed* n. 'sanctuary' (Gall. *nemeto-n*): Skr. *námati* 'he bows, bends', rt. *nem-*.

Particle *nu no* : Skr. *nú*, Gr. *νὶ*, Indg. \**nú* 'now'. *canim* 'I sing' : Lat. *canō*, Goth. *hana* m. 'cock'. Redupl. pf. *ro-se-scaind* 'he leapt' : Skr. *skándāmi* 'I jerk, leap', Lat. *scandō*. *snām* inf. 'swim' : Skr. *snā-ti* 'he bathes himself'.

*cum-ung* 'narrow' : Av. *azah-* 'distress', rt. *aṅgh-*. *com-boing* 'confringit' : Skr. pf. *babhāṅja* 'fregit' *pra-bhanṅá-s* 'breaker, pounder', rt. *bha<sup>x</sup>ṅg-*.

Rem. The letter *n* is employed to represent *ṇ* in Keltic as in Latin.

§ 211. It may be concluded that *-mt-* became *-nt-* in prim. Keltic from Cymr. Bret. *cant* O.Ir. *cēt* 'hundred' : Lith. *szimta-s*, Indg. \**ḱmtó-m*, cp. § 212.

Indg. *-m* became *-n* in prim. Kelt. Gall. nom. acc. sg. neut. *νεμητρο-ν nemeto-n* 'sanctuary' (Zeuss-Ebel p. 225). The nasal was often retained in Irish before vowels and mediae at the beginning of the following word, when the preceding vowel had disappeared. Acc. sg. *fer n-aile* 'virum alium' fr. \**uīro-n*. Under the same conditions the *-n* from prim. Kelt. *-en* = Indg. *-ṇ* and *-ṇ* was also retained. M.Ir. *deich m-bai* 'ten cows' fr. \**deken* : Skr. *dáśa*, Lat. *decem*, Indg. \**deḱṇ*. M.Ir. *nōi n-ubla* 'nine apples' fr. \**nouen* : Skr. *nāva*, Indg. \**neuyṇ*. Cp. § 658, 2.

§ 212. Prim. Kelt. *n* (partly going back to Indg. *ṇ*, *ṇ*, § 243) disappeared in Irish — with 'compensation lengthening' when the preceding vowel was short — before *t*, *c*, *s* (*f*). The vowel was then shortened in unaccented syllables, afterwards became irrational and entirely disappeared under certain conditions (§§ 613. 634).

*sēt* Cymr. *hynt* Bret. *hent* 'way' : Goth. *sinþs* 'a going, a time'. *tēt* Cymr. *tant* 'string' : Skr. *tāntu-ṣ* 'thread, string', rt. *ten-*. *cēt* Cymr. Bret. *cant* 'hundred' : Lat. *centu-m*, Lith. *szimta-s*, Indg. \**ḱmtó-m* (§ 211). *ēc* 'death' Bret. *ancou*; according to Windisch to Skr. *naś-*, Gr. *νέξv-ς*. *brēc* 'lie, deceit' : Skr. *bhrqśa-s* 'fall, loss'. *ēcath* 'hamus' : Skr. *avaká-s* 'hook', Gr. *ἀγκών* 'bow' *ὄγκo-ς* 'bow, crook, bend', Lat. *ancu-s uncu-s*, OHG. *angul* 'angle'. *ēcen* 'necessity, constraint' : Gr. *ἀν-ἀγκη*. *gēis* (gen. du. M.Ir. *gēsī*) 'swan' : Skr. *hṅs-á-s* OHG. *gans* 'goose'. Fut. st. *sēs*- fr.

\**syen(t)s-* i. e. \**syend+s-* (*syend-* 'drive, hunt'), 1. sg. *cu-du-sē[s]-sa*, fut. sec. 1. sg. *du-sēsainn* (Thurneysen Kuhn's Ztschr. XXVIII 148). Gen. sg. *mās* (nom. *mī*) 'mensis', st. \**mēns-* : Gr. Lesb. gen. sg. *μηνν-ος*.

Shortening and disappearance. 3. pl. *bérit* 'ferunt' fr. \**béront(i)*, prim. f. \**bhéronti* : Skr. *bháranti*, Gr. Dor. *φέροντι*. *ér-mítu* 'honor' (gen. *ér-míten*) fr. \**mētiu*, \**mentió*, *fóimtiu* 'a remarking' fr. \**fó-mētiu* etc. : Lat. *mentió*; a further formation with *n* from Indg. \**my-ti-*, Skr. *matí-ṣ*, Goth. *ga-munds* (st. *ga-mundi-*), rt. *men-dér-met*, gen. *dér-mait*, 'a forgetting', *fór-mat*, dat. *fór-mut*, 'envy' from stem \**mēto-*, \**mento-* : Lat. *com-mentu-s*, Gr. *αυτόματο-ς*, Skr. *matá-s*, from the same rt. *men-*. *óac óc* 'young' fr. \**óec*, Cymr. *ieuanc*, prim. Kelt. \**íouyeko-s* : Skr. *yuvaśá-s*, Lat. *juvenu-s*, Indg. \**-y-kó-s* (§§ 137. 174). Acc. pl. *fíru* 'viros', *fáthi* 'prophetas' fr. \**fírō(s)*, \**fáthā(s)*, prim. Kelt. \**úiro-ns*, \**uāti-ns* : cp. Goth. *vaira-ns*, *gasti-ns*.

Rem. Zimmer Kuhn's Ztschr. XXVII 449 ff. shows that first an assimilation of the explosive to the nasal took place in the prim. Ir. combinations *nt*, *nc* in such a manner that the former became voiced. Zimmer, p. 467, says that the new sound probably did not become a pure media in the first instance, but *dt*, *gc*. This change was generally not expressed in the writing of O.Irish, while in Mod. Ir. orthography it is expressed, e. g. *eug* 'death' = O.Ir. *ēc*, *ceud* 'hundred' = O.Ir. *cēt*. Cp. §§ 513. 658, 2.

Where *m* came together with a following *r*, *l*, an excrescent *-l-* was developed, and then initial *m* became absorbed. *brechtrad*, older *mrechtrad* 'varietas': to Lith. *márga-s* 'variegated'. *blicht*, older *mblicht mlicht* 'milk', *bligim*, older *mbligim* 'I milk', to *melg* 'milk', Gr. *άμέλω* Lat. *mulgeō* O.Bulg. *mlūza* 'I milk', rt. *melg-*. Cp. § 298. *blāith*, older *mlāith* 'tender, soft' (st. \**mlāti-*), to *melim* inf. *bleith* 'molo'; cp. § 306.

Original intervocalic *m*, written *mh*, is in Mid. and Mod. Irish a nasalised labial spirant, e. g. *nemh* 'sky'. That this affection already took place in the O.Ir. period, follows from the fact that *mh* appears in the Modern language in words, where the nasal already in O.Ir. no longer stood directly after vowels; O.Ir. *amprom* fr. Lat. *improbus* also speaks for the great antiquity of this change, since *m* must here have represented a

spirant. The change of *m* to a spirant is probably likewise to be also assumed in O.Ir. *mebuir* fr. Lat. *memoria*, in this case, however, it may be a question of dissimilation as in Mid.Ir. perf. *mebaid* = O.Ir. *memaid* 'he broke'.

### Germanic.

§ 213. Goth. *midjis* OHG. *mitti* 'medius' : Skr. *mādhyā-s*. Goth. *qiman* OHG. *queman* 'to come' : Skr. *gámāna-m* 'a going', fr. rt. *gem-*. Goth. *hilms* OHG. *helm* 'helmet', Ags. *helm* 'protector, helmet' : Skr. *śárman-* n. 'protection'. OHG. *camb* 'toothed tool, comb' : Skr. *jambha-s* 'tooth, bit', Gr. *γόμφο-ς* 'plug, bolt, nail', O.Bulg. *zqbū* 'tooth'.

Goth. *nahts* OHG. *naht* 'night' : Lat. *nox*, Lith. *naktī-s*. Goth. *manna* fr. *\*manu-ō* OHG. *man* 'man' : Skr. *mānu-ṣ* 'man'. Goth. *áins* OHG. *ein* 'one' : Lat. *oino-s ūnu-s*, prim. f. *\*oīno-s*. Goth. *snáivs* OHG. *snēo* 'snow' : Lith. *snėga-s* O.Ir. *snechta* 'snow', rt. *sneigh-*. Goth. *bindan* OHG. *bintan* 'to bind' : Skr. *bándhana-m* 'a binding', rt. *bhendh-*.

OHG. *zanga* Ags. *tonge* O.Icel. *tong* 'tongs', OHG. *zangar* 'biting, sharp' : Skr. *dáśana-m* 'a biting, bite'. Goth. *aggu-s* OHG. *angi engi* 'narrow' : O.Bulg. *ažükü* 'narrow', rt. *añgh-*. Goth. *stiggan* 'to push' : Lat. *stingere*. Goth. *gaggan* OHG. *gangan* 'to go' : Skr. *jañghā-* 'heel-bone'.

Rem. *ʳ* is generally represented in Goth. by *g*, s. § 25; in West Germ. and Norse by *n* as in Lat.

### § 214. Prim. Germ. changes.

-*md-* (*m* partly going back to Indg. *m*, § 244) became -*nd-*. OHG. *rant* m. O.Icel. *rond* f. 'edge', to rt. *rem-* 'cease, rest', Goth. *rimis* n. 'rest'. Goth. *skanda* OHG. *scanta* 'shame', to Goth. *skaman* (w. verb) OHG. *scamēn* 'to be ashamed'. O.Icel. *sund* n. 'swimming' fr. prim. Germ. *\*s(u)um-da-* (§ 180 p. 158). Goth. *hund* OHG. *hunt* 'hundred' : Lith. *szimta-s*, Indg. *\*kṛtō-m*. Whereas *m* remained before *þ* down to the literary period. Goth. *ga-qumþi-* 'synagogue', OHG. *cumft cumft* with early excrement *f*, to Goth. *qiman* OHG. *coman* 'to come'. OHG. *numft nunft* 'a taking', to Goth. *niman* OHG. *neman* 'to take'. OHG. *ramft*,

bye-form of *rant* 'edge', therefore goes back to a *\*rám-ḡa-* (§ 529) <sup>1)</sup>. For OHG. *mft* from *mḡ* see § 529. *m* also remained before *s*, e. g. Goth. *ams* 'shoulder': Skr. *ása-s*, Indg. *\*omso-s*.

*-ln-* (*l* partly goes back to Indg. *l*, § 299) became *-ll-*. OHG. *wella* 'wave': Lith. *vilni-s* O.Bulg. *vlūna* 'wave'. Goth. *fulls* OHG. inflec. *fullēr* 'full': Lith. *pilna-s* O.Bulg. *plūnū* 'full', Indg. *\*pl̥nó-s*.

Further *n*, as the initial sound of chief-accented *n*-suffixes, seems to have been assimilated to the descendants of Indg. root-final explosives. The prim. Germ. gemination may be thus explained. E. g. OHG. *lecchōn* 'to lick', prim. Germ. *\*likkō-* fr. previous Germ. *\*liġh-nā-*, cp. Gr. *λιχνέω*, rt. *leiġh-*. Cp. Osthoff Paul-Braune's Beitr. VIII 297, Kluge ibid. IX 169. On the relations of sound-shifting *s*. §§ 530. 534. 538. 541, 5.

*ṛ* disappeared before *χ* (§ 527—529), whereby short vowels became long <sup>2)</sup>. Goth. OHG. *fāhan* 'to seize' fr. *\*faṛχana-n*: Lat. *pangō pāx*, Skr. *pāśa-s* 'noose, cord', rt. *pāk-*, with nasal-infix *pañk-* (§ 221). Goth. *pāhta* OHG. *dāhta* 'I thought', pret. of *ḡagkjan*, *denchen* 'to think': O.Lat. *tongere* 'to know'. Goth. *pūhta* OHG. *dūhta* 'appeared', pret. of *ḡugkjan*, *dunchen* 'to seem, appear', from the same root. Goth. *bi-ūhts* 'accustomed': Lith. *j-ūnkta-s* 'accustomed' (§ 666, 1). Goth. *ḡeihan* OHG. *dīhan* 'to thrive' fr. *\*ḡiṛχana-n*, older *\*ḡeṛχana-n*: Lith. *tenkū* 'I have enough', cp. Ags. pret. pl. *ḡunzon* part. *ḡunzen* and the OS. causat. *thengian* 'to complete'; the *ī* of the present in the Goth. and HG. forms was the occasion of their passing into the analogy of verbs like Goth. *steiga* 'I ascend' = Gr. *στειχω*: pret. Goth. *ḡáih* OHG. *dēh* (cp. § 67 rem. 2).

Rem. This disappearance of the nasal before *χ* took place later than the passing of *χ* into *ʒ* (Verner's law, §§ 530. 541, 4), as is seen by such forms as Ags. *ḡunzon* beside Goth. *ḡeihan* (s. above), Goth. *juggs* 'young' beside compar. *jūhiza*.

1) Goth. *anda-numti-* 'a receiving, taking up' was a new formation after forms like *fralusti-* 'loss'.

1) It seems to me not to be absolutely necessary to conclude with Sievers Ags. Gramm. p. 15 that the *āχ* which arose from *awχ* must still have had nasalised *ā* down to the period of the separate dialects.

Indg. *-m* became *-n*. Acc. sg. \**wulfa-n* 'wolf': Skr. *vṛka-m*; \**kyēni-n* 'woman': Skr. *-jāni-m*; \**sunu-n* 'son': Skr. *sūnī-m*; gen. pl. \**zēbōn* 'donorum': cp. Av. *vanqm* (*vanā-* 'tree'). When protected by a particle (after the change of *-m* to *-n* had taken place) this *n* was preserved in Goth. *pan-a* OHG. *den* Ags. *don-e* 'the': Skr. *tā-m* Gr. *τό-ν*. Where no such protection was at hand, *-n* was dropped in the prim. Germ. period at the same time with the Indg. *-n* after short vowels, whereas it only became reduced after long vowels, and first fully died out in the course of the individual dialects. From \**wulfa-n*, \**kyēni-n*, \**sunu-n*: \**wulfa*, \**kyēni*, \**sunu* = Goth. *vulf*, *qēn*, *sumu*. Cp. prim. Norse (runic inscrip.) *staina* = Goth. *stain* 'stone', *sunu* = Goth. *sumu*. But fr. \**zēbōn* gen. pl. and fr. nom. \**χανōn* 'cock' \**twagōn* 'tongue' (with Indg. *-n*, cp. gen. Goth. *hanins tuggōns* and the nom. formation Gr. *άλών* etc.): \**zēbō<sup>n̄</sup>*, \**χανō<sup>n̄</sup>*, \**twagō<sup>n̄</sup>* = Goth. *gibō*, OHG. *hano*, Goth. *tuggō* (hence the nom. Goth. *raþjō* 'account' and Lat. *ratio* are not exactly the same, since *n* had not been dropped in Lat.). With Goth. *tuggō* cp. prim. Norse (runic inscrip.) *Fino* = O.Icel. *Finna*.

### § 215. Gothic and West Germanic changes.

In Goth., *m* in the combination *-mn-*, passed into a spirant, which was now written *f*, now *b*, e. g. *vundu-fn-i* f. 'wound, plague', *vitu-bn-i* n. 'knowledge' with weak form of the suffix *-men-*, the latter to Skr. *vid-mán-* 'wisdom' (cp. the author Morph. Unt. II 201. 209). Cp. O.Icel. *-fn-* from *-mn-*, e. g. *nafn* 'name' *safna* 'to collect'.

Rem. 1. In Goth. *namn-ē* 'nominum' and *namn-jan* 'nominare' the *-mn-* was re-introduced through analogy (after *namō*, *namins* etc.), just as in O.Icel. dat. sg. *gamne* beside regular *gafne* from *gaman*. n. 'joy'.

In the final syllable of nouns with *n-* and *m-* suffixes, if the nasals followed explosives or spirants, there arose in West Germ. through the loss of the short vowel following the nasal (§ 635. 661, 2), *ʏ* and *ʉ*, from which a vowel was then developed. Nom. acc. OHG. *eban* OS. *ēban* Ags. *efen* 'even' = Goth. nom. *ibns* acc. *ibn*, prim. Germ. \**ēbna-z* \**ēbna(-n)*. OS. *mēthom* Ags. *mādum* 'present, jewel' = Goth. *máiþms* *máiþm*.



(It is possible that a sonantal nasal was also spoken in Goth., *ibys, iby, máip̃ns máip̃n*). In OHG., the vowel, thus developed, penetrated from the final into the medial syllable of these nouns and their derivatives, at first after short syllables, and later after long also, e. g. *ebano* adv., *ebani* 'a plain', *ebanōn* 'to level'; such forms were chiefly due to analogy (cp. Sievers Paul-Braune's Beitr. V 90 ff.). Anaptyctic vowels were also often generated from nasals in OHG. under other circumstances, e. g. *wahsamo* beside *wahsmo* m. 'growth' to *wahsan* 'to grow', *brosama* beside *brosma* f. 'crumb', *kinoto* beside *chnodo* 'knot, thong'. An assimilation to the quality of the surrounding vowels may occasionally be observed in the development of OHG. vowels, e. g. *ebono, ebonōn, ebini* = *ebano, ebanōn, ebani*.

Rem. 2. Cp. anaptyxis in the case of *w*, § 180, and liquids, § 277.

Nasals, like other consonants (§§ 143. 277. 529. 532. 536. 540), were geminated before *ǰ* in West Germanic. OHG. *frum-mian frumman* OS. *frummian frummean* 'to further, promote', to OHG. *frum* 'apt, fit' OHG. OS. *fruma* 'advantage'. OHG. *wenn(i)an* OS. *wennian* Ags. *wennan* 'to accustom': Goth. *vanjan* O.Icel. *venja*, to Skr. *van-* 'like, love'.

In OHG. *-m*, which had become final, passed into *-n* in the ninth cent., a repetition of the prim. Germ. change (§ 214). Dat. pl. *tagun*, older *tagum*: Goth. *daga-m* 'diebus'. 1. pl. *geban*, older *gebam*: Goth. *giba-m* 'damus'. 1. sg. *bibēn*, older *bibē-m* 'I tremble at': Skr. *bī-bhē-mi* 'I am in fear'.

#### Baltic-Slavonic.

§ 216. Lith. *mirtī-s* O.Bulg. *su-mrītī* f. 'death': Skr. *mṛ-ti-ṣ*, Lat. *mors mortis*. Lith. pl. *dūmai* O.Bulg. *dymū* 'smoke': Skr. *dhā-mā-s*, Lat. *fū-mu-s*. 1. pl. Lith. *vėžame* O.Bulg. *vezemū* 'vehimus': Skr. *vāhā-mas*, Lat. *vehi-mus*. Lith. *esmī* O.Bulg. *jesmī* 'I am': Skr. *ās-mi*. Lith. *limpū* 'I remain clinging': Skr. *limpāmi*.

Lith. *nūga-s* O.Bulg. *nagū* 'naked': Skr. *nagnā-s*, Goth. *naqaṣ*. Lith. *añs anà* O.Bulg. *onū ona* 'that': Skr. *aná-* 'this'.

Lith. *sė-men-ĩnis* O.Bulg. *sě-men-ĩnũ* 'belonging to seed': Lat. gen. *sė-min-is*. Lith. *pĩlna-s* O.Bulg. *plĩnũ* 'full': Goth. *fulls*, Indg. \**pl̥-no-s* (§§ 302. 303). Pruss. *kĩrsna-n* acc., O.Bulg. *črĩnũ* 'black': Skr. *kr̥ṣṇá-*, Indg. \**qrsno-s* (§§ 302. 303). Lith. *mentũrė* fem. 'twirling-stick', O.Bulg. *maq̃titi* 'to bring into tumult, confusion': Skr. *mānthāmi* 'I stir, turn'.

Lith. *slanka slāñkiu-s* 'creeper,' slow man', O.Bulg. *slakũ* 'crooked': OHG. *slango* O.Icel. *slange slangi* m. 'snake', rt. *slenǫq-*. Lith. *ungurỹs* (Pruss. vocab. *angurgis*; the ending of the word is wrongly written) O.Bulg. *agorištĩ* 'eel': Lat. *anguilla*. Lith. *sniñga* 'it snows': Lat. *ninguit*.

Rem. *no* is represented by *n* in Baltic.

§ 217. *-m* seems to have become *-n* in prim. Baltic-Slav. Acc. sg. \**to-n* 'the' from Indg. \**to-m* (Skr. *tá-m*): Lith. dial. *tan tōn*, generally *tā* (218), Pruss. *s-tan*, O.Bulg. *tũ*.

That for the Slav. form *tũ* first of all \**tũn* \**ton* is to be presupposed, is shown by *sũn-*, in *sũn-ėsti* 'comedere' and other secondary forms of *sũ* = Pruss. *san* (*san-ĩnsle* 'girdle'): Skr. *sám*, Indg. \**som*. Prim. Balt.-Slav. final *-n* did not entirely die out after *a* in Slav., e. g. acc. sg. fem. *ta* 'the' = Skr. *tām*, Gr. *τῆν*; cp. § 219.

§ 218. Baltic.

Indg. *-mt-* remained (while in other Indg. languages it became *-nt-*). Lith. inf. *vėmti* 'to spit, vomit', supine *vėmtu*, Lett. inf. *wemt*: cp. Skr. part. pf. *vānta-* beside *vamita-*. Lith. *reñti* 'to support': cp. Skr. inf. *rántum*, to *rámati* 'he brings to a standstill, makes fast'. Cp. also the *m* from Indg. *ṃ* (249) in Lith. *sziñta-s* Lett. *si'mts* 'hundred': Lat. *centu-m*; Lith. *desziñta-s* Lett. *desmits* Pruss. *dessĩmts* *dessympts* 'decimus': Gr. *δέκαρο-ς* Goth. *taihunda*, beside Lith. *deviñta-s* Lett. *dewĩts* Pruss. *newĩnts* 'nonus', Indg. \**new̥n-to-s*.

Nasal + *s* or *sz*, *š* (= Indg. *h̥*, *ǵ* *ǵh*, § 412). In words like *žqš̥-s* 'goose' (OHG. *gans*, Skr. *haśá-s*), *grėžũ* 'I turn, bore' inf. *grėsz-ti*, *at-graža-s* 'return' (O.Icel. *kringr* 'round', Mod.

HG. *kring kringel*, rt. *grēhgh-*) a nasal-vowel verging into a more or less distinct *ɲ* is at present heard in a portion of the Lith. dialects, whilst in the greater part the nasal-vowel has entirely died out and a pure long vowel is only spoken (*žāsìs*, *grēžìù*). The nasal hook has therefore only an etymological signification in the literature of the latter dialects. No complete consistency, however, exists in the use of it.

Rem. When in those dialects, in which the pronunciation *ā* for *ą* etc. is the universal rule, e. g. in that with Godlewa, fut. *pìsiu* (*pìsiu*) and *pìnsiu* ('I shall twist') is spoken side by side of inf. *pinti* and *píti* (*píti*), it is due to a levelling between the form of the fut. stem and that of the inf. etc.: *pìnsiu* is a new formation after *pinti*, but *píti* after *pìsiu*. Cp. the Author Lit. Volksl. und Märch. p. 288 1).

Prim. Balt.-Slav. *-n* after vowels (§ 217) has entirely disappeared in one part of the language, and a pure un-nasalised vowel prevails. The written language, which represents this state and in which the nasal hook has only an etymological value, is also here inconsistent. It has, e. g. acc. sg. *děva*, *anā anā*, *szē*, but gen. pl. *děvū* ('deorum') for *děvū*; the latter from *\*-ān*, older *\*-ōm* (cp. Ved. *děvām*). Elsewhere, as before sibilants, a nasal vowel, ending in a more or less strongly articulated *ɲ*, is spoken, e. g. *tan*, *děvuɲ*, or *-n* remained intact: *tan*, *anan*, *szin*. There are dialects in which all three stages (pure vowel, nasal vowel + *ɲ*, vowel + *n*) occur side by side. It is clear that in addition to differences of accentuation and quantity (s. Bezenb. Beitr. X 307 ff.) also various relations of sandhi (position in absolute and conditional finality, various initiality of the following word) brought about the state of fluctuation. Unfortunately so little account is taken of word-combination in the writing down of the forms in question (s. especially Bezenb. Beitr. VII 163 ff.) that it is at present impossible to obtain a knowledge of the historical state of things.

### § 219. Slavonic.

Before all consonants except *ǰ*, nasals became, with the preceding vowel, nasalised vowels in prim. Slavonic (cp. § 281

1) The above is unaffected by Bezenberger's opposite view (Beitr. VII 167).

rem. 3). The *i* and *u*, thus formed, became then further  $\bar{i}$  (O.Bulg. *i*) and  $\bar{u}$  (*y*, § 60). O.Bulg. remained at this stage. Examples:

1. *v-onja* 'vapour, smell' from rt. *an-* 'breathe' (§ 666, 1): Skr. pres. 3. sg. *ániti*. *zemlja* 'earth': Lith. *žėmė*, Lat. *humu-s*, Gr. *χαμαί*; concerning the excrescent *l* s. § 147 p. 132.

2. *ę* = prim. Indg. prim. Slav. *e* + nasal. *světŭ* 'holy': Lith. *szeŭta-s*, Av. *spenta-*, cpf. *\*kvento-s*. *zėba* 'dilacero, frigeo': Skr. *jámbha-tē* 'snatches at something', causat. *jambháya-ti* 'bruises, pounds'. Cp. § 68. *ę* = Indg. *on* in the acc. pl. *konje* 'equos' fr. *\*konjens*, older *\*konjo-ns* (§ 84 p. 80).

*ę* was at the same time the representative of the Indg. sonantal nasals = prim. Sl. *m, ŋ* (§§ 248. 249). *pa-męti* f. 'remembrance': Lith. *at-minti-s* 'memory', Goth. *ga-mundi-* 'remembrance', Skr. *mati-š* 'thought, mind', Lat. *mens*, Indg. *\*mŋ-ti-s*. *deseŭti* 'ten': Lith. *dėszinti-s*, Skr. *daśati-š*, Indg. *\*dekŋti-s*.

3. *a* = Indg. *o, a* (prim. Slav. *o*) + nasal.

*beraŭti* 'ferunt': Gr. Dor. *φέρο-ντι*. *zabŭ* 'tooth': Gr. *γόμοφο-s* 'bolt'. Cp. § 84.

*ažŭkŭ* 'narrow': Gr. *ἄγχω*, Lat. *angus-tu-s*. *ačhati* 'to smell' fr. orig. *\*an-s-*: Lat. *anima*, *alu-m hālāre* fr. *\*anslo-* (§ 208), Gr. *ἄνεμο-s*, rt. *an-*. Cp. § 100.

4. *i, y* = previous Balt.-Slav. *i, u* + nasal.

Suffix *-ikŭ* (*-in-ikŭ*) = Lith. *-inka-s* (*-in-inka-s*), e. g. *dvor-inkŭ* 'comes palatii': Lith. *dvārininka-s* 'courtier'<sup>1)</sup>. *isto*, gen. *istes-e*, 'testiculus', pl. *istes-a* 'renes': Lith. *inksta-s* 'kidney, testiculus', Pruss. *inwce* 'kidney', Lat. *inguen*. Acc. pl. *gosti* 'guests': Goth. *gasti-ns*. Cp. also *plita* (beside *plinŭta*) 'brick' fr. Gr. *πλινθος*.

*lyko* n. 'bast': Lith. *lunka-s* Pruss. *lunka-n*. *v-ykna* 'I learn': Lith. *j-inkstu* 'I become accustomed' (§ 666, 1). Acc. pl. *syny* 'sons': Goth. *sumu-ns*.

1) If this suffix belongs to OHG. *-inc* O.Icel. *-ingr*, it is easy to conjecture that it is borrowed from Germ. For Germ. *-inga-* beside *-un-ga-* (the author Morph. Unt. II 238, Kluge Nominale Stamm bild. 13. 26) rather contains Indg. *-en-* than *-in-*.

*y* was further the continuation of older *-on-* in the aec. pl. masc. *vlūky* 'lupos': Goth. *vulfa-ns* Gr. Cret. *νόμο-νς* (§ 84); acc. pl. fem. *raky* 'manus': ep. Pruss. *gemans* 'feminas' (§ 615).

*-n* alone occurred as final in the prim. Slav. period (§ 217), and *\*-ān*, *\*-ēn* became *-a*, *-e*; *\*-ūn* = Indg. *\*-ōn* (§ 92) became *-y*; *\*-en* and *\*-in* (= Indg. *-n̥* § 248) became *-e*; *\*-in* became *-ī*; *\*-un* (= Indg. *\*-um* and *\*-om*, § 84 p. 80) became *-ū*. O.Bulg. remained at this stage. Examples:

1. *-a*, *-e*. Acc. sg. f. *ženā* 'wife': Skr. *āśvām* 'equam', Gr. *χώραν*, Indg. *-ā-m*. 1. sg. *veza* 'veho': Lat. *veham*, cpf. *\*ueghā-m*. Nom. acc. neut. *imē* 'name' fr. *\*i-mēn*: cp. the long vowel in Goth. *namō* fr. *\*na-mōn* (§§ 195. 214).

2. *-y*. Nom. *kamy* 'stone' (st. *kamen-*), formed like Gr. *ἄκμων*, OHG. *hano*, Lith. dial. *szun* 'dog' (beside *szū*, Skr. *śvā*, § 92 rem.).

3. *-e*. Nom. aec. neutr. *polje* 'field' fr. *\*-ien*, *\*-ion*, Indg. *\*-io-m* (§ 84 p. 80). J. Schmidt Kuhn's Ztschr. XXVII 307 perhaps rightly (doubts however remain, s. W. Schulze ibid. 546) traces the *-e* of the loc. sg. *kamen-e* back to *\*en* = Pruss. *en* Gr. *ἐν* 'in' (*\*kamen* loc. like Skr. Ved. *kárman*, Gr. *δομεν*). The *-e* of the aec. sg., e. g. *mater-e* 'matrem', fr. *\*-in* = Gr. *-a*, Indg. *-n̥* (§§ 224. 249).

4. *-ī*. Acc. *gostī* 'guest': ep. Skr. *āvi-m*, Gr. *ὄν-ν*.

5. *-ū*. Aec. *synū* 'son': Skr. *sūnū-m*. Aec. *vlūkū* 'wolf': Skr. *vṛka-m*, Gr. *λύκο-ν*.

Rem. 1. Acc. sg. *jī* 'eum' *konjī* 'equum' are accordingly not fr. *\*-io-n*, *konjo-n*, but fr. *\*-i-n* (Lith. *jī*), *\*konji-n*. S. § 84 rem. 1.

Assimilation took place when nasals of different organs came together. This process was also prim. Slav. *kamēnū* 'made of stone' fr. *\*kamm-ēnū*, to *kamen-* 'stone'. To the nom. pl. *graždān-e* 'town-inhabitants' (fr. *\*grādīān-e(s)* § 147 p. 132 f.; from *gradū* 'town', cp. Gr. *οὐρανίων-ες* 'celestial inhabitants') belonged as dat. *graždāmū* and as instr. *graždami* (Miklosich Vergl. Gramm. III<sup>2</sup> 15 f.), fr. *\*-ān-mū*, *\*-ān-mi*.

Rem. 2. Cp. the assimilation of *-nm-* to *-m-* in *imē* 'name' (= *\*iēmē*) and *imā* 'I grasp, take' (= *\*iēmā*, cp. *vūz-īmā*, *sūn-īmā*, § 666, 1), the

former fr. \**in-mēn* (cp. O.Ir. *ainm*, Gr. *ἄνομα* etc.), the latter fr. \**inm-ā-m* (Goth. *nīma*, Gr. *νέμω*, rt. *nem-*) with *in* = Indg. *ŋ-* (§ 248). On account of Pruss. *emn-a-* 'name' and Lith. *imù* = Slav. *imq* we must assume that the assimilation here took place in the prim. Balt.-Slav. period. \**ŋ-men-*, \**ŋm-ō* (1. sg.) had probably already at this period become \**ŋmen-*, \**ŋmō*. Cp. Lat. *emō* § 238.

Nasal changes in the prim. Indg. period.

§ 220. J. Schmidt (Kuhn's *Ztschr.* XXVI 337 ff.) assumes that *n*, in the final combination long vowel + nasal + *s*, disappeared in the Indg. prim. language. E. g. Indg. *-ās* in the acc. pl. of *ā*-stems (Skr. *áśvās* 'mares', Goth. *gibōs* 'gifts', Lith. *rankos-nà* 'into the hands') fr. *-ā-ns*, cp. *-o-ns* in the mascul. (Gr. Cret. *νόμο-νς* etc.). Indg. nom. sg. \**mēs* 'month' fr. \**mēns* (cp. Lat. gen. pl. *mēns-um* etc.), hence the Skr. form *mās*. The ending of the nom. sg. masc. part. pf. act. *-ṽōs* (Gr. *εἰδώς*, Av. *vādvā* 'knowing', § 649, 7) fr. *-ṽōns* (cp. Skr. acc. sg. masc. *vidvās-am* etc.).

This hypothesis seems to me worth mentioning in this place as being a possibility which ought to be noticed. At present however it requires a still firmer foundation. We shall come to speak below of some of the forms and form-categories which Schmidt has brought forward in support of his theory.

§ 221. In all Indg. languages we meet with forms having a nasal in the root-syllable, when this ends in an explosive or a spirant, where we have good reason to suppose that the nasal once stood behind the root-syllable as nasal suffix. Forms also often occur with nasal suffix beside those with nasal infix. It is probably here a question of a sound-change which dates back to the Indg. prim. period. But it still remains to be established on the one hand, by what law the nasal-anticipation (or the affection preparing the way for it) at that time now appeared, now not; and on the other hand it must be determined whether the same process or similar processes have not also happened at a later time in the individual languages, e. g. in Italic (cp. Thurneysen Kuhn's *Ztschr.* XXVI 301 ff.) and thus cause the whole mass of examples to have to be estimated from various points of view. In any case it is no mere accident that the

prim. Indg. change of the voiceless explosives into the voiced at the end of roots (§ 46<sup>7</sup>, 7), so frequently appears in connection with present formations having a nasal infix (Osthoff *Morph. Unt.* IV 328, *Zur Gesch. d. Perf.* 548), and that the syllable, which had absorbed the vowel into itself, was generally unaccented (the strong forms of the Skr. seventh present-class as *chinád-mi* do not come into account here).

The nasal anticipation appears most frequently in the present tense, especially in the formation with suffix '-é- -ó-' (Skr. sixth class), with which the Skr. seventh present-class is closely related (s. the author's article in *Morph. Unt.* III 148 ff.). Skr. *limpāmi*, Lith. *limpù* : O.Bulg. *pri-b(p)na*, fr. rt. *leip-* 'smear, stiek'. Skr. *chindāmi chinādmi*, Lat. *scindō*, OHG. *scintan* (cp. also Av. causat. *scindayēiti*, Gr. *σχινδαλυό-ς*), from rt. *sqhāit-sqhaid-* 'split, tear'. Gr. *πυθάνομαι*, Lith. *pa-bundù* : O.Bulg. *vūz-būna* fr. *\*-būdna*, fr. rt. *bheydh-* 'watch, mark'. Skr. *yunājātē yunājmi*, Lat. *jungō*, Lith. *jūngiu* : Gr. *ζεύγνυμι*, from rt. *jeug-* 'harness, yoke'. Lat. *pangō*, OHG. OS. inf. *fāhan* (fr. prim. Germ. *\*fawaxana-n*, § 214) part. *fangan* : Gr. *πήγνυμι*, from rt. *pāk- pāg-* 'bind, make fast'. Lat. *pandō* : Gr. *πίττημι* 'I spread out'. Gr. *λυγάνομαι* 'I have the hiccup' (*λόγξ* 'hiccup') : Mid. HG. *slucken* fr. prim. Germanic *\*slugnōna-n* (§ 534). Lith. *smunkù* 'I slide, glide' : Mid.HG. *smücken* 'to dress, adorn' O.Icel. *smokkr* 'under dress' from prim. Germ. *\*smuz-n-* (§ 530).

Noun formations. Lat. *fundu-s* 'ground, bottom', O.Ir. *bond bonn* 'solea', Gr. *πύνδαξ* 'bottom' : Skr. *budhná-s* 'bottom'. Lat. *unda*, Pruss. *unda-* m. 'water', Lett. *údēns* 'water' fr. *\*undens*, Lith. *vandũ -eñs* 'water' (the Lett. and the Lith. words seem to be due to a contamination of the stems *\*unda-* and *\*uaden-*), to these Skr. *unādmi undāmi* 'I wet, bathe' : Skr. *udān- udn-* 'water, wave', Gr. *ύδαρ-* from *\*udṛ-t-* (§ 233) *ἄλοσ-ύδνη* (?), Goth. *vatīn-*, dat. pl. *vatn-a-m*, 'water' <sup>1</sup>). Here come perhaps also Lat. *mēns-*

1) OHG. *undea* 'wave' can only be compared on the supposition that the root originally ended in *t*, so that the *d* in Lat. *unda* Skr. *udān-* etc. would stand on the same level with the *g* in *pangō* *πήγνυμι* (beside Lat. *pac-*, Skr. *paṣ-*). See above.

'month', Gr. Lesb. *μηνν-*, O.Ir. *mīs-* fr. \**mēns-* (§ 212) : O.Bulg. *měseč-čī*, cp. Umbr. *menzne* 'mense', Mars. *mesene* 'mense', Skr. *mās- māsa-*.

Rem. Further examples in J. Schmidt's Voc. I 29 ff. (where however Skr. *mánthāmi* and similar forms are to be omitted). The author Morph. Unt. III 148 ff., Osthoff *ibid.* IV 325 ff., Paul-Braune's Beitr. VIII 268 ff.

#### B. THE NASALS AS SONANTS<sup>1)</sup>.

§ 222. The Indg. parent language had all four nasals both in a consonantal and sonantal function. *ṅ* and *ṇ* only occurred before the corresponding explosives.

We cannot ascertain whether the *-ṇ-*, which frequently forms the close of a nominal *n*-stem, was or was not already in the Indg. prim. period assimilated to the organ of a following non-dental explosive. E. g. for Skr. *yuvaśá-s*, Lat. *juvencu-s*, Cymr. *ieuanc* O.Ir. *ōac ōc* (the Keltic word has been transformed in the first syllable perhaps after the form of the comparative, see § 137), Goth. *juggs* (*jūggs*?) are we to regard the primitive form as \**juwṅ-ḷó-s* or \**juwṇ-ḷó-s* (or with initial *j-*, § 133)? Skr. instr. pl. *vṛṣa-bhiṣ* (stem *vṛṣan-* 'male') fr. \**ṽṛsm-bhis* or \**ṽṛṣṇ-bhis*?

The sonantal nasals occurred both as short and long, but mostly short. When long, they corresponded morphologically to *ī* and *ū* see § 312.

##### 1. The short sonantal nasals.

§ 223. The mode of treating the short *ṅ*, *ṇ*, *ṅ̄*, *ṇ̄* in the separate languages renders it advisable to divide them into four categories.

1) Concerning the sonantal nasals and liquids see the author's essay in Curtius' Stud. IX 285 ff. 385, Kuhn's Ztschr. XXIII 587 ff. XXIV 255 ff., Morph. Unt. II 151 ff.; J. Schmidt Jen. Literat.-Zeit. 1877 Art. 691, Kuhn's Ztschr. XXIV 321 f.; Osthoff Kuhn's Ztschr. XXIV 415 ff., Morph. Unt. I 98 ff. II 14 ff. IV p. IV ff.; Bezenberger in his Beitr. III 133 ff.; Fick *ibid.* III 157 ff., IV 167 ff.; de Saussure Mémoire sur le système primitif etc. 6 ff. 18 ff. 239 ff.; G. Meyer Griech. Gramm. p. 9 ff.; Paul in Paul-Braune's Beitr. VI 108 ff. 408 ff.; Kögel *ibid.* VIII 102 ff.; Kluge Beitr. zur Gesch. d. germ. Conjug. 17 ff.; J. v. Fierlinger Kuhn's Ztschr. XXVII 437 ff.; Zimmer *ibid.* 450.



1. Unaccented<sup>1)</sup> before explosives, spirants, nasals and liquids, and finally, e. g. *\*tūtó-s* part. pass. from rt. *ten-* 'stretch, extend': Skr. *tatá-s*; *\*sēm̃ñ* nom. acc. sg. of the neut. stem *\*sē-men-* 'a throw, seed': Lat. *sēmen*.

2. *m*, *n* unaccented before *ĩ*, e. g. *\*m̃ñĩó* 1. sg. pres. from rt. *men-* 'think': Lith. *miniù*. Here are probably also to be placed the combinations *m̃ñ*, *ñm̃*, s. § 225.

3. With principal accent before consonants, e. g. *\*s-ñti* 3. pl. of *\*és-mi* 'I am': Skr. *s-ánti*.

4. *m*, *n* before sonants, in which case *m*, *n* were spoken as glides, e. g. *\*t̃yn-ú-* (rt. *ten-*) 'stretched, thin': Skr. *tan-ú-*. The glide consonant corresponded to *n*, *ĩ* in such Indg combinations as *m̃ña*, *ñ̃a*, e. g. *\*d̃m̃ĩó* = Skr. Ved. *d̃uá* O.Bulg. *d̃uva*. S. § 117 p. 110.

The following is an abstract of the usual representation of *n* in the Indg. separate developments from these four points of view (*m̃ ñ ñ̃ ɲ̃* were similarly treated):

	Ar.	Armen.	Gr.	Ital.	pr. Ir.	Germ.	Balt.	Slav.
1.	<i>a</i>	<i>an</i>	<i>a</i>	<i>en</i>	<i>*en</i>	<i>un</i>	<i>in</i>	<i>ě</i>
2.	<i>an</i>	<i>an?</i>	<i>av</i>	<i>en</i>	<i>*en?</i>	<i>un</i>	<i>in</i>	<i>ǐn</i>
3.	<i>an</i>	<i>an?</i>	<i>av</i>	<i>en</i>	<i>*en</i>	<i>un</i>	<i>in</i>	<i>ě</i>
4.	<i>an</i>	<i>an</i>	<i>av</i>	<i>en</i>	<i>*an</i>	<i>un</i>	<i>in</i>	<i>ǐn</i>

### Primitive Indg. period.

§ 224. 1. Unaccented before explosives, spirants, nasals and liquids, and finally.

*\*k̃m̃tó-m* 'hundred': Skr. *śatá-m*, Gr. *ἑ-κατό-ν*, Lat. *centu-m*, O.Ir. *cēt*, Goth. *hund*, Lith. *sziñta-s*. *\*gm̃-tó-* 'gone', *\*gm̃-tí-* 'a going' fr. rt. *gem-*: Skr. *gatá-s gáti-š*, Gr. *βατό-ς βάσι-ς*, Lat. *in-ventu-s in-ventiō*, Goth. *ga-qum̃þi-*. *\*m̃ñ-* weak stem of *\*sem-*

1) Here and in the following §§ the prim. Indg. accentuation is always meant, from which the individual languages deviated in many instances. See § 669.

'unus', as prefix 'with', together': Skr. *sa-* (*sa-kṣt* 'once'), Gr. *ἀ-* (*ἀπλόος* 'simple'), Lat. *sim-* (*sim-plex*). \**dékḗn* 'ten': Skr. *dáśa*, Lat. *decem*, O.Ir. *deich n-*; Gr. *δέκα* also here or fr. \**δεκατ* (§ 652, 5) = Goth. *táihun*. Suffix of the acc. sg. -*η*: Gr. -*α*, Lat. -*em*, Goth. -*u*, Lith. -*į*, O.Bulg. -*e*.

\**mḡ-tó-* part. pass. fr. rt. *men-* 'think': Skr. *matá-*, Gr. *ἀντόματος*, Lat. *com-mentu-s*, O.Ir. *dér-met* (n. 'a forgetting'), Goth. *munda-*, Lith. *miñta-s* O.Bulg. *meṭŭ*. \**me-mḡ-* antecorsonantal weak pf. st. of the same rt. : Gr. *μέμα-μεν μεμά-τω*, Lat. *memen-tō*, Goth. 1. pl. *mun-um* (-*um* as in *vit-um* : Skr. *vidmá* Gr. Hom. *ἴδμεν* 'we know'); ep. Skr. mid. *mamm-é*. Pres. st. \**tḡ-néu-* \**tḡ-nu-* from rt. *ten-* 'extend, stretch' : 3. sg. mid. Skr. *ta-nu-tē*, Gr. *τά-νυ-ται*. -*mḡ-* antecorsonantal weak form of the nominal suffix -*men-* : Skr. *śró-ma-ta-* n. '(the act of) hearing' (= OHG. *hlīumunt* 'renown'), Gr. *σπίρ-μα-τα* 'germs', Lat. *cōgnō-men-tu-m*, Goth. *snīu-mun-dō* adv. 'in haste'. \**pṛṛmḡ-rós* 'fat' (ep. Skr. *pṛvan-*, Gr. *πίων*) : Skr. *pṛvará-s*, Gr. *πιαρός*. -*ḡs* postcorsonantal suffix of the acc. pl. : Skr. -*as*, Gr. -*ας*, Lat. -*ēs* fr. \**ens* (§§ 208. 619), Goth. -*uns*. -*ḡtái*, -*ḡtó* endings of the 3. pl. mid. : Skr. -*atē-ata*, Gr. -*αται-ατο*. -*mḡ* in the nom. acc. sg. neut. of -*men-* stems : Skr. *ná-ma* Gr. *ὄνο-μα* Lat. *nō-men* O.Ir. *ain-m n-* 'name'.

Rt. form *dḡk-* 'bite': Skr. *dáśati* (for \**daśati* like *gáchati* for \**gachati*, § 672), *δάκνω ἔδακον*; ep. Skr. *dáśa-s* 'bite', OHG. *zangar* 'biting, sharp', *zanga* 'tongs' (*δηξομαι δηγμα* etc. were later new formations after forms without nasals in the roots).

\**lḡghú-* \**lḡghró-* 'quick, small': Skr. *laghú-ṣ*, Gr. *ἐλαχύ-ς* *ἐλαφρός*, OHG. *lungar*.

§ 225. 2. η η̇ unaccented before *į*. \**gḡ-ḡó* 'I go' from rt. *gem-* : Gr. *βαίνω* from \**βανιω* \**βαμιω* (§§ 204. 639), Lat. *veniō* (§ 208). Pres. st. \**mḡ-ḡé-* rt. *men-* 'think': Skr. *mán-ya-tē*, Gr. *μαίνεται* (on the meaning see Curtius Grundz.<sup>5</sup> 103. 312), Lith. *miñiù* O.Bulg. *mñnja*. Pres. st. \**ghḡ-ḡí-* from rt. *ghen-* 'hew': Skr. *han-yá-tē* pass. (for regular \**ghan-yá-tē*, § 454 rem.), O.Bulg. *žñn-ja* 'I cut off, reap'. Formation of the present from noun stems in -*en-* -*men-*, Indg. ending of 1. sg.

-υ-ῖδ̄ : Skr. *ukṣan-yā-mi* to *ukṣán-* 'bull, ox', *brahman-yā-mi* to *bráhman-* n. 'prayer', Gr. *τεκταίνω* to *τέκτων* 'carpenter', *σπερμαίνω* to *σπέρμα* 'seed, germ', Goth. *glit-mun-ja* to *\*glitmin-* 'splendour'.

It is probable that the treatment of ηυ, υυ in Ar. Gr. and Slav. was analogous to that of ηῖ, υῖ. Skr. Ved. *jaganvān* Indg. *\*ge-gm-úds* and *jaghanvān* Indg. *\*ghe-ghm-úds*, part. pf. act. from the roots *gem-* 'go' and *ghen-* 'hew' (cp. § 199 rem.). Skr. *tanv-ī* fem. to *tanú-ṣ* 'stretched' fr. *\*tyn-u-ī*, cp. OHG. *dunni* 'thin' fr. *\*pūn-u-ia-*. Gr. part. βεβα-(F)ώς, γεγα-(F)ώς were formed anew after forms with βα-, γα-. O.Bulg. part. pf. *pññ* (*pe-ti* 'to hang, strain') may have arisen fr. *\*pñn-vñ* (cp. *da-vñ* from *da-ti* 'to give'): cp. *mñnijñ* 'minor' to Goth. *minniža* fr. *\*mi-nu-iz-ō* (§ 184 p. 161). Cp. the author Morph. Unt. II 211 f. 214, Osthoff Zur Gesch. d. Perf. 404. 436.

§ 226. 3. Accented before consonants. Personal ending of 3. pl. -ῆτι, -ῆτ, e. g. pres. indic. *\*s-ῆti*, opt. *\*sḗ-ῆt* *\*siḗ-ῆt*, imperf. *\*é s-ῆt* from rt. *es-* 'be'. Skr. *s-ánti* 'are' *ás-an* 'were'. Gr. Ion. *ἔασι* 'are' fr. *\*éσ-avti* (§ 205), El. *ἔαν* 'sint' fr. *\*éσ-λ-av*<sup>1)</sup> Bœot. *ἔαν* 'were' (*εἰ* fr. η, § 72). Umbr. *s-ent* 'sunt', O.Lat. *s-i-ent* 'sint'. O.Ir. *it* 'sunt', s. § 243, 3. O.Icel. *eru* 'are' prim. Germ. *\*iz-unþi*, O.Icel. *vissu* OHG. *wissun* 'they knew' with *-un* = Gr. *-av*, Indg. -ῆτ. O.Bulg. *jad-ētī* 'they eat': cp. Skr. *ad-ánti*; s-aorist base from *bodā* 'I sting': cp. Gr. *ἔδειξ-av*.

§ 227. 4. ηυ, υυ (*m, n* glides) before sonants.  
*σηυμ-ό-* 'any one' (rt. *sem-*): Skr. *sama-*, Gr. *ἀμό-*, Goth. *suma-*; by the side of this cp. Indg. *\*sm-* in Gr. *μ-ωνυῖ* 'having one claw', fem. *μ-ια* 'una' (§ 563, 6). *\*gmm-ō* present form from rt. *gem-* 'go': Skr. ved. *gam-ā-mi*, OHG. *koman* Ags. *cuman* O.Icel. *koma*; Skr. *gamāmi*: Av. *ā g<sup>e</sup>m-a-p* = *huv-ā-mi*: *á-hv-a-t* etc.

*\*tyn-ú-* 'stretched, thin': Skr. *tan-ú-ṣ*, Gr. *ταν-ύ-γλωσσο-ς*, Lat. *ten-u-i-s*, O.Ir. *tan-a*. Corresponding to the double suffix form -ῖδ̄- and -ῖδ̄- (§ 120), -ρο- and -γρο- (§ 287), there existed a

1) The *α* in El. *ἔαν* can, of course, by § 64 also regularly represent an older *ε*. In that case the form would not belong here as a new formation.

-*yno- -no-* beside. Hence e. g. Skr. Ved. *yaj-aná-s* beside *yaj-ná-s* 'veneration of the gods', Gr. *στειγ-ανό-ς* beside *στειγ-νό-ς* 'covering', *ἐδ-ανό-ν* 'food' beside Skr. *ánna-m* 'food' fr. \**ad-na-m*. Ved. *ganā-* Bæot. *βανᾶ* O.Icel. *kona* = Indg. \**gym-ā-*, beside Ved. *gnā-* Gr. \**μνᾶ-* fr. \**βνᾶ-* (in *μνῶμαι* 'I seek a wife for myself', § 492) O.Ir. *mnā* (gen. sg.) = Indg. \**gn-ā-* 'wife'; cp. Gr. *βίος* 'bow' Lith. *gijà* 'thread' beside Skr. *jyā-* 'bow-string'. Pres. Arm. *lk-anem* 'I leave' Gr. *λιμπ-άνω* beside Gr. *δάκ-νω* etc. (Osthoff Zur Gesch. d. Perf. 407). \**yn-* 'un-': Skr. *an-udrá-s* Gr. *ἄν-υδρο-ς* 'waterless', beside \**ϖ-* before explosives etc., e. g. Skr. *a-pád-* Gr. *ἄ-πovς* 'footless'; in the other languages we have the same form in both cases, Arm. *an-*, Lat. *in-*, Goth. *un-*.

On the prim. Indg. interchange between *ym*, *yn* and *m*, *n* after consonants cp. §§ 120. 153.

### Aryan.

§ 228. 1. Skr. *yáchatī* Av. *yasaitī* 3. sg. pres., Skr. *yatá-* Av. *yata-* part. pass from Ar. *yam-* 'to restrain, curb', prim. f. \**jṃ-ské-ti*, \**jṃ-tó-*. Skr. *gahí* Av. (Gāp.) *gaidē* 2. sg. imper. form rt. *gem-* 'go', prim. f. \**gm-dhí*. Skr. *śatá-m* Av. *sate-m* 'hundred': Lith. *szīnta-s*, Indg. \**kṛtá-m*. Skr. *stabh-* fr. \**stṛṇbh-* in *stabh-ná-mi* 1. sg. pres., *tastabh-úr* 3. pl. pf. (3. sg. *tastámbha*) from rt. *stembh-* (prim. Ar. *sthambh-*?) 'strengthen, prop up'.

Skr. *baddhá-* Av. O. Pers. *basta-* 'bound', Indg. \**bḥydh* + *tó-* from rt. *bhendh-* 'bind'; so also *bḥydh-* in Skr. *badhnáti* 'he binds' *badhyátē* 'he is bound' and others. Skr. *śastá-* Av. *sasta-* 'spoken, valued', prim. f. \**kṛs-tó-*: Lat. *cēnsu-s* a new formation for \**censtu-s*. Skr. *hatá-* Av. *jata-* 'struck' (regarding the initial s. § 454 rem.): Gr. *φατό-ς*, Indg. \**ghy-tó-*, rt. *ghen-* 'hew, strike, kill'. Skr. *ta-nō-mi* Av. *ta-nao-mi* 'I stretch' out': Gr. *τά-νν-ται*, rt. *ten-* 'stretch out, extend'. Skr. Av. *-ma-*, *-va-* as anteconsonantal weak form of the Indg. suffixes *-men-*, *-uen-*: loc. pl. Skr. *dhāma-su*, dat. pl. Skr. *dhāma-bhyas* Av. *dāma-byō* (Skr. *dhāman-* 'effect, law etc.' Av. *dā-man-* *da-man-* 'creature'): cp. Gr. *ἀνα-θήμυ-σι*; Skr. *párvata-s* 'range of mountains' Av. *paurvatā-*

f. 'mountain', to Skr. *pārvan-* n. 'node, knot': Gr. *πέλαρα* Lesb. *πέρορατα*, Indg. \**per-ur-to-*. Skr. *s-at-* Av. *h-at-* weak st. form of the part. of *ásmi ahmi* 'I am', e. g. in the fem. *satī*, *haiti*: cp. Gr. Dor. *ἔασσα*, Indg. \**s-ur-t-*. Skr. Av. *-ma* = \**-mṛ* in the nom. acc. sg. of *-men-*stems: Skr. *dhā-ma*, Av. *dā-ma dam-a*: cp. Gr. *ἀνάθημα*, Lat. *nō-men*.

Skr. *aśnōti* Av. *aśnaoiti* (§ 398) 'he reaches', prim. f. \**ṛk-néu-ti*: cp. Skr. perf. *ānáśa*, Gr. *ἐνεγκέν*. Skr. *bahú-ṣ* 'dense, much' fr. \**bhṛṅgh-ú-s*: cp. superl. *báhiṣṭha-* and Av. *baṣah-* n. 'greatness, strength'.

Skr. Av. *-ac-* 'bent in a certain direction, turned', e. g. in Skr. loc. pl. *praty-ák-ṣu* instr. pl. *-ág-bhiṣ*, fr. \**-ṛq-*, weak st. form to Skr. *-añc-* Av. *-anc-*: Gr. *ποδ-απ-ό-ς*, Lat. *prop-inqu-o-s* (cp. Osthoff Morph. Unt. IV 249 ff.).

Concerning the qualitative changes of *a* in Av. see § 94.

§ 229. 2. Skr. *gamyát* Av. *jamyāp* O.Pers. *jamīyā* 3. sg. opt. from rt. *gem-* 'go', prim. f. \**gm-ǰ-t<sup>1</sup>*; Sievers (Paul-Braune's Beitr. VIII 81 ff.) places here Ags. opt. *cyme* pl. *cymen* = Goth. \**kunǰu* pl. \**kumeina*. Skr. *mányatē* Av. *manyetē* 'he thinks', O.Pers. 2. sg. conj. pres. act. *maniyāhy*: Lith. *minū*, Indg. pres. st. \**mṛ-ǰ-*; corresponding to Skr. *manyú-ṣ* 'courage, zeal, anger' Av. *mainyu-ṣ* 'spirit', from rt. *men-*. Skr. *hanyátē* Av. *janyetē* 'he is struck': O.Bulg. *žin-ja* 'I cut off, reap'; Skr. *hanyát* Av. *janyāp* 3. sg. opt. 'he may strike', from rt. *ghen-* 'strike'. Denominative verbs: 3. sg. Skr. *udan-yá-ti* 'streams' *brahmaṇ-yá-ti* 'prays', Av. *vyāxman-ye-iti* 'deliberates'.

Rem. On the O.Pers. forms cp. § 125 p. 116.

Part. pf. Skr. *va-van-vān* Av. *va-van-vā* from Ar. *van-* 'obtain': cp. the weak st. form Skr. *vavn-úṣ-* Av. *vaon-uṣ-*. Skr. 1. du. *gánvas* (for \**ganvās*, accented after the analogy of the sg.) from *gam-* 'go': cp. 2. pl. *gathá*. Skr. *udan-vánt-* 'rich in water' *ātman-vánt-* 'animated'.

Concerning the qualitative changes of *a* in Av. see § 94.

1) Skr. *gam-yát* to *gm-iyá* (1. sg. mid.) as *jagan-vān* to *jagm-úṣī* (part. pf. act. masc. and fem.). On Iran. initial *j-* cp. § 451 rem.

§ 230. 3. Skr. *s-ánti* Av. *h-enti* O.Pers. *h-atiy* (read *hanti*, § 197 rem.) 'they are', Indg. \**s-ṃti*; with secondary ending Skr. *ás-an s-án* Av. *h-en* O.Pers. *ah-a* (read *āh-an*, § 197 rem.). Skr. *y-ánti* Av. *y-ēinti* 'they go', Indg. \**ṃ-ṃti* : cp. Gr. *ἴασι*; with secondary ending Skr. *áy-an* O.Pers. *ay-a* (r. *āy-an*). Skr. *sī-mánta-* 'boundary, parting' : Gr. *ἱ-μάτρ-* 'thong', Indg. \**sī-mṃ-to-*, to Skr. *sī-mán-* Gr. *ἱ-μορ-ιά*, rt. *saṃ-* 'limit, bind'.

On Av. *e* from *a* see § 94.

§ 231. 4. *saptam-ás-s* 'seventh' : Lat. *septimu-s*, Indg. \**septm-ó-s*, to which probably also belong O.Ir. *sechtmad* Mid. Cymr. *seithuet* (§ 634); but O.Bulg. *sedmy-jǎ* Pruss. *septma-s* Lith. *sėkma-s* fr. \**septmó-s*. Skr. *vanáti* 'he gains, loves' *sanáti* 'he attains' fr. \**ṃṃn-é-ti* \**ṃṃn-é-ti* (Av. *vanaiti hanaiti* either identical with these Skr. forms or like Skr. *vánati sánati* after class I): Goth. *un-vunands* 'not rejoicing'. Instr. sg. Skr. *bráhmaṇ-ā* (*bráhma-* n. 'prayer') Av. *bar<sup>e</sup>sman-a* (*bar<sup>e</sup>sman-* m. 'sacrificial rod') fr. prim. Ar. \**mṃn-ā*, with these cp. Skr. *námna-ā* (*námna-* n. 'name'). Antesonantal Skr. Av. O.Pers. *an-* 'un-' : Gr. *ἀν-*, Indg. \**ṃn-*.

*ghan-á-* 'killing' beside *-ghn-á-* (*go-ghná-* 'ox-killing') is similar to *gir-a-* beside *-gr-á-* 'swallowing, devouring' (§ 290).

On the qualitative changes of the *a* in Av. s. § 94.

Rem. The Ar. ending of 1. sg. *-am* e. g. in Skr. *ás-am* 'I was' (cp. Gr. *ἴα ἦ = \*ṃs-ṃ*) and that of the acc. sg. e. g. in Skr. *pád-am* 'foot' (cp. Gr. *πόδ-α = \*pod-ṃ*) point to *-ṃm*. Three explanations are possible. 1. There existed in prim. Indg. beside *-m* and *-ṃ* a form *-ṃm* (and *-ṃ*) after the manner of the phenomena discussed in §§ 312. 313. In that case Cyp. *-av* in *ἀ(ν)δρα(ν)τ-av* (Att. *ἀνδρα(ν)τ-α*) etc. could be directly connected with the Ar. form. 2. *-ṃ* became *-ṃm*, by a special Ar. development, when the following word began with a sonant, i. e. generated an *m* as glide, under the same conditions as *ṃ* and *ṃ* often made their appearance after *-i* and *-u* in various languages. 3. *-ṃ* became *-a* in prim. Ar. (cp. Skr. *dáśa*) and this became transformed to *-am* after the analogy of forms like Skr. *ábhara-m*, *áśva-m*. The second possibility seems to deserve the preference, and the first type in consideration of *ábharam* and *áśvam* may have been generalised through the side by side existence of *ásam a-* and \**ása t-*, *pádam a-* and \**páda t-* (cp. J. Schmidt Kuhn's Ztschr. XXVII 282 f.). Cp. *sthātúr* § 285.

## Armenian.

§ 232. *ĕsan* 'twenty' according to Hübschmann fr. \**gisan* (concerning *g-* § 162, and *-s-* § 408): Skr. *viśati-*, Gr. Dor. Bœot. *ἒλατι*, Lat. *vīginti*, Indg. \**uikmti-* or \**uiknti-* (first syllable uncertain). *tasn* 'ten' probably fr. Indg. \**delmt*: Goth. *taihun* (cp. § 651, 2). *inn* 'nine', pl. *inun-k̄* or *innun-k̄*: connected most closely with Gr. \**ἐνφα* (*ἐννα-*, *εἶνα-*, *ἐνα-*, § 166), beside Skr. *nāna* O.Ir. *nōi n-* Indg. \**némy*. *anun* 'name' fr. \**anman* \**an-man* (§ 202): Skr. *nā-ma*, Gr. *ὄνομα*, Lat. *nō-men*, O.Ir. *ainm n-*, Indg. *-my*. *an-* 'un-' = Indg. \**η-* and \**ηn-* (Skr. *a-* *an-*, Gr. *ἀ-* *άν-*, Lat. *in-*, Goth. *un-*), e. g. *an-ban* 'carens ratione et verbo': cp. Gr. *ἄ-φρωνος*; *an-anun* 'nameless': cp. Gr. *ἀν-ώνυμος*. *kan-ai-* in pl. *kanai-k̄* 'women': Bœot. *βανά* O.Icel. *kona* 'woman', prim. f. \**gyn-ā-*. Present formative suffix *-ane-*, e. g. *lk-ane-m* 'I leave' *gt-ane-m* 'I find': Gr. *-ανω*, *λιμπάνω*, prim. f. *-ηne-* *-ηno-*<sup>1)</sup>: by the side of this cp. *-ne-*, e. g. *ar-ne-m* 'I make', like Gr. *δάκνω*. *amarñ*, gen. *amar-an*, 'summer' (cp. also *amar-ayin* 'aestivus' *amar-aini* 'messis'): OHG. O.Icel. *sumar* 'summer'.

In the forms *tasn*, *inn*, *anun* the *a* in the final syllable *-an* had disappeared by the law of finals (§ 651, 1).

## Greek.

§ 233. 1. *βάσχω* 'I go': Skr. *gáchāmi* 'I go', Indg. \**gm-skō*, from rt. *gem-*. *ἐρατό-ς* 'lovely': Skr. *ratá-s* 'rejoicing, loved', Indg. \**rñ-tó-s*, rt. *rem-* (Skr. *rám-a-tē*). *-α*, ending of the 1. sg. in *ἦ-α* 'I was', *ἔχε(F)-α* 'poured out', *ἔδεικ-σ-α* 'showed', *ᾔδε-α* 'knew' etc., Indg. *-η*.

*ἔχασον* from *χενδ-* 'seize' (fut. *χείσομαι*, § 205): Lat. *pre-hend-ō*. *ἐπαθον πεπαθούα* from *πενθ-* 'suffer', *πένθος*. *ἄ-νῦμι ἄ-νύω ἄ-νύω* 'I come to the goal': Skr. *sa-nō-mi*, Indg. \**sy-néy-mi*, rt. *sen-*<sup>2)</sup>.

1) Only traces found in Ar., as in Skr. Ved. *iś-ana-t*, Av. *peś-anaiti mer<sup>nc</sup>-ainiš*. See the accident, and Bartholomae Ar. Forsch. II 94 f.

2) For a conjecture concerning the strange spiritus lenis in *ἄνῦμι ἄνύω* see Osthoff Zur Gesch. d. Perf. 479 f.

τα- 'stretch, span' in τὰ-νυ-ται τέ-τα-ται τα-τό-ς etc.: Skr. *ta-*, *ta-nu-tē*, Lat. *ten-*, *ten-tu-s*, rt. *ten-*. φα- 'kill' in πέ-φα-ται φα-τό-ς, Indg. \*ghy- : Skr. *ha-tá-s* 'struck'. γέ-γα-μεν 1. pl. pf. to γεν- 'gignere', γέν-ος. ἔ-κτα-μεν, ἔ-κτα-το = Skr. *á-kṣa-ta*, aor. to κτεν- Skr. *kṣan-* 'kill'. Lesb. ἄμμες Att. ἡμεῖς 'we', prim. Gr. \*ἄ-σμε- (§ 565): Skr. *a-sma-* (dat. *asmá-bhyam* 'nobis'), Goth. *un-s*, Indg. \*h̄-sme-. -α-, -μα-, weak form of the nominal suffixes -en-, -men-: φρα-σί, to φρεν- 'midriff, mind'; ὕδ-α-τ-, to Skr. *ud-án- ud-n-* 'water'; ονό-μα-σι : Skr. *ná-ma-su*, to *ná-man-ná-mn-* 'name'; ονό-ματα like Lat. *cōgnō-menta*. Suffix of the acc. pl. -ας : Skr. -as, Lat. -ēs (fr. \*ens, § 208) etc., Indg. -ys, e. g. νῆας 'ships': Skr. *nāv-as* Lat. *nāv-ēs*; ὀφρύας 'eye-brows': Skr. *bhrív-as*. Ending of the 3. pl. mid. -αται -ατο : Skr. -atē, -ata, Indg. -h̄tái, -h̄tó : ἦαται, ἦατο 'they sit, sat': Skr. *ásatē*, *ásata*; perf. κελιάται τετραάφαται, opt. γενοίατο etc. ἔν-νέ(ς)α 'nine' (orig. 'nine in all', ἔν- 'in'): Skr. *náva*, Arm. *inn* (§ 232), O.Ir. *nōi n-* (Lat. *novem* after the analogy of *septem*, *decem*), cp. § 152.

ἐλαχο-ν from λεγχ-, cp. pf. λέλογχα.

Rem. ο in εἰκοσι beside ἑτάκι 'twenty' etc. does not really represent Indg. sonant nasal. See the author's Griech. Gramm. p. 68 f.

§ 234. 2. βαίνω 'I go': Lat. *veniō*, Indg. \*gh̄-ḡō, § 204. So also καίνω 'I kill', prim. f. \*h̄gh̄-ḡō, to καμ-ό-ντες 'the dead': Skr. *śamayāmi* 'I put to death, destroy'; ν crept into ἔκανον, κέκονα from καίνω. Lesb. κταίνω 'I kill' fr. \*κτῆ-ḡω, rt. κτεν-μαίνεται : Skr. *mānyatē*, Lith. *miniū*, rt. *men-* (s. § 225). Analogously τταίνω 'I stretch out', τεκταίνω 'I build', σπερμαίνω 'I fructify' (cp. Goth. *glitmunja* 'I shine') etc. τέκταινα fem. to τέκτων 'carpenter', gen. sg. τεκταίνης like Goth. *lauhmunjōs* (nom. *lauhmun-i* 'lightning'); cp. the author Morph. Unt. II 195 ff., Osthoff Zur Gesch. d. Perf. 452 f. On the *i*-epenthesis see §§ 131. 639.

§ 235. 3. 3. pl. -αντι, Att. -ᾶσι fr. -h̄ti : ἰ-ᾶσι 'they go': Skr. *y-ānti*; ἀγ-νύ-ᾶσι 'they break in pieces, crush': cp. Skr. *śak-nuv-ānti*, Indg. \*-nuh̄-h̄ti. Participial suffix -αντ- = Indg. -h̄t- in δεῖξ-αντ-, ὑπερ-κῶδ-αντ-, ἀ-κάμ-αντ-, π-άντ- (§ 166 p. 147).



Rem. Some hold *εν*, and others *α* to be the regular representation of accented sonant nasal. The facts seem to us to agree best with the hypothesis given above.

§ 236. 4. ἅ-μα 'at once' ἀμ-ό- 'any one'; Skr. *sam-a-* Goth. *sum-a-* 'any one', Indg. *σηm-* (weak stem form beside *sm-* *sm-*) 'one'. Bæot. βανά 'wife': Armen. pl. *kan-ai-k* O.Icel. *kona*, Indg. \**γηn-ā-*. Aor. ταμείν, κτανείν, θανείν from τεμ- 'cut', κτεν- 'kill', θεν- (θείνω) 'strike, kill'. Weak st. δαμ- 'house' (beside δεμ- in δεσπότης, § 204 p. 171) in δάμ-αρτ- 'spouse', properly 'managing' the house', to ἀρτύω ἐπ-αρτής (W. Schulze Kuhn's Ztschr. XXVIII 281).

### Italic.

§ 237. The Indg. sonant nasals became in the prim. Ital. period *en*, *em*, *ev*, and thus fell together with Indg. *e* + nasal. In the same manner as in the latter combination *e* passed into *i* in Latin, e. g. *sin-gulī* (Indg. \**sm-*) like *tinguō*: Gr. τέγγω, s. § 65 p. 53.

§ 238. 1. Lat. *sim-plex sin-gulī*: Gr. ἅ-παξ, Indg. \**sm-* 'one'. *centu-m*: Lith. *szimta-s* 'hundred', Indg. \**km̄tō-m. v̄gintī*: Gr. *ἑκατὶ* (cp. § 232); *v̄cēsimu-s* fr. \**v̄cent+timō-* (§ 208): Gr. Bæot. *ἑκαστό-ς. decem*, Umbr. *desen-duf* 'duodecim': Skr. *dāśa*.

*cēnsu-s* (for regular \**censtu-s*), Osc. *an-censto* nom. sg. fem. 'incensa' *censtom-en* 'in censum': *śastá-* 'spoken, valued', Indg. \**ky-s-tó-*. *ēnsi-s*: Skr. *asī-ś* 'sword'. Lat. *emō*, Umbr. *emantur* 'accipiantur', Osc. *pert-emet* 'perimet', fr. \**ym-ō* = Lith. *imū* O.Bulg. *imq* 'I seize, take' (§ 219 rem. 2) from rt. *nem-* 'alloy' (Gr. *νέμω* 'I deal out, possess', Goth. *nima* 'I take'); \**ymō* first became \**ymō̄*, thence *emō*. *tentiō*: Skr. *tati-ś* 'row', Gr. *τάσι-ς* 'a stretching'. Suffix *-men-to-* = Skr. *-ma-ta-*, Gr. *-μα-το-* Germ. *-mun-da-*: *testā-mentu-m* (fr. \**terstā-mentu-m*), Osc. abl. *tristaa-mentud. juven-ta*: Goth. *junda* (*jūnda*?) 'youth', cpf. \**juuyn-tā* or \**juuyn-tā*. *triēns* to Gr. *τριάς*, like Skr. *daśāt-* 'decade' to Gr. *δεκάς*<sup>1)</sup>. Lat. *-ōnsu-s*

1) Either the nom. sg. and loc. pl. of these Gr. substantival numerals in *-άς* were the occasion of their passing into the analogy of *δ*-stems (cp.

-ōsu-s e. g. in *vīrōsus* (*n* preserved in *formōnsus* etc.) explained by Osthoff<sup>1)</sup> as fr. \*-ouēnsso-, \*-o-~~unt~~+to-, orig. the weak form of the suffix -uent- (Skr. -vant-, Gr. -Fεντ-), -to- participial suffix as in *ūbertu-s*, *vetustu-s*, *aegrōtu-s* etc. Participial st. *rudent-*: Skr. *rudat-* (Indg. \*rudnt-; beside the strong form \*rudónt-: Skr. *rudánt-*), from *rudō*: Skr. *rudāmi* 'howl, moan'. Acc. pl. *ped-ēs*, Umbr. *ner-f* 'nerones, proceres' fr. prim. Ital. \*-ens (§§ 208. 209), Indg. \*-us: Skr. -ās, Gr. -ας. *nō-men*, Umbr. *nu-mem no-me* 'nomen', Indg. \*-mυ: Skr. *nā-ma*, Gr. ὄνο-μα, O.Ir. *ainm n-* 'name'; analogously *ungu-en*, Umbr. *um-en* 'unguen': O.Ir. *imb n-* n. 'butter', cp. Gr. ἄλειφ-α, κάρα fr. \*καραό-α; concerning the Umbr. endings -em, -e, -en s. § 209.

*dingua lingua* (§ 369): Goth. *tuggō* OHG. *zunga* 'tongue'; if O.Bulg. *j-ęzykū* Pruss. *insuwis* 'tongue' also belong here, it follows that the prim. f. is \*dḡgh-*uā*, and that *d-* has been dropped in Baltic-Slavonic; s. Bezenberger in his Beitr. III 134 f., Bersu Die Guttur. 148 f. *juvencu-s*, Umbr. *ivengar* 'iuvencae': Skr. *yuvaśā-s*.

§ 239. 2. *veniō veniunt* (transferred into the analogy of verbs in -īre): Gr. βαίνω, Indg. \*gṃ-*īō*, rt. *gem-* 'go' (cp. § 208).

§ 240. 3. Umbr. *s-ent* 'sunt', O.Lat. *s-i-ent* 'sint', s. § 226. The participial st. *s-ent-* 'being' (Lat. *prae-sēns*, Osc. *prae-sentid* 'praesente') corresponds both to the accented form Skr. *s-ánt-* Indg. \*s-*h̄t-* and to the unaccented form Skr. *s-at-*, Gr. *ἔατ-* Indg. \*s-*ηt-*.

§ 241. 4. *tenu-i-s* fr. Indg. \*tṃn-*ú-*, § 227. *hemō* (*nēmō* fr. \*ne-hemō) acc. O.Lat. *hemōn-em*: Goth. *guma*, gen. *gumins*, 'man'; these forms stand to Pruss. *smoy* Lith. *žmū* 'man' (pl. *žmónés*) in the same relation as Indg. \*gṃnā- to \*gnā- 'wife' (§ 227).

*septimus*, *decimus*, *nōnus* (in the first instance fr. \*noueno-s, O.Lat. inscrip. *noine*) fr. \*septṃm-o-s, \*dekṃm-o-s, \*nemṃm-o-s,

*ρέποδες* for regular \**ρεποτες*, § 327), or there existed a prim. Indg. interchange of tenuis and media (§ 469, 7).

1) communicated by letter.

s. § 231. Superlative suffix *-timo-* (*op-timu-s*): Skr. *-tamá-* (*ya-tamá-s* 'which of many', relat.), Goth. *-tuma-* *-duma-* (*af-tuman-* 'latter', *hleī-duman-* 'left'), Indg. *\*-tymó-*. There exists a doubt regarding *terminus*, to *termen* (cp. Umbr. *term-nom-e* 'ad terminum', Osc. *teremnattens* 'terminaverunt'), as to whether we have here prev. Ital. *yn*, or whether old *n* first became vocalic in Ital. itself, since gen. sg. *termin-is* could exactly correspond to Skr. *tárman-as* (cp. *bráhman-ā*, § 231). The same doubt exists with regard to *femina*, *dominu-s* beside *domnu-s*, *lāmīna* beside *lāmna* and many other similar forms. Furthermore *-in-* could here also be Indg. *-en-<sup>1</sup>*)

### O. Irish.

§ 242. Indg. nasalis sonans and Indg. *e* + nasalis consonans had fallen together in Irish before consonants, as in Ital. But they still existed apart in prim. Keltic, as is shown by the different treatment in the Britt. branch (see Zimmer Kuhn's Ztschr. XXVII 450). Antesonantal *-yn-* (according to Thurneysen) became *-an-* already in prim. Kelt.; cp. § 298, 3.

§ 243. 1. *cēt* 'hundred': Cymr. Bret. *cant* Corn. *cans*, Lith. *szimta-s*, Indg. *\*kmtó-m*. *fiche*, gen. *fichet*, 'twenty': Mid. Cymr. *ugeint* Corn. *ugans* Skr. *viśati-*, Lat. *vīgintī*. *cēt*, unaccented form *cita-*, 'with': Cymr. *cant* Corn. *cans*, Gr. *κατά*. *dēt* 'tooth': Cymr. *dant* Corn. *dans* Goth. *tunþ-u-s* (cp. § 244), Skr. *dat-* (weak st. form in instr. sg. *dat-ā* etc. beside the strong *dánt* = Gr. *ὀδόντ-* OHG. *zand* OS. *tand* Lith. *dant-į-s*), Indg. *\*d-nt-* (strong *\*d-ó-nt-*), participle from rt. *ed-* 'eat'; the indic. would be *\*d-é-ti*. *ér-mitiu* 'honor': Lat. *mentiō*, Skr. *matī-ṣ*, Indg. *\*mṃ-ti-s* from rt. *men-* 'think'. *óac óc* 'young': Cymr. *ieuanc* O.Corn. *iouenc* Bret. *iaouank*, Lat. *juvencu-s*, Skr. *yuvaśá-s*.

*deich n-* 'ten': Skr. *dáśa*, Lat. *decem*. *nōi n-* 'nine': Skr. *náva*, Indg. *\*neuy*. *ainm n-* 'name': Gr. *ὄνομα*, Indg. *-mṃ*.

1) Cp. the conjectures of Thurneysen Kuhn's Ztschr. XXVI 308 and of Stolz Lat. Gramm. p. 166 f.

On the treatment of the prim. Ir. combination *-en-* in these words cp. §§ 211. 212.

2. Examples for Indg. *-ŋi-*, *-ŋi-* are unknown to us.

3. *it* 'sunt' (proclitic) with Cymr. *ynt* goes back to *\*enti*. This was an analogical transformation of *\*senti* = *\*s-ŋti* (§ 226), s. Zimmer Kelt. Stud. II 133.

5. *tana*: Corn. *tanow* Bret. *tanav* 'thin', Skr. *tani-ṣ*, Indg. *\*tŋn-á-*. *samail* 'likeness, picture': Cymr. *hafal* 'similis', Gr. *ἄμ-α*, Indg. *\*sŋm-*. *sechtmad* 'septimus' fr. *\*sechtamad*, s. § 231.

### Germanic.

§ 244. 1. Goth. OS. *hund* OHG. *hunt* O.Icel. *hund-rað* 'hundred': Lith. *szim̃ta-s*, Indg. *\*kŋtó-m*. Goth. *taihun* 'ten': cp. Lith. *dėszimt*, pl. *dėszimt-s* (the *-t* in *dėszimt* cannot of course be a final *-t* which has remained from the Indg. period), *taihunda* 'tenth': Lith. *desziŋta-s*, Gr. *δέκατο-ς*, prim. f. *\*dekŋt* and *\*dekŋto-s*. The Goth. stem *tigu-* 'decade', originated in the dat. pl., *tigum* fr. *\*tezum-m(i)*: cp. Skr. *daśábhiṣ* fr. *\*deŋbh̥is*; *tigum*, associated with *sunu-m*, occasioned the passage into the *u*-declension. Goth. *ga-qumþi-* 'a meeting, synagogue' (*q* for regular *k* §§ 180. 444 b.), OHG. *cumft cunft* 'a coming' (for the *f* s. §§ 214. 529): Skr. *gáti-ṣ*, Gr. *βάσι-ς*, Lat. *in-ventiō*, Indg. *\*gŋ-ti-* from rt. *gem-* 'go'. Prim. Germ. final *-un* = Indg. *-ŋ* became by § 214 Goth. *-u*, acc. sg. *tunþ-u* 'dentem' *fōt-u* 'pedem': Gr. *-α*, Lat. *-em*.

Goth. *bundum* OHG. *buntun* O.Icel. *bundom* 'we bound', to *band bant batt* 'I bound' (rt. *bhendh-*): cp. Skr. *tastabhimá* to *tastámbha* (rt. *stembh-* 'fasten') and Gr. *πασθῖα* to *πέπονθα* (*πενθ-* 'suffer'). Goth. *vunds* OHG. *wunt* 'wound': Gr. *\*Fató-* in *Φατάλαι* *οὐλαί* Hesych. (cod. *γατάλαι*), from rt. *ŋen-* (Goth. *vinnan* 'to suffer, feel pain'). OHG. *wuntar* OS. *wundar* 'wonder': Gr. *ἀθρέω* 'I gaze at, observe' fr. *\*Fathréō*. Goth. *undar* OHG. *untar* 'under': Skr. *adhás* 'below' *ádharma-s* 'the lower' *adhamá-s* 'lowest' (concerning Lat. *inferu-s* *infimus* cp. § 389 rem.). Goth. *t-unþ-u-s* 'tooth': Skr. *d-at-* etc., s. § 243; *tunþ-* was due to a levelling of the prim. Germ. st. form *\*tánþ-* (OHG. *zan*, § 527).

and *\*tund-*, Indg. *\*dónt-* and *\*dnt-*, s. § 530. The same participial suffix *-nt-* in Goth. *hulundi* f. 'cave' (cp. § 301). Suffix *-munda-* = Skr. *-mata-*, Gr. *-ματο-*, Lat. *-mento-*, Indg. *\*-mṡ-tó-* : Goth. *sniuu-mundō* adv. 'hastily', OHG. *hliu-munt* 'renown'. Ending of the acc. pl. Goth. *-uns* = Skr. *-as*, Gr. *-ας*, Lat. *-ēs*, Indg. *\*-ṡs* : Goth. *tunþ-uns* 'teeth' *fōt-uns* 'feet' *brōþr-uns* 'brothers' *auhsn-uns* 'oxen' 1)

Goth. *þugkjan* OHG. *dunchan* 'to seem, appear', prim. f. 1. sg. *\*tṡḡ-īō* or *\*tṡḡ-īō* : O.Lat. *tongēre* 'to know', from rt. *teṡḡ-* or *tesḡ-*. Part. pass. OHG. *slungan* 'wound' O.Icel. *slungenn* 'slung', inf. OHG. *slingan* O.Icel. *slyngva* : Lith. *slīnkti* 'to creep, sneak', rt. *slēsḡ-*.

§ 245. 2. Goth. *kunja-* (nom. acc. *kuni*) OHG. *cunni* O.Icel. *kyn* 'race, generation' fr. *\*ḡṡ-īo-* rt. *ḡen-* 'gignere'; with these Gr. *ὁμό-γυιο-ς* 'of the same race' (Goth. *sama-kunja-*), which represented a secondary form *\*ḡn-īo-* (§ 142 p. 128); *kunja-* probably corresponds to Lat. *geniu-s ingeniu-m*. Goth. *munjáu* opt. to *munan* 'to think' rt. *men-*, prim. f. of the strong opt. stem *\*mṡ-īō-*. Stem form Goth. *lauhmunjō-*, e. g. gen. sg. *lauhmunjōs* (nom. *lauhmuni* f. 'lightning'), fr. *\*-mṡ-īā-*, s. § 234. Goth. *glit-munja* 'I shine' fr. *\*-mṡ-īō* : cp. Gr. *περιμαλνω* 'I fructify', Skr. *brahmanyāmi* 'I pray'. O.Icel. *symja* 'to swim', pres. st. prim. Germ. *\*s(ṡ)um-īa-* (on the loss of the *ṡ* s. § 180 p. 158), prim. f. *\*sṡm-īo-* (Sievers Paul-Braune's Beitr. VIII 86).

*-nni-* fr. *-nī-* in West Germ., e. g. OHG. gen. sg. *cunnies* *cunnes* dat. pl. *cunniuum cunnum* (Ags. *cynnes cynnum*) = Goth. *kunjis kunjam*. Cp. § 215.

§ 246. 3. Ending of 3. pl. *-ṡti*, *-ṡt* in O.Icel. *eru* 'are', O.Icel. *vissu* OHG. *wissun* 'knew', s. § 226.

§ 247. 4. Goth. *sums* O.Icel. *sumr* 'any one' : Skr. *sam-a-*, Gr. *ἀμ-ό-*, Indg. *\*ṡm-ó-* from rt. *sem-*. Goth. *un-vunands* 'not rejoicing' : Skr. *vanāti* 'he gains, loves', Indg. 3. sg. *\*ṡm-é-ti*. In like manner Goth. *munan* 'to think' (rt. *men-*) and OHG.

1) To be read thus I. Cor. IX. 9 instead of Ms. form *auhsunns* s. Kögel Paul-Braune's Beitr. VIII 115.

*koman* OS. Ags. *cuman* O.Icel. *koma* 'to come' the latter to Skr. *gamāti* (rt. *gem-*). Superlative suffix *-duman-*, to Skr. *-tamá-* Lat. *-timo-*, Indg. *-tymó-*, see § 241.

On the change of *u* to *o* before *o* or *a* in the following syllable in West Germ. and Norse cp. § 51. This change did not take place before nasal + consonant, hence OHG. part. *buntan* (§ 244) beside *koman* etc.

### Baltic-Slavonic.

§ 248. The Indg. sonant nasals became *i* + nasal in the prim. Balt.-Slav. period. This *i* was open and still separate from Indg. *i*, as follows from the fact that Indg. *in* is represented in Slav. by *ĩ* before explosives and spirants, whereas Indg. *ʒ* in the same combinations is represented by *ę*. See § 219. We denote the prim. Baltic-Slav. and prim. Slav. equivalents of *ŋ*, *ʒ* by *im m*. Throughout the whole Baltic branch *im*, *in* arose from *im m*, so that all distinction between these and Indg. *im*, *in* was lost.

§ 249. 1. Lith. *deszi<sup>m</sup>ta-s* O.Bulg. *desętŭ* 'tenth': Gr. *δέκαρο-ς*, Goth. *taihunda*, Indg. *\*dekyntó-s*. Lith. *kišszta-s* 'stuffed, stopped', O.Bulg. *čęstŭ* 'dense', to Lith. pres. *kęmszŭ* 'I stuff, stop'. Lith. *gimti* 'to be born' (pres. *gemŭ*), *pri-gimti-s* 'inborn peculiarity', probably from rt. *gem-* 'come' (Osthoff Zur Gesch. d. Perf. 103): cp. Skr. *gāti-š*, Gr. *βάσι-ς*, Goth. *ga-qumþi-*, Indg. *\*gŋ-ti-*. Lith. *rimti* 'to become composed in mind' *rimta-s* 'fast': Skr. *rāti-š* 'rest, repose, ease' *ratá-* 'tarrying with something, devoted to a thing, being pleased with something', Gr. *ἐρατό-ς* 'lovely' (§ 233), rt. *rem-*. Acc. sg. Lith. *dŭkter-į* O.Bulg. *dŭšter-e* 'daughter', prim. Baltic-Slav. *\*dukter-in*: Gr. *θυγατέρι-α*; Lith. *vęžant-į* 'vehement': Gr. *φέρου-α*, Lat. *vehent-em*.

Lith. *at-mintŭ-s* 'memory', O.Bulg. *pa-męti* 'remembrance': Skr. *matŭ-š*, Lat. *mentŭ*, Goth. *ga-mundi-*, Indg. *\*mŋ-ti-* from rt. *men-*. Lith. *giŋti* 'to drive (cattle)' *ap-ginti-s* 'defence', O.Bulg. *žęti* 'to hew, mow': Skr. *hati-š* 'a blow', Indg. *\*ghŋ-*

*ti-s*; Lith. *ginczià* and *giñczia-s*<sup>1)</sup> 'combat, quarrel': Skr. *hatyā* 'a killing', OHG. *gundea* (Hildebr. 60 *gūdea*) 'fight, combat', Indg. *\*ghŋ-tiā-*, from rt. *ghen-*. Pruss. *newīnts* Lith. *devīnta-s* O.Bulg. *devētī* 'ninth' (concerning the first syllable of the word s. § 68 rem. 1): Goth. *niunda*, Gr. *ἔνατος* fr. *\*ēvfatō-ç* (§ 166), prim. f. *\*neuh-tó-s*; cp. also O.Bulg. *devētī* 'nine': Av. *navaiti-* 'ninety'; Skr. *navati-* 'ninety'. Lith. *tįsti* 'to stretch one's self out, extend' (beside *tešiù* 'I stretch'): Skr. *vī-tasti-ṣ* 'a span' (causat. *taśáyati* 'he draws to and fro'), cpf. *\*tys-ti-s*, from rt. *tens-*, cp. also Germ. *puns-* in the OHG. part. *gi-dunsan* 'swollen', to pres. *dinsan*.

Concerning Lith. *imù* O.Bulg. *ima* fr. *\*ym-ō* and O.Bulg. *ime* fr. *\*y-mēn* see § 219 rem. 2.

Pruss. *insuwi-s* O.Bulg. *j-czykū* 'tongue', perhaps to Lat. *dīngua lingua* Goth. *tuggō* s. § 238; Lith. *lēžiù* 'I lick'. O.Bulg. *pešti* f. 'fist': OHG. *fūst* 'fist' (prim. Germ. *\*fuwaxsti-z*, s. § 214 p. 181, and § 527 extr.), cpf. *\*pŋksti-s*, possibly to Goth. *figgrs* 'finger'. Lith. *liñkti* 'to bend one's self' *liñkęs* 'inclined, bent', beside *lenkiù* 'I bend' *lankà* 'valley' (O.Bulg. *lešti* 'to bend' can be both Lith. *liñkti* and *leñkti* 'to bend', cp. Leskien Arch. f. slav. Phil. V 507. 527).

§ 250. 2. Lith. *miniù* 'I think of', O.Bulg. *mīnja* 'I think': Skr. *mānyatē* 'thinks', Indg. pres. st. *\*mŋ-je-* from rt. *men-*. O.Bulg. *žinja* 'I cut off, reap': Skr. *hanyatē* 'is struck', Indg. pres. stem *\*ghŋ-je-* rt. *ghen-*. Here probably also belong part. perf. act. *pīnū* (pres. *pīna* 'I stretch out, hang') from *\*pīnvū* and *tīnūkū* 'thin' (compar. *tīnējī*) fr. *\*tīnv-ī-kū*, like Skr. *tanvī* fr. *\*tŋ-u-ī* (§ 225).

§ 251. 3. *-ŋti* in O.Bulg. *jad-ētī* 'they eat', *-ŋt* in O.Bulg. aor. *bas-ç* from *boda* 'I sting, stab', see § 226. It is possible on account of Skr. *dād-ati* that the *-çtī* in *dad-çtī* 'they give' (*dad-* = Lith. *dūd-*) arose from *-ŋti* (with unaccented *y*).

§ 252. 4. Lith. *pīnū* 'I bend' O.Bulg. *pīna* 'I stretch out,

1) Thus spoken in the dialect of Godlewa and probably also elsewhere. Kurschat (Gramm. p. 28) writes *giñczas*.

hang', Lith. *minù* 'I tread on' O.Bulg. *mǎnq* 'comprimo', Lith. *ginù* 'I check, keep off', Russ. *žnu* 'I cut off, reap' (on the loss of the *ǐ* s. § 36), like Skr. *vanāmi* (§ 231). Part. pf. act. fem. Lith. *mìmsi* (*miñti* 'to think of') O.Bulg. *pīnūši* (*peṭi* 'to stretch out'), cp. Skr. Ved. *jajan-úr* (beside *jajñ-úr*) 3. pl. pf. act. from *jan-* 'beget', *tatan-é* (beside *tatn-é*) 1. sg. pf. mid. from *tan-* 'stretch, extend'.

Rem. The Zographos gospel has occasionally *ǔ* for *ǐ* before non-palatal vowels, e. g. *tūma* 'darkness' (prim. f. *\*tūm-ā*) beside *tīminū* 'dark'. Cp. § 36 rem.

## 2. Long sonant nasals.

§ 253. The question, first discussed by de Saussure, as to which sounds and sound-combinations have arisen in the Indg. languages from long nasalis sonans (Mémoire sur la système primitif des voyelles 1879 p. 239 ff.; cp. besides especially Osthoff Morph. Unt. IV p. IV and p. 280, Zur Gesch. d. Perf. 30. 55. 331. 367. 373 ff.), has not hitherto, in many respects, been satisfactorily solved, just as in the case of the Indg. long sonant liquids (§ 306). The probable results of the investigations hitherto made, are as follow: — In Ar. *ā* = *ḡ*, *ḡ̄*, corresponding to *a* = *ḡ*, *ḡ̄*. In Gr. between consonants *ā* (Ion. Att. *ἡ*) = *ḡ*, *ḡ̄*, initially *ṽā-* (Ion. Att. *ῥῆ-*) = *ḡ-*. In Lat. *nā* and *an-* from *ḡ*, corresponding to Gr. *ā* and *ṽā-*. In Arm. initially *an-* from *ḡ-*. Nothing in any degree certain has, as yet, been determined for the other languages. Examples:

2. pl. pret. Skr. *ágāta* Gr. Dor. *ἔβατε* Ion. Att. *ἔβητε*, cpf. *\*é gḡté* rt. *gem-* 'go'. The stem form *\*gḡ-* forced its way into the sg. act. also, hence Skr. *ágām ágās ágāt* Gr. *ἔβην ἔβης ἔβη* beside Skr. *ágamam ágan ágan*.

Skr. *jātá-s* 'born, son' Av. *zāta-*, Skr. *jāti-ṣ* f. 'birth', Lat. *gnātu-s nātu-s, nātiō* (cp. also Gall. *Cintu-gnātu-s* 'first-born' according to Thurneysen Keltorum. 2), from rt. *ḡen-* 'gignere'. Analogously Skr. *sātá-* from *san-* 'reach', *vātá-* from *van-* 'to like', *ghā-ta-s* 'killing; blow, a putting to death' *ghā-ti-* 'blow, a wounding' from *han-* 'strike, kill' etc.



Skr. *jānāmi* 'I recognise, know', O.Pers. 3. sg. pret. *adānā* (= Skr. *ājānāti*), prim. f. \**ǵṛ-nā-mi*, Lat. *gnāru-s*, prim. f. \**ǵṛ-ró-s* (formed like *dū-ru-s*), rt. *ǵen-* 'noscere'.

Skr. *ātā-* f. 'rim, door-frame', Arm. *-and* in *dr-and* 'door-post, threshold', Lat. *anta* 'four-cornered door-pillar, pilaster'!).

Skr. *atī-ṣ* f. 'a water-fowl', Gr. *νησσα* 'duck' fr. \**νᾱτ-λα*, (with these also Lat. *anas anitēs*, OHG. *anut*, Lith. *ánti-s* 'duck' we venture to make no assertion as to their phonetic-relations).

Skr. *yātar-* 'wife of the husband's brother'; that the *ā* arose from *ṛ* is probable on account of Gr. *εἰνάτερες*, Lat. *janitricēs*, O.Bulg. *jetry*.

Further *ā* = *ṛ* in the Skr. nouns *jā-s* (loc. pl. *jā-su*) 'born, creature, being' (here orig. also *pra-jā-* 'progenies', which, going out from forms like loc. pl. *pra-jāsu*, passed into the *ā*-declension), *vāja-sā-s* 'lending power' (cp. *vāja-sāti-ṣ* f. 'a reaching of power', Skr. *san-* 'reach, attain' and 'distribute, administer'). With *ā* = *ṛ* *samana-gā-s* 'going to the place of assembly'. These nouns are on the same footing as *gīr* 'commending; praise', *pūr* 'citadel', s. §§ 306. 312.

Skr. Ved. *nā-mā* 'nomina' probably fr. \**mṛ*, hence *nā-mā* : *nā-ma* = *purá* : *purá*.

Greek *νᾱ-* *νη-* 'un-' in Dor. *νᾱ-ποιος* Hom. *νη-κερδής* etc., Umbr.-Samnit. *an-* 'un-' in Umbr. *an-hostatu* 'inhastatos' Osc. *an-censto* nom. sg. 'incensa' etc. fr. \**ṛ-* (W. Schulze Kuhn's Ztschr. XXVII 606).

## LIQUIDS.

### A. LIQUIDS AS CONSONANTS.

#### Indg. primitive period.

§ 254. One of the most difficult questions of Indg. phonology is to determine how many liquids the Indg. prim. language possessed and what their nature was (cp. Sievers *Phonetik*<sup>3</sup> p. 104 ff.).

1) If the Av. *ἄπαξ λεγόμενον ἀἰργῶ-* should mean 'door-post' and be connected with Skr. *ātā-* (Zimmer *Altind. Leben* 154), its first syllable

That there were at least two liquids, is seen by the circumstance that the European languages and Armenian agree in presenting *r* in many cases and *l* in others. *r* e. g. in Arm. *berem* Gr. *φέρω* Lat. *ferō* O.Ir. *berim* Goth. *baira* 'I bear' O.Bulg. *bera* 'I take'. *l* e. g. in Arm. *li* (gen. *lioy*) Gr. *πλήρης* Lat. *plē-nu-s* 'full' O.Ir. *línaim* 'I fill', O.Icel. *fleire* 'more' *flestr* 'most', Lith. *pìlna-s* O.Bulg. *plǎnǔ* 'full'.

A fixed law of representation has not yet been gained for the Skr. liquids.

The Skr. equivalents of Europ.-Arm. *r* are 1) mostly *r*. *bhārāmi* : Gr. *φέρω*. 2) *l*. *lūñcati* 'he picks, plucks, plucks out' : Gr. *ὀρύσσω* 'I dig', Lat. *runcāre* 'to weed out', Lith. *runkū* 'I become wrinkled' *raūka-s* 'wrinkle'. 3) *r*, later *l*. *rup- lup-* 'tear, break' : Lat. *rumpō*, Ags. *reófan* O.Icel. *rjúfa* 'to break, tear in pieces'.

Corresponding to europ.-Arm. *l* we have 1) in most cases *r*. *prūtá-s* 'filled' : Lat. *plētus* (according to O. Weise Bezenb. Beitr. VI 115 Skr. *r* always corresponds to Gr. *λ* after *k̄*-sounds, e. g. Skr. *śrávas* : Gr. *κλέφος*). 2) *l*. *tuḷá* 'balance' : Gr. *τάλαντον* 'balance', Lat. *tollō*, O.Ir. *tallaim* 'I take away', Goth. *þulan* 'to endure, suffer'. 3) *r*, later *l*. *rip- lip-* 'smear' : Gr. *λίπος* n. 'fat', Lat. *lippu-s* 'blear-eyed', Goth. *hi-leiban* 'to remain' (cp. Gr. *ληστέω* 'I persist in a thing'), Lith. *limpù* O.Bulg. *pri- lǐ(p)na* 'I stick, glue'.

The laws for these differences still remain to be investigated. It does not seem to be a mere accident that Skr. *l* = Arm.-Europ. *l* occurs much more frequently than Skr. *l* = Armen.-Europ. *r* 1).

must in that case be strong-grade. The interpretation of the passage in question is however doubtful.

1) "There is hardly a root containing an *l* which does not show also forms with *r*; words written with the one letter are found in other texts, or in other parts of the same texts, written with the other. In the later periods of the language they are more separated, and the *l* becomes decidedly more frequent, though always much rarer than the *r* (only as 1 to 7 or 8 or 10)". Whitney Sanskrit grammar § 53.

Old Iranian had only *r* as opposed to Arm.-Europ. *r* and *l* and Skr. *r* and *l*. O.Pers. *l* only in loan-words. It still remains to be investigated whether, and how far the *l*-sounds in the younger Iran. dialects are to be taken into account for fixing the development of liquids in pre-historic times.

With this state of things<sup>1)</sup> it seems to be most suitable to put down the Indg. primitive forms after the standpoint of the Europ. languages and Armenian, thus e. g. \**bhērō* 'I bear', \**plētō-s* 'filled'.

Rem. W. Heymann 'Das *l* der idg. Sprachen gehört der idg. Grundsprache an', Weimar 1873, p. 1 ff., and D. Pezzi Glottologia ariacissima, Torino 1877, p. 17 ff., give a summary of the older views, which have been put forth, regarding the previous history of the *r*- and *l*-sounds met with in the Indg. languages in historic times.

§ 255. Indg. *r*. Rt. *reudh-* 'to be red': Gr. ἔρυθρός Lat. *ruber* (gen. *rubrī*) Umbr. *rofu* 'rubos' O.Ir. *ruad* Goth. *ráuþs* 'red', O.Icel. *roðra* f. 'blood', O.Bulg. *rüdrü* Skr. *rudhirá-s* 'red'. Stem \**dhuer-* 'door, gate' (with gradation): Arm. *duñ* gen. *dran*, Gr. Arcad. *θύρ-δα* 'out' Att. *θύρα*, Lat. pl. *forēs*, O.Ir. *dorus*, Goth. *daúr*, Lith. pl. *dūrys*, O.Bulg. *dvorŭ* ('yard'), Skr. *dvār- dūr-* (*d* for *dh* § 480). Stem \**getuer-* 'four' (with gradation): Arm. *çor-k*, Gr. Delph. *τέτορες*, Lat. *quattuor*, O.Ir. *cethir*, Goth. *fidvōr*, Lith. *ketverì* 'by fours' O.Bulg. *četvero* (distrib.), Skr. *catvāras*. Rt. *uerǵ-* 'effect': Arm. *gorc* Gr. *φέργον ἔργον* OHG. *werah werc* 'work', Av. *var<sup>e</sup>za-* 'a working'. Rt. *srey-* 'flow': Gr. *ῥεῦμα* 'river', O.Ir. *sruaim* 'stream', OHG. *strom* 'stream', Lith. *srawėti* 'to flow tricklingly' O.Bulg. *o-strovŭ* 'island', Skr. *srāvati* 'flows'.

Nominal suffix *-ter-*, e. g. \**mā-ter-* \**mā-tr-* 'mother': acc. sg. Arm. *mair*, Gr. *μητέρα*, Lat. *mātrēm*, O.Ir. *māthir n-*, OHG. *muoter*, Lith. *móteri* ('wife') O.Bulg. *matere*, Skr. *mātāram*;

1) Indg. *l* beside *r* could be held as definitely proved if Fortunatov's rule had a firmer basis viz.: that, where in Skr. a cerebral consonant appears as representative of an original liquid + dental, this liquid is the regular correspondent of Europ.-Arm. *l* (Bezzenberger's Beitr. VI 215 ff.). F's examples, to which a few others have been added by Windisch Kuhn's Ztschr. XXVII 168, are for the most part etymologically very uncertain, nor are unexplained exceptions wanting. Cp. § 259.

voc. Gr. *μῆτερ*, Skr. *mātar*. *r* as element of the ending of the 3. pl. mid. : Lat. *sequontu-r* O.Ir. *sechiti-r* 'they follow', Skr. *riric-rē* perf. from *ric-* 'to let loose, leave'.

*r* as consonantal glide after *r*, e. g. *\*grr-ú-* 'heavy', see §§ 284. 287.

§ 256. Indg. *l*. Rt. *leiq-* 'leave' : Armen. *lk-ane-m* Gr. *λείπω* Lat. *linquō* O.Ir. *lēcim* 'I leave', Goth. *leihva* 'I lend', Lith. *lėkū* 'I leave' O.Bulg. *otū-lėkū* 'remnant', Skr. *riṇākti* 'lets loose, leaves'. Rt. *gel-* 'fall, drop' : Gr. *βολή* 'a throw', OHG. *quellan* 'to spring, gush', Lith. *gāla-s* 'end', Skr. *gāla-ti* 'trickles down'. Rt. *melq-* 'drag, tear, draw' : Gr. *ἔλκω* 'I drag, draw', *ἔλκος* 'wound, sore', Lith. *velkū* O.Bulg. *vlėka* 'I drag, draw'; to the same root Skr. *vṛka-s* 'wolf'. Rt. *klei-* 'lean' : Gr. *κλίω* 'I lean, bow', Lat. *clivō-s* 'hill', O.Ir. *cloen* 'slant, unjust, wicked', Goth. *hláins* 'hill', Lith. *szlaíta-s* 'mountain-slope', Skr. *śráya-ti* 'leans against, puts to'.

Nominal suffixes *-lo-* *-lā-* *-lu-*. Arm. *dai-l da-l* 'beestings', Gr. *θη-λή* 'teat, nipple' *θη-λν-ς* 'nourishing, suckling, of female sex', Lat. *fē-lāre* 'to suck', O.Ir. *de-l* 'teat, dug', OHG *ti-la* 'a woman's breast', Lith. *pirm-dėlė* 'she who has given birth for the first time', cp. Skr. *dhā-rú-ṣ* 'sucking', Kurd. *dē-l* 'little woman'.

*l* as consonantal glide after *l*, e. g. root form *tl-*, s. §§ 284. 287.

### Aryan.

§ 257. Indg. *r*. Skr. *rādha-ti* 'brings about, prepares, satisfies' Av. *rāđaiti* 'prepares, gives' O.Pers. *avahya-rāđiyy* 'on that account, therefore' : Goth. *ga-rēdan* 'to provide' O.S. *rādan* 'to advise, help', O.Bulg. *raditi* 'to provide, take care of'. Skr. *pāri* Av. *pairi* O.Pers. *pariy* 'about, over, against' : Gr. *πέρι*, Lat. *per-* in *permagnum*. Perf. Skr. *da-dárs-ā* Av. *dā-dar's-a* 'I saw' : Arm. *tes-ane-m* 'I see' (§ 263), Gr. *δέρομαι* *δέδοκα*, O.Ir. perf. *ad-chon-darc* 'I saw', Goth. *ga-tarhjan* 'to mark out', rt. *derk-*. Skr. *pra-* Av. O.Pers. *fra-* 'before' : Gr. *πρό*, Lat. *prōd* *prō*, O.Ir. *ro*, Lith. *pra-* O.Bulg. *pro-*, Indg. *\*pro*

'before'. Skr. *ud-rá-* Av. *ud-ra-* a water-animal : Gr. ὕδ-ρο-ς ὕδ-ρᾶ 'water-serpent', O.Icel. *otr* OHG. *ottar* 'otter', Lith. *úd-ra* O.Bulg. *vyd-ra* 'otter'.

Skr. *rikh-* *likh-* 'scratch, tear', *rēkhā-* *lēkhā-* 'scratched streak, stroke, line' : Gr. ἐρείκω 'I tear open, up', Lith. *rėkiū* 'I cut, plough'.

§ 258. Indg. *l*. Skr. *rēcāya-ti* Av. *raēcayēiti* 'leaves, abandons' : Arm. *lē-ane-m* Gr. *λείπω* etc., see § 256. Skr. *śráv-as-* n. 'renown', Av. *sraṇ-ah-* n. 'word, prayer', Skr. *śru-tá-* Av. *srū-ta-* 'heard, renowned' : Arm. *lu* 'audible' (?), Gr. κλέφος κλέος n. 'renown' κλυτός 'renowned', Lat. *in-clutus*, O.Ir. *clū* 'renown' *cloth* 'renowned', Goth. *hlīuma* m. 'ear, hearing', OHG. *Ludo-wīg* 'Κλυτόμαχος', O.Bulg. *slovo* n. 'word'.

Skr. *rōca-tē* 'lights' *rōkā-s* 'light' *lōkā-s* 'a lighting, open space', Av. *raocah-* n. 'splendour' O.Pers. *raucah-* n. 'day' : Arm. *lois*, gen. *lusoy*, 'a light', Gr. λευκός 'white', Lat. *lux lūc-is*, O.Ir. *lōche* 'lightning', Goth. *liuhaþ* 'light', Lith. *laũka-s* 'palish' O.Bulg. *luča* 'beam, ray', root forms *leuq-* and *leuḱ-* (cp. § 467). Skr. *uda-prī-t-* 'swimming in water' *plāv-a-tē* 'swims', Av. *fra-fravaiti* 'wavers to and fro' : Arm. *lua-na-m* 'I wash', Gr. πλείω 'I sail, swim' πλυτός 'washed', Lat. *pluit*, O.Ir. *luath* 'quick', OHG. *flewen flouwan* 'to rinse, wash', Lith. *pláuti* 'to rinse'.

Skr. *lūhya-ti* 'feels a strong desire' : Lat. *lubet libet*, Goth. *liufs* O.Bulg. *ljubū* 'dear'. Skr. *nābhī-la-m* 'private parts' : Gr. ὀμφαλό-ς 'navel, umbō', Lat. *umbi-līcu-s*, O.Ir. *imb-l-iu* 'navel', OHG. *nabolo* 'navel'.

§ 259. Skr. *r* was spoken cerebral (hence the change of prim. Ar. *n* to *ṛ* in its vicinity, § 199), *l* dental.

*r* became *h* in absolute finality. Voc. *mātaḥ* 'O mother' : Gr. μητήρ. *antáh* 'in the inside' : Lat. *inter*. Cp. § 647, 3.

From a liquid with a following dental explosive or nasal often arose a cerebral explosive, or a nasal. *katú-ṣ* *kátuka-s* 'sharp, biting' : Lith. *kartū-s* 'bitter'. *gaṇá-s* 'band, crowd' : Gr. ἀγείρω ἀγορά. *jaṭhāra-* 'belly, womb' : Goth. *kilþei* 'womb'. *āṇi-* 'the part of the leg just above the knee, axle peg' : Gr. ὠλένη ὠλό-ν fr. \*ὠλ-ν-ο-ν, Lat. *ulna*. *paṇa-s* 'wager, stipulation,

promised reward': Lith. *peľna-s* 'profit'. In like manner probably *laš-āmi* 'I long, desire' fr. \**la-ls-*, cp. *lā-las-a-s* 'eager for, desirous', Lat. *lascīvo-s*. It is still unexplained from what point of view such forms, as opposed to others in which the liquid apparently under similar conditions remained, are to be judged. It is not improbable that intermixture of dialects has taken place. Cp. p. 209 foot-note and in addition to the literature quoted there Fröhde Bezenberger's Beitr. III 130 ff.

Nasal from liquid through dissimilation. *cañ-cūryatē* fr. older Ved. *car-cūryātē* 'moves quickly', intens. fr. *car-*. *cañ-cala-s* 'moving to and fro', from *cal-*. *pam-phulyatē*, intens. to *phálati* 'springs assunder'. Cp. § 282.

*r* underwent transposition before certain consonant combinations, e. g. from *darś-* 'see' fut. *drakṣyāmi* (cp. Gr. *δέξομαι*) perf. 2. sg. *dadrāṣṭha* inf. *drāṣṭum*; from *tarp-* 'to satiate one's self' perf. 2. sg. *tatrāpṭha* beside *tatārpṭha*; from *sarp-* 'crawl' fut. *srapsyāmi* beside *sarpsyāmi* aor. *ásrāpsam* beside *ásārpsam*.

§ 260. Avestic. Before *i-* and *u-*vowels an anaptyctic *i* or *u* was prefixed to initial *r-*. *'rista-* part. fr. *raēp-* 'to be connected with'. *'rusta-* part. fr. *raod-* 'to grow forth'. An anaptyctic vowel arose from medial *r* before and after consonants, which, when *r* preceded, was generally represented by *e*. Perf. *dādar<sup>e</sup>sa*: Skr. *dadārṣa*, Gr. *δέδορα*, from rt. *derk-* 'see'. *e* also after *er* = Indg. *r*, *l*, e. g. part. *ker<sup>e</sup>ta-*: Skr. *kṛtá-* 'made', prim. f. *\*qrto-* (§ 288). Other vowels more seldom, e. g. pres. *s<sup>u</sup>ru-nao-mi* from *sru-*: Skr. *śru-* 'hear': *s<sup>i</sup>ri-nao-mi* (*ni-s<sup>i</sup>rinaomi* 'I hand down') from *sri-*: Skr. *śri-* 'direct towards, direct to'. Further *e* was suffixed to final *r*, e. g. *antar<sup>e</sup>* 'between': O.Pers. *atar* Skr. *antár*. Cp. §§ 624. 649, 4.

*r* became spirant before *k*, *p*, *t*, when the next preceding sonant had the chief accent. This pronunciation of the *r* was represented by *hr* before *k*, *p*, but *hrt* became *ṣ*. This law also obtained for *er* = Skr. *r* (§ 288). *mahr-ka-* m. 'death, destruction' fr. \**már-ka-* beside *mar<sup>a</sup>ka-* (with the same meaning) = Skr. *marká-* m. 'an injuring of the sun, a darkening'. *vehrka-*:

Skr. *vṛka-* 'wolf', Indg. \**ur̥go-*. *kehrp-* 'form, body': Skr. *kṣp-* 'form, appearance'. *mašya-* (*mašiya-*): Skr. Ved. *mārtiya-* O.Pers. *martiya-* 'mortal being, man'. *a-meša-*: Skr. *a-mṛta-* 'immortal' beside *mer'ta-*: Skr. *mṛtá-*. Cp. Bartholomae Ar. Forsch. II 35 ff. and § 674.

Rem. Prim. Ar. final *-rt*, *-ṛt* always appear as *-r<sup>o</sup>ḍ*, *-er<sup>o</sup>ḍ*, e. g. *ha-ker<sup>o</sup>ḍ* = Skr. *sa-kṛt* 'once'. The law, whereby *-t* became *-ḍ* (§ 649, 6), was therefore older than the change of *rt* to *ṣ*.

*ur-* was transposed with *u-* prefix, e. g. *urvāta-* n. 'a determining': Gr. *ῥοητός* 'determined, settled'. See § 157.

§ 261. Old Persian. *š*, whose exact pronunciation cannot be closely defined, appears for prim. Ar. *tr* = prim. Iran. *ḫr*. *ši-*: Av. *ḫri-* Skr. *tri-* 'three'. *puša-*: Av. *puḫra-* Skr. *putrá-* 'son'. Gen. *piša*: Av. *piḫrō* Gr. *πατρός* 'of a father'. See §§ 353. 473, 2.

#### Armenian.

§ 262. Indg. *r*. *erek* 'evening': Gr. *ἕρεβος* n. Goth. *riqiz-a-* n. Skr. *rájas-* n. 'darkness', Indg. \**regos*. *e-re-kē* 'three' (*e-* prothetic, § 263): Gr. *τρεις*, Lat. *trēs*, O.Ir. *trī*, Goth. *ḫreis*, O.Bulg. *trije*, Skr. *tráyas*, Indg. \**tréj-es* 'three'. *cer* 'old man': Gr. *γέροντ-* Skr. *járant-* 'old man'. *skesur*, gen. *skesri*, 'mother-in-law': Gr. *ἐκροῦά* Lat. *socrus* Corn. *hweger* Goth. *svaithrō* O.Bulg. *svekry* Skr. *śvaśrū-* 'mother-in-law'. *tu-r* 'gift': Gr. *δῶρο-ν*, O.Bulg. *da-rū*. *dustr*, gen. *dster*, 'daughter': Gr. *θυγάτηρ*.

Indg. *l*. *liz-u-m* 'I lick': Gr. *λείγω* Lat. *lingō* O.Ir. *ligim* 'I lick', Goth. *bi-láigō* 'I lick', Lith. *lėžiù* Skr. *rēhmi léhmi* 'I lick', rt. *leiǵh-*. *ail*, gen. *ailoy*, 'alius': Gr. *ἄλλο-ς* Lat. *aliu-s* O.Ir. *aile* Goth. *aljis* 'other'.

§ 263. *r* became *ṛ* before *n* (occasionally also in other cases without any clear reason). *durn*, gen. *dran*, 'door', an extension of the Indg. st. \**dhur-* with the suffix *-en-*: Gr. Arcad. *θύρ-δα* 'out'. *jeṛn-u-m* 'I warm myself', beside *jeṛ* 'warmth' *jeṛm* 'warm': Gr. *θερός θερμός-ς*, Lat. *formu-s*. Thus also when *r* goes back to Indg. *r*, e. g. *garn* 'lamb': Skr. *úr-an-a-s* (*ur-* fr. \**aur-*, § 157), Gr. gen. *ἄρ-ν-ός*, Indg. \**ur̥+en-* (§ 291).

λ appears in some words for Indg. *r* and *l*, without the special cause being known. *astλ*, gen. *astel*, 'star, constellation': Gr. ἀστὴρ ἄστρο-ν Lat. *stella* fr. \**ster-lā* Bret. *sterenn* Goth. *stairnō* Skr. *stār-* 'star'. *eln*, gen. *elin*, 'hart': Gr. ἔλλός 'a young hart' fr. \*ἐλ-ν-ο-ς, ἔλαφο-ς 'hart' fr. \**el-η-bho-s*, Cymr. *elain* 'hind', O.Bulg. *jel-en-ī* 'hart'.

*br*, *tr*, *bl* were transposed to *rb*, *rt*, *lb*. *surb*, gen. *srboy*, 'clean': Skr. *śubh-rá-s* 'bright, pretty'. *kirtn*, gen. *krtan*, 'sweat': Gr. ἰδρώς. *e-lbair* 'brother' (*e-* prothetic, s. below): Lat. *frāter*, Skr. *bhrātar-*.

Initial liquid developed a prothetic vowel which appears as *e*, *a*:

Original initial liquid. *e-rek* 'evening': Skr. *rājas-*. *aluēs* 'fox': Skr. *lōpāśa-*.

Secondary initial liquid. *e-re-k* 'three': Skr. *trāy-as*. *e-lbair* 'brother': Lat. *frāter*. *a-lbeur* 'a spring' fr. \**bleur*, older \**bley(a)r*: Gr. φρέαρ 'a well' fr. \**φρη-φαρ*.

Rem. *o*-prothesis perhaps in *orc-a-m* 'I break open' and *oib-a-m* 'I bewail'. See Hübschmann Armen. Stud. I 46. 47.

Indg. *r* was dropped in *tes-ane-m* 'I see': Gr. δέρομαι. The reason of its dropping out is unknown.

### Greek.

§ 264. Indg. *r*. ὀρέγω 'I stretch out': Lat. *regō*, O.Ir. imper. *ē-rig* 'erect thyself', Goth. *uf-rakja* 'I lift up'. πέρα 'beyond, further' περάω 'I pass through' πόρος 'passage, ford, way': Arm. *heri* 'far, distant', Lat. *per-egre* 'in a foreign land', O.Ir. *ire* 'ulterior', Goth. *farjan* 'to sail, drive', O.Bulg. *pera* 'I traverse', Skr. *pāra-s* 'more distant, farther'. ὑπὲρ ὑπεῖρ (fr. \**ύπερι*, §§ 131. 645 final 2) 'over' ὑπερο-ς 'pestle': Lat. *s-uper*, Goth. *ufar* 'over' *ufarō* 'thereon': Skr. *upāri* 'above'. πέρδομαι 'I break wind': OHG. *ferzan* 'to break wind', Lith. *pérdžiū* 'I break wind', Skr. *pārdatē* 'breaks wind'. τέρομαι 'I become dry': Lat. *torreō* fr. \**tors-ēō*, Goth. *ga-fairsa* 'I wither', Skr. *tarṣa-s* 'thirst'.



τρῆω (aor. Hom. τρέσ-σαι) 'I flee, tremble' τρέμω 'I tremble': Lat. *tremō*, Lith. *trimù* 'I tremble (with cold)' O.Bulg. *tręsq* 'I shake', Skr. *trásāmi* 'I tremble at, quake'. ἄγ-ρός 'field': Lat. *ager*, Goth. *akrs* 'field', Skr. *ájra-s* 'a plain'. πῦρ πῦρ-ός 'fire': Arm. *hur*, gen. *hroy*, 'fire', Umbr. *pure* 'igne', OHG. *fūr* *fūr* 'fire'. ἄ-κῶ-ρος 'powerless, without authority' κῶ-ρος 'power': Skr. *śū-ra-* Av. *sū-ra-* 'strong, sublime'.

§ 265. Indg. *l*. λέχος n. 'bed' ἄ-λοχο-ς 'bed-mate' (ἀ- fr. ἀ-, § 564): Lat. *lectu-s*, O.Ir. *lige* 'bed', Goth. *liga* 'I lie', O.Bulg. *sq-logŭ* adj. 'consors tori'. κολ-ων-ός 'hill': Lat. *collis*-s fr. \**col-n-i-s*, *ex-cellō*, Ags. *hyll* 'hill', Lith. *kál-n-a-s* 'mountain' *kelù* 'I raise'. μέλδω 'I melt, make liquid': OHG. *smelzan* 'to melt, dissolve'. κλέπ-τω 'I steal': Lat. *clepō*, Goth. *hlifa* 'I steal', Pruss. *au-klīpts* 'concealed'. καν-λό-ς 'stalk': Lat. *cau-li-s* 'stalk' *cau-lae* 'holes, openings', Lith. *káu-la-s* 'bone'.

§ 266. Affections of Gr. *ρ* and *λ* (partly proceeding from Indg. *r*, *l*, § 292).

The one liquid was sometimes put in the place of the other by dissimilation, e. g. κεφαλ-αργιά beside κεφαλ-αλιῖα 'head-ache', to ἄλγος, μορμολύττω 'I frighten' beside μόσ-μορο-ς 'fear', θηλητήρ (Hesych.) beside θηρητήρ 'hunter'; or one of the two liquids was dropped, e. g. φᾶτριᾶ beside φροᾶτριᾶ 'brotherhood, clan', δρύ-φακτο-ς fr. δρύ-φρακτο-ς 'fence', ἔκ-παγλος 'frightful' fr. \*ἔκ-πλαγ-λο-ς, to ἐκ-πλαγῆναι; or the first liquid was changed to a nasal, e. g. γαγγαλίζω 'I tickle' fr. \*γαλαγαλιζω (beside γαργαλίζω). Cp. § 282. Probably also by dissimilation Cret. (Gortyn.) μαίτυρες fr. μάρτυρες 'witnesses'; palatal *l* was the intermediate stage between *ρ* and *ι*.

Initial *ρ*, *λ* underwent vowel-prothesis. ἐ-ρυθρός 'red': Lat. *ruber*, Skr. *rudhirá-s*. ὀρύσσω 'I dig': Lat. *runoō*. ἐ-λαφρός 'nimble': OHG. *lungar*. ἀ-λῖναι 'to spread over, besmear': Lat. *li-nō*, O.Ir. *le-nim* 'I cling to'. Cp. § 626. Ibid. also concerning medial anaptyxis.

The combinations *sr-* and *yr-* became *ř-* i. e. voiceless *r*, the former in prim. Gr., the latter in the course of the individual dialects, e. g. ῥέω 'I flow' fr. Indg. \**srey-*ō, Skr. *srávāmi*, to which

also Corcyr. *ρhoFai* Hom. *ῥοαί* 'streams'; Att. *ῥήτρᾱ* 'a saying' = El. *Φράτρᾱ*. Cp. §§ 164. 565.

Anteconsonantal *λ* was pronounced *l* in Cret. (Russ. *λδ*), and as such passed into *μ*, e. g. *ἀνκά*: Ion. *ἀλκή* 'strength', *θεύγω*: Hom. *θείλω* 'I enchant, cheat' (cp. Lith. § 280).

*λ* before *τ*, *θ* became *ν* in certain Doric districts, e. g. *φίντατος* 'dearest', *ἦνθον* 'I came'.

### Italic.

§ 267. Indg. *r*. Lat. *rē-s*, Umbr. *re-per* 'pro re': Skr. *rā-s* (instr. *rāy-ā*) 'wealth'. Lat. *rēx rēgis*, Osc. *regaturei* dat. 'rectori', Marruc. *regen[a]* dat. 'reginae': Gall. *-rīx* 'king' in *Dumno-rīx* etc., O.Ir. *rī* gen. *rīg*, Skr. *rāj-an-* 'king'. Lat. *ferō*, Umbr. *ferar* 'feratur', Volsc. *ferom* 'ferre', Marruc. *ferenter* 'ferentur': Gr. *φέρω*, Skr. *bhārāmi*. Lat. *vertō*, Umbr. *co-vertu* 'convertito', Osc. *Ἔρσορει* 'Versori, Τροπαίω': Goth. *vairþan* 'to become', Lith. *veĩsti* and *vartĩti* 'to turn, direct to' O.Bulg. *vratiti* 'to turn, direct to', Skr. *vārtatē* 'revolves, rolls'. Lat. *serpō*: Gr. *ἔρπω*, Skr. *sārpāmi*, Indg. *\*sērpō* 'I creep, crawl'. Lat. *termō termen*, Umbr. *termnom-e* 'ad terminum', Osc. *terem-nattens* 'terminaverunt': Gr. *τέρμων* 'boundary' *τέρμα* 'goal', Skr. *tārman-* n. 'point of the offering rod'. Lat. *frīgus*, Umbr. *frehtef* 'refrigerans, frigefaciens': Gr. *ῥίγος* 'frost', prim. f. *\*srīgōs* (§ 570). Lat. *caper capra*, Umbr. *cabriner* gen. 'caprini': Gr. *κάπρο-ς* 'boar', O.Icel. *hafr* 'he-goat'. Lat. *ācer ācris*, Osc. a krid abl. 'acri': Gr. *ἄκρο-ς* 'point', Lith. *asztrū-s* O.Bulg. *ostrū* 'sharp', Skr. *catur-aśra-* 'four-cornered'.

§ 268. Indg. *l*. Lat. *lūx lūcis*, Osc. *Luvkis* 'Lucius': Gr. *λευκό-ς* 'white'. Lat. *luō re-luō so-lūto-s*: Gr. *λῶ* 'I loose', O.Icel. *lǫja* 'to crush, shatter', Goth. *lāus* 'loose', Skr. *lu-nā-mi* 'I cut, cut down, annihilate'. Lat. *gelu*, Osc. *γελαν* 'pruinam': O.Icel. *kala* 'to freeze' Goth. *kalds* 'cold', O.Bulg. *žlédica* 'snow-rain'. Lat. *sōl*: Gr. *ἥλιος* *ἥλιος* Mid. Cymr. *heul* Corn. *houl* Goth. *sauil* O.Icel. *sōl* Lith. *sáulė*, Skr. Ved. *suvar* (gen. *sūr-as*) Av. *hvar*<sup>e</sup> 'sun'. Lat. *flōs flōris*, Osc. *Fluusaí* dat. 'Florae', Sabin. *Flusare* abl. 'Florali': O.Ir. *blāth* 'blossom' Cymr. *blodau*

'flos', Goth. *blōma* m. 'flower' OHG. *bluot* 'blossom'. Lat. *clūni-s*: Cymr. *clun* 'hip', O.Icel. *hlaun* 'buttock', Lith. *szlauni-s* 'hip, upper part of the thigh', Skr. *śróṇi-ś* Av. *sraoni-ś* 'buttock, hip' <sup>1</sup>). Lat. *āla* fr. *\*acslā* (cp. §§ 503. 570): OHG. *ahsla* Ags. *eaxl* O.Icel. *axl* 'axle', prim. Germ. *\*axslō*.

§ 269. Latin. Affections of prim. Lat. *r*, *l* (partly arising from Indg. *r*, *l* § 295).

The one liquid was often put in the place of the other by dissimilation: *r* for *l*, e. g. in *caeruleu-s* 'azure' fr. *caelu-m*, suffix *-cro-* in *lucru-m simulācru-m lavācru-m* etc. from *-clo-* (*saeclu-m*), which arose from *\*tlo-* (§ 367), suffix *-āri-* from *-āli-* in *exemplāri-s militāri-s lūnāri-s* etc. (cp. *aequāli-s nāvāli-s* etc.); *l* for *r*, e. g. in vulgar Latin *pelegrīnu-s* (Italian *pellegrino*) fr. *per-egrīnu-s*. *r* was dropped by dissimilation in *prae-stīgiae* beside *prae-strīgiae*, *frāgāre* beside *frāgrāre* etc. For a like reason nasal from liquid in *cancer cancrī* fr. *\*carcro-*: Gr. *καρκίνο-ς* Skr. *karkaṭa-s* 'crab'. Cp. § 282.

*r* disappeared before *s* + consonant. *com-pecō* 'I constrain' fr. *\*-per(c)-scō* *\*par(c)-scō*, to Skr. *parc-* 'to put in connexion'. *poscō* fr. *\*por(c)-scō*: Skr. *prchāmi* 'I ask', Indg. *\*prk-skō* from rt. *prek-*. *tostu-s* fr. *\*tors-tu-s*, to *torreō*. *Māspīter* beside older *Mārspīter*. *Tuscu-s* beside Umbr. *Tursco-* *Tusco-*.

*ll* fr. *rl*. *stella* from *\*ster-lā*: cp. Gr. *ἀστὴρ* Bret. *sterenn* Goth. *stairnō* 'star'. *agellu-s* fr. *\*ager-lo-s*, older *\*agr-lo-s* (§ 633). *paullu-s* fr. *\*paur-lo-s*: Gr. *παῦρο-ς*.

*ss*, *s* from *rs* (from *rss*) in *prōssum prōsa quōssum sūsum* etc. = *prōrsum* etc. It is uncertain whether the preceding long vowel was here a co-operating factor. This is not proved by *vorsus morsus* etc., since *r* may here have been restored by levelling (cp. *vortō mordeō*).

1) Gr. *κόκκυξ* 'coccyx' will also belong to this category, notwithstanding its problematical vocalism. Cp. the author Zum heut. Stand der Sprachwiss. 70 f.

*ri*, *ro* became *er* through the intermediate stage *r* in *cer-tu-s* = Gr. κριτό-ς, *ager* = Gr. ἀγρό-ς etc. See §§ 33. 623 rem. 1. 633.

Just as *medius* arose from \**mediō-s*, and *mortuo-s* from \**mortuō-s* (§§ 135. 170), so also postconsonantal *l* became sonantal, and thus arose *-ol-*, *-ul-*, *-il-*. This process seems first to have been effectuated in the archaic period.

*pō-culu-m*, older *pō-colo-m*, *sae-culu-m*, *piā-culu-m* (Umbr. *piha-klu* 'piaculorum') etc. beside which also *pō-clu-m*, *sae-clu-m* etc. Analogously *-bolo-*, *-bulo-*, *-bili-* fr. *-blo-* (Gr. *-θλο-*), *-bli-*, as *tabola tabula* fr. \**tablā* (Umbr. *tafle e* 'in tabula'). *angulu-s* (Umbr. *anglom-e* 'in angulum') fr. \**anclo-s* (§ 499), to *ancu-s uncu-s* and OHG. *angul. populus poplu-s* (Umbr. *poplom* 'populum'). *nōmen-culātor* fr. *nōmen-clātor*. Concerning *coculu-m* and *torculu-s* cp. also § 431 c.

Rem. A similar origin of *er* from *r* seems to me very doubtful in pl. *generī* (cp. Gr. γαμβροί), *umeru-s* (cp. Umbr. *onse* 'in umero' Goth. *ams* 'shoulder'), *numeru-s* (cp. Osc. *Niumsieis* 'Numerii'). See § 568, 3.

§ 270. Umbrian. *r* often remains unwritten before *s*, e. g. *fasiu fasiō* beside *farsio* 'farrea', *pesnimu* beside *persnimu* 'precamino'. In like manner the orthography fluctuates with final *r*, e. g. *emantu* beside *emantur* 'emantur', *-pe* beside *-per* 'per, pro'. In these cases *r* must have experienced a weakening.

§ 271. Oscan. *r* and *l* became sonantal before and after consonants, and then arose an anaptyctic vowel. This took the quality of the preceding vowel when the liquid came first in the consonant combination, and that of the following vowel when it did not come first. 1) *aragetud* 'argento', *amiricatud* 'inmercato, non mercato', *Μαμερκιες* 'Mamercius', *teremniss* 'terminibus', *Alafaternum* 'Alfaternorum' to Lat. *albu-s*. 2) *sakarater* 'sacratur' beside *σακρο* 'sacrum' or 'sacra', *pútúrúspíd* nom. 'utrique' beside *pútercí-píd* loc. 'in utroque', *Vestirikíuí* dat. 'Vestricio', *zicolom* 'dicm' beside loc. *zikel[ei]* abl. *ziculud*. Beside these however without anaptyxis *altrei* dat. 'alteri', *altram* 'alteram', *ehtrad* 'extra' etc., see § 627.

Cp. also Pelign. *Alafis* 'Alfus', *Salavatur* 'Salvator', *pristafalacirix* (Lat. \**prae-stabulātrix*) 'antistita', *sacaracirix* (Lat. \**sacrātrix*) 'sacrificans' (-*cr-* fr. -*tr-*, § 367).

### Old Irish.

§ 272. Indg. *r*. *roth* 'wheel', Gall. *petor-ritum* 'four-wheeled chariot' : Lat. *rota*, OHG. *rad* n. 'wheel', Lith. *rāta-s* 'wheel', Skr. *rātha-s* 'vehicle, war-chariot'. *daur* (gen. *daro*) Cymr. *derwen* 'oak' (to which O.Ir. *druid* Gall. *Druidae* 'druids'?): Gr. *δόνυ* 'wood, shaft, spear' *δρῦ-ς* 'tree, oak', Goth. *triu* 'tree', Lith. *dervā* 'resinous wood' O.Bulg. *drēvo* 'wood, tree', Skr. *dāru drū-* Av. *dāuru* n. 'wood'. *orc* 'pig' : Gr. *πόρκο-ς* Lat. *porcu-s* OHG. *farh farah* Lith. *pařsza-s* O.Bulg. *prase*, prim. f. \**porĕo-s* 'pig, sucking-pig'. *brai* Mid. Ir. 'eye-brows' : Gr. *ὀφρῶ-ς* OHG. *brāwa* O.Bulg. *brŭv-ŷ* Skr. *bhrū-ṣ* 'eye-brow'. *fe-r* 'man' : Lat. *vir* Goth. *vair* Lith. *výra-s* Skr. *vīrā-s*, Indg. \**yi-ró-s* and \**yi-ró-s* 'man'. Comparative suffix Indg. -*tero-* : *air-ther* 'East' (to *ar* 'before, ante') *lērithir* 'more diligent'. Gr. *πό-τερο-ς* 'uter' *ὠμό-τερο-ς* 'rawer', Lat. *i-teru-m*, Skr. *ka-tará-s* 'uter'. *e-ter e-tir* 'between' : Lat. *in-ter*, Skr. *an-tár*.

§ 273. Indg. *l*. *lōthur* Mid. Bret. *louazr* 'alveus, 'canalis' Gall. *lautro* 'balneo' : Arm. *log-ana-m* 'I bathe myself', Gr. *λούω* 'I wash' *λουτρό-ν* 'bath', Lat. *lavō lautu-s*. *gel* 'white' : Lat. *helus* (*holus, olus*), *helvo-s*, OHG. *gelo* (infl. *gelawēr*) 'yellow', Lith. *želiū* 'I grow green' O.Bulg. *zeliže* n. 'greens, vegetables' *zelenū* 'green', Skr. *hāri-ṣ* Av. *zairi-ṣ* 'yellowish'. *salann* Cymr. *halan* 'salt' : Arm. *ալ* (gen. *ալի*) Gr. *άλς* Lat. *sāl salis* Goth. *salt* O.Bulg. *soŭ* 'salt'. *melg* 'milk' : Gr. *ἀμέλω* 'I milk', OHG. *melchan* 'to milk', Goth. *miluks* 'milk' (§ 628), Lith. *mélėu* 'I milk', O.Bulg. *mlēsti* 'to milk'. *lār* Cymr. *llawr* 'pavement, floor' : Ags. *fłōr* 'house-floor' MHG. *vluor* 'corn-field, ground, soil'.

§ 274. A transposition of vowel + liquid is assumed in *flaith* 'dominion' (Goth. *valdan* 'to rule'), *frass* 'shower of rain' fr. \**urastā* (Skr. *varṣā-s* 'rain') and in many other words (Zeuss-Ebel G. C. 168, J. Schmidt Voc. II 370 ff., Windisch Ir. Gramm. § 79). It is unknown to us within what limits this sound-

process is to be acknowledged and by what it has been occasioned.

Rem. A great number of the examples brought forward are to be separated viz. all those cases in which *ri re*, *li le* depend upon Indg. *r*, *l* (§ 298), and those in which the liquid with the accompanying vowel was the continuation of *r*, *l* specially developed in Ir. through *samprasāraṇa*, as *du-fu-tharcair* 'voluit' fr. \**du-fú-thycair* from *-thracair* (§ 634).

### Germanic.

§ 275. Indg. *r*. Goth. *raþjō* 'account', OHG. *redia reda* 'account, a talking over, speech': Lat. *ratio*. OHG. *riozan* Ags. *reótan* 'to complain, weep', OHG. *rōz* 'a weeping, complaining': Lat. *rudō* 'I bray', Lith. *raudà* 'plaint' O.Bulg. *rydaja* 'plaint', Skr. *rudāmi* 'I lament, weep'. Goth. *ga-tairan* 'to destroy, demolish', OHG. *fir-zeran* Ags. *teran* 'to loosen, destroy': Gr. *δέρω* 'I skin, flay', Lett. *nū-daras* f. pl. 'chips of bark' O.Bulg. *dera* 'I skin', Skr. perf. *dadāra* 'he burst'. Goth. *ga-dars* OHG. *gi-tar* perf. 'I dare, venture': Gr. Aeol. *θέρσος* 'courage', *Θερότης Θερόπιπος* (*θέρσος*: *θάρσος* = *ένθος*: *πάθος*), Skr. *dhārṣāmi* 'I dare, venture'. Goth. *frāihnan* Ags. *friznan* O.Icel. *fregna* 'to ask': Lat. *precor procu-s*, Lith. *praszyti* O.Bulg. *prošiti* 'to demand, ask for', Skr. *praś-nā-s* 'a questioning'. Goth. *tag-r* n. OHG. *zahar* m. 'tear': Gr. *δάκρυ* Lat. *dacruma lacrima* O.Bret. *dacr* O.Ir. *dēr* 'tear'. Nominal suffix Indg. *-tro-*: Goth. *muír-þr* Ags. *mor-þor* n. 'murder', OHG. *ruo-dar* n. 'oar': cp. Arm. *araur*, gen. *arauroy*, 'plough' (*-ur-* = *-tr-*, § 360), Gr. *ἄροτρον* 'plough', Lat. *claus-tru-m* 'inclosure, bolt', Skr. *śró-tra-m* 'ear'.

§ 276. *l*. Goth. *láu-n* OHG. *lōn* O.Icel. *laun* 'pay, reward': Gr. *ἀπολαύω* 'I enjoy' *ληΐς* 'booty', Lat. *lucru-m*, *Laverna* 'goddess of thieves', O.Ir. *lō-g luag luach* n. 'pay, reward' (?), O.Bulg. *lov-ŭ* 'hunt, capture'. Goth. *lisan* OHG. *lesan* O.Icel. *lesa* 'gather, collect': Lith. *lėsti* 'to pick up with the beak'. Goth. *viljáu* opt. 'velim' pl. *vileima* 'velimus', inf. *viljan* OHG. *wellan*, OHG. *wala* f. O.Icel. *val* n. 'choice': Lat. *velim velle*, Lith. *vėlyti* 'to wish, grant, advise' O.Bulg. *voliti* 'to be willing', Skr. *va-vāra* perf. 'chose himself, preferred' *vāra-s* 'a wish'. Goth. *valdan* OHG. *waltan* 'to rule,

govern' : Lat. *valeō*, O.Ir. *flaith* f. 'dominion'. Goth. *hlutrs* (*ū*?) OHG. *hlūtar* 'clear, pure' : Gr. *κλύζω* 'I wash out, clean' fr. \**κλυδ-ζω*, *κλύδων* 'a wave'. OHG. *slingan* 'to entwine, wind, to creep like a serpent', O.Icel. *slyngva slyngja* 'to sling' : Lith. *slenkū* 'I crawl' *stankà* 'creeper', O.Bulg. *slakū* 'crooked', rt. *slenq-*. OHG. *nebul* 'fog', O.Icel. *nisl-* in compounds 'darkness' : Gr. *νεφέλη*, Lat. *nebula*, O.Ir. *nēl*.

### § 277. West Germanic.

Examples of dissimilation. In OHG. *l* from *r*, e. g. in *murmulōn murmulunga* beside *murmurōn* 'to murmur' *murmurunga* 'a murmuring' : Lat. *murmurāre* 'to murmur, grumble', Gr. *μυρμύρειν μορμύρειν* 'to murmur, roar, ripple'; in the loanwords *turtul-tūba* fr. Lat. *turtur*, *martela* beside *martera martra* 'torture, rack' *martolōn* beside *martorōn martrōn* 'to torture, rack' fr. Greek-Lat. *martyr martyrium*. Cp. § 282. Dropping of *r*, *l*. OHG. *criskimmōn* beside *criscrimmōn criscrimmōn* 'to gnash the teeth with rage', cp. OS. *gristgrimmo* 'a gnashing of teeth'. It is not so certain that OHG. *bior* Ags. *beōr* O.Icel. *bjōrr* 'beer' are related to OHG. *briuwan* 'to brew', Greek-Thrac. *βῆρο-ν* a kind of beer, Lat. *dē-frūtu-m*; in case they do, the dropping of the root *r* must be ascribed to the prim. Germ. period (\**b(r)eu-ra-*). Many bring Goth. *fugls* OHG. *fogal* 'bird' together with OHG. *fliogan* 'to fly'; the dissimilatoric disappearance of the *l* would also here be prim. Germ. (\**f(l)uz-la-*).

In the final syllable of nouns with *r-* and *l-* suffixes, when *r* and *l* followed a spirant or explosive, through the disappearance of the short vowel (§ 635) after the liquid, there arose in West Germ. *ɣ* and *ʎ* out of which a new vowel was developed, in OHG. OS. *a*, Ags. *e*, *o*. Nom. acc. OHG. *acchar* OS. *accar* Ags. *æccer* 'field' = Goth. nom. *akrs* acc. *akr*, Gr. *ἀγρός ἀγρό-ν*; OHG. *fogal* OS. *fugal* Ags. *fuzol* 'bird' = Goth. nom. *fugls* acc. *fugl*. (It is possible that liquids were also spoken syllabic in Goth., *akrs akr*, *fugls fugl*<sup>1)</sup>). The anaptyctic vowel in

1) The contrast between *vair stiur* fr. \**vairz* \**stiurz* and *akrs* speaks for *akrs* (§ 660, 6). But monosyllabic *akrs* may then have arisen from dissyllabic *akrs*.

OHG. forced, its way from the final into the medial syllable of these nouns and their derivatives, at first after short syllables, and then later after long also, e. g. *acchares* 'of a field', *fugalōn* 'to catch birds' (cp. Sievers in Paul-Braune's Beitr. V 90 ff.). Here must further be mentioned the development of a vowel between liquids and *h* which spreads throughout the whole extent of OHG., and in which OS. also to a certain extent shared, e. g. OHG. OS. *ferah* 'soul, life' : Goth. *fairhvu-s* 'world'; OHG. OS. *bi-felahan* 'to hide, bury' : Goth. *filhan*. Anaptyxis is also found between *r* and guttural and labial consonants especially in Oberdeutsch (Upper German), e. g. *purag puruc* beside *burg* 'citadel, city' : Goth. *baúrgs*; *peragan* beside *bergan* 'to conceal' : Goth. *baírgan*; *arapeit* beside *arbeit* 'work, toil' : Goth. *arbáips*; *aram* beside *arm* 'arm' : Goth. *arms*. The vowels thus developed frequently become assimilated to some vowel in their vicinity, e. g. *hungirita* 'hungered' to *hungar* 'hunger'; *fingerin* 'finger-ring' to *finger* 'finger'; *wuntorōn* beside *wuntarōn* 'to wonder at'; *puruc* beside *purag* 'city'; *piricha* = *pircha bircha* 'birch-tree' : Lith. *bérža-s*.

Rem. 1. In these cases it is partly a question of a prim. Germ. *r* and *l*, which depended upon Indg. *ʀ*, *ʁ*, e. g. the orig. *f* of OHG. *burg* Goth. *baúrgs* must be put down as *\*bhʀgh-*, s. § 299.

Rem. 2. Cp. the anaptyxis with *v* § 180, and nasals § 215.

*l* became geminated in West Germ. before *i*, e. g. OHG. *willio willo* OS. *willio* Ags. *willa* 'wish, desire' : Goth. *vīlja*, rt. *uel-*. See § 143 p. 129. Cp. the similar gemination of nasals § 216 and spirants and explosives (§§ 529. 531. 535. 540).

### Baltic-Slavonic.

§ 278. Indg. *r*. Lith. *rúgiu ráugéju* O.Bulg. *rygaja* 'I have eructation, belch' : *ἐρεύγομαι* 'I disgorge', Lat. *ē-rūgō* 'I vomit forth', OHG. *it-ruchen* 'to chew over' Ags. *roccettan* 'to spit out'. Lith. *pūrai* pl. 'winter-wheat', O.Bulg. *pyro* n. 'spelt' : Gr. *πῦρό-ς* 'wheat'. Lith. *kertù* 'I hew', O.Bulg. *črěsti* 'to cut' : Skr. *kártana-m* 'a cutting'. Lith. *barzdà* O.Bulg. *brada* 'beard' :



Lat. *barba* OHG. *bart* 'beard'. Lith. *kraūja-s* 'blood' *krūvina-s* 'bloody', O.Bulg. *krūv-ŭ* 'blood' *krūvīnū* 'bloody': Gr. κρέας 'flesh', Lat. *cruor*, O.Ir. *crū* 'blood', OHG. *rō* (infl. *rawēr*) O.Icel. *hrār* 'raw, uncooked', Gr. *kravya-m* *kraviš-* 'raw meat'. Lith. *bėbru-s* and *bėbru-s* O.Bulg. *bebrū* 'beaver': Lat. *fiber* O.Corn. *befer* (to which Gall. *Bibr-ax*) OHG. *bibar* 'beaver', Skr. *babhrū-ṣ* adj. 'brown', as subst. a kind of great ichneumon, Indg. *\*bhebhru-s*.

§ 279. Indg. *l*. Lith. *lōju* 'I bark', O.Bulg. *laja* 'I bark, scold': Gr. λῆ-ρο-ς 'idle talk', Lat. *la-trāre* 'to bark', Goth. *lai-lōun* 'they reviled' Skr. *rāya-ti* 'barks, barks at'. Lith. *pelė* 'mouse' *pātsa-s* 'faded', O.Bulg. *plavū* 'whitish' *pelesū* 'gray': Gr. πελιό-ς *πελιδρό-ς* *πελλό-ς* 'colourless, gray, pale', *πολιό-ς* 'gray, hoary', OHG. *falo* (infl. *fulawēr*) 'pale, faded', Skr. *palitā-s* 'gray'. Pruss. *dalpta-n* a smith's tool for drilling holes, O.Bulg. *dlato* n. 'chisel': OHG. *delban* Ags. *delfan* 'to dig'. Lith. *blėndžiū-s* 'I darken myself' (of the sun) *prý-blindė* 'evening twilight', O.Bulg. *blėda* 'I err': Goth. *blinds* 'blind' *blandan sik* 'to intermingle'. Lith. *mig-là* and *myg-là* (also *myglà* and *myglė*) O.Bulg. *mīg-la* 'fog': Gr. Hom. *ὀμίχ-λη* (Skr. *mīhirā-* 'cloud', s. § 287).

### § 280. Lithuanian.

The difference between *l̄* (hard) and *l* (soft) is sharper than elsewhere in the south-eastern districts ~~being~~ on those where Slav. is spoken; in some parts of the former territory, e. g. in Godlewa (Govern. Suwalki), antecorsonantal *al* sounds almost like the diphthong *au*, e. g. in *málka* 'fire-wood', cp. Cret. *αὐκά* = *ἀλά* § 266 1). Following palatal vowels then also occasion a softened pronunciation of the liquid, when they are separated from it by one or more consonants (the separating consonants are also thus softened); hence e. g. nom. sg. *tílla-s* ('bridge'), but loc. *tílle*.

Rem. The East Lith. dialect of Szyrwid († 1631) not only shows *l̄* before *a*, *o*, *u*, but also before *e* and *é*, e. g. *slepiu* 'I conceal', *saulė* 'sun'. Garbe, Lit. u. lett. Drucke des 16. u. 17. Jahrh. IV p. XXXIV sqq.

1) Cp. also Polab. *vāuk* 'wolf', *vāuno* 'wool' = Slov. *volk*, *volna*; French *haut* = Lat. *altus*; Du. *woud* = Mod.HG. *wald*, Swiss-Alem. (Bero-

Dissimilation. *katruļ* 'in what direction? whither?' fr. \**katruř*, cp. *kuř*, *kituř*. The ending of the so-called verba punctiva *-eriu* (1. sg. pres.) became in East Lith. (also in Lett.) *-eliu* when preceded by *r*, e. g. *bárkszteliu* fr. *bárkszteriu* 'I knock a little' (then by analogy also *stúkteliu* 'I beat a little' for *stúktteriu* etc.). *purpulnīs* 'purple' from and beside *purpurinīs*. Analogously Lett. *skrōdelis* 'tailor' fr. *skrōderis*. Cp. § 282.

### § 281. Slavonic.

*-tel-ř*, the suffix of nomina agentis, opposed to *-ter-* *-tor-* etc. of other languages (e. g. *da-tel-ř* 'giver': Gr. voc. *σῶ-τερ* nom. *δμή-τεροα* acc. *δῶ-τορ-α*, Lat. *da-tor*, Skr. *dā-tar-*) seems to have come by its *l* through dissimilation, and to have arisen regularly in forms like *žri-telī* 'sacrificer' *ora-telī* 'arator' *ori-telī* 'destroyer'. Cp. § 282.

Rem. 1. It seems to me improbable that the Lith. fem. *-klė* belongs directly here, i. e. to feminines like Gr. *ψάλ-τρια* Lat. *vic-trī-x* Skr. *dā-trī* (J. Schmidt Kuhn's Ztschr. XXV 29). I connect it with *-kla-* = Lat. *-clo-* from \**-tlo-*.

Prim. Slav. interconsonantal *-or-* *-ol-* and *-er-* *-el-* appear in O.Bulg. as *-ra-* *-la-* and *-rě-* *-lě-*. *prasę* 'sucking-pig': Lith. *pařsza-s*, Lat. *porcu-s*. *brada* 'beard': Lith. *barzdà*, Lat. *barba*, OHG. *bart*. *vlakū* 'draught' in *oblakū* 'cloud' from \**obvlakū* (properly 'a veiling cover'): Lith. *úž-valka-s* 'a cover', Gr. *ἰλό-ς*. *brěza* 'birch-tree': Lith. *bėrža-s*, OHG. *pircha*. *vlěka* 'I draw': Lith. *velkū*, Gr. *ἔλω*. Corresponding to this mode of treatment, initially, e. g. *ralo* 'plough' fr. \**or-dlo* (*-dlo-* = Gr. *-θλο-*): cp. Lith. *ár-klā-s* 'plough' (*-klā-* = Lat. *-clo-* from \**-tlo-*); *ra-tajř* 'husbandman': Lith. *ar-tóji-s*; but *alkati* beside *lakati* 'to hunger': Lith. *álkti* 'to hunger'.

Rem. 2. In the treatment of *o, e* + liquid between consonants the Slav. languages took various directions: O.Bulg. *prasę* Serv. *práse* Czech *prase* — Polish *prosię* Upper Sorab. *proso* Lower Sorab. *prose* — Russ. *porosjá*. Perfect agreement only exists in a few words initially, e. g. O.Bulg. *ralo* = Serv. Slov. Russ. *ralo* Czech *rádlo* Pol. Upper Sorab. Low Sorab. *radlo*. The investigations hitherto made concerning these phenomena

Münster; s. Brandstetter Die Zischl. der Mundart von B.-M. 1883 p. 12) *fergauštere* = *vergalstern*.

(cp. especially J. Schmidt Vocal. II 66 ff., Leskien Declin. p. XVI ff., Arch. f. slav. Phil. III 86 ff.) have not yet led to a solution of the question, what the change was, which the pre-Slavonic forms first underwent in prim. Slav. and what formed the last previous stage for all the individual dialectical formations. For the position between consonants it seems to me most probable that *or ol, er el* first of all became *gro llo, gre lle*, e. g. \**porse* became \**prose*. It is highly probable that the initial differences, which cannot be here brought forward in detail, represent sentence-doubles.

Rem. 3. The abandoning of the forms \**porse* \**volkū* is connected with a characteristic of the whole prim. Slav. history of sounds, which may here be disposed of<sup>1</sup>). The Slav sought to restore everywhere an open syllable (ending in a sonant). Compare besides the sound-change here in question, which in the first instance is supported by the change of \**zŕno* to \**zrĭno* etc. (§ 302), the development of nasal vowels from vow. + nas. before consonants, e. g. *svĕtū* 'holy' fr. \**sventū*, § 219; the simplifying of consonant groups, as e. g. *netijū* 'nephew' fr. \**neptijū*, *sūnū* 'sleep' fr. \**sūpnū*, § 545; the dropping of final consonants, as *nebo* 'sky' fr. \**nebos*, § 665, 4. A similar phenomenon exists in French. The tendency prevails also here to make all syllables open, the reason of which is here due to the weak expiratory accentuation (Ph. Kaufmann Die Gesch. des consonantischen Auslauts im Franz., Lahr 1886). Nothing prevents our accepting a like reason for Slavonic.

### Changes of liquids in the prim. Indg. period.

§ 282. The beginning of the processes of dissimilation, referred to in §§ 259. 266. 269. 277. 280. 281, probably goes back to the prim. Indg. period.

Already at this period e. g. an original *ger-ger-* (or with other vowel-grade, e. g. *ger-gŕ-*) 'to gargle, swallow, gulp down' may have become *ger-gel-* by dissimilation or an orig. *gel-gel-* (*gel-gl-*) have become *ger-gel-* (cp. Lat. *gurguliō*, OHG. *querechela* 'gullet, windpipe', Lith. *gargalū'ju* 'I gargle, rattle in the throat'; the latter may of course be a loan-word from German, Mod.HG. *gurgel* is borrowed from Lat.<sup>2</sup>). A satis-

1) My attention was drawn to it many years ago by Rob. Scholvin, but I do not know whether it has been observed elsewhere.

2) Forms like Gr. γέγγερος· βράγχος (Hesych.), γαργαρέων 'uvula' do not stand in the way of this theory. For firstly dissimilation need not have been extended to all the derivatives of reduplicated roots, and secondly, the original equality may have been restored again partly by assimilation and partly by form-association.

factory explanation is thus arrived at for a number of roots ending in a liquid, and often having full reduplication, which also show now *r*, now *l* unreduplicated finally (cp. e. g. Lat. *vorāre* and *gula*). It would be worth while to investigate more fully whether the nominal suffixes *-tro-* and *-tlo-*, beside *-dhro-* and *-dhlo-* are due to dissimilation.

In like manner the substitution of a nasal for a liquid by dissimilation might have had its beginning in the prim. Indg. period, cp. e. g. Skr. *bam-bhara-s* 'bee', Gr. *πεμ-φορηδών* a kind of wasp, cp. the author Curtius' Stud. VII 329. 357 f.

## B. LIQUIDS AS SONANTS. 1)

§ 283. The question, how many different, and what liquids were spoken in the Indg. prim. period (§ 254), equally concerns both sonant and consonant liquids. As sonants we represent them by *l* and *r*, and as consonants by *l* and *r*.

Sonantal liquids like syllabic nasals were spoken both long and short in the Indg. prim. period (§ 222), but mostly short, and from a morphological point of view they corresponded, when long, just as long sonantal nasals, to *ī* and *ū*, see § 312.

### 1. Short sonant liquids.

§ 284. Owing to the treatment in the developments of the individual languages we distinguish three cases.

1. Before explosives, spirants, nasals, *u* and finally, e. g. *\*mr-tó-s* part. fr. root *mer-* 'die', Skr. *mr-tá-s*; *\*ou̯dhṛ* nom. acc. neut. 'udder', Gr. *οὔθηρον*.

2. Before *i*, e. g. *\*mr-íé-* pres. st. from root *mer-* 'die', Lat. *mor-ior*.

3. Before sonants in which case *r* and *l* were spoken as glides, e. g. *\*grr-ú-s* 'heavy', Skr. *gurú-ṣ*. Cp. § 223, 4.

1) Cp. the literature quoted in the foot note to p. 190. To the proofs that sonant liquids were spoken in the Indg. prim. period, we add § 285 rem. a new, and as it seems to us, indisputable one.

The following is a survey of the usual representation of *r* in the individual languages arranged from these three points of view. (The treatment of *l* is analogous).

	Skr.	Av.	Arm.	Greek.	Ital.	Kelt.	Germ.	Balt.	Slav.
1.	<i>r</i>	<i>er</i>	<i>ar</i>	<i>ρα, αρ</i> (initially and abso- lutely finally only <i>αρ</i> )	<i>or</i>	<i>ri</i>	<i>ru, ur</i>	<i>ir</i>	<i>rĭ</i>
2.	<i>ur, ir</i>	<i>er</i>	<i>ar?</i>	<i>αρ</i>	<i>or</i>	?	<i>ur</i>	<i>ir</i>	<i>ir</i>
3.	<i>ur, ir</i>	<i>ar</i>	<i>ar</i>	<i>αρ</i>	<i>or</i>	<i>ar</i>	<i>ur</i>	<i>ir</i>	<i>ir</i>

### Prim. Indg. period.

§ 285. 1. Before explosives, spirants, nasals, *u* and finally.

\**mṛ-ti-s* 'dying, death' from rt. *mer-* : Lat. *mors mortis*, Lith. *mirtī-s* O.Bulg. *sū-mrĭtĭ*, Skr. *mṛti-ṣ*; \**mṛ-tó-* part. from the same root (neut. as abstract noun) : OHG. *mord* Ags. O.Icel. *mord* n. 'murder', Skr. *mṛtá-s* 'dead' *mṛtá-m* 'death'. \**bhṛ-ti-s* 'a bearing, bringing' : Lat. *fors forte*, O.Ir. *brith* 'a bearing', Goth. *ga-bairþs* OHG. *gi-burt* 'birth', Skr. *bhṛti-ṣ* 'a bearing, nursing, maintenance'. Tense stem \**dyṛk-é-* from rt. *derk-* 'see' : Gr. *ἔδραξε δρακών*, Skr. *ádṛṣa-t dṛṣá-nt-*. \**uṛt+tó-* part. from root *uert-* 'turn, direct to' : Lat. *vorsu-s*, O.Bulg. *vrĭsta* f. 'state, condition', Skr. *vṛttá-s* part., *vṛttá-m* subst. 'state, situation'. \**qetuy-to-s* 'fourth', to \**qetuer-* 'four' : Gr. *τέταρο-ς τέταρο-ς*, Lith. *ketvĭrta-s* O.Bulg. *četvĕrĭtĭ*. \**pō-tṛ-* \**bhrā-tṛ-* antec consonantal weak forms of the stems \**pātér-* 'father' \**bhrā-tor-* 'brother' : Gr. dat. plur. *πατρά-σι*, Goth. dat. pl. *fadru-m*, Skr. loc. pl. *pitṛ-ṣu*; Skr. *bhrātṛ-putra-* 'brother's son', Goth. *brōþru-lubō* 'brotherly love' (the latter may also like the nom. pl. *brōþrjus* be a new formation).

\**uḷgo-s* 'wolf' from rt. *uēlq-* 'drag, tear along'. Arm. *gail*, Goth. *vulfs*, Lith. *vilka-s* O.Bulg. *vlūkū*, Skr. *vṛka-s*. Weak

present st. form \**pi-pl̥*- from rt. *pel-* 'fill': Gr. *ἐμ-πίπλα-μεν*, Skr. *pīpṛ-más*; part. \**pl̥-nó-s* 'filled, full' from the same root: Goth. *fulls* (fr. prim. Germ. \**ful-na-z*, § 214 p. 181), Lith. *pilna-s* O.Bulg. *plünū*, Av. *per<sup>e</sup>na-*.

Rem. In the same manner as suffix nasals forced their way into the interior of the root syllable, when this contained an *i* or *u*, e. g. \**juwag-* (Skr. *yuñjátē*, Lat. *jungō*, Lith. *jūngiu*) fr. \**jug-n-* (s. § 221), so also when the root contained *r* or *l* as sonant. E. g. Skr. *kṛntāmi* 'I cut' *kṛntā-tra-m* 'chip, refuse', Lith. *krintū* 'I fall off' (of leaves, fruit etc.), rt. *gert-*. Lith. *drijs-* in *drijs-ti* 'to become courageous, venture' fr. *dhṛs-* (cp. Skr. *dhṛṣṇú-ṣ* 'courageous'), rt. *dhers-*. O.Bulg. *krēt-* in *krētaja* 'flecto' *krēna* 'deflecto' (fr. \**krēt-na*, § 545) fr. \**qṛnt-* (cp. Skr. *kṛnāt-ti* 'twists thread, spins'), rt. *gert-*. Goth. *vruggō* f. 'snare' fr. \**wṛng̥h-* from root *werg̥h-* (OHG. *wurgen* 'to strangle' MHG. *er-wergen* 'to strangle', Lith. *veržiū* 'I string together, straiten'). O.Ir. *lingim* 'I leap' (cp. perf. 3. sg. *le-blaing* for \**fe-blaing* after the initial sound of the pres. form) fr. \**ul̥wag-*, to Skr. *vālgāmi* 'I leap' (§ 173), is uncertain. And in a similar manner, as e. g. in Lat. the nasal extended itself from the pres. *jungō* to other forms belonging to the same root (*junctu-s*, *con-junx* etc.), there was formed in Lith. after *drijs-* a pres. *drešū* (cp. *mežū* 'I make water' for *minžū* in Bezenberger's Beitr. zur Gesch. der lit. Spr. 41, after the ratio of *renkū*: *rinkaū* etc.) and a fem. subst. *drašū* 'boldness'; in Slav. after *krēt-* an adj. *kratū* 'tortus'; in Germ. after *wurag-* a pres. \**wriwagō* (Ags. *wriwzan* 'to turn, press' OHG. *ringen* MHG. *ringen* 'to move to and fro, wind with exertion') and an adj. \**wriwaga-z* (O.Icel. *rangr* 'crooked, wrong' M.Eng. *wrang* Mod.Eng. *wrong*); in Ir. after \**ul̥wag-* the perf. *le-blaing* (s. above), whereas Lith. *krintū*, placed on a line with *limpū* etc., gave the impetus for the formation of *kritaū* *krišiu* etc. These nasalised forms of roots in liquid + consonant in the European languages furnish the best proof of the existence of sonant liquids in prehistoric times. For the suffix nasal can only have been forced over by a root form like *dhṛs-*, not by one like *dhers-* and *dhors-*, since forms like *dherns-* or *dhorns-* are unheard of (just as beside *juwag-* there appears no *jeuwag-* or *jowag-*).

Final *r*, *l*. Skr. nom. acc. neut. *sthā-tṛ* 'standing', beside which *sthā-tūr* (Lanman Noun-inflection p. 422) as representative of original \**stā-tṛr* i. e. of a form originally only used before initial sonants, see § 287; *sthātṛ*: *sthātūr* = *dāśa* 'ten': *pādām* 'pedem' (§ 231 rem.). Gr. *οὔθ-αρ* 'udder' *ἥπ-αρ* 'liver' fr. \**-r*, beside which *ῥδ-ωρ* 'water' probably fr. \**-r̄*. Lat. *jec-ur fem-ur* fr. \**-or* = \**-r*, beside which *ūb-er*, whose *-er* can be explained from \**-ar* \**-r̄*. *-r*: *r̄* = *-u*: *-ū* (in Skr. *purū* Gr. *πολύ*: Skr. *purū* Lat. *cornū*). Armen. *albeur* (gen. *alber*) 'source, spring'

fr. \**albey(a)r* (§§ 263. 651), Gr. *φρέαρ* 'a well' fr. \**φρηφαρ*. Cp. § 306 and the accidentence.

Gr. particle *ἄρ* indicating a natural sequence etc., Lith. *iř* 'and, also' fr. \**γ*. The form *ρά* was probably developed before forms beginning with a consonant. *ἄρα* and Cypr. *ἔρ(α)* fr. *ρά* by prothesis (§ 266)? Cp. the author Ber. d. sächs. Ges. d. Wissensch. 1883 p. 37 ff.

§ 286. 2. Before *i*. \**mγ-ιέ-* pres. stem from rt. *mer-* 'die' : Lat. *mór-ior*, Av. *mer<sup>o</sup>-yēmi*. \**spγ-ιέ-* pres. fr. root *sper-* : Gr. *σπαίρω ἀσπαίρω* 'I struggle convulsively', Lith. *spiriù* 'I push with the foot'. \**sqł-ιέ-* pres. from rt. *sqel-* : Gr. *σκάλλω* 'I stir up, hoe', Lith. *skilù* 'I strike fire'.

§ 287. 3. Before sonants with a following *r*, *l* as glide. \**grr-ús* 'heavy' : Gr. *βαρ-ύς*, Goth. *kaír-u-s*, Skr. *gur-ú-š*. \**grr-é-* pres. st. from *ger-* 'devour' : O.Bulg. *žvr-a*, Skr. *gir-āmi gil-āmi*, with change of accent *girāmi* (Atharvaveda VI 135, 3). Nominal suffix *-rro-* beside *-ro-*, like *-iio* beside *-io-* (§ 120) and *-yno-* beside *-no-* (§ 227), e. g. \**is-grrós* : Gr. Corcyr. *ιαρός* Bœot. etc. *ιαρός* (Hom. Att. *ἰερός*, formed after the analogy of *διδερός φοβερός* etc.) 'active, fresh, strong, holy', Skr. *iš-irás* 'hastily, active, fresh' beside Hom. *ἰρός* Lesb. *ἰρο-* fr. \**is-ro-* (cp. Osthoff Morph. Unt. IV 149 ff., Zur Gesch. d. Perf. 439); Skr. *rudh-irás* 'red' beside Gr. *ἰρυθρός*; Gr. *ἰθ-αρός* 'clear, serene' beside Skr. *īdh-r-īya-* 'belonging to the clear sky'; Gr. *ἰδ-αρός* 'watery' beside *ἄν-υδ-ρο-* 'waterless'; *σιν-αρός* beside *σινδ-ρός* (for the *-d-* see § 204 p. 170) 'injurious'; cp. also Skr. *mih-irás* 'cloud' beside Hom. *ὀμίχ-λη* O.Bulg. *mǔg-la* 'fog' (§ 279). Root form *tll-* beside *tel-* : Gr. *τάλ-ας* 'enduring', O.Lat. *tulō* 'I endure', Goth. *þuláiþ* 'endures', O.Bulg. *tīl-o* 'bottom' (properly 'surface', cp. Skr. *tal-a-s* 'surface, bottom'), Skr. *tul-ā-* 'balance' *tul-aya-ti* 'he raises up'.

#### Aryan.

§ 288. 1. Indg. *r* (*l*) = Skr. *r*, Av. *er* (*ehr* before *k* and *p*, and *eř* fr. \**ert* in chief accented syllables, in other cases

before consonants *er<sup>e</sup>*, see § 260), O.Pers. *ar*; the pronunciation of this O.Pers. *ar* must still have been different from that of *ar* = prim. Ar. *ar* (e. g. inf. *cartanaiy* 'to make'); it was perhaps *r* (cp. Hübschmann Kuhn's Zeitschr. XXVII 108 ff.).

Skr. *prchāmi* Av. *per<sup>e</sup>sāmi* 'I ask', O.Pers. *aparsam* 'I asked' (= Skr. *ápřcham*) : Lat. *poscō* fr. \**por(c)-scō*, Indg. \**prk̄-skō*; Skr. *prchā-* 'question, inquiry' : OHG. *forsca* 'investigation, question', Indg. \**prk̄-skā-* f., from rt. *prēk̄-*. Skr. *kṛ-tā-* Av. *ker<sup>e</sup>-tā-* O.Pers. *kar-ta-* 'made', part. from rt. *qer-*. Skr. *dhṛṣ-ṇó-mi* Av. *der<sup>e</sup>š-nao-mi* 'I dare, venture', O.Pers. *a-darš-nau-š* 'he dared'; Skr. *dhṛṣ-á-nt-* part. 'courageous' : Goth. *ga-dairsan* 'to dare, venture', Gr. *θρασύ-ς θαρσύ-ς* 'courageous', from rt. *dhers-*. Skr. *mṛ-tā-* 'dead' Av. *mer<sup>e</sup>ta-*, Skr. *a-mṛta-* 'immortal' Av. *a-meša-* : OHG. *mord* 'murder', Indg. \**mṛ-tó-*, from rt. *mer-*. Skr. *bṛh-ánt-* Av. *ber<sup>e</sup>z-ant-* 'great, high' from rt. *bhergh-*; the same root-form *bhṛgh-* in Gall. *brigi-* (in *Brigiani*, *Are-brigium* etc.) O.Ir. *bri* gen. *breg* 'mountain'. Skr. *kṛp-* 'form, appearance', Av. *kehrp-* 'form, body' : Lat. *corp-us*. Skr. *ṛkṣa-s* Av. *er<sup>e</sup>xšō* 'bear' : Arm. *arj*, Gr. *ἄρκτο-ς*, Lat. *ursus* fr. \**orcso-s*. Dat. pl. Skr. *pitṛ-bhyas* Av. *pter<sup>e</sup>-byō* 'patribus' : cp. Gr. *πατέροι*, Goth. *fadru-m*.

Skr. *prthāi-š* Av. *per<sup>e</sup>pu-š* 'broad', Gr. *πλατύ-ς* : O.Ir. *lethan* O.Cymr. *litan*, probably also OS. *folda* O.Icel. *fold* 'earth' (cp. Skr. *prthivī prthivī* 'earth')<sup>1)</sup>. Skr. *vṛka-s* 'wolf' Av. *vehrkō* 'wolf' : Goth. *vulfs*, Lith. *vilka-s*.

For Skr. *kṛp-tā-* Av. *ker<sup>e</sup>p-ta-* 'put in order, fixed', there is no certain corresponding form in the other languages.

On Skr. final *-r* = Indg. *-r*, see § 285.

From pre-Aryan gen. sg. \**bhrā-tṛ-s* 'brother's' arose *-tṛš* (§ 556, 1), Skr. *-tṛr* before voiced sounds (cp. *-ir -ur* fr. *-iṣ -uṣ*, § 647, 6), hence by § 290 *-tur*, *bhrátur*. The same formation is shown by Av. *ner<sup>e</sup>š* from *nar-* 'man'. See the accidence.

Owing to the limited extent of the monuments, it is impossible to arrive at anything definite regarding O.Pers. *u*

1) Lith. *plati-s* 'broad' does not belong here, it has the same vowel-grade as *brangùs* 'dear', *baugùs* 'dreadful' etc.



(written *ū*) = *r* in *a-kū-nav-am* = Skr. *á-ky-ṇav-am* 'I made' etc. (beside *kar-ta* = Skr. *ky-tá* 'made'). Cp. Bartholomae Ar. Forsch. II 67 f.

§ 289. 2. Indg. *r* before *i* seems to have been represented in Av. from the oldest period onwards, in the same manner as before other consonants: *mer<sup>e</sup>yeiti* like Lat. *moriōr*, Indg. *\*mṛ-ṛé-taṛ* 'dies'; *ker<sup>e</sup>yeṭē* 'is made, effected'. The Skr. forms *mriyātē kriyātē* are, as we have seen § 120 p. 112, of a different nature. O.Pers. *amariyatā* 'he died' may be *amaryatā* (s. § 125 p. 116), and would then correspond to Av. *mer<sup>e</sup>yeiti*; but it may also, according to the O.Pers. mode of writing, be read *amriyatā*, in which case it would be equal to Skr. *ámriyata*.

*ry* does not seem to occur in initial syllables in Sanskrit. Optative (precativ) forms as *kriyāt kriyāśma* from *kar-* 'make', as well as *jāgriyāt* (Āit. Brāhm.) opt. of *jāgarmi* 'I watch' are to be judged of in the same manner as *mriyātē*. Forms like *jūryati* 'becomes feeble' from rt. *ḡer-*, *tīryati* (*ava-tīryati* 'descends') from rt. *ter-* go back to original *ṛṛ* (s. § 306), and are on a level with *mī-ya-tē* 'disappears' from rt. *meṛ-* 'lessen', *śrū-ya-tē* 'is heard' from rt. *kleu-* etc. As regular representatives of Indg. *rṛ*, there can only be taken into account on the one hand *jāgryāt* (beside *jāgriyāt*) — how many such forms are extant? — and on the other, forms like opt. *kuryāt* from *kar-* 'make', *turyāt tuturyāt* from *tar-* 'to press through', *a-juryá-ś* 'not becoming old' from rt. *ḡer-* (the author Kuhn's Ztschr. XXIV 282 ff.). I am inclined to think that the latter category exhibits the regular development (except that *ur* took the place of *ir*, s. § 290) and that forms like *jāgryāt* were later new formations (after *jāgrhī* etc.).

Rem. This view might be put forth with greater certainty, if the possibility did not exist that the *ur* of *kuryá-* was taken over from the weak stem of the opt. *\*kurī-* (3. sg. mid. *\*kurī-tá*) = Indg. *\*qṛr-ī-* (§ 290).

§ 290. 3. Skr. *ur ir*, Av. O.Pers. *ar* (concerning Av. *or* fr. *ar* see § 94).

Skr. *purú-* Av. *parao-* *pouru-* O.Pers. *paru-* 'much', prim. f. *\*plū-* from rt. *pel-* 'fill'. Skr. *giri-ś* Av. *gairi-ś* 'moun-

tain': cp. Lith. *gìria gìre* f. 'forest'. Skr. *gurú-* 'heavy, vehement, hard', Av. *gouru-* 'contrary, peevish': Gr. βαρύς, Goth. *kairu-s*. Gen. abl. sg. Skr. *gir-ás* Av. *gar-ō* 'of a song' (instr. pl. Skr. *gīrbhiṣ* fr. \**gṛ-bhis*, § 306). Skr. *tirás* Av. *tarō* 'through, over', from root *ter-* 'press through, overstep'. Skr. *girāmi* 'I swallow': O.Bulg. *žira*, from rt. *ger-*; in like manner Skr. *tirāmi* 'I press through', *kirāmi* 'I pour out', *sphurāmi* 'I push away' etc.; *tirāmi*: *tārāmi* = *vanāmi*: *vānāmi* (§ 231) = *huvātē*: *hāvatē* 'invokes'. It cannot be decided whether Av. *sparāmi* 'I push, jerk' is the same as Skr. *sphurāmi* or a new formation after Skr. class I.

Finally. Skr. *-úr* Av. *-ar<sup>e</sup>*, the ending of the 3. pl. pf. act., e. g. Skr. *ās-úr* Av. *āsh-ar<sup>e</sup>* from rt. *es-* 'be'. These forms are on a level with the nom. acc. neut. *sthā-tūr* § 285 p. 228.

The change between *ur* and *ir* in Skr. was very probably originally evoked by the varying timbre of the neighbouring sounds. Preceding or following labials developed the form *ur*; cp. *sphurāti*; Skr. *úrana-s* 'ram' fr. \**ur-an-a-s* (§ 157), \**ur-an-* (cp. Arm. *garn*, gen. *garin*, § 291) beside Gr. *Faṛ-v-* fr. \**ur-n-* (§§ 164. 292); *gur-ú-* (opposed to *gir-í-*) etc. The orig. phonetic state became obscured through a great number of new formations made by analogy.

Rem. The present of *kar-* plays a principal part in the question as to how Skr. *ur* and *ir* are to be explained. It may be remarked that I trace the Ved. imperat. *kuru-* back to \**qgr+u*; *-u* was an appended particle like *-dhi* in *i-hi* Gr. *ι-θι* 'go' (Thurneysen Kuhn's Ztschr. XXVII 180). After the relation of *bhara*: *bharata*, there was formed to *kuru* the 2. pl. *kuruta*, in the indic. *kurutha*. For the rest see the accidence.

The side by side existence of Skr. *gurú-* Av. *gouru-* and Skr. *á-gru-* Av. *a-yru-* 'maidenish' (cp. Skr. *gurvī* 'gravidā')<sup>1)</sup>, of Skr. *gir-a-* *-gil-a-* 'swallowing' and *tuvi-grá-* 'swallowing much' etc., corresponds to that of *ghan-á-* and *-ghn-á-* 'killing' (§ 231).

### Armenian.

§ 291. 1. *barjr*, gen. *barju*, 'high' fr. \**bhṛgh-u-*: Skr. *bṛh-ánt-*, O.Ir. *bri* (§§ 288. 298). *harç*, gen. *harçi*, 'question',

1) Here come probably also Lat. *gravi-s* as *gr-av-i-s*, cp. Gr. *τανα(ρ)-ός* beside *ταν-ύ-* 'stretched' and Skr. *prth-iv-ī* beside *prth-ú-* (p. 230).

*harçane-m* 'I ask' with *ç* fr. (*h*)*sĕ* : Skr. *ṛchā*, OHG. *forsca* (§ 288). *marđ* 'man' : Skr. *mṛtá-s*. *arj*, gen. *arjoy* or *arju*, 'a bear' : Skr. *ṛkṣa-s*. *ard-ar* 'just, upright' : Skr. *r-tá-s* 'suitable, right'. *arciv* and *arcui* 'eagle' (*v* fr. *p*, §§ 330. 483) : Skr. *ṛjipyá-* 'stretching oneself, taking up in flight' (of birds of prey), Av. *er<sup>o</sup>zifya-* 'stretching oneself; falcon'. *kar-* 'four' (*kar-a-sun* 'forty') fr. \*(*q*)*tyr-* (§ 360) = Gr. *τρα-* in *τρά-πεζα* 'table' (properly 'fourfeet').

Finally : *albeur* 'source' fr. \**albeu(a)r* § 285.

*gail*, gen. *gailoy*, 'wolf', firstly by epenthesis fr. \**galio-s* = Skr. *vṛka-s* etc.? Cp. § 455.

2. Examples for *rĭ*, *lĭ* are not to hand.

3. *garn*, gen. *garin*, 'lamb', Indg. st. \**γr-en-* : Skr. *úr-an-a-s* fr. \**γur-* (§§ 263. 290). *sar*, gen. *saroy*, 'height, summit, declivity' : Skr. *śtras-* Av. *sarah-* n. 'head', rt. *ker-* (Lat. *cerebru-m cernuo-s*, O.Icel. *hjarse* 'crown of the head'). *kalin*, gen. *kalnoy*, 'acorn' : Gr. *βάλ-ανο-ς*, Lith. *gìl-é* (Lat. *glāns* seems to stand in a similar relation to these words as Gr. *πολύ-ρρην* 'rich in sheep' fr. \**-Fρ-ρην* to Arm. *garn* Skr. *úr-an-a-s*).

## Greek.

§ 292. 1. *δρατό-ς* *δαρτό-ς* 'skinned' : Av. *der<sup>e</sup>ta-* 'cut, mown', Lith. *nu-dirta-s* 'skinned'; *δάροσι-ς* 'excoriation' : Skr. *dṛti-ṣ* 'leatherbag' (cp. Gr. *δέριμα* 'hide'), Goth. *ga-taiwǝþs* 'a destroying', from rt. *der-*. Hom. *ταρπόμεθα τετάρπετο* from *τέρπω* 'I delight' : Skr. *trámi* (not found), *tṛṛyāmi*, *tṛṛṇōmi* 'I satiate myself, become satisfied', rt. *terp-*. Aor. *ἔπαρδο-ν* to *πέρω* 'pedo'; the same root form in OHG. *furz* 'crepitus ventris', Lith. *pirđi-s* m. 'crepitus ventris' *pirđà* 'qui pedit' Russ. *perdēt* 'pedere' (prim. Slav. \**přirděti*). *μάρναμαι* 'I fight' and Corcyr. *βαρνάμενος* fr. \**βραναμενος* (§ 204) : Skr. *mṛ-ṇā-mi* 'I bruise, beat in pieces'. Analogously *βαρδῆν* τὸ *βιάζεσθαι γυναικας* *Ἀμπρακιῶται*, fr. \**βραδῆν* : Skr. *mṛd-nā-ti* 'presses vehemently' (cf. Lat. *comprimere feminam*). *τετράφραμεν* τὸ *τέτροφα* (*τρέπω* 'I turn'), like Skr. *dadṛṣimá* to *dadárṣa* (*darṣ-* 'see'). *τρασιά* *ταρσιά* 'a drying-kiln' to *τέροομαι* 'I become dry' : Skr. *tṛṣyā-* 'thirst' *tṛṣyāmi* 'I am thirsty', rt. *ters-*. *πρακνόν* *μέλανα*

Hesyeh. : Skr. *ῥῥῖ-νι-ῥ* 'spotted'; beside which, with other vowel-grade *περὸνός-ς*. *καρδ-ίη καρδ-ιά* 'heart' : Lat. *cor cord-is*, O.Ir. *cride*, Lith. *szirdi-s* O.Bul. *srǐdǔ-ce*.

*τέτλα-μεν* 1. pl. pf. from *tel-* 'bear', like *γέγα-μεν* to *γεν- 'gignere'* (§ 233). *ἔσταλται* 3. sg. pf. mid. to *στελ-* 'order', like *τέτα-ται* to *τεν-* 'stretch' (233). *πλατύ-ς* 'flat, broad' : Skr. *ῥῥῥῥῖ-ῥ* (§ 288).

It has not been definitely determined on what the varying position of the liquid depends (*ρα λα* and *αρ αλ*). Form association can only be assumed for certain cases, e. g. *δαρό-ς* : *δέρω δορά*; *ἐκλάπην* : *κλέπτω κέκλοφα*. Cp. the author Kuhn's *Ztschr.* XXIV 258, Osthoff *Morph. Unt.* II 144 f.

*α* always came first initially. *ἄρκτο-ς* 'bear' : Skr. *ῥῥῥῥῖ-α-s*. *ἄρσην ἄρσρην* 'masculine' : Skr. *ῥῥῥῥῖ-α-s* 'bull' fr. *\*ῥῥῥῥῖ-bho-s*. *ἄρ-νυ-μαι* 'I attain, gain' *μισθ-ἄρνο-ς μισθ-ἄρνη-ς* 'hired servant' : Skr. *ῥῥῥῥῖ-μι* 'I attain, gain'.

Likewise *-αρ* fr. *-ῥ* finally, see § 285.

In Acol. *ρο ορ* from *ρα αρ*, as Lesb. *σρότος μέμορθαι*, Bœot. *σροτό-ς*.

§ 293. 2. *σπαίρω ἀσπαίρω* 'I struggle convulsively' fr. *\*σπαρ-ιω* (§ 130) : Lith. *spirìù* 'I push with the foot', cpf. *\*σῥῥ-ῥῖδ*, rt. *sper-*. *σάλλω* 'I stir up, hoe' fr. *\*σκαλ-ιω* (§ 130) : Lith. *skilù* 'I strike fire', cpf. *\*sqḷ-ῥῖδ*, from rt. *sqel-*. Analogously *φθαίρω* Dor. (Att. *φθειρώ*) 'I destroy', *πταίρω* 'I sneeze' from rt. *pster-* (*πιτόρο-ς* 'a sneezing', Lat. *ster-nu-ō*), *βάλλω* 'I throw' from rt. *gel-* etc. *ἐχθαίρω* 'I hate' from *\*ἐχθῥ-ιω* to *ἐχθρό-ς* 'hated', like *ἀγγέλλω* to *ἄγγελο-ς*. On the *i*-epenthesis see § 639.

§ 294. 3. *βαρύ-ς* 'heavy' : Skr. *gurú-ῥ*. Coreyr. *λαρό-ς* 'holy' : *iṣirá-s* (§ 287). *πάρως* 'in front, before, sooner' : Skr. *purás* 'before, in front'. The preterites *ἔπταρων* 'I sneezed' *ἔβαλον* 'I threw' go with Skr. *girámi*, O.Bulg. *žira*, Lat. *tulō* (§ 287); *ἔ-βαλ-ε* : *ἔ-πλ-ε*, *ἔ-πλ-ε-το* 'versabatur' = Skr. *á-huv-a-t* : *á-hv-a-t* 'he called to' (cp. §§ 153. 159). Here belong also passive aor. like *ἐδάρην ἐβάλην*; *ἔ-βάλ-η-ν* : *ἔ-βλ-η-ν* = *ἔ-φύ-η-ν* : O.Bul. *bě* from *\*bǔ-ě* (§ 184).

General Greek *ορ, ολ* in *ἔ-πορ-ο-ν πολ-ύ-ς* etc., concerning which see § 306.

## Italic.

§ 295. 1. Lat. *porca* 'the ridge between two furrows', Umbr. Mars. pl. *porculeta* 'porcae' (Pliny) : O.Bret. *rec* 'sulco' Cymr. *rhych* 'furrow' (cp. Thurneysen Keltorum. p. 74 f.), OHG. *furuh* Ags. *furh* f. 'furrow'. Lat. *vorsu-s*, Umbr. Osc. *vorsum* ('quod Graeci πλέθρον appellant, Osci et Umbri vorsum', Frontinus de limit. p. 30, 9), Umbr. *trah-vorfi* 'transverse' : Skr. *vṛt-tá-*, from rt. *uert-* 'turn' (§ 285). Lat. *fors forte*, Osc. *fortis* 'forte', Pelign. *forte* gen. 'fortunae' : Skr. *bhṛ-ti-ṣ* (§ 285). Lat. *or-tu-s* part., Umbr. *ortom orto* 'ortum' : Skr. *ṛ-tá-s* part. 'raised'. Lat. *portu-s porta* : Av. *peṣu-š* 'ford' *hu-per<sup>h</sup>pw-i* f. 'having a good ford' (§§ 260. 288), Gall. *-ritum* 'passage' in *Augusto-ritum* (with Latinised ending), OHG. *furt* m. 'ford'. *sporta sportula* : Gr. *σπάρα-το-ν* 'rope, cable'. *cornu-s cornu-m* : Gr. *κράνο-ς κράνο-ν* 'cornel-tree'. *porru-m* fr. *\*porso-m* (§ 571) : Gr. *πράσο-ν* 'a leek'. *forti-s fortis* : Skr. part. *dyḍhá-s* 'fast, strong' (to *darh-*), prim. f. *\*dhyḡh + tó-*, rt. *dhergh-*. *tostu-s* from *\*tors-to-s* : Skr. *tyṣ-ṭá-s* 'rough, hoarse'. *mo-mord-imus* : Skr. *ma-mṛd-ímá* 'we crushed, pounded', rt. *merd-*; cp. also *vort-imus* : Skr. *va-vṛt-ímá*. *ursu-s* : Skr. *ṛkṣa-* 'bear' (§ 288).

On the dropping of *r* in Lat. forms as *tostu-s*, *poscō* (§ 288) see § 269.

Lat. *mulsu-s* part., *molta multa* 'a fine, penalty', Umbr. *motar* gen. 'multae', Osc. *moltam* 'multam' fr. prim. Ital. *\*molk-tā-* : Skr. *mṛṣṭá-* part., indic. *mṛṣámi* 'I touch, feel'. Lat. *mulctu-s* : Lith. *mĩlszta-s* 'milked', O.Ir. *mlicht blicht* 'milk', from rt. *melg-*. Analogously the Lat. participial forms *oc-cultu-s* from rt. *kel-* 'cover, conceal' : OHG. *helan* 'to hide' (concerning the apparently contradictory *oquoltōd* of the S. C. de Bacch. 15 see Bersu Die Gutturalen und ihre Verbindung mit *v* im Lat. p. 41); *pulsu-s* to *pellō* : Gr. *παλτό-ς* 'brandished, hurled' etc., *tollō* fr. *\*iḷ-nō*, from rt. *tel-*.

Rem. *o* before *l* + cons. (except *ll*) uniformly became *u* in Latin, whereas the vowel fluctuated before *r*, cp. *curtu-s* : Gr. *καρτό-ς* 'shorn, cut', *fornu-s*, later *furnu-s* : Skr. *ghṛ-ṛá-s* 'heat, glow'. A law for this irregularity has not been discovered.

Finally, *-ur* fr. *-r*, *jec-ur*, see § 285.

§ 296. 2. Lat. *morior* : Av. *mer<sup>e</sup>yeiti* 'dies' (§ 289). *horior* O.Lat. = *hortor*, probably to Umbr. *heriest* 'volet' Osc. *herest* 'volet' and identical with Gr. *χαίρω* 'I rejoice', to which it was the causat. form ('I make pleasure, joy'); *hortor* would accordingly be from a \**horto*- = *χαρό-*s 'wished for'. *orior oriuntur* fr. \**r-íō-*, to *ortu-s* : Skr. *rṭá-s* (§ 295).

§ 297. 3. O.Lat. *tuŕō*, rt. *tel-*. *oc-culō* either fr. \**k̄l-ó* or \**celō* (= O.Ir. *celim* OHG. *hilu*) through the influence of the *l*. *gul-* in *gula gulō* rather from \**gl-* (cp. Skr. *gira-* *-gila-* 'swallowing', *gili-š* f. *gilana-m* 'a swallowing', § 290) than from \**gel-* prim. Ital. \**g<sup>e</sup>el-*, since in the latter root form \**vel-* would be expected (cp. *veniō*, *veru* § 432 b), hence *gula* : OHG. *chela* 'throat' = Gr. Bœot. *βανά* : Goth. *qinō* 'wife; *gulō* was formed like Goth. *skula* 'debtor' (§ 301).

#### Old Irish.

§ 298. 1. General Keltic *ri* (*re*), *li* (*le*).

O.Ir. *bri* gen. *breg* (from \**brix* \**brigos*) 'rising ground', Gall. *brigi-* (in *Brigiani* an Alpine race, *Are-brigiu-m* etc.), Cymr. Bret. *bre* : Skr. *bṛh-ánt-* (§ 288). O.Cymr. *rit* 'ford', Gall. *Augusto-ritu-m* : Av. *pešu-š*, Lat. *portus*, OHG. *furt* (§ 295). O.Ir. *drech* 'face' fr. \**drica* prim. f. \**dṛhā* : Skr. *dṛś-* 'look', Gr. *ἔδρακον* 'I saw', rt. *derh-*. O.Ir. *brissim* 'I break', *brisc* Bret. *bresk* 'fragile, apt to break', according to Stokes' conjecture (*Mém. de la soc. de lingu.* V 420) from rt. *bherdh-* : Gr. *πέρω* 'I lay waste, destroy' aor. *ἔπραθο-ν*; on *brisc* cp. § 516. O.Ir. *lethan* O.Cymr. *litan* 'broad' : Skr. *prthú-š* (§ 288).

O.Ir. *re-nim* 'I give up, sell, grant' : Gr. *πέρονημι* 'I sell, export', which represented an older \**παρ-νᾶ-μι* (this form seems to be represented in Hesych. by *πορνάμεν* \* *πωλεῖν* with *o* = *a*, § 292 extr.), originally \**pr-nā-mi* from rt. *per-*. *ara-chrinim* 'difficisor' (perf. *do-ro-char*) : Skr. *śr-nā-mi* 'I separate, break in pieces'. Mid.Ir. *do-breth* 'datum est' : Skr. *bhṛ-tā-* 'carried'; *brith* 'a carrying' : Skr. *bhṛ-ti-š* 'a carrying', from rt. *bher-*. *sreth* 'row' : Lat. *sors sortis* beside *serō*. Here belong further, from such

roots as *bher-*, the part. perf. pass. in *-te*, *brithe brethe* 'brought', and the part. necessitatis in *-ti*, *brithi brethi* 'ferendus'. *cride* 'heart' : Gr. *καρδ-ιη* (§ 292).

*bligim* 'I milk' from \**mligim* (§ 212) : O.Bulg. *mlūzaq*, Indg. prim. f. \**mlǵ-ō* from rt. *melǵ-*; to which *mlicht blicht* 'milk' : Lat. *mulctu-s. clethi* 'celandum' to *celim* 'celo' : Lat. *oc-cultu-s. Inf. blith* to *melim* 'molo'.

When such syllables with *ri*, *li* = Indg. *r*, *l* became voiceless in composition in Irish, *r*, *l* arose anew through vowel reduction when another syllable followed (samprasāraṇa). From these a vowel was then again developed. Thus e. g. *eperthe* part. pass. 'oblatus' from \**éd-brithe* through the intermediate stage \**-brthe*. See § 634 and Thurneysen Rev. Celt. VI 315.

2. Examples for the representation of *ri*, *li* are unknown to me.

3. As *yn* became *an*, so also *rr*, *ll* became *ar*, *al*. *maraim* 'I remain' : ep. Lat. *mora*, rt. (s)*mer-* (§ 589, 3); *mora* may just as well represent \*(s)*mṛā* as \*(s)*morā*. *scaraim* 'I separate, divide' Cymr. *ysgar* 'separatio', to O.Ir. *scorim scuirim* 'I unharness' *scor* 'an enclosure for unyoked animals' Cymr. *ysgor* f. 'rampart, bulwark' : cp. Lith. *skiriù* 'I separate, divide'. -*al-* perhaps in *samail* 'likeness, picture' fr. \**snm-lli-* (cp. § 243, 4). Cymr. *malu* 'I grind, grind to powder' is more certain : ep. O.Ir. *melim* <sup>1)</sup>).

### Germanic.

§ 299. 1. Prim. Germ. *ur*, *ru*.

Goth. *þaúrs-u-s* OHG. *durri* O.Icel. *þurr* 'dry, withered' : Skr. *tṛṣ-ú-ṣ* 'covetous, gaping from dryness' ; Goth. *þaúrstei* f. OHG. *durst* m. Ags. *ðyrst* m. 'thirst' : Skr. *tṛṣ-ṭá-* 'hoarse, rough' : Goth. *þaúrsjan* 'to thirst' (originally a strong verb like *vaúrkjan* s. below) : Skr. *tṛṣ-yāmi* 'I am thirsty' ; Goth. part. *ga-þaúrsans* : Skr. Ved. part. *tṛṣ-āná-s* and *ta-tṛṣ-āná-s*, from rt. *ters-*. Inf. Goth. *ga-daúrsan* OHG. *turran* Ags. *durran* 'to dare, venture' :

1) My attention was drawn to these examples for the representation of *rr*, *ll* in Keltic by Thurneysen.

Skr. *dhřš-á-nt-* part. 'bold'; 1. pl. Goth. *ga-daur̥s-um* 'we dare': Skr. *dadhřš-ímá* (cp. also *vaur̥þum* 'we became': Skr. *vavřtimá*, Lat. *vortimus*); opt. Goth. *ga-daur̥s-jáu*: Skr. *dadhřš-yám*; OHG. *ca-turst* f. 'boldness': Skr. *dhřš-ři-š* f. 'boldness', from rt. *dhers-*. Goth. *vaur̥kjan* OHG. *wurchen* 'to work, effect': Av. *ver<sup>e</sup>zyęti* 'effects', Gr. *ῥέζω* 'I do' for regular *\*ῥάζω* from *\*Fραγ-ζω* (*ε* after the analogy of *ῥοζω*, *ῥοδω* etc.), Indg. *\*ur̥g-řó*, from rt. *uerġ-*. Goth. *þaur̥-nu-s* OHG. *dorn* 'thorn': O.Bulg. *trǫnǫ* 'thorn', Skr. *třna-m* 'grassblade'. OHG. *zoraht* OS. *toraht torht* 'bright, clear' (for the anaptyctic vowel s. § 277): Skr. *dhřš-řá-* 'seen, appearing, revealing', Indg. *\*dřk-tó-s-*, from rt. *derġ-*. Goth. *haur̥n* OHG. *horn* 'horn': Gr. *κάρνος* 'horned cattle' (Hesych.) and Lat. *cornu*, in case the latter had not Indg. o.

Goth. *brōþru-m* dat. pl. of *brōþar* 'brother': cp. Skr. loc. pl. *bhrátř-řu*. Part. OHG. *rohhan* 'revenged, avenged' (beside inf. Goth. *vrikan* OHG. *rehhan*): Skr. part. *vavřjāná-* pres. *várjati* 'turns off', *pari-vargá-s* 'a laying aside'. So also part. Goth. *þruskans* OHG. *droskan* 'thrashed', beside inf. *þriskan dreskan*, Goth. *brukans* OHG. *brohhan* 'broken' beside inf. *brikan brehhan*, OHG. *sprohhan* 'spoken' beside inf. *sprehhan* etc. Goth. *trudan* O.Icel. *troða* 'to tread', OHG. *trotta* f. 'a press' beside OHG. inf. *tretan*; Goth. *trudan*: OHG. *tretan* = OHG. *koman*: Goth. *qiman* (§ 247).

Goth. *vulfs*, OHG. *wolf* 'wolf': Skr. *vřka-s*. Goth. *fulls* OHG. *fol* (infl. *follēr*) 'full': Lith. *pilna-s*, Av. *per<sup>e</sup>na-*. Goth. *skulds* part. 'obliged', OHG. *sculda* 'debt', to indic. Goth. *skal* OHG. *scal* 'I shall' (related to Lat. *scelus?*). Goth. pf. pl. *fra-guldum* part. *-guldans* to inf. *fra-gildan* 'to repay'. Goth. part. *\*hlufans* to *hlifan* 'to steal' (cp. Gr. *κλέπτω*, *ἐκλάπην*) like *brukans* to *brikan*? Goth. *lustu-s* 'desire', probably to Lat. *lascivo-s*, Skr. *lā-las-a-s* 'desirous, eager for' *lāřāmi* 'I desire' fr. *\*la-ls-ā-mi* (§ 259).

The diversity of the position of the liquid (*ur* and *ru*) was in part undoubtedly due to other forms of the same form-system, cp. e. g. Goth. *þruskans*: *þriskan* with *þaur̥sans*: *þaur̥san*. The independent forms have not yet been satisfactorily settled;



cp. the author Kuhn's *Ztschr.* XXIV 258 ff., Osthoff *Morph. Unt.* II 49. 145. It however seems to me probable (cp. Kluge Kuhn's *Ztschr.* XXVI 90) that these forms are *ur*, *ul*.

On the change of *u* to *aú* (before *r*) in Goth. and *u* to *o* in West Germ. and Norse see § 51.

§ 300. 2. Goth. opt. *skuljáu* to *skal* 'I shall', as *munjáu* to *man* 'I think' (§ 245). OHG. *hulla* MHG. *hülle* f. 'veil, cover' fr. prim. Germ. \**χuljō*, to OHG. *helan* 'to conceal', rt. *kel*.

§ 301. 3. Part. pret. pass. Goth. *bair-ans* (*bairan* 'to bear'), *ga-tair-ans* (*ga-tairan* 'to tear in pieces'), *stulans* (*stilan* 'to steal'), OHG. *boran*, *zoran*, *stolan* : cp. O.Bulg. part. pret. pass. *tír-enü* to *tírā* 'I rub' fr. rt. *ter-* (§ 305) and Skr. *tī-stir-āñá-s* part. pf. mid. from rt. *ster-* 'strew'. Goth. *skulan* OHG. *scolan* 'to be obliged', part. Goth. *skulands* 'obliged', probably also Goth. *vulands* 'seething' (to OHG. *walm* 'heat') : cp. pres. Skr. *girámi* O.Bulg. *žírā* from rt. *ger-* 'swallow' (§ 287). Goth. *skula* OHG. *scolo* 'debtor', like Ags. *cuma* 'advena' OHG. *willi-como* 'welcome' from rt. *gem-* (cp. § 247). OHG. *hol* O.Icel. *holr* 'hollow', Goth. *hulundi* f. 'a hollow' (cp. § 244), to OHG. *helan* 'to conceal' : cp. Gr. *καλ-ῖά* 'hut, barn'. On Goth. *aú*, West Germ. Norse *o* see § 51.

#### Baltic-Slavonic.

§ 302. Indg. *r*, *l* uniformly became *ir*, *il* in the prim. Baltic-Slav. period. Though it cannot be strictly proved, it is nevertheless probable, that the *i* in these combinations differed from Indg. *i* in the same manner as the *i* in *in* = Indg. *ŷ*. See § 248. We accordingly put the prim. Baltic-Slav. forms down as *ir*, *il*.

Thence in Lith. *ir*, *il*.

In prim. Slav. *ŷr*, *ŷl*. *r* and *l* retained this position in O.Bulg. before *i* and sonants, in other cases they were transposed (*rŷ*, *lŷ*). The labial timbre of the *l* caused the neighbouring *ŷ* to pass into *ŷ̄*. But the orthography is very inconsistent, and it would be difficult to decide how far the regular state has

been disturbed in the living language by form-association. Cp. § 305 rem.

Rem. 1. That *řr*, not *rř* or *r* was also spoken in prim. Slav. before consonants in such cases as *čřinū* 'black' (= Pruss. *kirsna-*, Skr. *kṛṣṇá-* 'black', Indg. \**qrsno-*) is proved on the one hand by the transition of a preceding *k* to *č* (§ 461), in which all Slav. dialects took part (Serv. *c*), and on the other by the dropping of the *s* in *čřinū*, which is only conceivable on the assumption of an older form \**čřsnū* (s. §§ 585, 2, 588, 6).

Rem. 2. The treatment of prim. Slav. *řr*, *řl* varied greatly in the different Slav. dialects. Suffice it here to remark that Serv. Slov. and Czech went back again to Indg. liquida sonans, e. g. O.Bulg. *čřinū* = Serv. *crn*, Slov. *črn*, O.Czech *črný* (the latter the def. form of the adj. = O.Bulg. *čřiny-jě*).

§ 303. 1. Lith. *žirni-s* m. 'pea', O.Bulg. *zřino* 'corn' : Goth. *kairn* 'corn'. Lith. *szirsziū*, gen. *szirszeiš*, O.Bulg. *srī-šen-ř* 'hornet, gad-fly' : OHG. *hornaz* 'hornet' fr. prim. Germ. \**χurzn-ata-z*, cpf. \**kr̥s-en-* \**kr̥s-n-* (cp. Lat. *crābrō* § 306). Lith. *kirmis* m. 'worm', O.Bulg. *čřimnū* 'red' (*čři-vi* 'worm' with a diff. suffix) : Skr. *kṛmi-* 'worm'. Lith. *kiřsta-s* 'hewn', O.Bulg. *čřita* 'I cut' : Skr. *kṛttā-s* 'cut off', from rt. *qert-*. Lith. *viržys* 'cord' *viržėti* 'to bind with cord', O.Bulg. *vřiza* 'I bind, close' : OS. *wurgil* 'a strangling cord' OHG. *wurgan* 'to strangle', from rt. *uergh-*. Lith. *tirp-ti* 'to grow stiff, to become feelingless', Russ. *terpnet* 'to grow stiff' (prim. Slav. \**tirpnati*) : Lat. *torpeō* (Lat. *torp-* = Indg. \**trp-* or *torp-*?).

O.Bulg. 2. sg. opt. (imper.) *rřci* 'say' orig. f. \**rřqoi-s*, 1. sg. pres. *reka*, cp. the accidentence.

Lith. *vilna* 'a single hair of wool', O.Bulg. *vlina* 'wool' : Goth. *vulla* 'wool' fr. \**vulna* (§ 214 p. 181). Lith. *vilkiū* 'I am clad in, with', Lith. *vilkęs* O.Bulg. *vlīkū* part. pret. act. to *velkū* *vlēka* 'I drag' : Gr. *αἰλαξ* 'furrow' (\**Flax-*) beside *ελαω*, rt. *uelq-*. Lith. *vilgau* 'I moisten', O.Bulg. *vlūgūkū* 'moist' : OHG. *wolchan* n. *wolcha* f. 'cloud', from rt. *uelq-*. O.Bulg. *dlūgū* 'duty' : O.Ir. *dliged* 'lex, officium' O.Ir. *dligim* 'I deserve, am entitled to', Goth. *dulgs* 'debt', rt. form *dhlg-*. O.Bulg. *zřiva* 'husband's sister' : Gr. *γαλόως γάλως*.

§ 304. 2. Lith. *spirù* : Gr. *σπαίρω*, *skilù* : Gr. *σκάλλω*, s. § 293. Analogously *dirù* 'I skin' (Szyrwid's *dirru* is probably to be read thus) rt. *der-*, *girù* 'I praise' rt. *ger-*. O.Bulg. *vŕja* 'I boil up, seethe' 2. sg. *vŕiši* (inf. *vŕěti*) might be put here under the supposition that the original inflection of the present was \**vŕješi* etc., like *žinja žinješi* (§ 250); cp. Czech *vrū* (in O.Bulg. form \**vŕa*) like *tŕa mŕa* etc. (§ 305). Lith. pl. *tĭlės*, gen. *tĭlū*, 'board in the bottom of a boat', O.Bulg. *tĭlja* 'bottom' : cp. Skr. *tūlya-* 'equal, straight', rt. *tel-*.

§ 305. 3. Lith. *mirusi* O.Bulg. *mŕūši* part. pf. fem. 'mortua', O.Bulg. *mŕa* 'morior', rt. *mer-*. Analogously pres. Lith. *più* 'I cast, shed' from rt. *pel-* 'fill', O.Bulg. *žŕa* 'I swallow' = Skr. *girāmi gilāmi*, rt. *ger-*, *tŕa* 'tero' and others.

Rem. *ŭr* occasionally occurs for *ŕr* before non-palatal vowels in the Zographos gospel, e. g. *dŭrati* for *dŕrati* 'to split, tear in pieces', and vice versa, *zŭlē* loc. beside *zŭlū* nom. 'bad' etc. Cp. § 36 rem.

## 2. Long Sonant Liquids.

§ 306. Regarding the representation of Indg. *r̄*, *l̄* in the individual languages there still remains much that is doubtful just as in the case of Indg. *r̄*, *l̄*. We hold the following developments as certain : Skr. *ŕr*, *ŭr* (cp. *ŕr*, *ur* = Indg. *r̄r* or *l̄l* § 290), Av. O.Pers. *ar*; Gr. *ορ ολ* and *ρω λω*, finally *ωρ*; Lat. *ar* (*al*) and *rā lā*; Kelt. *lā*; Germ. *ar*, *al*.

Indg. *r̄*.

\**r̄dhwós* 'upright' : Skr. *ŭrdhwá-s*, Gr. *ὀρθός*, Lat. *arduo-s* from prim. Ital. \**ar̄huo-s* (§ 170 p. 150, § 370).

\**r̄-mós* 'arm, bow' : Skr. *ŕmá-s* Av. *ar<sup>e</sup>ma-*, Armen. *armuln*, Lat. *armu-s*, Goth. *arms*, O.Bulg. *ramę* fr. \**ormeę* (§ 281).

\**r̄-ti-s* : Lat. *ars artis*, OHG. *art* 'manner'. From the same root Skr. *r̄-tá-m* 'propriety, right manner'.

*stĕr-* from rt. *ster-* 'spread' : part. perf. pass. Skr. *stŕ-ŕá-s* Av. *star<sup>e</sup>-ta-* Gr. *στρο-τός* Lat. *strā-tu-s*, Gr. *στροῦ-μα* Lat. *strā-men* 'straw', Gr. *ἔστρο-ται στόρ-νύμι* and others.

*gĕr-* from rt. *ger-* 'grind' : Skr. *jŕ-ŕá-* 'ground to pieces, wasted away', Lat. *grā-nu-m* 'grain'.

*př-* (cp. Skr. *purás* Gr. *πάρος* § 294) : Skr. *pūr-va-s* 'the one in front', Gr. *πρωτο-ς* Dor. *πρᾶτο-ς* 'the first' from *\*πρω-φ-ατο-ς* (cp. *τρι-ατο-ς* 'the third'), Dor. *πρᾶν* 'formerly' fr. *\*πρωφᾶν*, Att. *πράην* 'lately' fr. *\*πρωφῖαν* (O.Bulg. *прѣ-вѣ-жѣ* 'the first' : Skr. *pūr-va-s* = *plū-nū* 'full' : *pūr-ḡá-s* etc., s. below).

*hřs-* : Skr. *śūrṣ-á-m* 'head' Gr. *κόρο-η* 'head, temples'.

*gř-* from rt. *ger-* 'swallow' : Skr. *gūr-ḡá-* part. pass., *gūr-ya-* gerund, *gūr-ḡi-ṣ* 'a swallowing', Gr. *βιβρω-σκω* 'I eat, devour'. *βρω-τήρ* 'eater, devourer' *βρω-μα* 'food'.

*př-* 'to share in' : Gr. *πέ-προ-ται*, Lat. *pars partis* (beside *portio* fr. *\*př-ti*). If *pariō* also belongs to this root, as is assumed by Curtius Grundz. <sup>5</sup> 282, it must be traced back to *\*př-ḡō*, cp. Skr. *jūryāmi* from rt. *ger-* 'fall away, become fragile'.

Skr. *śūr-tá-* 'destroyed', Av. *a-sar<sup>e</sup>-ta-* 'unhurt', root form *hř-*.

Gr. *πρωξ-κος* 'a drop' : cp. *πρακνό-ν* (§ 292 p. 233), *περκνό-ς* 'sprinkled', Skr. *přśni-ṣ* 'speckled, variegated'.

Lat. *rādīx* fr. *\*urād-* (§ 168) *\*uřd-* : cp. Gr. *ράδ-αμνο-ς* 'shoot, sprout' Goth. *vairts* 'root' fr. *\*uřd-*.

Lat. *crātēs* pl. fr. *\*qřt-* : cp. Gr. *κάρι-αλο-ς* 'basket' Goth. *hairds* 'door' OHG. *hurt* 'hurdle-work, hurdle' fr. *\*qřt-*.

Lat. *crābrō* 'hornet' fr. *\*crās-rō* (§ 570) *\*hřs-*; beside which Lith. *szirszū* etc. fr. *\*hřs-*, § 303.

Lat. *quartus* fr. *\*ctvarto-s*, Indg. *\*qtuř-to-* (beside Indg. *\*qetuy-to-* § 285).

Gr. *ῥδ-ωρ* 'water' from *\*-ř-*; perhaps corresponding to Lat. *ūb-er* fr. *\*-ar*, *\*-ř-*. Cp. § 285 p. 228.

Indg. *l*.

*př-* from rt. *pel-* (*plē-*) 'fill' : Skr. *pūr-ḡá-s* 'filled' imper. *pūr-dhī* 'fill', Gr. *πολλοί* 'many' fr. *\*πολ-νό-* (or *πολ-λό-*?), O.Ir. *lan* O.Cymr. *laun* 'full'.

*\*uř-nā* f. 'wool' : Skr. *ūrṇā*, Lat. *lāna* (cp. §§ 151. 157. 168), Gr. *οῦλο-ς* 'fleecy' fr. *\*folno-ς* (§ 204).

*\*mřdh-* : Skr. *mūrdh-án-* 'height, highest part, head', Gr. *βλωθ-ρό-ς* 'high-grown'.

\**d̄l̄gho-* 'long' : Skr. *d̄irghá-s* Av. *dar<sup>e</sup>ga-* O.Pers. *darga-*, Gr. *δολιχός* (with enigmatical *i*).

\**ūl̄-mi-s* 'ebullition' : Skr. *ūr-mi-ṣ* 'wave' (§ 157), Ags. *wielm wylm* 'ebullition, wave' prim. Germ. \**ualmi-z*. To which OHG. OS. *wallan* 'to be agitated, boil up' prim. Germ. \**ualnana-n* (§ 214), cp. *wellan* 'to roll, move'.

Skr. *sthānā-* 'post, stake' fr. \**sthālnā-*, orig. \**st̄j-nā-*.

Gr. Lesb. *βόλλο-μαι* Att. *βούλο-μαι* (beside Dor. *δήλο-μαι*) 'I will, wish, desire' fr. \**ḡl̄-no-*, rt. *gel-* (§ 204).

Lat. *lātus-s* 'carried' probably fr. \**t̄j-to-s*, rt. *tel-*.

Lat. *clād-ēs* : to *per-cellō* fr. \**-celdō*, part. *-culsu-s* from \**kl̄d+to-*, Gr. Hom. *ἐκλασσα* 'broke' *κλυδ-άσαι* · *σεισαι* Hesych. Cp. § 369.

O.Ir. *blāith* 'tender, soft' fr. \**mlā-ti-s* prim. f. \**m̄l̄-ti-*, to *melim* 'I pound'; Cymr. *blawd* 'meal' fr. \**m̄l̄-to-*. On *bl-* fr. *ml-* see § 212.

The side by side existence of *ρω* and *ορ* in Gr. and *rā* and *ar* in Lat. may be compared with that of Gr. *ρα* and *αρ*, Germ. *ru* and *ur* fr. Indg. *r* (§§ 292. 299). Gr. *ορ*, Lat. *ar* fr. \**ωρ*, \**ār* were possibly shortened after the same principle as that which gave rise to Gr. part. *ἄεντ-* 'blowing' (indic. *ἄημι*) and Lat. *vent-u-s* fr. \**uē-nt-* (§§ 611. 612). *ῥωορ* especially speaks in favour of this theory; for *ῥωορ* : *στόρνυμι* = *ἄην* : *ἄεντ-* and *λύκω* : *λύκοις* (§§ 85. 611).

Skr. *ḡīr* 'praise' fr. \**ḡīr-ṣ* \**ḡī-s* loc. pl. *ḡīrṣū* fr. \**ḡī-su* and *p̄ūr* 'fixed place' fr. \**p̄ūr-ṣ* \**p̄ī-s* loc. pl. *p̄ūrṣū* fr. \**p̄ī-su* correspond to nouns like *jā-s* fr. \**ḡj̄-s* § 253 p. 207. But between the nom. sg. *ḡīr* *p̄ūr* and instr. sg. *ḡīrā* *p̄ūrā* nom. pl. *ḡīras* *p̄ūras* (*ḡīr-* *p̄ūr-* fr. \**ḡr-* \**p̄l-*, § 290) there exists precisely the same relation as between nom. sg. *dh̄īṣ* ('thought') *bh̄īṣ* ('earth') and instr. sg. *dh̄iyā* *bh̄iwā* nom. pl. *dh̄īyas* *bh̄īwas*. This parallelism was inherited from the Indg. prim. period (p. 250).

It is remarkable that in Greck antesonantal *ορ*, *ολ* and anteconsonantal *ρω* *ορ*, *λω* *ολ* frequently stand to each other in the same relation as Skr. *īr* *ur* and *īr* *ūr*, since one would expect *αρ* *αλ* as the representative of Indg. antesonantal *r̄r*,

μ (§ 294). ἔ-πορ-ο-ν 'gave, brought': πέ-πω-ται. ἔ-τορ-ο-ν 'pierced': τι-τρῶ-σκω 'I master, injure, wound' (cp. Skr. *tur-á-* 'advancing; injured, wound': *tāryāmi* 'I overpower' *prá-tūrti-ṣ* 'a mastering, combat'). ἔ-θορ-ο-ν 'leapt, sprang': θρῶ-σκω θόρ-νυμα. ἔ-μολ-ο-ν 'went, came': βλώ-σκω. βόλομαι 'I will, wish': Lesb. βόλλομαι. πολ-ύ-ς 'much' (Skr. *purí-ṣ*): πολλοί<sup>1</sup>). It may be inferred that the development of the vowel from short sonant liquid was influenced by the quality of the long vowel developed from  $\bar{y}$ ,  $\bar{j}$ . Compare the transition of \*θα-τό-ς and \*δα-τό-ς to θε-τό-ς and δο-τό-ς through the influence of θη- and δω- (§ 109 c.). If this inference is right, there must once have stood beside πόλι-ς 'city' (Skr. *purī purí-ṣ*, Lith. *vilī-s*) an antec consonantal πολ- or πλω- = Skr. *pūr-* (*pūr-bhīṣ* etc.).

### ABLAUT (VOWEL GRADATION)<sup>2</sup>).

§ 307. By ablaut or vowel gradation we understand such quantitative, qualitative and accentual differences of the sonantal element of a root- or suffix-syllable, as were not called forth by sound-laws which were in operation at the time of the individual development of the Indg. languages, but had their origin either directly or indirectly in prim. Indg. differences. With them are further often also connected consonantal differences in the syllable containing the sonantal element. The following, e. g., stand in ablaut relation to one another: Lat. *da-tus* : *dō-num*; *s-iĕ-s* (O.Lat. for *sīs*) : *s-ī-mus*; Gr. ἄγ-ω : στρατ-ᾶγ-ός (Ion. Att. στρατ-ηγ-ός); λείπ-ειν : λοιπ-ός : λιπ-εῖν; ἄγ-ε-τε : ἄγ-ο-μεν; μη-τ ἑρ-εῖς : μη-τ ρ-ός : μη-τ ρά-σι; Goth. *aīhs-in* : *aīhs-an-s* : *aīhs-n-ē* (loc. sg., nom. pl., gen. pl. of *aīhsa* 'ox') : Skr. *pác-āmi* 'I cook' : *pa k-tás* 'cooked' (difference of accentuation).

1) Hom. *πολύ-ς* is probably to be explained from a supposed stem form \**πολF-* = Skr. *pūr-v-* (fem. instr. pl. *pūrv-ī-bhīṣ*) Indg. \**pl̥-μ-*, which regularly gave *πολ-* just as *οὔλο-ς* 'whole' from \**óλFο-ος* (§ 166). *πολ-* and *πολυ-* became contaminated to *πολυ-*.

2) The most important literature has been mentioned on p. 31—32 footnote 2. To this may further be added Leskien *Der Ablaut der Wurzelsilben im Litauischen*, Leipzig 1884.

Rem. 1. Accordingly the difference, e. g., between Gr.  $\xi\text{-}\gamma\nu\omega\text{-}\nu$   $\xi\text{-}\gamma\nu\omega\text{-}\mu\epsilon\nu$  and  $\xi\text{-}\gamma\nu\omicron\text{-}\nu$   $\gamma\nu\acute{\omicron}\text{-}\nu\tau\epsilon\varsigma$  has nothing to do with ablaut; since  $\gamma\nu\omega\text{-}$  became  $\gamma\nu\omicron\text{-}$  by a special Greek shortening, s. § 611; nor the contrast between Goth. *þagkja* 'I think' and *þakta* 'I thought' (s. § 214 p. 181), nor that between OHG. *ird-in* 'earthen' and *erd-a* 'earth' (s. § 67 p. 57) etc.

Rem. 2. Indg. long vowels, which from etymological considerations are shown to be the product arising from the contraction of two vowels (§§ 111—115), are rightly not put under ablaut as separate members. Cp. e. g. abl. sg. *\*ekwōd* (Lat. *equō*) fr. *\*ekwo-a<sup>2</sup>d* nom. pl. *\*ekwōs* (Skr. *áśvās*) fr. *\*ekwo-es* (§ 115) beside nom. sg. *\*ekwo-s* (Lat. *equos*), voc. sg. *\*ekwe* (Lat. *eque*) etc. Cp. § 314.

§ 308.  $\dot{\imath}$  and  $\underline{u}$  with a preceding or following vowel ( $a\dot{\imath}$ ,  $\dot{\imath}a$ ) stand, so far as relations of ablaut are concerned, on a level with consonant nasals and liquids. The following root-syllables, e. g., correspond to each other:

*bheǐdh-*, *bhoǐdh-* (Gr.  $\pi\epsilon\iota\theta\text{-}\epsilon\iota$ ,  $\pi\acute{\epsilon}\text{-}\pi\omicron\iota\theta\epsilon\iota$ ) } { *bhendh-*, *bhondh-* (Goth. *bind-iþ*, *band*)  
*bheǔdh-*, *bhoǔdh-* (Goth. *biud-iþ*, *báuþ*) } { *derk-*, *dork-* (Gr.  $\delta\acute{\epsilon}\rho\kappa\text{-}\epsilon\tau\alpha\iota$ ,  $\delta\acute{\epsilon}\text{-}\delta\omicron\rho\kappa\text{-}\epsilon$ )  
*sup-*, *sup-* (O.Icel. *svef-n*, Lith. *sāp-na-s*) : *prek-*, *prok-* (Lat. *prec-or*, *proc-us*).

The sonants  $i$  and  $u$  appear in the place of  $\dot{\imath}$  and  $\underline{u}$  in the ablaut-grade, which is deprived of the vowels  $e$  or  $o$ , just as sonant nasals and liquids in the place of the consonant.

*bhidh-* (Gr.  $\xi\text{-}\pi\iota\theta\text{-}\epsilon$ ) } { *bhydih-* (Goth. *bund-ans*)  
*bhudh-* (Goth. *bud-ans*) } { *dk-* (Gr.  $\xi\text{-}\delta\epsilon\alpha\kappa\text{-}\epsilon$ )  
*sup-* (Gr.  $\upsilon\pi\text{-}\nu\omicron\text{-}\varsigma$ ) : *prk-* (Lat. *poscō* fr. *\*pr(k)skō*, § 288).

To the ablaut *bheǐdh-* : *bhoǐdh-* : *bhidh-*, *bhendh-* : *bhondh-* : *bheǔdh-*, *derk-* : *dork-* : *dk-* corresponds the ablaut *pet-* : *pot-* : *pt-* (Gr.  $\pi\acute{\epsilon}\tau\text{-}\epsilon\tau\alpha\iota$  :  $\pi\omicron\tau\text{-}\acute{\alpha}\tau\alpha\iota$  :  $\acute{\epsilon}\text{-}\pi\tau\text{-}\epsilon\tau\omicron$ ). The only difference is that in the latter case the last grade does not form a syllable in itself. The last grade, in the case of roots like *bheǔ-* *gen-*, whose ablaut is exhibited as *bheǔ-* : *bhou-* : *bhu-* *bhu* and *Ǔen-* : *Ǔon-* : *Ǔu-* *Ǔn-*, may be both syllabic and non-syllabic; cp. Gr.  $\varphi\acute{\upsilon}\text{-}\sigma\iota\varsigma$  beside  $\acute{\upsilon}\pi\epsilon\rho\varphi\acute{\iota}\alpha\lambda\omicron\varsigma$  fr. *\*úpερ-φF-ιαλός* (§ 166 p. 147),  $\gamma\acute{\epsilon}\text{-}\gamma\alpha\text{-}\mu\epsilon\nu$  beside  $\gamma\acute{\iota}\text{-}\gamma\upsilon\text{-}\epsilon\tau\alpha\iota$ .

§ 309. We distinguish six ablaut-series. They all have one grade in which the vowel of the syllable has entirely disappeared. Representing this by 0, we have the following vowel-series:

1. *e*-series: 0, *e*, *o*,  $\bar{e}$ ,  $\bar{o}$ .
2.  $\bar{e}$ -series: 0,  $\varrho$ ,  $\bar{e}$ ,  $\bar{o}$ .
3.  $\bar{a}$ -series: 0,  $\varrho$ ,  $\bar{a}$ ,  $\bar{o}$ .
4.  $\bar{o}$ -series: 0,  $\varrho$ ,  $\bar{o}$ .
5. *a*-series: 0, *a*, (*o*?),  $\bar{a}$ ,  $\bar{o}$ .
6. *o*-series: 0, *o*,  $\bar{o}$ .

Many attempts have already been made (the most recent by Hübschmann *Das idg. Vocalsystem*, 1885) to systematise these series morphologically, i. e. to place together those phases of the different series which belong to a definite morphological category, e. g. the root-syllable of participles formed with *-to-* or of the present indic. formed with the so-called thematic vowel. A parallelism clearly exists in many cases. E. g. part. \**d+tó-s* 'given' (Skr. *dēvá-tta-s* 'god-given') to \**é-dō-m* 'I gave' (Skr. *á-dā-m*) from rt. *dō-*, as \**i-tó-s* 'gone' (Skr. *itá-s*) to \**é-ej-ŋ*, contracted \**éj-ŋ* 'I went' (Skr. *áy-an*) from rt. *ej-*. Or \**kṛ-n-ŋti* 3. pl. 'they sever, break' (Skr. *śṛ-ŋ-ánti*) to \**kṛ-ná-mi* 1. sg. (Skr. *śṛ-ná-mi*) with present suffix *-ná-*, as \**qi-nu-ŋti* 3. pl. 'they pile up' (Skr. *ci-nv-ánti*) to \**qi-néu-mi* 1. sg. (Skr. *ci-nó-mi*) with present suffix *-neu-*. On this principle, the three first series e. g. have been parallelised in the following manner:

	Weak grade	Medium gr.	Strong gr.
<i>e</i> -series: 0	(e),	<i>e</i> ,	<i>o</i>
$\bar{e}$ -series: 0	$\varrho$ ,	$\bar{e}$ ,	$\bar{o}$
$\bar{a}$ -series: 0	$\varrho$ ,	$\bar{a}$ ,	$\bar{o}$ ,

from which the members  $\bar{e}$  and  $\bar{o}$  of the *e*-series were excluded because parallels were not found to them (they appear e. g. in Gr.  $\pi\alpha\text{-}\tau\eta\rho$  and  $\delta\omega\text{-}\tau\omega\rho$ , Dor.  $\pi\acute{\omega}\varsigma$  'foot') in both the other series.

The investigations instituted in this direction have not yet gone far enough to let us give a system of gradation-series completely worked out on this principle. And it is questionable whether we have a right to aim at the attainment of such a system at all, in the sense in which it is usual to do so. Several strata of formations, distinct in their time of origin, seem to overlies each other. In those which arose earlier, much



may have been obliterated by transference of forms before the new cause of gradation came into activity, and the later phonetic law which called new distinctions into being did not act in the same manner as the older law or laws. In this case it is from the outset impossible to expect that parallels can be found everywhere.

§ 310. Clearness prevails most of all in the case of the weak grade, which is recognisable in each ablaut-series and assumes in most series a distinct twofold shape. It is due to a reduction of the vowel, which was caused through the chief accent lying on the following syllable. Cp. e. g. the participles, \**d*+*tó*-s from rt. *dō*- and \**i*-*tó*-s from rt. *eĭ*-, quoted in § 309. This connexion between accentuation and the phase of ablaut is best recognisable in Skr., since this language had most faithfully preserved the prim. Indg. accentuation (§§ 669. 672).

What we denote as the 'weak' stem-form in the accidence, has weak grade vocalism.

Rem. Many phenomena of younger phases are instructive for the relation of *dyk-* to *pt-* etc. (§ 308). E. g. by the West Germ. law of syncope OHG. \**hōrita* 'heard', \**brannita* 'burnt' appear as *hōrta*, *branta*, whereas \**zimbrita* 'built' (= Goth. *timrīda*) became \**zimbr̥ta*, whence historic *zim-barta*; prim. Germ. \**yulfaz* 'wolf' became OHG. *wolf*, whereas prim. Germ. \**akraz* became \**akr̥z*, whence OHG. *acchar* (§§ 623 rem. 1. 635).

Opposed to the weak grade we call the other phases of each series the strong grades and distinguish strong grade 1. 2. etc. It is not known whether the strong grades, having the same number in the various series, always came into existence under the same conditions of accentuation etc.

What we denote as the 'strong' stem-form in the accidence, has strong grade vocalism.

#### 1. *e*-series.

§ 311. The scheme is:

Weak grade		Strong grade			
a. unaccented	b. secondary accented	1	2	3	4
0	(e)	é	o	ē	ō

This series appears most completely carried through in the nominal suffixes *-(t)er-* (*-[t]or-*), *-en-*, *-men-* and in the stem *ped-* 'foot':

$\left. \begin{array}{l} -(t)r- \\ -(t)r- \end{array} \right\}$	$-(t)r-$	$-(t)ér- \quad -(t)or- \quad -(t)ēr- \quad -(t)ōr-$
$\left. \begin{array}{l} -n- \\ -ŋ- \end{array} \right\}$	$-ŋn-$	$-én- \quad -on- \quad -ēn- \quad -ōn-$
$pd-$	$ped-$	$ped- \quad pod- \quad pēd- \quad pōd-$

Wg. a. *-tr-*: Gr. gen. sg. *πα-τρο-ός*, Skr. instr. sg. *pi-tr-ā*, Goth. gen. sg. *fa-dr-s*. *-tr-*: loc. pl. Gr. *πα-τρό-σι*, Skr. *pi-tṛ-ṣu*, Goth. dat. pl. *fa-dru-m*. — Wg. b. *-tŕr-*: perhaps Skr. nom. acc. *sthā-tūr* (§ 285). — Str.g. 1. *-tér-*: acc. sg. Gr. *πα-τέρ-α*, Skr. *pi-tár-am*, Lith. *dùk-ter-ì* O.Bulg. *dŭš-ter-e*. — Str.g. 2. *-tor-*: acc. sg. Gr. *φοῦ-τορ-α*, Skr. *svás-ār-am*, O.Ir. *siair*, Goth. *brō-þar svist-ar*. — Str.g. 3. *-tér-*: nom. sg. Gr. *πα-τήρ δο-τήρ*, Skr. *pi-tá dā-tá*, Lat. *pa-ter* (§ 655, 4), O.Icel. *faðer faðir*, Lith. *dùktē* O.Bulg. *dŭšti*. — Str.g. 4. *-tōr-*: nom. sg. Gr. *φοῦ-τωρ δῶ-τωρ*, Skr. *bhrā-tā dā-tā*, Lat. *da-tor* (§ 655, 4), O.Ir. *siur*, Lith. *ses-ũ*.

Wg. a. *-n-*: Gr. gen. sg. *ἀρ-ν-ός*, adj. *νόνν-μν-ος*, Skr. gen. sg. *ukṣ-ŋ-ás nā-mn-as*, Lat. *car-n-is*, Goth. gen. pl. *aihs-n-ē na-mn-ē*. *-ŋ-*: Gr. loc. pl. *φρα-σί* (from *φρήν*), fem. *πρό-φρα-σσα* (to *πρό-φρων*), neut. *ὀνό-μα-τα*, Skr. loc. pl. *ukṣ-á-su nā-ma-si*, Lat. *cōgnō-men-tu-m*, OHG. *hliu-mun-t*. — Wg. b. *-ŋn-*: Skr. gen. sg. *bráh-man-as* (§ 231). — Str.g. 1. *-én-*: acc. sg. Gr. *ἀρχ-έν-α φρ-έν-α ποι-μέν-α*, Skr. *ukṣ-ān-am arya-mān-am*, Goth. loc. sg. *aihs-in*, Lith. acc. sg. *pē-men-ì*. — Str.g. 2. *-on-*: acc. sg. Gr. *τέκτ-ον-α φρό-φρ-ον-α ἄκ-μον-α*, Skr. *tákṣ-ān-am áś-mān-am*, Goth. *ah-man*. — Str.g. 3. *-ēn-*: nom. sg. Gr. *ἀρχ-ήν φρ-ήν ποι-μήν*, Skr. *ukṣ-ā*, *arya-mā* O.Icel. *ux-e*. — Str.g. 4. *-ōn-*: nom. sg. Armen. *šun*, Gr. *τέκτ-ων πρό-φρ-ων ἄκ-μων*, Skr. *tákṣ-ā áś-mā*, Lith. *ak-mū*, O.Bulg. *ka-my*; Gr. acc. sg. *Κρονί-ων-α* nom. pl. *ὀρᾶνί-ων-ες*, acc. sg. Lat. *rati-ōn-em* Goth. *raþj-ōn*, O.Bulg. nom. pl. *gražd-ān-e* (§ 219 p. 187).

The change between *e* and *o* and between *ē* and *ō* seems

here (cp. the material collected together by Collitz in Bezenberger's Beitr. X 34 ff.), as also frequently in other circumstances, to have been so regulated that *e* and *ē* originally stood in chief-accented syllables, *o* and *ō* in the next following syllable.<sup>1)</sup>

Wg. a. *pā-*: Av. *fra-bd-a-* (*-bd-* fr. *\*pā-* § 469, 2) 'the instep of the foot'. — Wg. b. *ped-*: Gr. Lesb. Bæot. *πεδ-ά* (instr.) 'after, with' (cp. Osthoff Zur Gesch. d. Perf. 574), *πεζό-ς*, gen. sg. Lat. *ped-is* Skr. *pad-ás*. — Str.g. 1. *ped-* (whether it occurs, is uncertain). — Str.g. 2. *pod-*: acc. sg. Gr. *πόδ-α* Skr. *pād-am*, nom. pl. Arm. *ot-kē* (§ 330 rem.), to which Lat. *tri-pod-are*. — Str.g. 3. *pēd-*: Lat. nom. sg. *pēs*, perhaps also Lith. *pėd-à* 'foot-print'. — Str. g. 4. *pōd-*: Gr. Dor. *πώς*, Goth. *fōt-u-s*. — Umbr. *du-purs-us* 'bipedibus' either Str.g. 2 or 4, according as *u* is to be understood as *ō* or *ō*. Skr. nom. sg. *pāt* either Str.g. 3 or 4.

Rem. In the Indg. prim. language the simple form perhaps had in the nom. sg. *\*pēd-*, acc. sg. *\*pād-* (Lat. *ped-em*?), whereas the compounds (cp. Skr. *aštā-pāt*, Gr. *ὀκτώ-πους* etc.), and also the simple form, when in accent it entered into a close connexion with preceding words, had *\*pōd-* and *\*pod-*. Then levellings in various directions took place<sup>2)</sup>.

For further information regarding these declensions with gradation see the accidence.

### § 312. The weak grade.

In formative syllables ending in an explosive or a spirant, the weak grade has only two forms, while four appear in those ending in *i*, *u*, nasal, liquid, since the unaccented as well as the secondary accented phase assumes two forms according as a sonant or a consonant follows:

1) Cp. G. Meyer in Kuhn's Ztschr. XXIV 248, Mahlow Die langen Voc. 161, Fick Gött. gel. Anz. 1880 p. 421 ff., Möller Paul-Braune's Beitr. VII 492 ff.

2) By this it is not implied that this change in the vowel quality is to be maintained for all monosyllabic gradating nouns. These nouns were not all created in the same period.

	a. unaccented.		b. secondary accented.	
rt. <i>ped</i> -:	<i>pā-</i> (Av. <i>fra-bā-a-</i> )		<i>ped-</i> (Skr. gen. <i>pad-ās</i> )	
rt. <i>ed</i> -:	<i>ā-</i> (Gr. <i>ἄρι-σ-το-ν</i> 'breakfast')		<i>ed-</i> (Skr. 2. pl. imper. <i>at-tā</i> )	
rt. <i>sneigh</i> -:	<i>snigh-</i> (Gr. <i>νίφα</i> )		<i>snigh-</i> (Gr. <i>νίφ-ει</i> )	
rt. <i>leug</i> -:	<i>lug-</i> (Goth. <i>lūkans</i> )		<i>lūg-</i> (Goth. <i>lūkan</i> )	
	before sonants      before cons.		before son.      before cons.	
rt. <i>bheug</i> -:	<i>bhū-</i>	<i>bhu-</i>	<i>bhu-</i>	<i>bhū-</i>
rt. <i>gem</i> -:	<i>gm-</i>	<i>gm-</i>	<i>gmm-</i>	<i>gm̄-</i>
rt. <i>ster</i> -:	<i>str-</i>	<i>str-</i>	<i>strr-</i>	<i>str̄-</i>

Examples for the three last named roots are:

Rt. *bheug* 'become'. *bhū-*: Skr. *á-bhv-a-*, Gr. *ὑπερφιάλο-ς* fr. *\*ύπερ-ψF-ιαλο-ς* (§ 166), O.Bulg. *bě* fr. *\*bū-ě* (§ 184). *bhu-*: Gr. *φύ-σι-ς*, Lat. *fu-tūru-s*. *bhu-*: Skr. gen. sg. *bhuv-ās*, Gr. *ἐφύην*. *bhū-*: Skr. *bhū-ti-* *bhū-man-*, Gr. *φῦ-μα*.

Rt. *gem* 'go'. *gm-*: Av. 3. sg. act. *γm-a-ḫ*, O.Pers. 3. sg. mid. *a-gm-a-tā*. *gm-*: Skr. *ga-tā-s*, Gr. *βα-τό-ς*, Lat. *in-ven-tu-s*. *gmm-*: Skr. *gam-ā-mi*, OHG. *kom-an*. *gm̄-*: Skr. *á-gā-ta*, Gr. *ἔ-βᾶ-τε*.

Rt. *ster* 'spread, strew'. *str-*: Lat. *str-uere*. *str-*: Skr. *str-tā-s*, Gr. *στρα-τό-ς*. *strr-*: Skr. pf. mid. *ti-stir-ě* *ti-stir-ānā-s*, O.Bulg. 1. sg. pres. *stīr-a*. *str̄-*: Skr. *stīr-nā-s*, Gr. *στρω-τό-ς* *στόρνυμι* (§ 611), Lat. *strātu-s*.

The parallelism between *-ī-*, *-ū-*, *-ḡ-*, *-ṛ-* etc. on the one hand and *-i-*, *-u-*, *-m-*, *-r-* on the other is clearly seen e. g. in such forms as Skr. *bhū-ṣ* 'world' gen. *bhuv-ās*, *bhrū-ṣ* gen. *bhruv-ās* Gr. *ὀφρύ-ς* gen. *ὀφρύ(F)-ος* and Skr. *pūr* fr. *\*pūrṣ* (Indg. *\*p̄l-s*) gen. *pur-ās* (Indg. *\*p̄l-ós* or *\*p̄l-és*), *gō-ṣā-s* 'oxen gaining' (Indg. *\*-sḡ-s*) gen. *gō-ṣan-as* (Indg. *\*-sḡm-ós* or *\*-sḡm-és*) etc. See §§ 253. 306. Gr. *χρῶς* also seems to be a noun of this kind, whose gen. *χρῶός* in that case has taken the place of *\*χρῶός* *\*χαρ-ός* (s. §§ 294. 306), further (*ἄμο-*)*βρῶς* ('swallowing raw') = Skr. (*muhur-*)*gīr* ('swallowing suddenly'), Indg. *\*ḡr-s*; *-βρῶι-ος* a new formation like *χρῶι-ός*.

§ 313. That both phases of the weak grade — here as in all other ablaut-series — originated in the different degree of the stress-accent (§ 667, 3), is a probable result of Osthoff's investigation (Morph. Unt. IV).

The sound-form to which we have given the name of weak grade *b*., shows a less degree of weakening and regularly appears wherever a secondary stress remained upon the syllable. The phase *a*. originated whenever through any circumstances, connected with position in the sentence, the syllable lost its secondary accent and became accentless. Such circumstances are priority of another member of a compound, the prefixing or suffixing of a formative syllable etc.

That position of a syllable at the beginning of a sentence or member of a sentence occasioned secondary accent, may be concluded from the numerous double forms as Av. *fra-bd-a*- and Skr. *pad-ás*; Av. *haurva-fš-u*- 'the whole beast' (*-fš-* from *\*-ps-*, § 473) and *pasu*- Skr. *paś-ú-* 'beast' (Indg. *\*peḥ-ú-*); Skr. *á-bhv-a*- 'contrary to all existence, monstrous' and gen. *bhuv-ás*; *su-bhru-š* 'having a beautiful brow' and *bhrú-š* 'brow'; *gō-ghn-á-s* 'cow killer' and *ghan-á-s* 'destroyer'; *á-gr-u-š* and *gurú-š* (§ 290); Gr. *πολύ-τλας* and *τάλας*. We may probably assume also that forms like *\*gná-* (Ved. *gná-*, O.Ir. gen. sg. *mnā*), *\*klutó-s* (Skr. *śrutá-s*, Gr. *κλυτός* etc.), *\*stytó-s* (Skr. *stytá-s*, Gr. *στρωτός*) beside *\*ggná-* (Ved. *ganá-*, Bœot. *βανᾶ*, O.Icel. *kona*), *\*klūtó-s* (OHG. *hlūt*), *\*stytó-s* (Gr. *στρωτός*, Lat. *strātu-s*) originally had their position regularly in such combinations as *\*sá gná* 'this wife', *\*tóm klútóm* 'this renowned man' (= *τὸν κλυτόν*). Naturally as soon as accentless and secondary accented forms were firmly established levelling took place, e. g. Skr. *prá-pada-m* 'point of the foot' *ánaṣṭa-pašu-š* 'he who loses nothing from his herd' *a-guru-š* 'not heavy' beside the more archaic Av. *fra-bda-haurva-fšu*- Skr. *á-gru-š*.

It is worth noticing how double forms have been often called into use for euphonic reasons and through the striving after etymological clearness. In forms like *\*peqtó-s* 'cooked' *\*peqtí-s* 'cooking' (Skr. *paktá-s paktí-š*, Gr. *πεπτός πέψις*, Lat. *coctus coctiō* from *\*quecto-s* *\*quectiō* §§ 172. 431 a), *\*spektó-s* 'spied' (Skr. *spaštá-s*, Lat. *spectu-s*), a generalisation of the secondary accented form took place in the system of verbal forms belonging to one unity, since *\*pqtó-s* *\*spḥtó-s* etc. had become obscure

by their modification; \**pqtó-s* is however perhaps still represented by Gr. *ό-πτό-ς* with prothetic vowel. Of the double forms prim Ar. \**z-dhi* and \**az-dhi* 'be' (rt. *es-*) Skr. generalised the second form in spite of *s-más s-thá s-tá* etc., since \**dhi* from \**zdhi* was too indistinct; from \**azdhi* came regularly *ēdhi* (§ 591); the first form was retained by Iranian, Av. *z-dī*. If a combination of consonants preceded formative syllables ending in *i, u*, nasal or liquid, the antesonantal secondary accented form was often generalised. Thus we have \**bhrū-* beside \**bhrū-* 'brow', but no \**bhrū-* beside \**bhrū-*, only \**sru-* not \**sru-* beside \**sru-* ('flow') (Skr. *á-susruv-a-t*, Gr. *ἐρρύη*), only *klī-*, not \**klī-* beside \**klī-* ('lean') (Skr. *śi-śriy-ē*, Gr. Hom. *κίλι-αται*). Compare further postconsonantal \**nu-ñti* in Skr. *śak-nuv-ánti* Gr. *ἀγ-νό-ασι* with Skr. *śak-nu-más* Gr. *ἄγ-νν-μεν* and with Skr. *cin-v-ánti*, the Skr. gen. sg. *várt-man-as* (prim. f. \**uert-mñn-os* or *-es*) with the loc. pl. *várt-ma-su* (prim. f. \**uert-mñ-su*) and the gen. sg. *ná-mn-as*. Cf. §§ 117. 120. 153. 159.

Rem. The question as to how the two phases of the weak grade developed phonetically from the forms of the strong grade, has received different answers and is even now not ripe for settlement. We may refer to the latest discussions by Hübschmann loc. cit. p. 181 ff. and Bremer Paul-Braune's Beitr. XI 264. 267.

Specially deserving of attention is the circumstance that we may very often be in doubt as to whether we should refer a secondary accented form of the weak grade of a root to the *e-* or *ē-*series, e. g. *pī-* 'fill' (§ 306) *gī-* 'live' (§ 37) to *pel-* *gei-*, or to *plē-* (Lat. *plē-tu-s*, Skr. *prā-tá-s*) *gī-* (Gr. *ζῆ* from \**zē*, Av. *iyā-tu-š* 'life') just as the optative suffix *-ī-* stands to the strong form *-iē-*. Cp. Hübschmann loc. cit.

### § 314. The strong grade.

On the grades *e* and *o* there is nothing to add here to the observations in § 311.

The phases *ē* and *ō* present difficulties in so far as in the case of many forms with *ē* and *ō* in the separate languages the question arises whether they first obtained their long vowel in the period after the Indg. prim. period had broken up, or whether the long vowel was inherited with the rest of the ablaut.

Forms with such an old *ē* *ō* were cited in § 311. Others are nom. Gr. *Ζεύς* from \**dīēus* (§ 611) Skr. *dyāuṣ* 'sky'; Lat.

*vōx* 'voice' Skr. *vāk* 'speech'; Gr. *δυσ-μενής* 'evil disposed' Skr. *dur-manās* 'downcast'; part. perf. act. Gr. *εἰδ-ώς* from \**εἰδ-φώς* Av. (Gāp.) *vīd-vā*. Also old inherited forms or at any rate modelled on old inherited types were Gr. *φῶρ κλώψ σκώψ*, Lat. *fūr*; with these go as denominatives the Gr. verbs *κλωπάομαι τρωπάω πωτάομαι* etc.

Rem. Observe that the *ē* of forms of the weak perf. stem as Lat. *sēdimus* Goth. *sētum* from rt. *sed-* 'sit' have nothing to do with the *ē* of the strong grade. *ē* arose here from *ĕ* by lengthening, *sēd-* from \**se-zd-* = orig. \**se-s(e)d-*. See §§ 590. 591. 594 and the accident. The same reduplicated root-form was apparently at the basis of many non-perfect verbal forms and noun formations which for the most part were formed later from the perfect. Thus Lith. *sēdmi sēdžiu* O.Bulg. *sēzda* 'I sit' Lat. *sēd-ēs sēd-āre* to perf. Lat. *sēd-imus*; Armen. *mit* 'sense' Gr. *μῆδομαι* 'I devise' OHG. *māza* 'a measure' to perf. Goth. *mēt-um* O.Ir. *ro mīd-ar* 'judicavi' from rt. *med-* (Gr. *μέδω* Goth. *mīta* Lat. *modu-s* etc.); Lat. *tēgula* Lith. *stėgiu* 'I thatch a roof', rt. *steg-*; Goth. *anda-nēms* 'pleasant', rt. *nem-*; etc. How far the assumption of such origin for the *ē* should extend, is certainly still doubtful. Cp. the author, Morph. Unt. IV 414, Osthoff Zur Gesch. d. Perf. 82 f. 110 f.

We have further to distinguish according to § 307 rem. 2 the *ē* and *ō* which have arisen by contraction. Especially to be mentioned here is the *ē* in the forms of roots beginning with a vowel, as *ed-* 'eat' *es-* 'be' etc. In the perf. stem *ēd-* (Lat. *ēd-imus* Skr. *ād-imā* etc.) *ē* arose by contraction of the *e* of the root with the *e* of the reduplication, in the imperf. stem *ēd-* (Skr. *ād-am* by contraction of the *e* of the root with the augment *e* (§ 114). From this now originated to some extent a new root-form *ēd-*, from which came Lat. *ēs-t* *ēs-u-s*, Lith. *ēd-mi* *ēd-i-s*, Goth. *uz-ēta* etc., and which called into being Gr. *ἔδ-ωδ-γί* after the analogy of the ablaut *ē*-series. Cp. author loc. cit., Osthoff loc. cit. 122 ff. 148 ff.

On the other hand it must remain quite undecided if many other *ē* and *ō* forms were proper ablaut vowels of the *ē*-series i. e. whether directly inherited or introduced by analogy. Besides sporadic forms as Gr. *ἦπαρ* Av. *yākar*<sup>o</sup> (beside Lat. *jecur* Skr. *yakṣt*) 'liver' the Skr. *Ṛddhi*-vowels come especially into consideration. It is quite conceivable that e. g. the *s*-aorists *á-bhāut-sam* (rt. *bheydh-*) *á-drāk-ṣam* from \**a-dārṣ-ṣam* § 259 (rt. *derk-*) *á-jāi-ṣam* (rt. *gei-*) *á-bhār-ṣam* (rt. *bher-*) represent an Indg. aorist formation with long root-vowel; cp. Lat. *rēxī tēxī*, O.Bulg. *nēsū rēchū basū* and observe that in Gr. *ἔφρουσα ἔτεφρα ἔτεισα ἔφερα* the *e* of the root syllable may have been shortened from *ē* (§ 611). Cp. the accident.

2. *e*-series.

§ 315. The scheme is:

Weak grade		Strong grade	
a. unaccented	b. secondary accented	1.	2.
0	ə	<i>e</i>	<i>ō</i> ,
e. g. from rt. <i>dhē-</i> 'put, place':			
<i>dh-</i>	<i>dhə-</i>	<i>dhē</i>	<i>dhō-</i> .

Wg. a. *dh-*: Skr. 1. pl. *da-dh-más*, O.Bulg. 1. sg. *deždaq* from \**de-d-ia* (§ 147), Lith. 3. sg. *dėsti* i. e. \**dē-d+ti* (§§ 544. 552). — Wg. b. *dhə-*: Skr. part. *-dhi-ta-s hi-tá-s*, 3. sg. aor. *á-dhi-ta*, Gr. *θε-τό-ς ε-θε-το*, Lat. *crēdi-tu-s* from \**crēda-tu-s* § 109 d (Skr. *śrād-dhita-m* neut. 'trusted, believed'). — Str.g. 1. *dhē-*: Gr. *τί-θη-μι ἀνά-θη-μα*, Skr. *dá-dhā-mi dhá-man-* neut. 'seat, place', Goth. *ga-dē-þs* OHG. *tā-t* OHG. part. *gi-tān*, inf. Lith. *dē-ti* O.Bulg. *dě-ti*, Lith. fut. *dě-siu*, O.Bulg. aor. *dě-čūū*. — Str.g. 2. *dhō-*: Gr. *θα-μό-ς* 'heap', Goth. *dōms* 'judgment', OHG. *tuot* 'does' orig. \**dhō-je-ti*.

From root *sē-* 'throw, sow': — Wg. a. *s-*: Skr. *s-trī* 'woman'? (cp. Lat. *sa-tor* 'begetter'). — Wg. b. *sə-*: Lat. *sa-tu-s*, Gr. *ε-τό-ς, ἀφ-έ-την ε-σαν*. — Str.g. 1. *sē-*: Gr. *ί-η-μι ἦ-μα*, Lat. *sē-men*, O.Ir. *sē-l* 'seed', Goth. *mana-sē-þs* 'mankind, world' OHG. *sāt* 'sowing', inf. Goth. *saian* OHG. *sāan* (§ 142), pres. Lith. *sėjū* O.Bulg. *sějū*, Lith. pl. *sē-men-s* O.Bulg. *sě-me* 'seed, sowing'. — Str.g. 2. *sō-*: perf. Gr. Dor. *ἀφ-έ-ω-κα ἀν-έ-ω-θηαι* Goth. *sai-sō*.

From rt. *lēd-* 'let': — Wg. b. *ləd-*: Lat. *lassu-s*, Goth. *lats* OHG. *laz* 'weary, lazy'. — Str.g. 1. *lēd-*: Goth. *lētan* 'let'. — Str.g. 2. *lōd-*: Goth. perf. *lai-lōt*.

The Gr. *ε* (Wg. b.) in *θε-τό-ς, ε-τό-ς* etc. had taken the place of regular *α*, see § 109 c.

Skr. *da-dh-más* bears the same relation to *dhi-švá* (imper., cp. Gr. *θέ-ο*) as Av. *haurva-fš-u-* does to *pas-u-* Skr. *paś-ú-* (§ 313 p. 251), that is, the unaccented weak grade phase in *da-dh-más* was occasioned by the prefixing of the reduplicated syllable. Greek *τί-θε-μεν* was a new formation for \**τι-θ-μεν*.



Other examples of this ablaut-series in Hübschmann loc. cit. 71 ff.

3. *ā*-series.

§ 316. The scheme is:

Weak grade		Strong grade	
a. unaccented	b. secondary accented	1.	2.
0	ə	ā	ō.

From rt. *bhā*- 'speak': — Wg. b. Gr. *φα-μὲν*, Lat. *fa-teor*. — Str.g. 1. Gr. *φᾶ-μι*, Lat. *fā-ma fā-bula* (Armen. *ba-n* 'λόγος' here or to wg. b. ?). — Str.g. 2. Gr. *φω-νή*.

From rt. *stā*- 'stand': — Wg. a. *st-*: Skr. weak stem of the part. perf. act. *ta-sth-úṣ-* (e. g. fem. *tasthúṣṭ*), *savyē-ṣṭhar-* 'the warrior who stands on the left (of the charioteer)' Av. *raṣae-ṣtar-* 'standing on the war-chariot, warrior' from \**sth+tar-*. — Wg. b. *stə-*: Skr. 3. sg. aor. *á-sthi-ta*, part. *sthi-tá-s*, *sthi-ti-ṣ* 'a standing', Gr. *στα-τός* *στά-σι-ς* *στά-τήρ*, Lat. *sta-tu-s sta-tiō*, Goth. *staþs* 'stead, place', Lith. *sta-taũ* 'I place', pl. *stā-klės* 'loom', O.Bulg. *sto-jǎ* 'I stand'. — Str. g. 1. *stā*: Skr. aor. *á-sthā-m*, *sthā-man-* 'standing-place, strength', Gr. ἵ-στη-μι ἔ-στη-ν *στή-μων*, Lat. *stā-men Stā-tor*, O.Ir. *-tau* 'am' from \**stā-ǵō*, Goth. *stō-ma* 'basis, substance' *stōls* 'stool, seat', Lith. *pa-stó-ju* 'I become something' *sto-mũ* 'stature', O.Bulg. *sta-jǎ* 'I stand'. — Str.g. 2. *stō* cannot be established with certainty, it may be represented by Skr. perf. 3. sg. *ta-sthāú*.

Skr. *savyē-ṣṭhar-*: Gr. *στα-τήρ* = Av. *haurva-fš-u-*: Skr. *paś-ú-* (§ 313 p. 251).

Other examples of this ablaut-series in Hübschmann loc. cit. 91 ff.

4. *ō*-series.

§ 317. The scheme is:

Weak grade		Strong grade
a. unaccented	b. secondary accented	
0	ə	ō.

From rt. *dō*- 'give': — Wg. a. *d*- : Skr. *dēvā-t-ta*- 'god-given' *bhāga-t-ti-ṣ* 'gift of fortune' part. *da-t-tā-s* 1. pl. pres. *da-d-mās* 3. pl. perf. *da-d-ūr*, Lat. *de-d-ī* probably = Skr. *da-d-ē*, 2. pl. Lith. *dūste* from \**dū-d+te* O.Bulg. *da-s-te* from \**dā-d+te* 3. pl. *da-d-ęŕŕ*. Wg. b. *də*- : Skr. *dī-ti-ṣ* 'possession' 3. sg. aor. *ā-dī-ta*, Armen. *ta-mkē* 'damus', Gr. *δά-νός*, *δο-τό-ς* *δό-σι-ς* *δο-τήρ* *ἴ-δο-το*, Lat. *da-tu-s* *da-tor* *da-mus*, Lith. part. perf. act. *dā-vo*s. — Str.g. *dō*- : Skr. *dā-dā-mi* *ā-dā-m* *da-dāū*, Armen. *e-tu* 'I gave' *tu-r* 'gift', Gr. *δί-δω-μι* *δώ-σω* *δῶ-ρο-ν* *δῶ-τι-ς*, Lat. *dō-nu-m* *dōs*, inf. Lith. *dū-ti* O.Bulg. *da-ti*, O.Bulg. *da-rŭ* 'gift'.

From rt. *pō*- 'drink': — Wg. b. *pə*- : Gr. *πο-τό-ν* *πό-σι-ς* *πο-τήρι-ο-ν*. — Str.g. *pō*- : Skr. *pā-tār*- 'drinker', Gr. *πῶ-μα* *πέ-πω-μα*, Lat. *pō-tor* *pō-culu-m*.

Gr. *ο* (wg. b.) in *δο-τό-ς* *πο-τό-ν* etc. had taken the place of regular *α*; the latter is preserved in *δά-νός*. See § 109 c.

Skr. *dēvā-t-ta*- *bhāga-t-ti*- *da-dmās* to Gr. *δο-τό-ς* Lat. *da-tu-s* Skr. *dī-ti-ṣ* like Av. *haurva-fš-u-* to Skr. *paś-ū-* (§ 313 p. 251).

Other examples of this ablaut-series in Hübschmann loc. cit. 99 ff.

### 5. *a*-series.

§ 318. The scheme is:

Weak grade		Strong grade	
a. unaccented	b. secondary accented	1.	2.
0	(a)	á	ā.

From rt. *aḡ*- 'drive, lead': — Wg. a. *ḡ*- : Skr. *pāri-j-man*- 'wandering about' *j-mán*- 'path'; here also Gr. *ὄ-γ-μο-ς* 'path' with prothetic *ὄ*- (as in *ὄ-πτό-ς*, see p. 252)? — Wg. b. *aḡ*- : Skr. *aj-á-s* 'driver' = Gr. *ἀγ-ό-ς*, Skr. *aj-irá-s* 'quick' = Lat. *ag-ili-s* (with transition into the *i*-declension), Skr. pass. *aj-yá-tē*, Gr. part. *ἐπ-ακ-τό-ς*. — Str.g. 1. *aḡ*- : Skr. *ájāmi*, Armen. *ac-em*, Gr. *ἄγ-ω*, Lat. *ag-ō*, O.Ir. *ag-aim*, O.Icel. inf. *ak-a*. — Str.g. 2. Skr. *ājī-ṣ* 'a race', Gr. *στρατ-ηγό-ς*, Lat. *amb-āg-ēs*.

From rt. *bhaḡ*- 'allot, enjoy, eat': — Wg. a. *bhḡ*- : Skr. perf. mid *bhēj-ē*, an irregular transformation (see the accident) of

original \**bhe-bhg-*. — Wg. b. *bhag-* : Skr. *bhak-tá-m* 'portion, food', Gr. *φαγ-εἶν* 'to eat'. — Str.g. 1. *bhag-* : Skr. *bháj-āmi* 'I allot, enjoy' (in case this had not taken the place of \**bhajāmi*, if so, it had wg. b.) *bhāga-s* 'distributor, giver of blessings', Av. *baγa-* 'god', O.Bulg. *bogŭ* 'god'. — Str.g. 2. *bhāg-* : Skr. perf. *ba-bháj-a*, *bhāg-á-s* 'share, lot'.

From rt. *īāg-* 'honour' : — Wg. a. *īg-* : Skr. part. *iṣ-tá-s*, *gtv-īj-* 'sacrificing at the regular time'. — Str.g. 1. *īāg-* : Skr. *yāj-āmi*, Gr. *ἄζομαι ἄγος*; here doubtless also, notwithstanding the suffixal accentuation, Skr. *yaj-ná-s* Gr. *ἀγ-νό-ς* (since we should rather expect *īg-* as wg. b.). — Str.g. 2. *īāg-* : Skr. *ati-yāj-á-s* 'honouring exceedingly' causat. *yājáyāmi*.

From rt. *day-* 'burn' : — Wg. a. *du-* (*du-*) : Skr. *du-nó-ti* 'burns, puts to grief'. — Wg. b. *dū-* *du-* : Skr. *dū-ná-s* 'burnt, tortured', Gr. *δύ(φ)-η* 'woe, pain' — Str.g. 1. *day-* : Skr. *dav-a-s* 'fire-brand', Gr. *δαίω* (from \**δαφ-τω*) 'I light up' *δαός* 'fire-brand, torch'. — Str.g. 2. *dāy-* : Skr. *dāv-á-s* 'fire-brand', Gr. perf. *δέ-δῆ-ε*, *δέφ-τω-ν* *δήω-ν* (*πῶο*).

From rt. *aīdh-* 'burn' : — Wg. a. *idh-* : Skr. part. *iddhá-s* 'kindled, pure' *idh-má-s* 'fire-wood', Gr. *ἰθ-αρό-ς* 'serene, pure'. — Wg. b. *īdh-* : Skr. *īdh-r-īya-* 'belonging to the serene sky', Lat. pl. *īd-ūs* scil. *noctēs* 'the clear nights', OHG. *īt-al* 'pure, clear'. — Str.g. 1. *aīdh-* : Skr. *édhas-* 'fire wood', Gr. *αἶθω* 'I kindle', Lat. *aestus aestās*, O.Ir. *aed* 'fire', OHG. *eit* 'rogus, ignis'.

Skr. instr. sg. fem. *nas-ā* nom. du. fem. *nās-ā* Ags. *naes-āyrlu* ('nostrils') OHG. *nasa* Lat. *nār-ēs* Lith. *nós-i-s* etc., proves the existence of an Indg. noun nom. sg. \**nās(-s)* acc. sg. \**nās-η* (str.g. 2), gen. sg. \**nas-ós -és* (wg. b.) 'nose'.

Other examples in Hübschmann loc. cit. 114 ff.

An unmistakable parallelism exists with the *e*-series. Observe especially also the forms of the nominal suffixes *-ā-* : *-a-* = *-o-* : *-e-*, e. g. acc. sg. \**ekvā-m* (Skr. *áśvām*, Lat. *equam*) : voc. \**ekva* (Skr. *ám̐ba*, Gr. *νύμφᾶ*, O.Bulg. *ženo*) = acc. sg. \**ekvo-m* (Skr. *áśva-m*, Lat. *equo-m*) : voc. \**ekve* (Lat. *equē*, Gr. *ἵππε*).

It still of course remains questionable, how the *o* is to be explained which frequently occurs in this ablaut-series, e. g.

Gr. *κόσμο-ς* 'ornament' beside *κῆ-κασ-ται* 'is excellent' (Skr. 3. pl. perf. *śā-śād-úr*). See Osthoff in Hübschmann loc. cit. 190 f.

Rem. It seems to me hardly possible to carry out the hypothesis, indicated by Osthoff loc. cit. 191. Cp. e. g. the feminine suffix *-a-*: *-ā-*.

### 6. *o*-series.

§ 319. The scheme is:

Weak grade		Strong grade	
a. unaccented	b. secondary accented	1.	2.
o?	(o)	ó	ō.

From rt. *og-* 'see': — Wg. b. and str.g. 1. *og-*: Gr. *ὀπτεύον* *ὄψι-ς* *ὄψομαι* *ὄμμα*, Lat. *oc-ulu-s*, Lith. *akl-i-s* O.Bulg. *oko* 'eye'. — Str.g. 2: *ōq-*: Gr. *ὄπ-ωπ-ε* *ὄψ*.

From root *od-* 'smell': — Wg. b. and str.g. 1. *od-*: Gr. *ὄζει* *ὄδμη*, Lat. *od-or ol-ō ol-eō*. — Str.g. 2. *ōd-*: *ὄδ-ωδ-ε* *εὐ-ώδη-ς*, Lith. *ūdžiū* 'I smell (something)'.

From rt. *bhod-* or *bhodh-* 'sting, prick, dig': — Wg. b. *bhod(h)-*: Lat. *fossu-s fossa*. — Wg. b. or str.g. 1. *bhod(h)-*: Lat. *fodiō*, O.Bulg. *boda* 'I sting', Lith. *badaū* 'I prick'; to which also Gr. *βόθ-ρο-ς* *βόθ-υρο-ς* 'ditch', in case we may assume that *β* had taken the place of *π* after the analogy of *βαθύ-ς* *βένθος* (the root would then certainly be *bhodh-*). — Str.g. 2. *bhōd(h)-*: Lat. *fōdī*, O.Bulg. *basū* aor. (cp. § 314 rem. p. 253), *badajq* 'I sting'.

Wg. a. would exist in Gr. *ἀντι-κρῶ* 'right opposite, straight on', wg. b. in the form *ἀντι-κρῶ*, if this adverb is really related to *ἀντι-κρούω* 'I push back, stop' and this latter belongs to the *o*-series (cp. Osthoff Morph. Unt. IV 267 f. 345).

Other examples in Osthoff loc. cit. 343 ff. and in Hübschmann loc. cit. 167 ff.

## EXPLOSIVES.

§ 320. The so-called stop-consonants are in reality glides, implosive and explosive. The transition does not take place between two sounding elements, but between a sound and a

moment of absence of sound; it is of secondary importance that the *mediae* are mostly pronounced 'voiced'. If we regard language as a genetic product, the moment of the absence of sound is the material part in explosives which corresponds to the nucleus of the other elements of language. But it can of course only be heard by observing the implosive and explosive glides, and these are of paramount importance for the comprehension of language as an acoustic phenomenon. At all events the names stop-sound and explosive-sound only imperfectly indicate the nature of these elements of language. Cp. Flodström Bezenberger's Beitr. VIII 1 ff.<sup>1)</sup>

§ 321. We consider the history of the Indg. explosives from two points of view, in as much as we ask ourselves the questions: what has been their fate as regards their place of articulation and what as regards their form of articulation?

According to the place of articulation we have to distinguish four classes of Indg. explosives:

1. Labials, more accurately bilabial or labio-labial (*p*-sounds): stop between the upper and lower lip;

2. Dentals (*t*-sounds): stop through articulation of the fore part of the tongue against the inner wall of the upper teeth or against their sockets;

3. Palatals (*k*-sounds): stop through articulation of the middle part of the back of the tongue against the back part of the hard palate, cp. say the *k* in English *kid*;

4. Velars (*g*-sounds): stop through articulation of the hind part of the back of the tongue against the soft palate (velum palatinum), cp. say the *k* in Mod.HG. *kunst*.

Rem. 1. Some use the term gutturals instead of velars. We avoid this name because it is apt to give rise to a confusion of this class of consonants with the palatals (3), since these are likewise often called gutturals. Many call classes 2 and 3 'the two guttural series' of the Indg. primitive language.

Rem. 2. In writing the Indg. prim. forms we employ *k*, *kh*, *g*, *gh* only when we leave it undecided whether the explosive had a palatal or velar articulation, e. g. rt. *kneigh*- § 423.

1) See now also Sievers Phonet. <sup>3</sup> 33 ff.

These prim. Indg. sounds often left their old place of articulation in the development of the separate languages. The sphere of articulation, into which the sound was transferred, was either one which had already from of old been taken up with the production of explosives, e. g. Lat. *quīnque* O.Ir. *cōic* 'five' fr. Indg. *\*penqe* (transition of *p-* to a velar, see §§ 336. 339), or was a new one. To these new places of articulation belong:

the labio-dental position: articulation of the lower lip against the upper teeth, e. g. OHG. labio-dental *f* from bilabial *f* from Indg. *p* (§ 342);

the interdental: the edge of the tongue stops up the fissure between the two rows of teeth, e. g. Gr. spirant *θ* (*ῑ*) from Indg. *dh* (§§ 365. 495);

the cerebral or cacuminal: the tip of the tongue is turned up and drawn back and articulates against the highest part of the dome of the palate, e. g. Skr. *ṭ ḍ ḍh* from Indg. *t ḍ dh* (§§ 352. 355. 358).

Rem. 3. Some finer distinctions, e. g. between postdental and supradental sounds (Sievers Phonet. <sup>3</sup> 54 ff.), need not be considered here.

§ 322. According to the form of articulation we must likewise distinguish four classes.

First of all comes into consideration the difference which calls for the division into *tenuis* and *mediae*. Its characteristic feature is the greater or less tension to which the parts of the mouth are put in the formation of explosives, e. g. a more energetic closing and opening of the lips takes place with *p* than with *b*. Hence the names *fortis* and *lenis* are also used instead of *tenuis* and *media*.

The *mediae* may be produced with or without voice (§ 16). In the prim. Indg. period they were probably voiced throughout and remained so almost everywhere, where they did not pass into *fortes*.

The Indg. *tenuis* and *mediae* were pronounced both with and without aspiration. The aspiration is indicated by placing an *h* after the respective sound: *th*, *bh* etc.

In the Indg. primitive period there accordingly existed:

1. unaspirated tenues, e. g. *t*;
2. unaspirated voiced mediae, e. g. *d*;
3. aspirated tenues, e. g. *th*;
4. aspirated voiced mediae, e. g. *dh*.

In the developments of the separate languages the form of articulation suffered numerous changes, to which the name sound-shifting has been given. These changes partly happened in such a manner that the result of the change represents another of the forms of articulation belonging to this class which had been handed down from the Indg. prim. language, e. g. Indg. *dh* became *d* in Iranian, Keltic and Baltic-Slavonic, and *th* in Greek (§§ 481. 495. 524. 542. 549). But in the various stages of the separate developments we also meet with other kinds of sounds in the place of the Indg. explosives, viz.:

affricatae i. e. explosives with a following homorganic spirant, e. g. Arm. *c* from Indg. *ġ* (§§ 409. 484), HG. *pf*, *z* (i. e. *ts*), *ch* (i. e. *kʃ*) from Indg. *b*, *d*, *ġ* *g* (§ 533);

spirants (fricatives), e. g. Germanic *f* from Indg. *p* (§ 527 ff.);

*h* i. e. voiceless vowel (§ 16), e. g. HG. *h* from Indg. *k*, *q* (§ 529);

consonantal vowels, e. g. Armen. *-aur-* from *-atr-* (§§ 360. 483), M.Cymr. *seith* = Ir. *secht* 'septem' (§ 339);

long vowels as representatives of original short vowel + explosive, e. g. O.Ir. *ēn* 'bird' from (O.Bret.) *etn* (§ 518);

nasals e. g. Lat. *mn* from Indg. *pn* (§ 500);

liquids, e. g. Lat. *l* from *d* (§ 369).

The Indg. sound also often entirely disappeared, e. g. *p* in Keltic (§ 339).

Lastly it may be pointed out that the explosive, after it had become a sound of another kind, not rarely became again an explosive later, e. g. Indg. *\*rudhró-* 'red' (Gr. *ῥουθρό-ς*) became Lat. *rubro-*, the combination *-dhr-* having passed through the stages *-thr-*, *-þr-*, *-fr-*, *-br-* (§ 509). It thus happened

sometimes that the prim. Indg. form and place of articulation were reached again, e. g. in OHG. *fater* 'father', whose *t* represents Indg. *t* (Skr. *pitā* Gr. *πατήρ* etc.), which had become *t* after having passed through the various stages *p*, *ā*, *d* (§ 528 ff.).

§ 323. The system of the Indg. explosives was accordingly the following:

		Places of articulation			
		linguo-palatals			
		labial	dental	palatal	velar
forms of articulation	ten.	<i>p</i>	<i>t</i>	<i>k̄</i>	<i>q</i>
	voic. med.	<i>b</i>	<i>d</i>	<i>ḡ</i>	<i>g</i>
	ten. asp.	<i>ph</i>	<i>th</i>	<i>k̄h</i>	<i>qh</i>
	voic. med. asp.	<i>bh</i>	<i>dh</i>	<i>ḡh</i>	<i>gh</i>

We now consider the history of these explosive sounds singly, beginning first of all with their places of articulation. We shall not treat the *tenuis aspiratae* until section 2. (B., §§ 475. 553). These sounds seem to have been comparatively rare in the prim. Indg. period and present no special peculiarities in their place of articulation as compared with the other explosives.

#### A. THE EXPLOSIVES ACCORDING TO THEIR PLACE OF ARTICULATION.

##### 1. Labial explosives.

###### Indg. primitive period.

§ 324. *Tenuis p*. \**pə-tér* 'father': Skr. *pitár*- Armen. *hair* Gr. *πατήρ* Lat. *pater* O.Ir. *athir* Goth. *fadar*. \**pro* 'fore, before': Skr. *pra-* Gr. *πρό* Lat. *prōd* *prō* O.Ir. *ro* Lith. *pra-* O.Bulg. *pro-*. Rt. *sup-* 'sleep': Skr. *svāpiti* 'sleeps' *svāpna-s* 'sleep, dream', Armen. *kun* (gen. *knoy*) 'sleep' (*k̄-* from *su-*, see



§ 162), Gr. ὑπνο-ς 'sleep', Lat. *sopor somnu-s*, O.Ir. *suan* 'sleep' (§ 339 rem.), Ags. *swefan* 'to sleep' O.Icel. *svefn* 'sleep', Lith. *sāpna-s* 'dream' O.Bulg. *sūpati* 'to sleep' *sūnū* 'sleep'. \**sérpō* 'I creep, crawl': Skr. *sárpāmi* Gr. ἔρπω Lat. *serpō*. Rt. *spēk-* 'spy': Skr. *spāś-* 'spy, watchman', Lat. *cōn-spiciō au-spez*, OHG. *spehōn* 'to spy'.

Suffixal elements with *p* seem not to have existed in the prim. Indg. period, if we must not put *p* here in certain cases where it is usually regarded as 'root-determinative', e. g. *sthāp-áyāmi* 'I cause to stand, erect' OHG. *stabēn* 'to be stiff' *stab* 'staff', from the root *stā-*.

§ 325. Media *b*. This sound occurred more rarely in the Indg. prim. period than any of the other explosives. \**pīb-* or perhaps \**bīb-* 'drink': Skr. *pībāmi* O.Ir. *ebaim* (prim. Kelt. \**pībō*, § 339) Lat. *bibō* 'I drink', possibly a reduplicated form; its relation to the root *pō-* with the same meaning (§ 317) is not clear (for an uncertain conjecture see Osthoff Morph. Unt. IV 43). Rt. *lāb-*: Skr. *rāmbatē lāmbatē* 'hangs down loosely, sinks down', Lat. *lābitur*. Rt. *bar- bal-* (cp. § 282 on *ger- gel-*): Skr. *balbalā-karōmi* 'I stammer', Gr. βάββαρο-ς, Lat. *balbus balbūtire*. \*-*bd-*, unaccented weak grade form to *ped-* 'foot' (§§ 311. 469, 2): Skr. *upa-bd-á-* 'a stamping, trampling', Gr. ἐπί-βδ-αι 'day after the festival' (cp. *πεδά* 'on foot, next afterwards, after', Armen. *het yet* 'behind, after, with'). Root-form *dheub-*: O.Ir. *fu-domain* (compar. *fu-dumnu*) Cymr. *dwfn* 'deep' (prim. Kelt. *-bn-*, § 520), Goth. *diups* 'deep' MHG. *tümpfel* 'pool', Lith. *dubù-s* 'deep, hollow' *dumburỹs* 'a hole in the ground filled with water' *daubà* 'ravine, defile' O.Bulg. *dübrī* 'dale, ravine'; beside which *dheup-* in Ags. *dýfan* 'to dive' OHG. *tobal* 'a hollow in a forest', O.Bulg. *duplī* 'hollow' (§ 221 p. 188 f. § 469, 7). Cp. §§ 328. 331. 334. 337. 340. 343. 346.

*b* seems not to exist in suffixal elements.

§ 326. Media asp. *bh*. \**bhērō* 'I bear, carry': Skr. *bhár-āmi* Armen. *berem* Gr. φέρω Lat. *ferō* O.Ir. *berim* Goth. *baíra* O.Bulg. *berq*. \**bhrū-* \**bhruy-* 'eye brow' (§ 312): Skr. *bhrū-ś-* Gr. ὀφρῶν-ς Mid.Ir. gen. du. *brūad* OHG. *brāwa* Lith. *bruv-i-s*

O.Bulg. *brǔv-ǔ*. \**nébhos* n. 'cloud, atmosphere' : Skr. *nábhās* Gr. *νέφος* Lith. *debes-ǐ-s* (with unexplained *d-* for *n-*) O.Bulg. *nebo*, cp. also Gr. *νεφέλη* Lat. *nebula* O.Ir. *nēl* (fr. \**neblo-*) OHG. *nebul* 'cloud, fog'. \**ḡombho-s* : Skr. *jámbha-s* 'tooth', Gr. *γόμφο-ς* 'tooth', OHG. *chamb* 'comb', Lith. *žamba* 'mouth' O.Bulg. *zǫbǔ* 'tooth'.

Formative suffix of noun stems *-bho-* : Skr. *vṛṣa-bhá-s ṛṣa-bhá-s* 'bull' Gr. *ἔλα-φο-ς* 'stag' *ἔρι-φο-ς* 'buck'. *-bh-* in case suffixes : Skr. instr. pl. *-bhīṣ* etc., Armen. instr. sg. *-b* instr. pl. *-bē*, Gr. *-φι(v)*, Lat. *-bus*, *ti-bē nō-bēs*, O.Ir. dat. pl. *-b*, O.Bulg. *te-bě* 'tibi'.

### Aryan.

§ 327. Indg. *p*. Skr. *pṛchāmi* Av. *per<sup>e</sup>sāmi* 'I ask' O.Pers. 2. sg. imper. *parsā* : Lat. *poscō* from \**por(c)-scō* (§ 269), OHG. *forsca* 'question', rt. *prek-* (*pṛk-*). Skr. *nāpāt* Av. *napā* O.Pers. *napā* 'descendant, grandchild' : Gr. pl. *νέποδες* 'children' (with *δ* instead of *τ* after the analogy of *πόδες* through the resemblance of the nom. sg. \**νεπιως* to *πίως* 'foot'), Lat. *nepōs*, Mid-Ir. *niæ* (gen. *niath*) 'sister's son', OHG. *nefo* 'nephew, relation'. Skr. *spḍś-* Av. *spas-* 'spy' : Lat. *au-sper*.

The change of organ remains unclear in Skr. *ṣṭhīv-* *ṣṭhyā-* 'spit' (pres. *ṣṭhīvāmi* part. *ṣṭhyūtá-*) : Gr. *πτύω* from \*(*σ*)*πιχῶ-ιω* (§ 131 p. 119), Lat. *spuō*, Goth. *speiva*, Lith. *spiau-ju*.

In Iranian *p* became *f* before consonants, and was probably pronounced as a labio-dental, e. g. Av. O.Pers. *fra-* = Skr. *pra-* 'before', see § 473, 1.

§ 328. Indg. *b*. Skr. *buk-kāra-s* the roaring of a lion : Gr. *βέκρης* 'howling', Lat. *būcina* 'a crooked horn' or 'trumpet', O.Bulg. *bučati* 'to bellow'. Skr. *sabar-* 'nectar' : OHG. *saf* Ags. *sæp* 'juice'; rt. *sab-* was perhaps a secondary form of *sap-* in Lat. *sapiō* (§ 469, 7). Skr. *upa-bd-á-* 'a stamping, trampling', Av. *upa-bd-a-* 'foot', see § 325. Upon \**ab-bhīas*, dat. abl. pl. from *ap-* 'water', rests Av. *aiwyō*; on Skr. *adbhyás* *adbhīṣ* see rem. 2. Cp. § 325.

Rem. 1. Prim. Ar. *b* in the combination *bh* = *bh+t*, as Skr. *dṛbdhá-* 'wound, twisted', Av. *der<sup>e</sup>wāa-* m. 'a twist, plait' (for *w* from *b* see § 478),

from rt. *derbh-*. It has not been determined how this combination was pronounced in the Indg. prim. period, see § 552.

Rem. 2. The *d* in Ved. *adbhiṣ*, instr. pl. from *ap-* 'water', and in *sq-sṣḍbhiṣ*, instr. pl. from *sq-sṣṣp-*, appellation of ten divinities and the offerings dedicated to them, cannot phonetically have taken the place of *b*. It was probably caused by the analogy of *nádbhiṣ* from *\*nabd-bhiṣ* (stem *napt-* 'descendant'). See Osthoff Zur Gesch. d. Perf. 600 f.

§ 329. Indg. *bh*. Skr. *bháv-ati* Av. *bavaiti* 'becomes, is' O.Pers. 3. sg. conj. *bavātiy*, Skr. *bhū-mi-* Av. *bū-mi-* O.Pers. *bu-mi-*, 'earth': Gr. *φύσις* 'nature', Lat. *fuam futūru-s*, O.Ir. *buith* 'existence', OHG. *būan* 'to dwell, build', Lith. *bū-ti* O.Bulg. *by-ti* 'to be', rt. *bhey-*. Skr. *bhrātā* Av. *brāta* O.Pers. *brātā* 'brother': Arm. *elbair* (§§ 263. 360) Gr. *φράτωρ* Lat. *frāter* O.Ir. *bráthir* Goth. *brōþar* Lith. *broter-ėli-s* (demin.) O.Bulg. *bratrū* 'brother'. Skr. *abhi* Av. *aiwi* (Gāṇ. *aibī*) O.Pers. *abiy* 'hither': to Goth. *bi* OHG. *bī* 'by'. 3. pl. perf. Skr. *babhr-úr* Av. *bawr-ar<sup>e</sup>*, Indg. *\*bhe-bhr-*, from rt. *bher-* 'bear, carry'.

#### Armenian.

§ 330. Indg. *p*. Initially mostly *h-* before vowels. *hing* 'five': Skr. *pāñca* Gr. *πέντε* Lith. *penkš*. *heri* 'distant': Skr. *pāra-s* 'more distant, on the other side', Gr. *πέραν* 'on the other side', O.Ir. *ire* 'ulterior', Goth. *fairra* 'distant'.

Rem. For this *h* we sometimes find *y*, e. g. *yauray* beside *hauru* 'step-father', to Gr. *πάτερος* 'uncle'; *yi-sun* 'fifty' beside *hing* 'five' (Hübschmann Ztschr. d. deutsch. morg. Ges. XXXV 656, Arm. Stud. I 45. 74). The phonetic relation is not clear. With loss of *h-*, *otn* 'foot' pl. *ot-ñ* Gr. *πόδες*.

*ev* 'and, also': Skr. *ápi* 'also', Gr. *ἐπι* 'on, to'. *evñ* 'seven': Skr. *saptá* Gr. *ἑπτά* Lat. *septem* O.Ir. *secht n-* Lith. *septyni* 'seven'.

*ep'em* 'I cook' probably to Greek *εψω*. *p'oit* (gen. *p'utoy*) 'σπουδή', to *σπουδή* (Hübschmann Ztschr. d. d. m. Ges. XXXVI 117).

§ 331. Indg. *b*. Here belongs perhaps *bu* and *bu-ēč* 'owl': Gr. *βῦα-ς βύζα* (*βῦζα?*) 'horn-owl', Lat. *būbō*; probably an onomatopoeic formation; in this case *b* would not have been shifted to a tenuis like the other Indg. mediae (§ 484).

§ 332. Indg. *bh.* *ba-n* (gen. *bani*) 'λόγο-ς': Gr. *φη-μι* 'I say' *φω-νή* 'voice', Lat. *fa-teor fā-ma.* *αλβευ* 'source, spring' (§ 263): Gr. *φρέαρ* 'well, fountain'. *arbi* 'I drank' *arb* 'a drinking-bout': Gr. *ροπέω* 'I sip', Lat. *sorbeō*, Lith. *srebiū* 'I sip', rt. *srebh-*; Armen. *arb-* and Lat. *sorb-* from Indg. *sybh-* (§§ 291. 295). *surb* 'clean, pure': Skr. *śubh-rá-s* 'bright, smart', cpf. *\*kubh-ró-s* (§ 263).

Suffix *-a-vor* e. g. *lus-a-vor* 'clear': Gr. *λευκο-φόρο-ς*. Instr. sg. *mardo-v* pl. *mardo-vē* (from *mard* 'man') beside *dster-b dster-bē* (from *dustr* 'daughter'), cp. § 326.

### Greek.

§ 333. Indg. *p.* *πέτ-ο-μαι* 'I fly' aor. *ἐ-πτ-ό-μην*: Skr. *pátāmi* 'I fly' aor. *ápapta-m*, Lat. *petō*, O.Bret. *etn* O.Ir. *ēn* (§ 518) 'bird', OHG. *fedara* 'feather'. *πλέ(φ)-ω* 'I swim': Skr. *plávati* 'swims', Armen. *luana-m* 'I wash', Lat. *pluit*, O.Ir. *luath* 'quick', OHG. *flewen flouwen* 'to rinse, wash', Lith. *pláuju* 'I rinse' O.Bulg. *plovā* 'I sail'. *ὑπείρ ὑπέρ* 'over': Skr. *uráni* 'above', Lat. *s-uper*, Goth. *ufar* 'over'. *τέρπ-ω* 'I refresh, delight': Skr. *tarpáyāmi* 'I satiate, satisfy', Lith. *tarpā* 'a thriving' Pruss. *en-terpo* 'it is of use'.

*πτ* became *ττ* in Thessalian and Cretan, e. g. Thess. *Λεττί-ναιος*, to Att. *Λεπτινης*; *ἀττᾶς* from *ἀπ τᾶς*; cp. Thess. *Ἀτθόνειτος* = *Ἀφθόνητος*, Cret. *ἔγρατται* = Att. *γέγραπται*, to *γράφω* 'I write'.

§ 334. Indg. *b.* *βαβάζω* 'I chatter' *βαμβαίνω* 'I stammer' *βαμβαλίζω* 'I chatter with the teeth': Lat. *babulu-s* 'chatterer', Mod.HG. *babbeln rappeln.* *βδέω* 'I break wind' represents Indg. *bzd-*, weak grade form to *pezd-*: Sloven. *pezdēti* 'to break wind' Pruss. *peisda* 'buttock', Lat. *pēdō* from *\*pezdō* (§ 594), cp. *bd-* weak grade form to *ped-* § 328. Cp. §§ 325. 328. 331.

§ 335. Indg. *bh.* *φαγεῖν* 'to eat': Skr. *bhājāmi* 'I allot, enjoy' *bhaktā-m* 'portion, food' *bhāga-s* 'sharer out' Av. *bagā-* 'god' O.Bulg. *bogŭ* 'god', rt. *bhaq-*. *ὀμφαλό-ς* 'navel': Skr. *nābhi-ṣ* 'navel' *nābhāla-m* 'private parts', Lat. *umbō umbilicu-s*, O.Ir. *imm-lind* 'umbilicum' (§ 525), OHG. *naba* 'wheel-nave' *nabolo* 'navel',

Pruss. *nabi-s* 'navel, wheel-nave' Lett. *naba* 'navel'. ὀρφανός 'orphan': Armen. *orb* 'orphan', Lat. *orbu-s*, O.Ir. *orbe* 'hereditas', Goth. *arbi* 'inheritance'.

The *f*, which arose from prim. Greek *ph* (*φ*) (§ 495), was first of all bilabial. Since the letter *φ* was employed to represent the *f* which had arisen from *p* (*θ*) in Bœot. and Epirot., *f* = *ph* seems here also to have been labio-dental (see loc. cit.)

### Italic.

§ 336. Indg. *p*. Lat. *pāx pangō*, Umbr. *pase* 'pace', Osc. Paakul 'Paculus': Skr. *pāśa-s* 'string, cord', Gr. πήγνυμι 'I fasten', MHG. *vuoge* 'joint' Goth. *fāhan* 'to seize', rt. *pāḥ- pāḡ-*. Lat. *opus*, Umbr. *osatu* 'operato, facito', Osc. úpsannam 'operandam, faciundam': Skr. *āpas- āpas-* n. 'work, religious deed', OHG. *uoba* 'holyday' *uobo* 'cultivator of the land'. Lat. *op-* in *op-tineō ostendō* from *\*ops-tendō*, *ob*, Umbr. *ostendu* 'ostendito, adhibeto', Osc. úp eísúd 'apud id': Gr. ἔπι, Skr. *āpi*, Indg. ablaut *e : o*. Lat. *caper capra*, Umbr. *cabriner* gen. 'caprini': Gr. κάπρο-ς 'boar', O.Icel. *hafr* 'buck'.

Lat. *quīnque*, Umbr. *pumperias* Osc. *pumperias* \*quintiliae', Osc. Πομπτικες 'Quinctius, prim. Ital. *\*kueṛekue*, which arose from *\*perēkue* (Skr. *pāñca* etc.) by assimilation. Lat. *coquō* from *\*quequō* (§ 172, 3. 431 a), *porīna* is probably borrowed from Osc. (pure Lat. form *coquīna*), prim. It. *\*kueṛkūō* from *\*pekūō* (Skr. *pācāmi*, Gr. πέσσω). On the Umbr.-Samn. *p* from *kū* cp. § 431 a. The similar assimilation of initial *p* exists also in Keltic in the same two words (§ 339), Germanic has it perhaps also in the numeral *five* (§ 444 a). This change is possibly older than the separate history of these languages.

Prim. Ital. *pt* became *ft* in Umbr.-Samn., as *lt* became *χt* (§ 502); Umbr. *ht* from *ft*. Osc. *scriptas* pl. 'scriptae' Umbr. *screihtor* pl. 'scripti' *screhto* 'scriptum'. Cp. Osthoff Zur Gesch. d. Perf. 183.

§ 337. Indg. *b*. Lat. *lūbricu-s*: Goth. *sliupan* 'to slip'. Lat. *lambō*: OHG. *laffan* 'to lick' pret. *luof*; rt. *lab-* would be a secondary form to *lap-* (§ 469, 7), if we may assume

old *p* for Gr. *λάπτω* Armen. *laḫem* 'I lick'. Lat. *labium* probably to Ags. *lippa* m. OHG. *lefs* m. 'lip'; Kluge explains the difference in the root-vowel by assuming that *labium* arose for \**lebium* through association with *lambō*. Cp. §§ 325. 328. 331. 334. 346.

§ 338. Indg. *bh*. Lat. *ferō*, Umbr. *ferar* 'feratur', Marruc. *feret* 'feret': Skr. *bhārāmi* 'I bear'. Lat. *flōs*, Sabin. *Flusare* abl. 'Floralī', Osc. Fluusaí dat. 'Florae': O.Ir. *blāth* 'bloom', Goth. *blōma* m. 'flower'. Lat. *ti-bī si-bī*, Umbr. *te-fe* 'tibi', Osc. *t(i)-fei* 'tibi' *si-fei* 'sibi': ep. Skr. *tú-bhy-am* 'tibi', O.Bulg. *te-bē* 'tibi'. Lat. *albu-s*, Umbr. *alfu* 'alba', Osc. Alafaternum 'Alfaternorum': Gr. *ἀλφός*-ς 'white leprosy'. Lat. *amb-itu-s*, Osc. *amfr-et* 'ambiunt' (for Umbr. *ambr-* see § 209): Gr. *ἀμφί* Gall. *ambi-* 'circum'.

Rem. How is Lat. *barba*, for which we should expect \**farba* (OHG *bart* O.Bulg. *brada*), to be explained? All the attempted explanations known to us, are unsatisfactory.

According to Seelmann (Ausspr. d. Lat. 294 f.) Lat. *f* was, up to the middle of the imperial period, "a hybrid sound, which might equally well be described as an interdental dorsal spirant with bilabial increase of narrowing, as a bilabial spirant with dorso-bidental increase of narrowing", then *f* became labio-dental. It seems to follow from the *m* in *amfr-* that *f* was bilabial in Oscan.

#### Old Irish.

§ 339. Indg. *p*. Apparently nowhere retained as *p* in Keltic.

It was dropped initially in the prim. Kelt. period. O.Ir. *ēn* O.Bret. *etn* 'bird', rt. *pet-* 'fly', see § 333. O.Ir. *il* 'much, manifold', compar. *lia* Mid.Cymr. *llei*: Skr. *purú-*§ compar. neut. *práyas*, Gr. *πολύ-*ς *πλείων*, Lat. *plūs*, Goth. *filu* 'multum' compar. O.Icel. *fleire fleiri*. O.Ir. *lār* O.Cymr. *laur* Corn. *lor leur* 'pavement': Ags. *flōr* 'house floor' MHG. *vluor* 'cornfield, ground'. *athir* 'father': Gr. *πατήρ*. O.Ir. *orc* 'pig': Gr. *πόρκο-*ς Lat. *porcu-s* OHG. *farh farah* Lith. *pařsza-s* 'pig'. O.Cymr. *rit* 'ford', Gall. in *Augusto-ritum*: Av. *peřu-*š 'ford', Lat. *portu-s*, OHG. *furt* (§§ 295. 298).

Intervocalic *p* disappeared at the same period. Mid.Ir. *nie* (gen. *niath*) 'sister's son', Mid.Cymr. *ney nei* (pl. *neyeynt nyeint*) 'brother's or sister's son': Skr. *nápāt* Lat. *nepōs* (§ 327). O.Ir. *tē* (pl. *tēit*) 'hot' from \**te(p)ent-* (cp. § 212): Skr. *tápati* 'warms, burns', Lat. *tepeō*, O.Bulg. *topiti* 'to warm'.

-*pt-* probably became *ft—cht* already in prim. Kelt. (cp. Low German *nicht*, *lucht* = OHG. *nift*, *luft*) and thus fell together with Indg. *kt* and *qt* (§§ 436. 517): O.Ir. -*cht-*, Britann. -*kt-*. O.Ir. *secht* Mid.Cymr. *seith* Corn. *seyth* Bret. *seiz* 'seven': Skr. *saptá*, Lat. *septem* etc. O.Ir. *necht* O.Corn. *noit* 'neptis': Skr. Ved. *naptī-ṣ* 'daughter, granddaughter', Gr. ἀνεπιός-ς 'first cousin' (from \*ἀνεπιός-ς, § 489), Lat. *nepti-s*, OHG. *nift* 'neptis, privigna', O.Bulg. *netijǎ* 'nephew, cousin' from \**neptijǎ* (§ 545).

Rem. How was -*pn-* treated? O.Ir. *suan* Cymr. *hun* 'sleep', which undoubtedly belong to Skr. *svápna-s* etc. (see § 324), point to \**sōno-*, this latter may have arisen from \**sopno-* through the intermediate stages \**sofno-* \**sohno-* (cp. § 518), but \**sopno-* may represent Indg. \**supno-* (cp. O.Ir. *bond bonn* 'solea' Cymr. *bon* 'stem, base' from \**bundo-s*, Lat. *fundu-s*, § 50). The historical forms however might also have arisen from \**sopno-* through the intermediate stages \**sovno-* \**soyno-*.

Prim. Kelt. \**kuenakye* 'five' = Indg. \**penaqe*, \**kyeky-* 'cook' = Indg. \**peq-*. O.Ir. *cōic* (§ 212) O.Cymr. *pimp* Corn. *pymp* Bret. *pemp* 'five'. Mid. Cymr. *popuryes* 'pistrix', O.Corn. *peber* 'pistor' *popei* 'pistrinum'. See § 336.

§ 340. Indg. *b* = prim. Kelt. *b*. O.Ir. *ebaim* 'bibo', Corn. *evaf* 'bibam' from \**ebam*: Skr. *píbāmi* (§ 325). -*mn-* from -*bn-* in O.Ir. *fu-domain* 'deep', see §§ 325. 520.

§ 341. Indg. *bh* = prim. Kelt. *b*. O.Ir. *bri* gen. *breg* 'mountain', Gall. *brigi-* (in *Brigiani*, *Are-brigium* etc.): Skr. *byh-ánt-* 'great, high', Armen. *barjr* 'high', root form *bhṣḡh-* (§§ 288. 291). O.Ir. *biu* 'sum', M.Cymr. *bydaf* 'ero', like Lat. *fīō fīs* etc. from Indg. \**bhy-ūō*, rt. *bhey-* (§§ 170. 175). O.Ir. *com-boing* 'confringit': Skr. *pra-bhanḡá-s* 'breaker, bruiser'. O.Ir. *braigim* 'pedo' Gaelic *braigh-* 'to give a crackling sound, to burst, explode': Lat. *fragor frangō*, Goth. *brikan* 'to break'. Corn. *befer* 'beaver', Gall. *Bibr-ax*: Skr. *babhrú-ṣ* adj. 'brown', subst. a kind of great ichneumon, Lat. *fiber* OHG. *bibar* Lith. *bēbru-s* (and *bēbru-s*) O.Bulg. *bebrǔ* 'beaver', Indg. \**bhe-bhru-s*.

O.Ir. *imb imm* 'around, about', Gall. *ambi-* : Gr. ἀμφί Lat. *amb-* Osc. *amf-r-* (§ 338). Cp. § 525.

Dat. *tri-b* 'tribus' : cp. instr. Skr. *tri-bhīṣ* dat. abl. *tri-bhyás*, to which also Gall. ματρει-βο ναμανοικα-βο 'matribus Nemausicis'. Cp. § 526.

### Germanic.

§ 342. Indg. *p*. Goth. *speivan* OHG. *spīwan* 'to spit' : Gr. πτόω 'I spit' fr. \*(σ)πλῦ-ιω (§ 131), Lat. *spuō*, Lith. *spīau-jū* O.Bulg. *plju-jā* (fr. prim. Slav. \*(s)plū-ia § 147) 'I spit'. OHG. *spehōn* : Skr. *spāś-* 'spy, watchman', Lat. *cōn-spiciō*, rt. *spek-*.

Goth. *faihu* OHG. *fihu* 'cattle' : Skr. *pāśu* Lat. *pecu* 'cattle', Indg. \**péku* n. Goth. *fraihan* (pret. *frah*) OHG. *frāgēn* 'to ask' : Skr. *praś-ná-* 'a questioning', Lat. *precēs* pl., *procu-s*, Lith. *praszyti* O.Bulg. *prosiiti* 'to demand, request', rt. *prek-*. Goth. *hlifan* 'to steal' *hliftu-s* 'thief' : Gr. κλοπή 'theft' κλέπτης 'thief', Lat. *clepō*, rt. *qlep-*. OHG. *nefo* Ags. *nefa* 'nephew' : Skr. *nápāt* etc., see § 327. Goth. *af* (*ab-u*, with interrogative particle *u*) OHG. *aba* 'away' off : Skr. *ápa* Gr. ἄπο 'away off'. Goth. *bi-leiba* OHG. *bi-lību* Ags. *be-līfe* 'I remain' : Skr. *riptá-liptá-* 'besmeared' *limpāmi* 'I smear, fasten to', Gr. λίπος n. 'grease' λιπαρέω 'I persist in', Lat. *lippu-s* 'blear-eyed', Lith. *limpū* (pret. *lipaū*) O.Bulg. *pri-līplja* (inf. *-līpēti*) 'I remain sticking, cling'.

Goth. *f* was bilabial. So, too, was OHG. *f* in the period of the oldest monuments. In the course of the OHG. period however *f* became labio-dental, as is shown by *nf* from older *mf* (see Kögel Üb. d. Keron. Glossar 58 f.).

The initial *f* in Goth. *fimf* OHG. *fimf finf* 'five' is perhaps not to be traced directly back to Indg. *p* (Indg. \**penqe*), but to *kṛ* (\**kṛenakṛe*). See §§ 336. 444 rem. 1.

§ 343. Indg. *b*. Goth. *slēpan* OHG. *slāfan* 'to sleep' (orig. 'to be slack'), OHG. *slaf* Low G. *slap* 'slack' : O.Bulg. *slabū* 'slack, weak', rt. *slēb-*. Goth. *ráurpan* OHG. *roufen* 'to pluck', rt. *reub-*, a secondary form of *reup-* in Ags. *reófan* O.Icel. *rjáfa* 'to break, rend', Skr. *rup-lup-* 'tear, shatter', Lat. *rumpō* (§ 469, 7). Cp. §§ 325. 328. 334. 337. 346.



§ 344. Indg. *bh*. Goth. *beitan* OHG. *bīzzan* *bīzan* 'to bite': Skr. *bhédami* 'I split, break down', Lat. *findō*, rt. *bheǵd-*. Goth. *bōka* f. 'letter' (of the alphabet) OHG. *buocha*: Gr. *φηγός*-s a kind of oak bearing an esculent acorn, Lat. *fāgu-s* 'beech'. Goth. *blēsan* OHG. *blāsan* 'to blow' OHG. *blāen* 'to swell, blow': Lat. *flāre*. Goth. *liuba-* (nom. *liufs*) OHG. *liob* 'dear': Skr. *lūbhyaṃi* 'I feel a strong desire', Lat. *libet libet*, O.Bulg. *ljubū* 'dear', rt. *leubh-*. Goth. *kalbō* OHG. *kalba* 'a female calf': Skr. *gárbha-s* 'embryo, the young', Gr. *δολφός*-s *δελφύς* 'matrix', *δέλφαξ* 'pig', rt. *gelbh-*.

For the pronunciation of Goth. *f* (nom. *liufs* acc. *liuf* see § 539) cp. § 342.

#### Baltic-Slavonic.

§ 345. Indg. *p*. Lith. *pelė* 'mouse' *pālsza-s* 'sallow, pale', O.Bulg. *plavū* 'whitish' *pelesū* 'gray': Skr. *palitá-s* 'gray', Gr. *πελιός*-s *πολιός*-s 'gray', OHG. *falo* (infl. *falawēr*) 'sallow, pale'. Lith. *plakū* 'I strike, scourge', O.Bulg. *plača* 'I weep': Gr. *πλήσσω* 'I strike' *πληγή* 'a blow', Lat. *plangō plāga*, Goth. *fōkan* 'to bewail', rt. *plāq- plāg-* (§ 469,7). Lith. *tīrpti* 'to grow stiff, become numb' (pret. *tīrpaū*), Russ. *terpnuť* 'to grow stiff, become numb': Lat. *torpeō*.

*k* in Lith. *sėkma-s* 'septimus' from *p* (cp. Pruss. *sepma-s* beside *septma-s*) or from *t*? Cp. § 377.

§ 346. Indg. *b*. Lith. *skabū-s* 'cutting' *skabėti* 'to cut', O.Bulg. *skobŭ* 'radula': Lat. *scabō*, from rt. *sqab-*, secondary form of *sqap-* in Gr. *σκαπάνη* 'spade, hoe', O.Lat. *scaprēs* 'scabby, rough', Goth. *skaba* 'I shave' (§ 469, 7). Cp. §§ 325. 328. 343.

Lith. *g* for *b* (regularly?) in *dūgna-s* 'ground', to O.Bulg. *dūno* 'ground' fr. *\*dūb-no* (§ 548), rt. *dheub-*, see § 325.

§ 347. Indg. *bh* = prim. Baltic-Slav. *b*. Lith. *bijó-ti-s* 'to be in fear' *baj-ū-s* 'fearful', O.Bulg. *boj-a-ti se* 'to be afraid': Skr. *bháy-a-tē* 'is in fear'. Lith. *blendžiū-s* 'I obscure myself' (of the sun), O.Bulg. *blęda* 'I err': Goth. *blandan sik* 'to have intercourse with', rt. *bhlendh-*. Lith. *žėmbu* 'I shoot, bud'

(properly 'I split myself, burst'), O.Bulg. *zēba* 'I tear in pieces': Skr. *jambhāya-ti* 'he pounds, destroys' Av. *zembayēitē* 'he destroys'.

## 2. Dental Explosives.

### Indg. primitive period.

§ 348. Tenuis *t*. Rt. *ten-* 'stretch, extend': Skr. *ta-nō-mi* 'I stretch out, extend' *tan-ū-ṣ* 'thin, small', Gr. *τείνω* 'I stretch', Lat. *ten-tu-s* part., *ten-u-i-s*, O.Ir. *tana* Cymr. *teneu* 'thin', Goth. *þanja* 'I stretch' OHG. *dunni* 'thin', Lith. dial. *tenva-s* O.Bulg. *tīnkū* 'thin'. Stem *\*trej-* *\*tri-* 'three': nom. pl. Skr. *tráy-as* Arm. *e-re-k* Gr. *τρεις* Lat. *trēs* O.Ir. *trī* Goth. *þreis* Lith. *trỹs* O.Bulg. *trīje trije*. Rt. *pet-* 'to move quickly through the air, fly, fall': Skr. *pātāmi* 'I fly, fall', Gr. *πέτομαι* 'I fly', Lat. *petō* 'I reach after something, desire' *im-petu-s* 'a falling against, attack', O.Bret. *etn* O.Ir. *ēn* 'bird', OHG. *fedara* 'feather'. Rt. *uert-* 'roll, turn, direct to': Skr. *vārtatē* 'turns itself, rolls, Lat. *vertō*, Goth. *vairþan* 'to become', Lith. *veřsti vartýti* O.Bulg. *vratiti* 'to turn'. Rt. *ster-* 'spread, strew': Skr. *stṛ-ṇō-mi* Gr. *στόρ-νῶ-μι* 'I spread, strew', Lat. *ster-nō*, O.Bret. *strouis* 'stravi', Goth. *stráuja* O.Bulg. *stīra* 'I spread'.

Frequently in suffixes. Participial suffix *-to-*, as *\*klu-tó-s* 'heard, renowned': Skr. *śru-tá-s* Gr. *κλυ-τό-ς* Lat. *in-clu-tu-s* O.Ir. *cloth* OHG. *Hlot-hari* Lothar (*\*Κλυτό-στρατος*, as it were). Ending of the 3. sg. *-ti -t*, of the 3. pl. *-nti -nt*, as *\*bhére-ti* 'bears' *\*bhéro-nti* 'they bear': Skr. *bhāra-ti bhāra-nti*, Gr. Dor. pl. *φέρο-ντι*, Lat. *vehit vehu-nt*, O.Ir. pl. *berit*, Goth. *bairi-þ baira-nd*, O.Bulg. *bere-tī beratī*.

§ 349. Media *d*. *\*dekṃ* *\*dekṃt* 'ten': Skr. *dāśa* Arm. *tasn* Gr. *δέκα* Lat. *decem* O.Ir. *deich n-* Goth. *taihun* Lith. *dėszimt dėszimti-s*. Stem *\*dwi-* 'two', nom. acc. du. masc. *\*dwiō* *\*dwiuō* 'two': Skr. *dvi-*, Ved. *dvā duvā*, Gr. *δι-*, *δύ-δεκα δύο*, Lat. *bi-*, *duō*, O.Ir. *dā*, Goth. *tvái* (pl.), Lith. *dù* masc. (fr. *\*dwiū*) *dvì* fem., O.Bulg. *dva dūva*. Rt. *veid-* 'see, know': Skr. *vēda* Arm. *git-e-m* Gr. *οἶδα* 'I know', Lat. *videō*, O.Ir. *ad-fiadaim* 'I announce, relate', Goth. *váit* 'I know', Lith. *vėida-s* 'face, coun-

tenance', O.Bulg. *věděti* 'to know'. Rt. *perd-* 'to break wind': Skr. *párdatē* Gr. *πέρδετα* 'breaks wind', Ags. *feortan* OHG. *ferzan* 'to break wind', Lith. *pir̃di-s* m. 'crepitus ventris'.

Rarely in suffixes. Gr. *χρόμαδο-ς* 'a gnashing' *χρῆμιζω* 'I bellow, neigh' fr. \**χρῆμιδ-ιω* (§§ 131. 493), Lat. *frendō* fr. \**frem-dō* (§ 207), Ags. *zrimettan* OHG. *gramizzzōn* 'to murmur, gnash'. Suffixal *d* (e. g. Gr. *-δων -δνο-ς -δαινω* : *μελεδών μελεδαινω*, Lat. *-dīn-* : *frīgēdō*, see Leo Meyer Vergl. Gramm. II<sup>1</sup> 363 ff., the auth. Morph. Unt. II 170. 203. 206, Thurneysen Kuhn's Ztschr. XXVI 305 ff.) may have arisen from *t* in the Indg. prim. period just as root-final *d* (§ 469, 7).

§ 350. Media asp. *dh*. Rt. *dhē-* 'set, place, do': Skr. *dhā-ma* 'law, manner, dwelling-place', Arm. *d-ne-m* 'I set', Gr. *ἀνάθημα* 'that which is set up, an offering', Lat. *fa-c-* in *artifex faciō*, *con-dere* (§ 370), Goth. *ga-dē-þs* (st. *ga-dēdi-*) 'deed', Lith. *dē-ti* O.Bulg. *dě-ti* 'to lay'. Rt. *reudh-* 'to be red': Skr. *rudhirá-s* Gr. *ἔρυθρός* Lat. *ruber* O.Ir. *ruad* Goth. *ráuþs* (st. *ráuda-*) O.Bulg. *rŭdrŭ* 'red'. Rt. *bhendh-* 'bind': Skr. *bándhana-m* 'a binding', Gr. *πενθερός* 'father-in-law' (cp. Skr. *bándh-u-ṣ* 'a relation'), Lat. *of-fendimentu-m* 'chin-cloth', Goth. *bindan* 'to bind'.

More rarely as *t*, oftener as *d* in suffixes. Nominal suffix *-dhlo-*: Gr. *θέμεθλα* pl. 'foundation', Lat. *trī-bulu-m* 'a thrashing sledge' Czech *rá-dlo* (O.Bulg. *ra-lo* fr. \**rā-dlo*, §§ 548. 551) 'plough'. Ending of the 2. sg. imper. *-dhi*: Skr. *śru-dhí* Gr. *κλῶ-θι* from rt. *kleu-* 'hear', O.Lith. *veizdi veizd* O.Bulg. *viždī* 'see' from rt. *meid-* (see § 547). Ending of the 2. pl. mid. Skr. *-dhvē -dhvam*, Gr. *-θε*.

#### Aryan.

§ 351. Indg. *t*. Pronominal stem Skr. Iran. *ta-* 'the, this', e. g. in acc. Skr. *tá-m* Av. *te-m*, O.Pers. in *ai-ta-* 'this': Gr. *τό-*, Lat. *tam*, Goth. *þa-*, Lith. *ta-* O.Bulg. *to-*, Indg. \**to-* 'the, this'. Skr. *áti* Av. *aiti* O.Pers. *atiy* 'over': Gr. *ἔτι* 'moreover, still', Lat. *et etiam*, Indg. \**éti*. Skr. *ásti* Av. *asti* O.Pers. *astiy* 'is': Gr. *ἔστι*, Lat. *est*, Goth. *ist*, Indg. \**és-ti* 'is'.

§ 352. *t* became *ṭ* after *ṣ* (= Indg. *ḷ* or *s*) in Sanskrit. *aṣṭá* = Av. *ašta* 'eight' : Gr. *ὀκτώ* etc., see § 360. *uṣṭá-* 'burnt' = Av. *ušta-* 'roasted' : Lat. *ustu-s*, Indg. \**us-tó-s* from rt. *eys-*. See §§ 399. 556, 1.

-*tc-* became -*cc-*. *ucca-* 'high' from prim. Ar. \**utca-* (*ut-* = *ud-* 'on high').

-*tṣ-* became -*cch-* (-*ch-*). *pacchás* 'in the manner of *pāda*, in hemistichs' from \**pat-śas* (*pat-* = *pad-* 'foot').

Rem. In certain manuscripts of the Vājasaneyi-saṁhitā -*tkn-*, -*tkm-* are written for -*tn-*, -*tm-*, e. g. *patknī* 'mistress', *patkman-* n. 'flight'. *k* apparently here represents the glide arising from the sudden raising of the uvula (see Sievers Phonet. <sup>3</sup> 63. 160 f.).

§ 353. In Iranian, *t* was partly changed into a spirant with a different position of articulation.

Av. O.Pers. *p̄*, Av. *ḍ* were interdental, as in Av. *p̄wam* O.Pers. *p̄wām* (read *p̄vām*) = Skr. *tvám* 'thee', Av. acc. pl. *f<sup>e</sup>ḍr-ō* 'patres' fr. \**ptr-as*, see § 473, 2.

Av. *p̄k* from *tk*, as *aḥka-* = Skr. *átka-* 'dress', see § 473, 2

Av. *ṣ* fr. *rt*, as *mašya-* (*mašiya-*) 'a mortal being, man' = Skr. *mártya-* O.Pers. *martiya-*, see §§ 260. 288. 474.

O.Pers. *šc* from *tc* (Skr. *cc*), as *aniyaš-ciy* = Skr. *aniyác-icid* 'any other'. *šy* (written *šiy*, § 125 p. 116) from *p̄y* = prim. Ar. *t̄j*, as *hašiya-* = Av. *haiḥya-* Skr. *satyá-* 'true'. *š* fr. *p̄r* = prim. Ar. *tr*, as *ši-* = Av. *p̄ri-* Skr. *tri-* 'three'. See §§ 261. 473, 2.

§ 354. Indg. *d*. Skr. *dū-rá-* Av. O.Pers. *dū-ra-* 'far, distant' : Gr. Hom. *δév-ο-μου* 'I am at a loss for', rt. *dey-*. Skr. Av. *dru-* 'wood' : *δov-τόμο-ς* 'felling timber', Goth. *triu* n. 'tree'. Skr. *sád-as-* Av. *had-iš-* O.Pers. *had-iš-* n. 'seat', weak pf. stem Skr. *sēd-* Av. *hazd-* prim. Ar. \**sa-zd-* (§ 591) : Gr. *ἕδ-ος* n. 'seat', Lat. *sedeō sēdī*, O.Ir. *suide* 'seat', Goth. *sitan* 'to sit', Lith. *sédēti* O.Bulg. *sédēti* 'to sit'. Skr. *chind-ánti* 'they cut off, tear', Av. *scind-áyeiti* 'he breaks' : Gr. *σχινδ-αλμó-ς* 'a splinter', Lat. *scind-ō*.

§ 355. *d* became *ḍ* after *ṣ* (= Indg. *z*) in Sanskrit; *ṣ* was then dropped. *nīdá-s* 'nest' : Arm. *nist* 'seat, possession',

Lat. *nīdu-s*, OHG. *nest* 'nest', Indg. *\*ni-zd-o-* 'sitting down, abode' from *ni* 'down' and rt. *sed-* 'sit'. See § 591.

-*dj-* became -*jj-*. *újjiti-š* 'victory' from *\*ud-jiti-š*. Analogously *ujjhítá-* 'forsaken, given up' fr. *\*ud-jhita-*, see § 406.

§ 356. *d* partly became an interdental spirant *ḍ* in Av., as *dadāiti* = Skr. *dādā-ti* 'gives' from rt. *dō-*, see § 478.

Prim. Ar. *du-* appears as (*dv-* and) *ḍb-* (Gāp. *db-*), *b-*. *ḍbiš-* (Gāp. *d<sup>a</sup>biš-*) = Skr. *dviš-* 'hate'. *bitīm* (Gāp. *d<sup>a</sup>bitīm*) = Skr. *dvitīya-m* 'secundum'. See § 159 p. 143.

§ 357. Indg. *dh*. Skr. *dhárš-āmi* 'I dare', Av. *darš-i-š* 'vehement' O.Pers. *a-darš-nau-š* 'he dared': Gr. *θρασ-ύ-ς* 'bold' *Θερσ-ί-της* 'the insolent one', Goth. *ga-dars* 'I dare', Lith. *drĩs-ti* 'to dare' (§ 285 rem.), rt. *dhers-*. Skr. *mádhu* Av. *mađu* n. 'sweetness, honey': Gr. *μέθv* 'wine', O.Ir. *mid* OHG. *metu meto* 'mead', Lith. *medù-s* O.Bulg. *medü* 'honey', Indg. n. *\*médhu*. 2. sg. imper. Skr. *šru-dhí* 'hear', Av. *i-dī* O.Pers. *i-dīy* 'go': Gr. *ἴ-θι* 'go'. Skr. *mádhyā-* Av. *maidīya-* 'medius': Gr. *μέσο-ς* 'medius', Lat. *mediu-s*, O.Ir. *medōn* 'medium', Goth. *midji-s* 'medius', O.Bulg. *mežda* 'boundary', Indg. *\*medh-jo-* 'medius'.

§ 358. *dh* became *ḍh* after *ḷ* (from old *ḡ* or *z*) in Sanskrit; *ḷ* was then dropped. *léḍhi* 'licks' from *\*leḷḍhi*, *\*leiḡḍhi* i. e. *\*leiḡh+ti*. *mīḍhá-* 'battle prize, combat': Av. *mīžda-* 'wages, pay', Gr. *μισθό-ς* Goth. *mizdō* O.Bulg. *mīžda* 'wages, pay', Indg. *\*mizdhó-*. See §§ 396. 404. 591.

§ 359. In Iranian, where the Indg. and prim. Ar. mediae asp. fell together with the mediae, the former underwent the same changes as the latter, e. g. Av. *mađu* (§ 357) as *dadāiti*. See § 356.

#### Armenian.

§ 360. Indg. *t*. *tařam-i-m* *tařam-i-m* 'I fade, wither': Skr. *tarša-s* 'thirst', Gr. *τέρσομαι* 'I become dry', Lat. *torreo tostus*, O.Ir. *tart* 'thirst', Goth. *þaursus* 'withered'. *tanjr* 'dense': Av. superl. *tancišta-* 'strongest', Goth. *þeihan* 'to thrive' fr. prim. Germ. *\*þenxana-n*, MHG. *ge-dihite* adv. 'frequently' O.Icel. *þētr* 'close, tight' fr. prim. Germ. *\*þenxto-* (§ 67

rem. 2), Lith. *tenkù* 'I have sufficient' *tánku-s* 'close'. *ut* 'eight' : Skr. Ved. *aṣṭá* (§ 352) Gr. *ὄκτώ* Lat. *octō* O.Ir. *ocht n-* Goth. *ahtháu* Lith. *asztūni* 'eight'.

*t* after *s*. *astl* (gen. *astel*) 'star, constellation' : Skr. *stár-* Gr. *ἀστὴρ* Lat. *stella* Bret. *sterenn* Goth. *stairnō*. *sast* (gen. *sasti*) 'a reviling, reproach' : Skr. *śās-ti-ṣ* 'a punishment, command' *śās-tár* 'chastiser, commander'.

*d* after *r*, *n*. *mard* 'homo' : Skr. *mytá-s* (§ 291). -and in *dr-and dr-andi* 'door-post, threshold' : Skr. *ātā*, Lat. pl. *antae*, see § 253 p. 207.

*k* fr. *ty*. *kō* 'tuus' *kēz* 'to thee' : Skr. *tvám* 'thou', Gr. Cret. *τφέ* Att. *σέ* 'thee' (§ 166 p. 147), O.Bulg. *twojǎ* 'thy'. *kār-* 'four' (*kār-a-sun* 'forty') fr. \*(*q*)*tyg-* = Gr. *τρα-*, in *τρά-πεζα* 'table' (orig. 'four-foot'). Cp. § 162.

Intervocalic *t* became *ǰ* and then disappeared. *hair* (pl. *har-k*) 'father', *mair* (pl. *mar-k*) 'mother' : Gr. *πατήρ, μήτηρ*. *heru* adv. 'last year' : Gr. Dor. *πέροντι*, O.Ir. *urid* MHG. *vert* 'last year'.

-*atr-* became -*aur-*. Gen. *haur* 'of a father', *maur* 'of a mother' : Gr. *θατρός, μητρός*. *araur* 'plough' : Gr. *ἄροτρο-ν*.

-*rh-*, later -*h-*, from -*rtǰ-* or -*rtr-*. *marh mah* (gen. *marhu mahu*) 'death', to Skr. *mytyú-ṣ* 'death' or to Goth. *maúrþr* 'murder'; concerning *ar* from Indg. *r* see § 291.

§ 361. Indg. *d*. *tiv* 'day' : Skr. instr. *div-ā* 'by day', Gr. gen. *Δι(φ)-ός*, Lat. *diē-s*, Cymr. *dyw* 'day', Lith. *dėva-s* 'god'. *ta-m* 'I give' : Skr. *dá-dā-mi* Gr. *δί-δω-μι* Lat. *dō* 'I give', Lith. *dū-ti* O.Bulg. *da-ti* 'to give'. *het* (gen. *hetoy*) 'foot-print', *het yet* 'behind, after' (§ 330 rem.) : Skr. *pad-ā-m* 'foot-step, foot-print', Gr. *πιδ-ά* 'after, with' gen. *ποδ-ός* 'of a foot', Lat. gen. *ped-is*, Goth. *fōt-u-s* 'foot', Lith. *pėd-à* 'foot-print'. *kirtn* 'sweat' (*rt* fr. *tr*, § 263) : Skr. *svēda-s* Gr. *ἰδρώς* Lat. *sūdor* Cymr. *chwys* OS. *swēt* OHG. *sweiz* 'sweat', rt. *sweid-*.

§ 362. Indg. *dh*. *diem* 'I suck' : Skr. *dháyami* 'I suck, drink', Gr. *θή-σατο* 'he sucked', Lat. *fē-lāre* 'to suck', Mid.Ir. *dī-th* 'he sucked', Goth. *daddja* 'I suckle', O.Bulg. *doja* 'lacto'. *dustr* (gen. *dster*) 'daughter' : Skr. *duhitár-* (*d-* fr. *dh-*, § 480) Gr. *θυγάτηρ* Goth. *daúhtar* Lith. *duk-tė* O.Bulg. *dūšti* 'daughter'.

## Greek.

§ 363. Indg. *t*. τελαμών 'a strap for bearing anything' τάλαντο-ν 'a balance': Skr. *talā* 'balance', Lat. *tollō*, Goth. *þuláip* 'suffers, endures'. *Ἔτος ἔτος* n. 'year': Skr. *vats-á-s* 'year', Lat. *vetus-tu-s* 'aged, old', O.Bulg. *vetüchü* 'old'. *στίζω* 'I prick' *στιγμή* 'a prick, mark': Skr. *tig-má-s* 'pointed, sharp' (for *t-* fr. *st-* see § 589, 3), Lat. *in-stigāre*, Goth. *stiks* 'moment of time' OHG. *stih* 'a prick'. Participial suffix *-nt-*, acc. sg. *φέρο-ντ-α* 'ferentem': Skr. *bhāra-nt-am* 'ferentem', Lat. *eu-nt-em*, Goth. *gība-nd* 'datorem', Lith. *vėža-nt-į* 'vehentem'.

*ππ* from *ππ*. Hom. *κάππεσε*, aor. to *κατα-πίπτω* 'I fall down'. Hom. Lesb. *όππως* 'how' fr. \**όππως* i. e. \**σφόδ* (Goth. *sva* 'so') + indef. *πως*; the simplification of the double consonant in *όπως* ensued from the model of the uncompounded *πώς*; cp. *ότι* (*ότι*) fr. \**σφόδ*+*τι*.

§ 364. Indg. *d*. Nominal prefix *δυς-* 'mis-, bad, ill' e. g. in *δυς-μενής* 'ill disposed': Skr. *duṣ-*, Armen. *t-* ('un-' e. g. *t-gēt* 'unknowing', *t-mardī* 'inhumanus', see Hübschmann Ztschr. d. deutsch. morg. Ges. XXXVI 120 f.), O.Ir. *du-* *do-*, Goth. *tuz-* OHG. *zur-*, Indg. \**du-* 'mis-, ill, bad, hard, un-'. *ήδ-ύ-ς* 'sweet, pleasant': Skr. *svād-ú-ṣ* 'sweet, well-tasted', Lat. *suādeō* (properly 'I exhibit something agreeable'), Goth. *sūts* (*sūts?*) 'sweet'. *ύδ-ωρ* 'water' *άν-υδρο-ς* 'waterless': Skr. *ud-án-* 'water' *an-udrá-s* 'waterless', Armen. *get* (gen. *getoy*) 'river' (*g-* fr. *u-*, § 162), Lat. *unda*, Goth. *vatō* n. 'water', Lith. *vandū* O.Bulg. *voda* 'water' (cp. footnote to p. 189). *μέλδομαι* 'melt, grow liquid': OHG. *smilzu* 'I melt, grow liquid', rt. *smeld-*.

*δ* became *δ̄* in *El.* at an early period (later also elsewhere), which was written *ζ* on the oldest *El.* inscriptions, e. g. *ζικαια*, *Φειζώς*. See § 491.

*λλ* fr. *δλ* in *Lacon.* *έλλά* 'seat', to *έδος*, perhaps also in *ύλλο-ς* 'ichneumon' (Curtius Grundz.<sup>5</sup> 248).

§ 365. Indg. *dh*. *θύ-νω* 'I rush or dart along' *θύ-ος* 'frankincense' *θυ-μός-ς* 'courage, passion': Skr. *dhū-má-s* Lat. *fū-mu-s* 'smoke', OHG. *tūmalōn* 'to revolve, reel', Lith. pl. *dū-*

*mai* O.Bulg. *dy-mǎ* 'smoke'. *αἶθ-ω* 'I burn': Skr. *édh-a-s* 'fire-wood', Lat. *aedēs* orig. 'burning-place, hearth', O.Ir. *aed* 'fire', OHG. *eit* 'funeral-pile'. *ἄνθος* n. 'germ, blossom, flower': Skr. *ándhas* n. 'vegetable'.

In several dialects prim. Gr. *θ* i. e. *th* became at an early period the interdental spirant *þ*, which partly moved forwards to *f*. S. § 495.

### Italic.

§ 366. Indg. *t*. Lat. *termō termen*, Umbr. *ter̄mnom-e ad terminum*, Osc. *teremnattens* 'terminarunt': Skr. *tárman-* n. point of the sacrificial rod', Gr. *τέρμων* 'boundary', *τέρμα* 'end, goal'. Lat. *tovo-s tuo-s*, Umbr. *tover* gen. 'tui' Osc. *tuvai* dat. 'tuae': Skr. *táva* 'tui', Gr. *τε(f)ός* 'tuus', Lith. *tavàs-is* 'thine'. Lat. *quatuor quattuor*, Umbr. *petur-* 'quadru-' Osc. *petiro-pert* 'quater': Skr. *catvār-as* Gr. Ion. *τέσσαρ-ες* O.Ir. *cethir* Goth. *fidvōr* 'four', Lith. *ketverì* 'by fours', O.Bulg. distrib. *četvero*. Comparative suffix *-tèro- -tro-*, Lat. *u-ter*, Umbr. *podruh-peì* 'utroque' Osc. *pú-túrús-píd* pl. 'utrique': Skr. *katará-s* Gr. *πό-τερο-ς* Goth. *hva-þar* Lith. *ka-trà-s* 'which of the two', O.Bulg. *ko-tory-jǎ* 'which'.

§ 367. In the prim. Ital. period *tl* became *kl* except, as it seems, initially and in the combination *stl* (cp. Umbr. gen. sg. *Tlatie* to Lat. *látu-s* fr. *\*tlāto-s*, Indg. *\*tl̄-to-s*, Lat. *stlīs stlocu-s*). Nominal suffix *-klo-* fr. *-tlo-* (Gr. *-τλο-* e. g. *ἄν-τλο-ς* 'bilge-water'): Lat. *sae-clu-m sae-culu-m*, *piā-clu-m piā-culu-m* (*-culo-* fr. *-clo-*, § 269), Umbr. *piha-klu* 'piculorum', Osc. *sakara-klúm* 'sacrum' *pu-klo-* 'son' = Skr. *pu-trá-s* 'son'; for the change of this *-klo-* to *-kro-* by dissimilation as in Lat. *lavā-cru-m*, see § 269.

This change, which was caused by the lateral articulation (instead of the coronal) of the *t* anticipating the *l*, repeated itself in the course of the individual dialects. Here belong e. g. Lat. *ex-anclāre* fr. Gr. *ἐξ-αντλεῖν* 'to draw out', Vulgar Latin *veclu-s* (Italian *vecchio*) from *vet(u)lu-s*. In the Lat. historic period it extended itself also to the combination *stl*, hence such



spellings as *sclis sclataris* beside *stlis stlataris*. In like manner Umbr. *perš-clu pes-clu* 'supplicatione' beside Osc. *pes-tlúm 'sacellum, templum'*.

Rem. The same phenomenon in Lith., see § 377. Cp. also Mod.Gr.  $\xi\alpha\gamma\kappa\lambda\lambda\omega$  = O.Gr.  $\xi\alpha\text{-}\alpha\pi\tau\lambda\acute{\epsilon}\omega$ ,  $\sigma\epsilon\upsilon\kappa\lambda\omicron$  'beet' = O.Gr.  $\sigma\epsilon\upsilon\tau\lambda\omicron\text{-}\nu$  (Foy Lautsystem der gr. Vulgärspr. 7); Gipsy lang. *kockli* 'scissors' = *kaitlin* Skr. *kartrī*, *schuklo* fr. *schutlo* 'sour' (Bugge Kuhn-Schleicher's Beitr. I 154); Czech dial. *klustej* = *tlustj* O.Bulg. *tlŭstyjŭ* 'thick' *klouci* = *tlouci* O.Bulg. *tlŭšti* (beside *tlŕšti*) 'to strike' (Miklosich Vergl. Gramm. I<sup>2</sup> 506, Burda Kuhn-Schleicher's Beitr. VI 245).

*-tr-* seems to have become *-cr-* in Pelignian : *sacaracirix* 'sacrificans' = Lat. *\*sacrā-trī-x*, cp. § 271.

Lat. *-cc-* from *-tc-*. *siccus* (to *siti-s*) : O.Ir. *sesc* Cymr. *hysp* 'dry, withered, barren', cpf. *\*sītqo-s* (§§ 419. 516). *peccō* fr. *\*petcō* i. e. *\*ped-cō*, to *pēs impediō* etc. *floccus* probably fr. *\*fotco-s* i. e. *\*flod-co-s*, to Gr.  $\phi\lambda\upsilon\delta\epsilon\acute{\iota}\nu$  'to rend'. Analogously *accipiō*, *acquīrō* fr. *\*atc.*, *\*atqu.* i. e. *ad+c.*, *qu.*; *quicquam* fr. *\*quitquam* i. e. *quid+quam* (*quidquam* is the etymological spelling). Cp. further *appellō* fr. *\*atp.* i. e. *ad+p.*, *topper* 'forthwith' fr. *\*totper* i. e. *\*tod* (cp. *is-tud*, Skr. *tād* 'the' neut.) + *per*, cp. *sem-per parum-per*.

§ 368. Indg. *d*. Lat. *dīcō*, Umbr. *deitu* 'dicito' Osc. *deikum* 'dicere' : Skr. *diśāmi* 'I show, point out', Gr.  $\delta\epsilon\lambda\upsilon\upsilon\mu$  'I show', Goth. *ga-teiha* 'I announce, proclaim'. Lat. *dīvo-s deu-s* (cp. § 172, 2), Umbr. *deveia* 'divina' Osc. *deivaí* dat. 'divae' : Skr. *dēvá-s* O.Ir. *dia* Lith. *dēva-s* 'god'. Lat. *ed-ō*, Osc. *edum* 'edere' : Skr. *ád-mi* Arm. *ut-em* Gr.  $\epsilon\delta\text{-}\omega$  Goth. *it-a* 'I eat', Lith. *éd-u* 'I eat' O.Bulg. *jad-ŭ* f. 'food'. Lat. *mod-estu-s mod-u-s*, Umbr. *meř-s mers* 'ius' fr. *\*medos* : Arm. *mit* (gen. *mt-i*) 'thought', Gr.  $\mu\acute{\epsilon}\delta\text{-}\omicron\text{-}\mu\alpha\iota$   $\mu\acute{\eta}\delta\text{-}\omicron\text{-}\mu\alpha\iota$  'I consider, plan', O.Ir. *midiur* 'puto', Goth. *mīta* 'I measure'. Lat. *pēdō* fr. *\*pezdō* (§ 594) : Gr.  $\beta\delta\acute{\epsilon}\omega$  'I break wind' etc., see § 334.

§ 369. *l* appears for *d* (initially before vowels, medially between vowels) in about twelve Lat. words. E. g. *lēvir* : Skr. *dēvár-* Arm. *taigr* Gr.  $\delta\alpha\eta\omicron$  Lith. *dēver-l-s* 'husband's brother'; *limpa* : Osc. Diumpais 'Nymphis' (§ 49 p. 42); *lacruma*, older *dacruma* : Gr.  $\delta\acute{\alpha}\upsilon\omicron\nu$  O.Bret. *dacr* Goth. *tagr* 'a

tear'; *olō oleō* beside *odor* : Gr. ὀδμή 'smell', Lith. *ū' džiu* 'I smell something'; *solū-m* beside *sedeō* : Gr. ἕδ-ος 'seat'; *solum solea* : Gr. ὀδός 'way' ἔδαφο-ς 'bottom, ground', O.Bulg. *choditi* 'to go'; *ūlīgō* beside *ūdu-s ūvidu-s* with suffixal *d*; *mālu-s* probably from \**mazdo-s* : OHG. *mast* 'mast' (§ 596). This change, due to the dorsal articulation of the *d*, was possibly not occasioned by any special phonetic conditions whereby *d* stood in the words in question opposed to other Lat. words containing *d*, but had its origin in some local dialect.

Rem. 1. I decidedly hold the forms with *r = d* as *ar = ad* (*ar-biter ar-vorsus*), *apor = apud* for non-Latin, s. Corssen Ausspr. I<sup>2</sup> 238 ff., Jordan Krit. Beitr. 92 ff., Stolz Lat. Gramm. § 51. These words were imported from one of the Umbr.-Samn. dialects. Cp. this § lower down.

*dy* became *b*, e. g. *bi-s* : Skr. *dvī-ṣ* 'twice'. See § 170 p. 150.

*dl* became *ll*. *sella* fr. \**sed-lā* : Gr. Lacon. ἑλλά 'seat' § 364, Goth. *sitts* 'seat'. *rāllu-m* 'ploughshare', to *rādō* : Skr. *rādāmi* 'I scratch'. Cp. also *grallae* 'stilts', to *gradior*, with *d = Indg. dh* : Goth. *grīps* (st. *gridi-*) 'step, grade', O.Bulg. *gręda* 'I come' (§§ 370. 511).

*ld* became *ll*. *sallō* (*salsu-s*) : Goth. *saltan* 'to salt'. *per-cellō*, to *clād-ēs* fr. \**kļd-* (§ 306 p. 243) : Gr. Hom. κλάσαι 'to break', κλαδάσαι · σεῖσαι Hesych. (*per-culsu-s = κλαστό-ς*, cpf. \**kļt-to-s* i. e. \**kļd+to-*). The *d* in \**saldō* and \**per-celdō* did not belong to the root. *mollī-s* fr. \**moldy-i-s* : Skr. *mṛd-ū-ṣ* 'soft, tender', fem. *mṛd-v-ī*.

Rem. 2. Observe the limited period of the operation of this sound-law. *valdē* fr. *validē*, *caldus* fr. *calidus* did not suffer this assimilation.

*dg* became *gg* : *agger* fr. \**ad-ger*.

In Umbrian intervocalic and final *d* passed into a sound (*ř* and *rs*), which we conjecturally denoted in § 23 as a strongly spirant *r*. *te-řa de-rsa* 'det' *te-řust di-rsust* 'dederit' : Lat. *de-dē*, Skr. pres. *dā-dā-mi* perf. Ved. *da-dā*, Gr. δί-δω-μι δέ-δο-μαι, rt. *dō-* 'give'. *peř-i pers-i* 'pede' *du-purs-us* 'bipedibus' : Lat. *ped-*, Gr. ποδ- 'foot'. *asam-ař* 'ad aram' *ars-veitu* 'ad-vehito' : Lat. *ad* O.Ir. *ad-* Goth. *at*. In a few instances simply *r* or *s* is written instead of *rs*, as *ar-* beside *ars-*, *a-tropusatu* beside *aha-tripursatu* '(abs)tripodato'.

Rem. 3. The forms ř eře 'dedit' and ř unu 'donum' arose from association of the initial *d* to the medial ř of the forms teřa teřust etc.

A similar change of the *d* is shown in Volsc. *ar-patitu*, with *ar* = Lat. *ad* (how the verbal form itself is to be understood is doubtful), and in Mars. *apur finem* 'apud finem'. The *Ð* in Pelign. VIÐAD ('videt' or 'viderat') may denote a similar *r*-sound.

§ 370. Indg. *dh* became *þ* in the prim. Ital. period, and it may be assumed that this spirant in the same period was shifted to *f* uniformly initially, medially before and after *r*, before *l* and after *u* (*u*), perhaps also after *m*. Medial *f* then became *b* in Lat. Lat. *fēlare filiū-s*, Umbr. *feliuf filiu* acc. 'lactantes': Skr. *dháyāmi* etc., see § 362. Lat. *foru-m* Umbr. *furo* 'forum', prim. Ital. \**þuro-ro-m*: Skr. *dvār-* 'door' (for regular \**dhvār-*, § 480), Lith. *dvāra-s* O.Bulg. *dvorū* 'yard'. Lat. *forti-s* O.Lat. *forcti-s*: Skr. *dydhá-s* 'firm, strong' fr. \**dhṛṣṭha-s* i. e. Indg. \**dhṛḡh+to-* (§§ 482. 552). Lat. *rubro-*, Umbr. *rufu* 'rubros': Gr. *ἐρυθρός-s* O.Bulg. *rūdrū* 'red', O.Icel. *roðra* f. 'blood', Indg. \**rudh-ró-s*. Lat. *combr-ētum* a kind of rush: Lith. *szveñdrai* pl. a kind of sedge or reed, cpf. \**k̄uendhro-* (Lat. *co-* fr. \**cye-*, § 172, 3). Italic suffix *-fro-* = Gr. *-θρο-*, Lat. *crībrum*<sup>1</sup>), *verte-bra*, Osc. *Vena-frum* name of a town ('hunting place, hunting ground' according to Corssen's probable conjecture). Lat. *barba* (on the initial *b* see § 338 rem.): OHG. *bart* O.Bulg. *brada* 'beard'. Italic suffix *-flo-* = Gr. *-θλο-*, Lat. *sta-bulum* (*-bulo-* fr. *-blo-*, § 269), Umbr. *sta-flarem* 'stabularem', Pelign. *pri-sta-falaciriæ* 'antistita' fr. \**-sta-flā-crīx* (§ 271) = Lat. \**præ-stabulātrīx*. Lat. *rōbu-s*, Umbr. *rofū* 'rubos', prim. Ital. \**roufo-*: O.Ir. *ruad* Goth. *ráuþs* (st. *ráuda-*) 'red', cpf. \**rouðho-s*; Lat. *rūfu-s* was a loan-word from an Umbrian-Samn. dialect. Lat. *ūber* n.: Skr. *ūdhar*, Gr. *οὔθαρ* OHG. *ūtar* 'udder'. Lat. *jubeō* O.Lat. *joubeō* beside *jussī jussus*; *ss* proves the origin of the

1) The suffix-form *-dhrā-* might be maintained for OHG. *rī-ttara* Ags. *hrī-dder* 'sieve', but they also admit of being traced back to *-trā-*. Cp. Kluge Nominale Stammbildungslehre der altgerm. Dial. p. 46.

*b* from *dh*, see § 552. If Lat. *lumbu-s* belongs to OHG. *lenti* 'loins' O.Bulg. *lēdviĵa* 'loins, kidneys', it must be traced back to a \**lomdho-s*; the origin of *p* fr. *dh* would then be older than the change of *m* to *n* before dentals (§ 207). Cp. Osthoff Zur Gesch. d. Perf. 533 f.

In other cases Lat. *d* and Osc. *f* stand opposite to each other medially. Lat. *mediu-s*, Osc. *mefiaí* loc. 'in media': Skr. *mādhyā-s* etc., see § 357. Lat. *aedēs aedili-s*, possibly Osc. gen. sg. *Aífineís* (Osc. *aídil* was a Lat. loan-word): Skr. *édha-s* etc., see § 365. *vidua*: Skr. *vidhāvā* O.Ir. *fedb* Goth. *viduwo* O.Bulg. *vǐdova* 'widow'. *con-dō con-ditu-s* beside *fa-c-iō*, from rt. *dhē-* 'place, lay, do' (§ 350). Lat. *d* points to *p* as the direct previous stage, and thus the Osc. *f* cannot be prim. Ital. *f*.

That *d*, not *b*, appears after *r* in Lat. *arduo-s* fr. prim. Ital. \**arḫyo-s* (: Skr. *ūrḍhvā-s* Gr. ὀρθός, § 170 p. 150, § 306), was due to the combination *ḫy*.

Rem. Concerning the *f* in Lat. *īferu-s* *īfimu-s* which are generally connected with Skr. *adhamā-s* 'undermost', Goth. *undar* 'under' (cp § 244), cp. the conjecture given in § 389 rem.

### Old Irish.

§ 371. Indg. *t* = prim. Kelt. *t*. *temen* 'dark, gray' *temel* 'darkness': Skr. *tāmas-* n. 'darkness', Lat. *tenebrae*, OHG. *demar* 'twilight', Lith. *tamsà* 'darkness'. *tarathar* 'borer': Gr. *τερέω* 'I bore, pierce' *τέροτρο-ν* 'borer, gimlet', Lat. *terō terebra*. *ocht n-* 'eight': Gr. ὀκτώ etc., see § 360. *alt t*-preterite to *alim* 'I foster, bring up'. *tiagaim* 'I stride, go' with loss of initial *s*- (§ 575): Gr. *στείχω* 'I go', Goth. *steiga* 'I ascend', O.Bulg. *stignā* 'I come', rt. *steigh-*.

*cēt* (read *cēd*) Cymr. *cant* 'hundred': Skr. *śatā-m* Gr. ἑκατό-ν Lat. *centu-m* Goth. *hund* Lith. *szimtu-s*. See §§ 212. 513.

Spirantal *th*, *d* after vowels. *mā-thir* 'mother': Skr. *mātā* Gr. *μήτηρ* Lat. *māter*. Gen. *be-thad* dat. *be-thid* (nom. *beo-thu* 'life'), suffix *-tūt-*: Lat. *-tūt-*. See § 514.

§ 372. Indg. *d* = prim. Kelt. *d*. *derc* 'eye' *air-dirc* 'conspicuous, renowned': Skr. *dadārśa* 'I saw', Arm. *tes-ane-m*,

Gr. *δέχομαι* 'I see', Goth. *ga-tarhjan* 'to mark out'. *dēt* 'tooth': Skr. *dánt-* Gr. *δόνος* Lat. *dēns* Goth. *tunþ-u-s* Lith. *dant-ì-s* 'tooth'.

*d* was spirantal e. g. in *crīde* 'heart': Arm. *sirt* (gen. *srti*) Gr. *καρδίᾱ καρδίῃ* Lat. *cor* (gen. *cordis*) Goth. *hairtō* Lith. *szirdì-s* O.Bulg. *srīdīce* 'heart'. See § 522.

*nn* from *nd* e. g. in *ro se-scaīnd* redupl. pf. 'he leapt': Skr. *skānd-āmi* 'I jerk, leap', Lat. *scand-ō*. See § 520.

Assimilation of the *d* in the prep. *ad-* = Lat. *ad* to a following *g* and *b*, when *ad-* had the chief accent. *áccaldam áccaldam* 'address, conversation' beside *ad-gládur* 'I address'. *ápēlugud* 'adulation' fr. *\*ád-bēlugud*. *cc*, *c* is to be read as *gg*, and *p* as *bb*. See § 519.

§ 373. Indg. *dh* = prim. Kelt. *d. fu-domain* 'deep', Cymr. *dwfn* 'deep', to which probably also *domun* 'world' Gall. *Dubno-rīx Dumno-rīx* ('world-king'): Goth. *diups* 'deep' etc., see § 325. Mid.Ir. *dī-th* 'he sucked': Skr. *dháyami* etc., see § 362. *ard* 'high' (to which probably *Arduenna silva*): Skr. *ūrdhvá-s* Gr. *ὀρθός* 'upright' Lat. *arduo-s* (§§ 306. 370). *meld-ach* 'acceptus, gratus': OHG. *milli* OS. *mildi* 'mild, kind'.

*d* was spirantal e. g. in *riad* 'a driving': Gall. *rēda* 'vehicle', OHG. *rītan* 'to move on, drive, ride' O.Icel. *rīða* 'to travel, ride', rt. *reīdh-*. See §§ 522. 526.

Compare further *iud-* 'combat' in Brit. proper names as O.Cymr. *Iud-nerth* (*nerth* 'power, strength') *Iud-ri* (*ri* 'king'): Skr. *yúdh-* 'fight, combat'.

#### Germanic.

§ 374. Indg. *t*. Goth. OHG. *ist* 'is': Skr. *ás-ti* etc. Goth. *raih̄ts* OHG. *reht* 'right': O.Pers. *rāsta-* 'straight, right', Gr. *ὀρεκτός* 'stretched out', Lat. *rēctus*, prim. f. *\*rēk-to-s*. Cp. § 528.

Goth. *þairnu-s* OHG. *dorn* Ags. *ðorn* O.Icel. *þorn* 'thorn': Skr. *tṣ-ṇa-m* 'blade of grass', O.Bulg. *trīnū* 'thorn'. Goth. *anþar* OHG. *andar* Ags. *ōðer* 'other': Skr. *an-tará-s* Lith. *añ-tra-s* 'other'. Goth. *vairþan* OHG. *werdan* Ags. *weorðan* 'to become', Skr. *várt-a-tē* etc., see § 348.

Goth. *háid-u-s* 'manner', OHG. *heit* Ags. *hād* 'state, condition, property' : Skr. *kēt-ú-ṣ* 'luminous phenomenon, appearance, picture, form'. Goth. OS. *hund* O.Icel. *hund-rad* OHG. *hunt* 'hundred' : Skr. *śatá-m* etc., see § 371.

With the exception of *-tk-*, which became *-sk-*, in all combinations in which Indg. *t* underwent a shifting in prim. Germ., there arose first of all the interdental spirant *þ*, which partly became *ð*. In Goth. *þ* remained everywhere, *ð* partly remained, and partly became *d*. In HG. *þ* and *ð* became explosives again. For details see § 527 ff.

Prim. Germ. initial *þl-* from pre-Germ. *tl-* became *fl-* in West Germ. and Norse. OHG. *flīohan* Ags. *fleón* O.Icel. *flýja* 'to flee' : Goth. *þliuhan*. OHG. *flēhan* 'to caress, flatter, ask urgently', Ags. *flāh* O.Icel. *flār* 'deceitful, false' : Goth. *gaþláihan* 'to caress, console, speak friendly to'. Etymological equivalents for these words are wanting in the other Indg. languages.

In Middle German dialects *tw-* = prim. Germ. *þw-* passed into *kw-* (*qu-*). Mod.HG. *quängen quängeln* (beside *zwängen*) : MHG. *twengen* 'to put under constraint' (cp. the orthography *tquang* for *twanc* in Grimm's D. Gramm. I<sup>2</sup> 355 rem. of the new reprint), O.Icel. *þvinga* 'to compel'. MHG. *querch* Mod.HG. *quer* (beside Mod.HG. *zwerch*) : MHG. *twerch twer* 'cross, oblique', Goth. *þwairhs* 'angry'. Cp. OHG. *quīfalōn* § 375.

§ 375. Indg. *d*. Goth. *tiuhan* OHG. *ziohan* Ags. *teón* 'to draw' : Gr. *δαι-δύσσεισθαι* · *ἐλκεσθαι* Hesych., Lat. *doucō dūcō*, rt. *deuk-*. Goth. *triggva* f. 'covenant' OHG. *triuwa* 'fidelity' (§ 179 p. 157) : Pruss. *druwi* f. 'faith', Gr. *δοῶν* · *ἰσχυρόν*. *Ἀγορεύει* (Hesych.). Goth. *hairtō* OHG. *herza* Ags. *heorte* O.Icel. *hjarta* 'heart' : Gr. *καρδ-ία* etc., see § 372. Goth. *vitan* OHG. *wizzan* 'to know', Indic. *vāit weiz* 'I know' : Skr. *vēda* etc., see § 349.

OHG. *z* was the affricata *ts*, whereas *zz* (the oldest Mss. have *zz* after both long and short vowels, finally *z*) was a voiceless spirant, whose position of articulation seems to have been

somewhat different from that of *s* (Paul in Paul-Braune's Beitr. I 168 f.).

Prim. Germ. *tu-* = Indg. *du-* appears in Alemanic in the OHG. period as *qu-*, *quifalōn* 'to doubt' heside *zwifalōn* : Goth. *tveifts* 'doubt', to prim. Germ. *\*twi-* OHG. *zwi-* = Indg. *\*dwi-* 'two', see § 349. Cp. the younger *qu-* = prim. Germ. *pu-* in Middle German § 374.

§ 376. Indg. *dh.* Goth. *dags* OHG. *tag* Ags. *dæz* O.Icel. *dagr* 'day' : Skr. *ni-dāghá-s* 'heat, hot time, summer', Lith. *dāga-s dagà* 'harvest' (properly 'hot time'), cpf. *\*dhogho-s*, from rt. *dhegh-* 'burn'. Goth. *bindan* Ags. *bindan* OHG. *bintan* O.Icel. *binda* 'to hind' : Skr. *bándhanam* etc., rt. *bhendh-*, see § 350.

Goth. *ana-biudan* 'to command, order' Ags. *beódan* OHG. *biotan* O.Icel. *bjōða* 'to offer' : Skr. *bódhāmi* 'I awake, mark, perceive', Gr. *πυθόμαι πυθάνομαι* 'I inquire, ask', Lith. *būdinti* 'to awake' O.Bulg. *būdēti* 'to wake, watch over', rt. *bheydh-*.

*ð* arose first of all in every combination in prim. Germ. This returned to an explosive in West Germ. throughout, and partly in Goth. For details see § 537 ff.

#### Baltic-Slavonic.

§ 377. Indg. *t.* Lith. *taszyti* O.Bulg. *tesati* 'to chop' : Skr. *tákṣāmi* 'I make, fashion', Gr. *τέκτων* 'carpenter', Lat. *texō*, O.Ir. *tāl* 'carpenter's axe'. Lith. *szvit-ėti* O.Bulg. *svit-ėti* 'to shine brightly' : Skr. *śvit-rá-s śvēt-á-s* 'brilliant, bright', rt. *kṣeīt-*. Lith. *kert-ù* 'I hew, strike' O.Bulg. *črīt-q* 'I cut' : Skr. *kṛnt-āmi* 'I cut, split', rt. *qert-*. Lith. *at-min-tì-s* 'memory' O.Bulg. *pa-mę-tī* 'remembrance' : Skr. *ma-tī-ṣ* etc., Indg. *\*mṛ-tì-s* 'a thinking of, meditating' (rt. *men-*).

*tl* became *kl* (cp. *gl* fr. *dl*, § 378) in Lith. and Lett., as in Italic (§ 367). Suffix *-kla-* = Lat. *-clo- -culo-* : Lith. *ir-kla-s* Lett. *-ir-kl-s* 'oar', Lith. *sė-klà* Lett. *sē-kla* 'seed' (cp. Lat. *sae-clu-m sae-culu-m*), Lith. *gany-klà* Lett. *gani-kla* 'pasture, cattle-range'. The previous stage *tl* was preserved in Prussian : *eb-sentliuns* 'having marked' opposed to Lith. *žėn-kla-s*

'mark' (Burda Kuhn-Schleicher's Beitr. VI 245). Cp. also the loan-word Lith. *turklėli-s* 'turtle-dove' (from which *kurklėli-s*), which is still *turtlelis* in Bretken.

*k* for *t* in East Lith. (Godlewa) *rylmetys* fr. *ryt-metys* 'the early morning' and in West Lith. *tėknaga-s* from *tėnaga-s* 'fire-stone, flint'; to which also *sėkma-s* 'septimus' (cp. § 345)?

§ 378. Indg. *d*. Lith. *dirti* 'to skin', O.Bulg. *derq* 'I skin, tear': Skr. *dy-ṅā-mi* 'I burst, tear', Gr. *δέρω* 'I skin', Cymr. Corn. *darn* 'bit, portion', Goth. *ga-taira* 'I tear, destroy', rt. *der-*. Lith. *raudà* 'lamentation', O.Bulg. *rydaja* 'I lament': Skr. *rudāmi* 'I mourn, weep', Lat. *rudō* 'I bray, roar', Ags. *reótan* OHG. *riozan* 'to mourn, weep'. Lith. *grúda-s* 'corn' *graudù-s* 'brittle, fragile', O.Bulg. *gruda* 'clod': O.Icel. *grautr* OHG. *gruzzi* 'griit'. Lith. *piñdi-s* 'crepitus ventris': Skr. *pádatē* Gr. *πέφεται* 'breaks wind', OHG. *ferzan* 'to break wind', rt. *perd-*.

*gl* from *dl* (cp. *kl* from *tl*, § 377) in Lith. and Lett. Lith. *ėglė* 'fir' beside Pruss. *addle* Polish *jodła*; *d* = Indg. *d* or *dh*? Lett. *segli* pl. 'saddle' fr. *sedli*, rt. *sed-*. Cp. Kašub. *żagło* = Polish *żadło* 'edge, point' with suffix *-dło* = Indg. *-dhlo-*.

§ 379. Indg. *dh* = prim. Baltic-Slav. *d*. Lith. *dė-dė* 'uncle' *dė-da-s* 'old man', O.Bulg. *dě-dŭ* 'grandfather': Gr. *τή-θη* 'grandmother', *τη-θί-ς* 'aunt' (*τ-* fr. *θ-*, § 496), *θεϊο-ς* 'uncle'. Lith. *dabini* 'I adorn, clean', O.Bulg. *doba* 'opportunitas' *dobrŭ* 'good': Goth. *ga-dabiþ* 'it is fit, becoming' *ga-dōfs* (st. *ga-dōba-*) 'becoming, proper', Lat. *faber* 'skilful, workman'. Lith. *vedù* O.Bulg. *veda* 'I lead, lead home': Skr. *vadhū-ṣ* 'bride, maiden', O.Ir. *fedim* 'I bring, lead'.

Rem. O.Bulg. *žegq* 'I burn' cannot be separated from Lith. *degù* Skr. *dāhāmi* etc., rt. *dhegh-* (§ 376). *deg-* must have become *geg-* (whence *džeg-* *žeg-*, see § 463) by assimilation in prim. Slavonic. This is shown by Russ. *iz-gaga* 'heart burn' (Leskien Handbuch<sup>2</sup> p. 12).

### 3. Palatal Explosives<sup>1)</sup>.

§ 380. Indg. *ĥ*, (*ĥh*), *ǵ*, *ǵh* usually appear in Greek, Ital., Keltic, and Germanic as explosives or as such sounds, for which

1) On the palatal and velar explosives in the Indg. languages see Ascoli *Fonologia comparata del sanscrito del greco e del latino*, Torino



explosives are to be presupposed as the immediately previous stage; whereas in Ar., Armen., Baltic-Slav., and Albanian they usually appear as spirants (in Armen. at the same time as affricatae) or their continuations.

It is possible and not improbable, that this diversity reflects a prim. Indg. difference of articulation, that the original explosives were spoken with a spirantal colouring (as affricatae?) in one portion of the Indg. parent language, whilst they remained pure in the other. This dialectical difference was then transmitted to the individual developments. Cp. § 417.

We classify the individual languages in the following §§ in accordance with this difference and give below an abstract of the usual representation of the palatals in the various languages.

Idg.	Germ.				Skr.	Slav.				
	Gr.	Ital.	O.Ir.	Germ.		Av.	Arm.	Alb.	Lith.	Slav.
$\tilde{k}$	<i>x</i>	<i>c</i>	<i>c</i>	<i>k, x(h), g ʒ</i>	$\tilde{s}, \tilde{š}$	<i>s, š</i>	<i>s</i>	<i>s</i>	<i>sz</i>	<i>s</i>
$\tilde{g}$	<i>γ</i>	<i>g</i>	<i>g</i>	<i>k</i>	<i>j, (ž)</i>	<i>z, ž</i>	<i>c</i>	<i>δ</i>	<i>ž</i>	<i>z</i>
$\tilde{gh}$	<i>χ</i>	<i>h, g</i>	<i>g</i>	<i>g ʒ</i>	<i>h</i>	<i>z</i>	<i>j, z</i>	<i>δ</i>	<i>ž</i>	<i>z</i>

e Firenze 1870 (translated by Bazzigher and Schweizer-Sidler under the title 'Vorlesungen über die vergleich. Lautlehre des Sanskrit etc.', Halle 1872) p. 107 ff.; Studj critici II (1877) p. 25 ff.; Havet Revue critique 23. Nov. 1872, 7. Mar. 1874, Mém. de la soc. de lingu. II 261 ff.; Fick Die ehemalige Spracheinheit der Indogerm. Europa's 1873 p. 1 ff.; J. Schmidt Jen. Lit.-Zeit. 1874 Art. 14. 1875 Art. 588. 1877 Art. 247, Kuhn's Ztschr. XXV 64 ff.; H. Möller Die Palatalreihe der idg. Grundspr. im Germ., Leipz. 1875, Kuhn's Ztschr. XXIV 427 ff.; Windisch Kuhn-Schleicher's Beitr. VIII 25 ff.; Hübschmann Kuhn's Ztschr. XXIII 21 ff. 384 ff.; Benfey Gött. Nachr. 1876 p. 297 ff.; Leskien Declin. im Slav.-Lit. und Germ. 1876 p. XXIV f.; G. Curtius Stud. VII 267 ff.; Bezzenberger in his Beitr. II 151 ff. VI 236; K. Verner in Morph. Unt. I 116 ff.; F. Müller Sitzungsber. d. Wiener Ak. 1878 p. 3 ff.; Kluge Beitr. zur Gesch. d. germ. Conj. 1879 p. 42 ff.; Frödhe Bezenb. Beitr. III 12 ff.; Collitz ibid. 177 ff.; d'Arbois de Jubainville Mém. de la soc. de lingu. IV 422 ff.; Osthoff Paul-Braune's Beitr. VIII 256 ff.; the Auth. Kuhn's Ztschr. XXV 306 f., Morph. Unt. IV 407 ff.; Bersu Die Gutturalen und ihre Verbindung mit *v* im Lateinischen, Berlin 1885.

## Indo-Germanic prim. period.

§ 381. Tenuis *k̄*. \**k̄mtó-m* 'hundred': Gr. ἑκατόν Lat. *centu-m* O.Ir. *cēt* Goth. *hund* + Skr. *śatá-m* Lith. *szimta-s*. \**śuékuro-* 'father-in-law', \**śuekrú-* 'mother-in-law': Gr. ἐκυρό-ς, ἐκυρά, Lat. *socer, socrus*, O.Corn. *hwigeren, hweger*, Goth. *swaihru m.*, OHG. *swigar f.* + Skr. *śváśura-s, śvaśrú-ś*, Arm. *skesur f.* Lith. *szeszura-s m.*<sup>1)</sup>; on the initial Skr. *ś-* Arm. *sk-* Lith. *sz-* see §§ 557, 4. 562. 587, 2. Rt. *ueik-* 'enter in': Gr. *φοῖκος οἶκος* 'house', Lat. *vīcu-s*, Goth. *veihs* (gen. *veihsis*) n. 'district' + Skr. *viśámi* 'I enter, come', Alb. *vise pl.* 'places', Lith. *vėszėti* 'to be a guest, tarry', O.Bulg. *višī* 'village'. \**oktōy* \**októ* 'eight' (cp. § 645 final 1): Gr. ὀκτώ Lat. *octō* O.Ir. *ocht n.* Goth. *ahtáu* + Skr. *aṣṭáú aṣṭá* Lith. *asztūni* O.Bulg. *os-mī*.

Seldom in suffixal elements. \**juuyū-kó-s* or \**juuyū-kó-s* 'youthful': Lat. *juvencu-s* O.Ir. *ōac ōc* (§§ 137. 174) Goth. *juggs* (*jūggs*?) + Skr. *yuvaśá-s*.

§ 382. Media *ġ*. *ġen- ġnō-* 'get to know, know': Gr. *γινώσκω* 'I perceive', Lat. *gnō-scō nō-scō*, O.Ir. *ad-ġēn-sa* perf. 'cognovi', Goth. *kann* 'I know' + Skr. *jā-nā-mi* 'I perceive, know' (§ 253) Av. *ā-zainti-* 'knowledge, explanation', Arm. *can-eay aor.* 'I knew', Lith. *žin-óti* 'to know' O.Bulg. *zna-ti* 'to know'. Rt. *melġ-* 'strip off, milk': Gr. ἀμέλω Lat. *mulgeō* O.Ir. *bligim* OHG. *milchu* 'I milk' + Skr. *mṛjāti* 'wipes, rubs, cleans', part. pass. *mṛjātī-* Av. *mar<sup>e</sup>zaiti* 'strips', Lith. *mėlėu* O.Bulg. *mlūzq* 'I milk'.

Prim. Indg. suffixes with *ġ* seem not to occur.

§ 383. Media asp. *ġh*. Gr. *χιών* 'snow' *χειμών* 'winter', Lat. *hiems*, O.Ir. *gam* O.Cymr. *gaem* O.Corn. *goyf* 'winter' (cp. § 392) + Skr. *himá-* 'frost, snow' Av. *zima-* 'winter', Arm. *jiun* 'snow', Alb. *dimeġ* 'winter', Lith. *žemà* O.Bulg. *zima* 'winter'. Rt. *ueġh-* 'vehere': Gr. ὄχο-ς 'carriage', Lat. *vehō*, O.Ir. *fēn* 'carriage' (§ 526), Goth. *ga-vigan* 'to move' + Skr. *váhati* Av.

1) Kurschat writes *szeszūras*. The palatal pronunciation of the second *sz* is probably due to assimilation with the initial *sz-* which had been palatalised by the following *e*.

*vazaiti* 'leads, goes', Alb. *viéth* 'I steal' (orig. 'I lead away'), Lith. *vežù* O.Bulg. *vezq* 'veho'.

Prim. Indg. suffixes with *gh* seem not to occur.

*a. The language-group with explosives.*

Greek.

§ 384. Indg. *k̄*. καρδ-ία, Ion. καρδίη 'heart': Lat. *cor* O.Ir. *cride* Goth. *hairtō* 'heart' + Skr. *śraddhā*-f. 'confidence' (§ 282), Arm. *sirt* Lith. *szirdi-s* O.Bulg. *srǐdice* 'heart'. κλυ-τός 'renowned': Lat. *in-clutu-s* O.Ir. *cloth* 'renowned', OHG. *Hlot-hari* Lothar = \*Κλυτό-σρατο-ς + Skr. *śru-tá-s* 'heard, renowned', Arm. *lu* 'audible' fr. \**shu*-? (s. Hübschmann, Armen. Stud. I 33), O.Bulg. *slov-o* 'word', rt. *k̄leu-*. εἴκοσι, Bæot. etc. *ἑίκατι* 'twenty': Lat. *vicēsimum-s*, O.Ir. *fiche* 'twenty' + Skr. *viśati*-ṣ 'the number twenty', Arm. *k̄san* 'twenty' fr. \**gsan* \**gisan* (*g-* fr. *u-*, § 162). πόρκο-ς 'pig': Lat. *porcu-s* O.Ir. *orc* OHG. *farh farah* + Lith. *pařsza-s* O.Bulg. *prase* 'pig'.

From *k̄u* arose *ππ*, which was simplified to *π* initially. ἵππο-ς 'horse': Skr. *áśva-s*. πάντ- 'all': Skr. *-śvant-*. See § 166 p. 147.

*k̄i* became σσ, ττ. μᾶσσων 'longer': Av. *masyā* 'greater'. See § 489.

Prim. Gr. *κτ* = Indg. *kt* and *qt* became ττ in Cret. ἐργο-διώττα-ς = Att. ἐργο-διώκτης 'taskmaster'. νυτί loc. sg. = Att. νυκτί (with *qt*, § 427 c).

§ 385. Indg. *ḡ*. γεύω 'I let taste': Lat. *gus-tu-s*, O.Ir. *to-gu* 'choice', Goth. *kiusa* 'I test, choose' + Skr. *jōṣ-a* Av. *zaoš-a*-m. 'favour, kindness', rt. *ḡeus-*. ὀρέγω 'I reach': Lat. *regō*, O.Ir. imper. *e-rig* 'stand up', Goth. *uf-rakja* 'I reach up' + Skr. *rāj-iṣṭha*- Av. *raz-išta*- 'straightest, most just', Lith. *rāžyti-s* 'to keep on stretching oneself'. ἐργον 'work': Goth. *vaurkja* 'I work, effect' + Av. *ver<sup>e</sup>zyeiti* 'effects, completes', Arm. *gorc* 'work', rt. *uerḡ-*.

*ḡi* became ζ (σδ), δδ. ἀζομαι 'I stand in awe of', to ἄγ-ιω-ς, rt. *iaġ-*. See § 493.

§ 386. Indg. *ǵh* = prim. Gr. *kh*. *χαμαί* 'on the ground': Lat. *humu-s*, *homō* (= *ὁ ἐπιχθόνιος*), Goth. *guma* 'man' + Skr. *jm-ás* (§§ 469, 8. 554 rem. 1) Av. *z<sup>h</sup>m-ō* (§ 407) gen. 'of the earth', Alb. *de* 'earth', Lith. *žėmė* O.Bulg. *zemlja* 'earth'. *χείρ* 'hand': Arm. *jerñ* 'hand' pl. *jer-ē*. *ἔχω* 'I have, hold' fut. *σχή-σω*: Goth. *sigis* 'victory' + Skr. *sáhas-* Av. *hazah-* n. 'strength, power, victory'. *σπέροχ* 'I hurry on, drive': + Skr. *spṛhayati* 'eagerly longs for' Av. *sper<sup>e</sup>zaitē* 'strives'.

*ǵh<sub>2</sub>* became *σσ*, *ττ*. *ἄσσον* 'nearer' to *ἄγγι*, rt. *añǵh-*. See § 497.

### Italic.

§ 387. Indg. *k̄*. Lat. *cēnseō*, Osc. *censamur* 'censetor': + Skr. *śás-a-ti* 'recites, praises'. Lat. *ci-s ci-ter*, Umbr. *ši-mu ši-mo* 'ad citima, retro' *šive* 'citra': perhaps Gr. neut. nom. acc. *-κ(ι)* in *οὐ-κί ναί-κί πολλά-κί* (Osthoff Morph. Unt. IV 241 f.), O.Ir. *ce* 'on this side', Goth. *hi-mma* 'to this' + Arm. *-s* 'this' (suffixed pronoun), Alb. *si-viēt* 'in this year', Lith. *szì-s* O.Bulg. *sǝ* 'this', Lat. *clī-nō clī-tellae*, Umbr. *kletram* 'lecticam': Gr. *κλίνω* 'I lean, bend', O.Ir. *cloen* 'slant, unjust, bad', Goth. *hláins* 'hill' + Skr. *śráy-a-ti* 'leans against, lays on', Lith. *szlāūta-s* 'mountain-slope', rt. *k̄lei-*. Lat. *decem*, Umbr. *desen-duf* 'duodecim' tekuries *dequrier* 'decuriis' Osc. *dekmanniúis* 'decumanis': Gr. *δέκα* O.Ir. *deich n-* Goth. *taihun* + Skr. *dáśa* Arm. *tasn* Lith. *dēszimt* O.Bulg. *desetǝ* 'ten'. Lat. *equo-s*, Umbr. *tra ekvine* 'trans equinum' (cp. § 431 a): Gr. *ἵππος* O.Ir. *ech* 'horse', Goth. *aíhva-tundi* 'βάτος' + Skr. *áśva-s* 'horse', Lith. *aszva* 'mare', Indg. *\*ék̄yo-s \*ék̄yā*. Lat. *queror questu-s*: + Skr. *śvás-i-mi* 'I breathe, snort, sigh', rt. *k̄yes-*.

*-cf-* became *-ff-* in Lat.: *effērō efficiō*; the *c* in *ec- ex* was probably *k̄*.

Prim. Ital. *k* (partly = Indg. *q*, § 430) became a sibilant in Umbrian before *e-* and *i-*vowels, which cannot be more closely defined: *š*, *ś s* (§ 23). Besides *šimu* etc. already named cp. further: *tišit* 'deceit', to Lat. *decet decus*, Skr. *daśas-yá-ti* 'does honour, is gracious'; *curnāše* 'cornice' beside *curnaco* 'cor-

nicem'; fa<sup>8</sup>ia 'faciat' beside fakust 'fecerit'. With this may be compared the treatment of Lat. *c* before palatal vowels in the Romance developments, as Italian *cento* Fr. *cent* from *centum*.

Rem. Lat. *c* had the pronunciation *k* also before *e-* and *i-*vowels down to the Middle Ages, thus *kentum*, *kito*. Cp. Seelmann Die Ausspr. d. Lat. 332 ff.

§ 388. Indg. *ġ*. Lat. *gē-gn-ō malī-gn-u-s* (§ 619) *genu-s*, Osc. Genetaí 'Genetrici': Gr. γί-γν-ο-μαι 'I become' γέν-ος 'race', O.Ir. *ro gēnair* 'natus est' *gein* 'birth', Goth. *kuni* 'race' + Skr. *ján-as-* n. 'race' Av. *zē-zan-anti* 'they beget, bring forth', Arm. *cin* 'birth', rt. *ġen-*. Lat. *rēg-is* gen. sg., Osc. regatureí 'rectori', Marruc. *regen*[a dat. 'reginae': O.Ir. *rēg* gen. 'of a king' Gall. *Bitu-rīges* + Skr. *rāj-* (nom. sg. *rā́j*, § 401 rem. 2) *rāj-an-* 'king' *rā́ṣṭi* 'shines forth, distinguishes himself'. Lat. *argentu-m*, Osc. aragetud abl. 'argento': Gr. ἀργής 'bright, white', *un-áirēks* 'impure' OHG. *erchan* 'certus, egregius, right, pure' + Skr. *árjuna-s* 'bright, white, silver-coloured' Av. *ar<sup>e</sup>zah-* n. 'the clear day, day-light', Arm. *arcat* 'silver'. Lat. *glōs*: Gr. γαλώς + O.Bulg. *zliwa* 'husband's sister'.

§ 389. Indg. *ġh* = prim. Ital. *χ*. Lat. *humu-s* *homō*, Umbr. *hondra* 'infra' *hodomu* 'infimo' Osc. *huntru* 'infra' (s. § 207), Umbr. *homonus* 'hominibus' Osc. *humuns* nom. 'homines': Gr. χαμαί etc., see § 386. Lat. *hor-tu-s* *co-hors*, Osc. *húrtúm* 'hortum': Gr. χοῦτο-ς 'grass, hay, fodder, feeding-place, courtyard', O.Ir. *gort* 'scges' *lub-gort* 'vegetable-garden' + Lith. *žar-di-s* m. 'pasture for horses, pasture-ground' Pruss. *sardi-s* 'a place enclosed by a hedge'). Lat. *vehō*, Osc. *vehia* 'plaustrum' (Paulus F.): Gr. ὄχο-ς etc., see § 383. Lat. *mihī* and Skr. *māhyam* 'mihī' probably contained Indg. *ġh*, the same sound as in Skr. nom. *ahám*.

Concerning the dropping of Lat. *h* = *ġh* see § 510.

*f* also occurs instead of Lat. initial *h*, e. g. *folus* beside *holus helus*: O.Ir. *gel* 'white', OHG. *gelo* 'yellow' + Skr. *hári-ṣ* Av.

1) It is uncertain whether Goth. *gards* 'yard, house, family' and OHG. *garto* also belong here. Lith. *gařda-s* and O.Bulg. *gradū* seem to have been borrowed from Germ. See § 467, 2 and Kluge Etym. Wtb. der d. Sprache under *Garten*.

*zairi-s* 'yellowish', Lith. *želiù* 'I grow green' O.Bulg. *zeliže* n. 'greens, vegetables'; *fariolu-s* beside *hariolu-s haru-spez*: Gr.  $\chi\omicron\omicron\delta\eta$  'a string of gut', O.Icel. *garner garnir* pl. 'entrails' + Lith. *žarnà* 'gut'. Along with Osthoff (Morph. Unt. IV 99, cp. Danielsson in Pauli's Altital. Stud. III 144, Bersu Die Gutturalen im Lat. 131) we do not hold these forms with *f* as also *fosti-s* beside *hosti-s* (§ 430) for Lat., but for Sabine.

Rem. I am in doubt about the *f* in Lat. *fundō*, to Goth. *giutan* 'to pour', Gr.  $\chi\acute{\epsilon}\omega$  'I pour'  $\chi\acute{\upsilon}\text{-}\tau\omicron\alpha$  'holy water', Av. *zao-prā-* 'libation'. One might regard the *f* as having regularly arisen in *in-fundō cōn-fundō*, and then carried over to the uncompounded form, if the assumption had a firmer basis, *in-fumu-s in-finu-s* may have come from an older *\*in fumō = in humō* (cp. Umbr. *hon-āra* above), which, being regarded as a superlative, was followed by the forms *in-feru-s inferior*. The *f* in the Lat. words cannot be regularly connected with the dental in Skr. *adhās* 'below' Goth. *undar* 'under'.

Lat. *ng* fr. prim. Ital.  $\alpha\chi$ . *angō*: Gr.  $\acute{\alpha}\chi\chi\omega$  'I press tight, strangle', O.Ir. *cum-ung* 'narrow', Goth. *aggvu-s* 'narrow' (with *v* from the oblique cases) + Skr. *āhas-* Av. *aṣah-* n. 'distress, need', Arm. *anjuk* (*ancuk*) 'narrow', O.Bulg. *aṣa* 'bond, fetter'. *mingō* (beside *mējō*, probably fr. *\*meiḥō*, § 510): Gr.  $\omicron\mu\acute{\iota}\chi\acute{\epsilon}\omega$  'I make water', Ags. *mīzan* O.Icel. *mīga* 'to make water' + Skr. *mēhati* Av. *maṣaiti* 'makes water', Arm. *mēz* (gen. *mizi, mizoy*) 'urine', Lith. *mīžalaĩ* pl. 'urine'.

#### O.Irish.

§ 390. Indg. *k̄* = prim. Kelt. *k*. O.Ir. *clū* 'renown' *cluas* 'ear', Mid.Cymr. *clusteu* pl. 'ears': Gr.  $\kappa\lambda\upsilon\text{-}\tau\acute{o}\text{-}\varsigma$  etc., see § 384. O.Ir. *imm-chom-arc* 'question, an asking', O.Cymr. *di-erchim* 'ad poscendum' (for the loss of the *p*- see § 339): Lat. *prec-ēs* pl., Goth. *frathnan* 'to ask' + Skr. *praś-ná-* Av. *fraś-na-* (§ 398) 'question, an asking', Arm. *harsn* (gen. *harsin*) 'bride', Lith. *praszyti* O.Bulg. *prosiiti* 'to beg, request'. O.Ir. *derc* 'eye', Mid.Bret. *derch* 'aspectus': Gr.  $\delta\acute{\epsilon}\rho\chi\omicron\mu\alpha\iota$  'I see', Goth. *ga-tarhjan* 'to mark out' + Skr. *dadārśa* perf. 'I saw', Arm. *tesane-m* 'I see'.

O.Ir. *brēc* (read *brēg*) 'lie, deceit' with loss of *n* before *c*: + Skr. *bhraśa-s* 'downfall, loss, a perishing'. See §§ 212. 513.

O.Ir. *fiche* Mid.Cymr. *ugeint* 'twenty': Gr. *ἑξήκати εἴκοσι* etc., § 384. See § 514.

O.Ir. *ocht* 'eight' probably with prim. Kelt. *cht*: Gr. *ὀκτώ* etc., § 381. See § 517.

O.Ir. *dess* Cymr. *deheu* 'dexter, australis', as regards the suffix to Goth. *taihswa* 'dexter', further Gr. *δεξιό-ς* Lat. *dexter* + Skr. *dákṣiṇa-* Av. *dašina-* 'dexter', Lith. *deszinė* 'dextera' O.Bulg. *desinŭ* 'dexter', Indg. \**deks-*. See § 517.

In Irish *k* and *q* fell together in *c*. Whereas in the Britt. branch and in Gall. they can still mostly be distinguished, since in the latter *q* had become *p* (§§ 435. 436). *p* arose from Indg. *k<sub>u</sub>* in Cymr. *ebol* 'foal' = O.Cymr. \**epaul*, Gall. *epo-* (*Epo-rēdia*) 'horse' beside O.Ir. *ech*.

§ 391. Indg. *ġ* = prim. Kelt. *g*. O.Ir. *gein* 'birth', Cymr. *geni* 'nasci': Gr. *γένος* etc., see § 388. O.Ir. *gnāth* 'known, accustomed, usual', Cymr. *gnawt* 'habitus': Gr. *γνω-* etc., see § 382.

O.Ir. *ato-m-aig* 'me adigit' *agat* 'agant': Gr. *ἄγω* 'I drive, lead', Lat. *agō*, O.Icel. *aka* 'to drive' + Skr. *ájati* Av. *azaiti* 'drives', Arm. *acem* 'I bring, lead', rt. *aġ-*. See § 522.

§ 392. Indg. *ġh* = prim. Kelt. *g*. O.Ir. *gam* (from \**ġiam-*, older \**gi(ġ)am-*)<sup>1</sup>) O.Cymr. *gaem* = (fr. \**geam-*, older \**gi(ġ)am-*) 'winter': Gr. *χιών χειμών* etc., see § 383. *cum-ung* 'narrow': Gr. *ἄγχω ἄγχι* etc., see § 389.

O.Ir. *ligim* 'I lick' *ligur* 'tongue': Gr. *λείχω* 'I lick', Lat. *lingō*, Goth. *bi-láigō* 'I lick' + Skr. *léh-mi* 'I lick' 3. sg. *lédhi*, Arm. *liz-u-m* Lith. *lėžiù* 'I lick' O.Bulg. *lizati* 'to lick'. O.Ir. *bri* gen. *breg* 'rising ground' Gall. *brigi-* in *Brigiani Are-brigium* etc.: Goth. *bairgahei* 'chain of mountains' + Skr. *bṛhánt-* Av. *ber<sup>z</sup>ant-* 'great, high', rt. *bherġh-*. See § 526.

#### Germanic.

§ 393. Indg. *k̄*. Goth. *skei-nan* OHG. Ags. *scīnan* O.Icel. *skína* 'to shine' OS. *sci-mo* MHG. *scheme* 'shadow': Gr. *σκιᾶ*

1) Thurneysen conjectures, that the form *gam* was formed through the influence of *sam* 'summer'.

'shadow' *οιτσο-ν* 'parasol' + Skr. *chāyā-* 'shadow, glimmer' (cp. Mod.Pers. *sāyah*). Suffix *-sko-* *-skā-* OHG. *forsca* 'inquiry, question' prim. Germ. \**fur*(*χ*)-*skō-* f. : Lat. *poscō* fr. \**por*(*c*)-*scō* + Skr. *prchāmi* Av. *per<sup>s</sup>sāmi* 'I ask', Skr. *prchā-* 'question, inquiry', rt. *prēk-*, weak grade form *prk̄-*.

Goth. *hund-s* OHG. *kunt* Ags. *hund* O.Icel. *hundr* 'hound, dog' : Gr. *κύων* (gen. *κυν-ος*) O.Ir. *cū* (pl. *coin*) Cymr. *ci* (pl. *cwn*) + Skr. *śvan-* *śun-* Av. *span-* *sūn-* Arm. *šun* (gen. *šan*) 'dog'. Goth. *ga-leihan* 'to announce, tell, relate' OHG. *zīhan* 'to accuse of' : Gr. *δείκνυμι* 'I show' *δίκη* 'order, law', Lat. *jū-dic-dicō* + Skr. *dēśāyāmi* Av. *daēsayēmi* 'I show, teach', rt. *deik̄-*. Goth. OHG. *fāhan* O.Icel. *fā* 'to seize' fr. prim. Germ. \**faw-χana-n* (§ 214 p. 181) : Gr. *πάσσαλο-ς* fr. \**πακκαλο-ς* (§ 489), Lat. *pāx paciscor* + Skr. *pāśa-s* 'snare, cord', rt. *pāk̄-*.

Goth. *fagrs* 'befitting' OHG. *fagar* 'beautiful' OHG. *fuogen* 'to unite' *fang* 'capture' from the same rt. *pāk̄-*. OHG. *swigar* Ags. *swezer* 'mother-in-law' : Gr. *ἐκυρά* etc., see § 381.

§ 394. Indg. *ġ*. Goth. *kniu* (gen. *knivis*) OHG. *chniu kniu* Ags. *cneó* 'knee' : Gr. *γνυ-πετεῖν* 'to fall on the knees, to become helpless' *γόνυ* 'knee', Lat. *genu* + Skr. *jñu-bād̄h-* 'bending the knees' *jānu* 'knee' Av. *fra-šnu* 'knee bent forward' (§ 403) *zanva* pl. 'knees', Arm. *cunr* 'knee'. Goth. *uf-rakjan* 'to stretch on high' OHG. *recchen* MHG. *recken* 'to stretch' : Gr. *ὀρέγω* etc., s. § 385. OHG. *boch boc* Ags. *bucca* O.Icel. *bokkr bukkr* 'buck' were from a weak stem-form \**bhuġ-n-* (§ 534) : + Av. *būz-a-* 'he-goat', Arm. *buc* 'lamb'.

§ 395. Indg. *ġh*. Goth. \**gans* 'goose' (hence Spanish *ganso*), OHG. *gans* O.Icel. *gās* 'goose' : Gr. *χίψ* Lat. *ānser* = *hānser* + Skr. *haśā-s* Lith. *žāsi-s* 'goose' (on O.Bulg. *gašī* s. § 467, 2). Goth. *gaggs* 'street, way' OHG. OS. *gang* O.Icel. *gangr* 'way, passage' : + Skr. *jāvaghā-* Av. *zavaga-* 'heel-bone', Lith. *žengiū* 'I stride', Indg. *ghenagh-*.

Goth. *deigan* 'to form of clay, mould', OHG. *teig* O.Icel. *deig* 'dough' : Gr. *τείχος* 'a wall', Lat. *fungō* + Skr. *dēhī* 'earth thrown out, rampart' *san-dēhā-s* 'a cementing' Av. *uz-daēza-* 'accumulation', Arm. *dēz* 'heap', rt. *dheigh-*.



*b. The language-group with spirants or affricatae.*

Aryan.

§ 396. Indg. *ḷ*, *ḡ*, *ḡh* were generally represented by *ś*, *ḷ*, *ḷh* i. e. by palatal *ś*-(*sh*)-sounds in the prim. Aryan period. *ś* and *ḷ* have the same sound as the 'softened' *ś* (*sz*) and *ž* (caused by the following of *i*- or *e*-vowels) of the Slavonic and Lithuanian languages.

Prim. Ar. *śt*, *śk* and *ḷd* *ḷdh*, *ḷbh* became developed to *št*, *šk* and *žd* *ždh*, *žbh* probably already in prim. Aryan. See §§ 399. 404.

The value of Indg. *śḷ* and *ḷs* cannot be precisely defined for the prim. Ar. period. See §§ 400. 401.

§ 397. Indg. *ḷ*. Prim. Ar. *ś* (§ 396) mostly remained unchanged in Sanskrit. It became *s* in Iranian. For this *s* there appears in O.Pers. mostly (initially before and medially between vowels), and in Av. occasionally *ṣ*, which, according to Bartholomae, is only a graphical variety of *s*.

Skr. *śás-a-ti* 'praises, recites' Av. *sarəh-aitē* 'names himself' O.Pers. *a-ṣah-a* 'he spoke, said, announced' : Lat. *cēnsēō*. Skr. *śūra-* Av. *sūra-* 'strong', Av. *aiwi-ṣūra-* 'over strong, over powerful' : Gr. *ἄνωρο-ς* 'without authority, invalid'. Acc. sg. Skr. *viś-am* Av. *viś-em* O.Pers. *viṣ-am* 'clan, village community' : Alb. *visē* etc., see § 381. Skr. *vāś-a-s* 'will, pleasure', Av. *vas-ō* acc. sg. n. (st. *vasah-*) adv. 'at pleasure' O.Pers. *vasaiy* loc. sg. (st. *vasa-*) adv. 'very, much' (orig. 'at pleasure') : Armen. *vasn* 'on account of' + Gr. *ἐκὼν* 'voluntary', rt. *uek-*. Skr. *āś-man-* Av. O.Pers. *as-man-* 'stone, sky' : + Gr. *ἄκμων* 'anvil, thunder-bolt'. Skr. *śvētā-* Av. *spaeta-* 'white' : Lith. *szvaityti* *szvaitinti* 'to make bright' O.Bulg. *svētū* 'light' + Goth. *hveits* 'white', rt. *ḷuejt-* *ḷuejd-*.

§ 398. Prim. Ar. *śn* and *ṣś* became *šn* and *fš* in Iranian (on *f* from *p* see § 473.)

Prim. Ar. *śn*. Av. *frašna-* = Skr. *praśná-* 'question' : Arm. *harsn* etc., rt. *prek-*, s. § 390. Av. gen. sg. *aš-n-ō* = Skr. *á-śn-as*,

beside the strong stem-form *as-an* = Skr. *dś-an* 'stone': Arm. *yes-an* 'whetstone' + Gr. *ἄσων-η* 'whetstone'. O.Pers. *vašna-* 'will, favour', to *vasaiy* etc., see § 397.

Prim. Ar. *pš*. Av. *haurva-fš-u* 'the whole cattle' beside *pas-u* = Skr. *paś-ú-*: Lat. *pecu*, Goth. *faihu* 'cattle', cp. § 313 p. 251.

§ 399. Prim. Ar. *št* = Indg. *ḷt* (§ 396) remained in Iranian, but became *št* in Sanskrit (cp. §§ 404. 556). Skr. *diṣṭi-ṣ* 'indication, prescription', Av. *ā-diṣti-š* 'direction, instruction' beside Skr. *dēśáyāmi* Av. *daēsayēmi* 'I show, teach': Lat. *dictiō*, OHG. *in-ziht* 'accusation', cp. also Gr. *δειξις* 'a showing', Indg. \**dik-ti-s*, rt. *deik-*, see § 393. 3. sg. Skr. *váṣti* Av. *vašti* 'he wishes, desires' beside 1. sg. Skr. *váśmi* Av. *vas<sup>e</sup>mi*, from rt. *uek-*, see §§ 397. 398. Skr. *práṣtu-m* inf. 'to interrogate', O.Pers. *ahi-frašti-* 'punishment by the sword', beside Skr. *praśná-* etc., see § 398.

Prim. Ar. *šk* = Indg. *ḷq* is found in Av. 3. pl. aor. act. *a-šk-ar<sup>e</sup>* 'they run off, go away' beside 3. pl. pres. mid. *sac-intē* from rt. Ar. *šak- šac-*. Cp. Bartholomae Ar. Forsch. II 51 ff.

§ 400. Indg. *sk* became in Skr. *ch* (*cch*), Av. O.Pers. *s* (or *ḥ*, see § 397). Present suffix Skr. *-cha-* Av. O.Pers. *-sā-* = Gr. *-σχο-* Lat. *-sco-*: e. g. Skr. *gá-chā-mi* Av. *ja-sā-mi* fr. Indg. \**gṃ-skō*, Gr. *βάσχω*, from rt. *gem-* 'go' (§ 228); Skr. *prchāmi* Av. *per<sup>e</sup>sāmi* O.Pers. *parsāmīy* fr. Indg. \**prk-skō*, Lat. *poscō* (\**por(c)-scō*), from rt. *prek-* 'demand, beg, ask' (§ 288); O.Pers. *xšná-sā-tīy* = Lat. *gnō-sca-t* (cp. § 403). Cp. § 557,2.

Rem. Other examples in Bartholomae's Handb. d. altiran. Dial. § 146 and Kuhn's Ztschr. XXVII 366 ff., where (s)ḷh, and not Indg. *sk*, is regarded as the original form. This theory seems to us not to have sufficient foundation. Cp. §§ 475. 553.

§ 401. Indg. *ḷs* became in Skr. *kṣ*, and in Av. O.Pers. *š*. Skr. *vákṣi* Av. *vaši*, 2. sg. to Skr. *váśmi* Av. *vas<sup>e</sup>mi*, s. §§ 397. 398. 399. Skr. *dákṣiṇa-* Av. *dašina-* 'dexter': Lith. *deszinė* etc., see § 390. Skr. *á-dṛkṣ-ata* 3. pl. indic. mid., Av. *dar<sup>e</sup>š-a-ḥ* 3. sg. conj. act. of the s-aorist from rt. *derk-* 'see', cp.

Gr. (late) fut.  $\delta\epsilon\omicron\zeta\omicron\mu\alpha\iota$ . O.Pers. *nīy-āpišam* 'I wrote' s-aorist from rt. *peik-*: Av. *zaranyō-pīs-* 'adorned with gold' *paēsa- paēsah-* 'ornament, decoration', Skr. *piśāmi* 'I adorn, form', O.Bulg. *pīsatī* 'to write' + Gr.  $\pi\omicron\iota\kappa\iota\lambda\omicron\varsigma$  'many-coloured', Lat. *pīctūra*.

The prim. Ar. form might have been *šš*, since in Sanskrit Indg. *ks* fell together with Indg. *ss* (preceded by *i, u*) = prim. Ar. *šš*, cp. Skr. 2. sg. *dvōkṣi* (1. sg. *dvēṣ-mi* 'I hate'). Cp. § 556, 1.

Rem. 1. Observe that Indg. *ks* and *qs* fell together in *kš* in Sanskrit, whereas in Iranian (as in Balt.-Slav., § 414) they remained separate: *ks* = Iran. *š*, *qs* = Iran. *xš*. Cp. § 556, 1.

Rem. 2. Skr. final *ks* became *k* by § 647, 7, as nom. sg. *dīk* 'heavenly direction' (st. *dīṣ-*), *ṛtv-ik* 'sacrificator' (st. *ṛtv-ij-*, rt. *īag-*). Forms as nom. sg. *spāt* 'spy' (st. *spāṣ-*), *viṭ* 'clan' (st. *viṣ-*), *rāt* 'king' (st. *rāj-* Indg. \**rēg-*) were new formations after the analogy of the cases with *bh-*suffixes, see § 404 rem. 3. In Av. the regular continuation of Indg. *-ks* was not altered by the law of finals: e. g. *spaš* = Skr. *spāt* Lat. (*haru-*)*spex*; *ayā-var<sup>o</sup>š* 'causing sins' to *ver<sup>e</sup>z-yeiti* 'works' rt. *yerḡ-*.

Rem. 3. *x* (not *š*) occurs in a number of Gr. words, opposite to Skr. *kš* = Iran. *š* = Lat. *x*, e. g. Skr. *tākṣā* 'carpenter': Gr.  $\tau\acute{\epsilon}\kappa\tau\omega\nu$ . On this correspondence cp. § 554 extr.

No trace of the first *k* in the Indg. combination *ksk* has remained in Aryan, it became assimilated to the following *s* at an early period. Cp. Skr. *pychāmi* Av. *per<sup>e</sup>sāmi* = Indg. \**pyk-skō* with Skr. *gāchāmi* Av. *jasāmi* = Indg. \**gm-skō* (§ 400).

§ 402. Indg. *g*. Prim. Ar. *ǰ* (§ 396) mostly became *j* in Sanskrit, and *z* in Iranian. *d* i. e. *ǰ* is often written for *z* in O.Pers., cp. *p* beside *s* § 397.

Skr. *jān-as* n. 'race' *jān-a-s* 'man, people', Av. *zī-zan-anti* 'they beget, bring forth' O.Pers. *parūw-zana-* 'populous': Lat. *genus* etc., s. § 388. Skr. *vājra-s* 'thunder-bolt of Indra' Av. *vazra-* 'club' O.Pers. *vazra-ka-* 'great, powerful', Skr. *vāja-* Av. *vāza-* m. 'strength': Gr.  $\upsilon\gamma\acute{\iota}\varsigma$  'healthy', Lat. *vegeō*, Goth. *us-vakjan* 'to wake up', rt. *ueḡ-* 'be active, strong'. Skr. *jōṣa-* Av. *zaoša-* m. 'favour, kindness', Skr. *jōṣtār-* 'loving' O.Pers. *dauštar-* 'friend': Gr.  $\gamma\epsilon\acute{\iota}\omega$  etc., see § 385. Skr. *jrāy-as-* n. 'surface, extent', Av. *zrayah-* n. O.Pers. *drayah-* *draya-* n. 'sea': + Lat. *gli-scō*. (i ?).

§ 403. Prim. Ar. *žn* became *šn* in Iranian. Av. *fra-šnu-* 'knee bent forwards' beside *zanva* pl. 'knees' etc., s. § 394. Av. *duš-varšnah-* 'evil doer' beside *ver<sup>e</sup>z-yeiti* 'works, effects, carries out' etc., s. § 385.

*xšn* appears for *šn* in O.Pers. *xšnā-sā-tiy* = Lat. *gnō-sca-t* (*s* = Indg. *sk̄*, § 400) from Indg. *gnō-* 'get to know' (s. § 382), as also in Av. *ā-xšnu-* beside *ā-šnu- fra-šnu-* and others. Cp. Bartholomae Handb. § 100 rem. 3.

Rem. *yasna-* 'offering' instead of *\*yašna-* (Skr. *yajñā-* 'offering', rt. *iaḡ-*) received the dental sibilant from analogy with such forms as 3. sg. pres. *yazaitē*.

Prim. Iran. *zm* = prim. Ar. *žm* became *sm* in Av. *rāsman-* 'column of an army' besides *rāzayeiti* 'puts in order': Gr. *ὀρέγω* etc., see § 385.

The transition of *žn* to *šn* and of *zm* to *sm* points to a voicelessness of the nasal.

§ 404. Prim. Ar. *žd ždh, žbh* (§ 396) became *žd, žb* in Iranian (§ 481); in Sanskrit they first became *ḷḍ, ḷbh* (cp. §§ 399. 591), then *ḷ* was dropped before *ḍ ḍh* with ('compensation lengthening'), while before *bh* it passed into *ḍ*.

1. *žd*. Here will come Skr. *mṛḍá-ti* 'is gracious, pardons, spares', *mṛḍiká-* n. 'grace, pardon, mercy' Av. *mer<sup>e</sup>ždika-* n. 'grace, pardon, mercy', in case they belong to the rt. *merḡ-* 'wipe off' (Skr. *mṛj-á-ti* 'wipes off, cleanses from guilt', Av. *mar<sup>e</sup>z-aiti* 'wipes, cleanses'); the original form would then be an old syntactical combination *\*mṛḡ dō-* 'grant a purity from sins'. Skr. *mṛṣ-ya-tē* 'forgets' *marṣáyatē* 'bears patiently, excuses, pardons' Lith. *mir̄sz-ti* 'to forget' can equally well be regarded as being from an old *\*mṛs dō-* (by assimilation *\*mṛz dō-*) 'grant a forgetting, excuse' (§ 591).

2. *ždh*. Av. *vazdri-š* 'promoter, accomplisher', to *vazaiti* = Skr. *váhati* 'vehit', fr. *\*ueḡh+tri-*. Av. (Gāp.) *ger<sup>e</sup>ždā* 3. sg. pret. mid. to *ger<sup>e</sup>zaiti* 'complains, implores' = Skr. mid. *gárhate* 'complains, blames', fr. prim. Ar. *\*grždha* or *\*ghṛždha* i. e. *\*grḡh-(ghṛḡh-)+to*. Skr. *léḍhi* 'licks' (1. sg. *léhmi*) fr.

prim. Ar. \**laiždhi* i. e. \**leiğh+ti*, part. pass. *liđhá-* 'licked' from prim. Ar. \**liždhá-* i. e. \**liğh+to-*. Skr. *ūdhā-* to *vāhāmi* 'veho', fr. prim. Ar. \**uždha-* i. e. \**uğh+to-*. Skr. *drđhá-* to *dřhyāmi* 'I fasten; stand firm', fr. prim. Ar. \**dhyždha-* (§ 480) i. e. \**dhyğh+to-*, cp. Lat. *forti-s forti-s*. Skr. *sādhā-* to *sāhatē* 'masters', fr. prim. Ar. \**sāždha-*. Skr. *bādhā-* 'fast, firm, strong' beside *bāh-ištā-* 'firmest' Av. *bazah-* 'strength, greatness', fr. prim. Ar. \**bhāždha-* (§ 480) i. e. \**bhṃğh+to-* (*a* = *ṃ*, § 253).

Prim. Ar. *a + ž* became Skr. *ō*. *vōđhu-m* inf. 'vectum' (from rt. *ueğh-*) fr. prim. Ar. \**važdhu-m* i. e. \**ueğh+tu-m*. *sōđhu-m* inf. 'to master, overpower' (from rt. *seğh-*) fr. prim. Ar. \**saždhu-m* i. e. \**seğh+tu-m*. 3. sg. *trñēđhi* 'he dashes to pieces' (pf. *tatarha*) for regular \**trñōđhi* (fr. \**trñāž-đhi*) arose from analogy to forms in *-nēđhi* fr. \**nazđhi* (§ 476 rem.)

Rem. 1. It has not been ascertained for certain what was the pronunciation of the etymologically presupposable combination *gh+t* at the close of the Indg. prim. period. See § 552.

Rem. 2. Forms like Skr. 2. sg. imper. *didiđđhi* for \**didiđđhi* (prim. f. \**di-diğ-đhi*), to *dideš-mi* 'I show', were new formations. The *š*-sound (\**didižđđhi*) was re-introduced in \**didiđđhi* after the analogy of *didištā di-dēštā* and others (*št* = *kt*, § 399), then this — change of period, change of sound-laws — passed into *đ*. Cp. § 591 rem. 1 on *dviđđhi* and § 476 rem. 1 on *daddhi* for *dēhi*.

3. *žbh*. Av. (Gāp.) *vīžbyō* Skr. *viđbhyās* dat. abl. pl. to Av. *vīs-* Skr. *viš-* 'clan, village community', rt. *uejk-*. Skr. *pađbhiš* instr. pl. to *paš-* 'a look', rt. *spek-*. We assume that in such cases *ğ* for *k* goes back to the Indg. prim. period, see § 469, 2. Skr. *žbh* probably became *đbh* in the same period in which the newly formed \**didižđđhi* (for \**didiđđhi*) became *didiđđhi* (rem. 2).

Rem. 3. In Sanskrit the cerebral explosive was carried over to the nom. from the cases with *bh*-suffixes, hence *spāt vit rāt* instead of the regular \**spāk \*vik \*rāk* fr. \**spakš* etc., see § 401 rem. 2.

§ 405. Indg. *ğh*. Prim. Ar. *žh* (§ 396) became *h* in Sanskrit through the intermediate stage *jh*, in Iranian it fell together with prim. Ar. *ž* in *z* (O.Pers. *d*, see § 402).

Skr. *hāv-ana-* Av. *zav-ana-* 'call, cry', Skr. *hv-atar-* Av. *zb-atar-* 'caller, crier': O.Bulg. *zov-a* 'I call' *zv-atelī* 'caller, crier' + OHG. *gaunōn* 'to complain'. Skr. *bāhū-š* Av. *bāzu-š*

'arm': Gr.  $\pi\eta\chi\nu\text{-}\varsigma$  'fore-arm', OHG. *buog* O.Icel. *bōgr* 'bow', Indg. \**bhāgh-u-s*. Skr. *dēh-ī* 'earth thrown out, rampart' Av. *uz-daez-a* 'accumulation' O.Pers. *dīd-ā* 'rampart, fortification': Goth. *deigan* etc., see § 395. Skr. *gūhati* 'hides, conceals' Av. *gaozaiti* 'hides, keeps' O.Pers. *gaudaya* imper. 'hide': Lith. »*gužietojis*« 'protector' *gūstā* 'brooding nest', rt. in weak grade form *ghāgh-*.

§ 406. In Sanskrit *jh*, the previous stage of *h*, was retained in *ujjhīta-* 'forsaken, given up' fr. \**ud-jhi-ta-*, to Skr. *hā-* Av. *zā-* 'leave, forsake, lose'.

*j* appears where prim. Ar. *žh* came under the law of the dissimilation of aspirates (§ 480), e. g. pres. *jā-hā-ti* = Av. *za-zā-iti*, prim. Ar. \**žha-žhā-ti*; pf. *ju-hāv-a* 'he called to' from *hu-*. This law of dissimilation consequently came into operation before the time that *jh* became *h*.

§ 407. Prim. Ar. *žhn* became *šn* in Iranian (cp. § 403). Av. *bar<sup>e</sup>š-nu-š* 'height, summit' beside *bar<sup>e</sup>z-ā-* 'height' *bar<sup>e</sup>z-išta-* 'very high' Skr. *bārḥ-iṣṭha-* 'very elevated': O.Ir. *bri* (gen. *breg*) 'rising ground' etc., see § 392.

Prim. Ar. *žhm* became *sm* in Av. (cp. § 403). *maēs-man-* 'urine' beside *gao-maeza-* 'cow-urine' Skr. *mēha-* 'urine': Lat. *mingō* etc., see § 389. *xraoždu-sma-* 'hard, firm ground' beside nom. *zā* acc. *zqm* 'earth': Gr.  $\chi\alpha\mu\text{-}\alpha\iota$  etc., see § 386; gen. *z<sup>e</sup>mō* instr. *z<sup>e</sup>mā* abl. *z<sup>e</sup>maḥ* had *z* for *s* after the analogy of *zā zqm*; in O.Pers. with *zm wāra-zmī-* 'Chorasmien'.

### Armenian.

§ 408. Indg. *k̄*. *sar* (gen. *saroy*) 'height, summit, slope': Skr. *śiras-* Av. *sarah-* n. 'head' + Gr.  $\kappa\acute{\alpha}\rho\acute{\alpha}$  'head', Lat. *cerebru-m* fr. \**ceres-ro-* (§ 570). *surb* (gen. *srboy*) 'pure' with *-rb-* from *-br-* (§ 263): Skr. *śubh-rā-s* 'bright, ornamental'. *srun-ḥ* pl. 'shin-bones, calves (of the leg)': + Lat. *crūs crūris*. *aseln* (gen. *aslan*) 'needle': Skr. *aś-ri-ṣ* 'the sharp side of a thing, corner, edge, border', Alb. *ušt* 'ear of corn' fr. \**ust*, Lith. *asz-t-rū-s* O.Bulg. *os-t-rū* 'sharp' O.Bulg. *osūtū*  $\tau\rho\acute{\iota}\beta\omicron\lambda\omicron\varsigma$ , genus *spinæ* + Gr.  $\acute{\alpha}\kappa\text{-}\rho\omicron\text{-}\varsigma$  'at the end', Lat. *ac-u-s*, O.Cymr. *ocet* 'raster' Goth.

*ahs* (gen. *ahsis*) 'ear of corn' OHG. *ahil* 'chaff, beard of grain'.  
*harsn* (gen. *harsin*) 'bride' from the root-form *prk-*, see § 390.

The *š* = *k̄* in *šun* (gen. *šan*) 'dog' is unexplained: Skr. *švan-* *šun-* etc., see § 393.

ç fr. Indg. (*k̄*)*sk̄*. *harç* (gen. *harçi*) 'question': Skr. *prchá-*, Indg. *\*prk̄-sk̄-*, see §§ 393. 400. 401.

ç fr. Indg. (*s*)*sk̄*. *aic* 'investigation': OHG. *eisca* 'demand', Indg. *\*aṣ-sk̄-*, cp. Skr. *ichā-* 'wish, desire' i. e. *\*is-skā-* beside *éš-a-s* 'a seeking out, wish'.

ç fr. *k̄s*. *veç* 'six': Lith. *szeszì* + Gr. *ἑξ* *ἕξ* Lat. *sex* O.Ir. *se* Cymr. *chwech*, cpf. *\*smeks* (cp. § 589, 3).

*k̄* probably disappeared as *s* before *t̄* in *ut* 'eight': Skr. *aštā* etc., see § 381. Perhaps also before *l* in *lu* 'audible' *lur* 'a hearing, tidings, news', since these words seem to be related to Skr. *śru-* Gr. *κλυ-* etc. (§ 384). See Hübschmann Arm. Stud. I 33.

§ 409. Indg. *ḡ*. *cer* (gen. *ceroy*) 'old man': Skr. *jārati* 'rubs, makes fragile' Av. *zaurvā-* f. 'age, a growing old' + Gr. *γέρων* 'old man'. *calr* (gen. *calu*) 'laughter': + *γελάω* 'I laugh'. *aic* (gen. *aici*) 'goat': + Gr. *αἶγ-* (gen. *αἰγός*) 'goat'. *arciv* 'eagle' (*ar* fr. *r* § 291, *v* fr. *p* § 330): Skr. *rjipyā-* 'stretching oneself, seizing on the wing' Av. *er<sup>e</sup>zifya-* 'stretching oneself, falcon'.

§ 410. Indg. *ḡh*. Initially and after *n*, *r* as *j*. *jaune-m* 'I consecrate, sacrifice': Skr. *hōtar-* Av. *zaotar-* 'the high priest' + Gr. *χέω* 'I pour'. *jukn* (gen. *jkan*) 'fish': Pruss. acc. *suckans* (read *zukan*s, § 412) 'fishes' Lith. *žūk-mistra-s* 'master of a fishery' *žuv-ì-s* 'fish'. *ji* (gen. *jioy*) 'horse': Skr. *hāya-s* 'steed'. *anjuk* (*ancuk*) 'narrow': Lat. *angō* etc., see § 389. *inj* (*inc*), gen. *enju* (*encu*), 'panther, leopard': Skr. *sihā-s* 'lion'. *mi-orj-i* 'μόνορχις' *orj-i* 'not castrated': Av. *er<sup>e</sup>zi-* Alb. *herde* for *\*erde* + Gr. *ὄρχις* 'testicle'. *barjr* (gen. *barju*) 'high': Skr. *bṛhānt-* etc., see § 392. *barj* (gen. *barji*) 'προσκεφάλαιον': Skr. *barhīṣ-* n. 'the offering-litter' Av. *bar<sup>e</sup>ziš-* 'cover, mat'.

*z* after vowels. *liz-u-m* 'I lick': Skr. *léh-mi* etc., § 392. *ozni* 'hedge-hog': Lith. *ežys* O.Bulg. *ježv* fr. *\*jez-ž* (§ 147 p. 134) + Gr. *ἐχίνο-ς* OHG. *igil* 'hedge-hog'.

## Albanian.

§ 411. According to G. Meyer (Bezenberger's Beitr. VIII 186 f., Alban. Stud. II 15 ff.) Indg. *k̂*, *ġ*, *ġh* are represented in Albanian in the following manner:

*k̂* = *s*. *si-viét* 'in this year': Lith. *sai-s* 'this' Lat. *ci-ter* etc., see § 387. *vise* pl. 'places': Skr. *viś-āmi* Gr. *φοῖνο-ς* etc., see § 381. *ušt* 'ear of corn' fr. \**ust*: Skr. *aś-ri-ṣ* Gr. *ἄκ-ρο-ς* etc., see § 408. G. Meyer conjectures *θ* fr. *s* in *djaθtē* (*διαθῆτε*) 'to the right', the first part of which *djaθ-* represents Indg. \**deks-* (Skr. *dákṣiṇa-* etc., see §§ 390. 401).

*ġ* = *δ*. *ḍemp* (with def. article *ḍemb-i*) 'tooth': Skr. *jám̐bha-s* 'bite, tooth', Lith. *žamba* 'mouth', O.Bulg. *zabŭ* 'tooth' + Gr. *γόμοφο-ς* 'tooth', OHG. *chamb* 'comb'. *ḍi* 'goat': Skr. *ajá-s* 'buck', Lith. *ožỹs* 'he-goat' + O.Ir. *ag allaid* 'cervus' (wild buck). *barθ* (with article *barθ-i*) 'white': Skr. *bhrájatē* Av. *brāzaiti* 'beams, radiates'. *l'iθ* 'I bind' (*l'id-*): + Lat. *ligāre*.

*ġh* = *δ*. The Indg. mediae and mediae aspiratae had fallen together in Alban. as in Iran. Kelt. and Balt.-Slav. *dies* 'caco': Skr. *hád-a-ti* 'cacat' Av. *zaid-ah-* 'nates', Arm. *jet* 'tail' + Gr. *χέζω* 'caco' perf. *κέχοδα, χόδαο-ς* 'nates'. *viéth* 'I steal' (*vied-*): Skr. *váhami* etc. s. § 383. *herde* 'testicle': Armen. *mirj-i* etc. s. § 410.

*d-* for *δ-* in *dimen* 'winter' (Gr. *χειμών* etc., s. § 383) and in *dié* 'yesterday' (Skr. *hyás* 'yesterday' + Gr. *χθές* 'yesterday', Lat. *herī hes-ternu-s*, Goth. *gistra-dagis* 'to-morrow').

## Baltic-Slavonic.

§ 412. Indg. *k̂*, *ġ*, *ġh* were *š*-(*sh*-)sounds in the Baltic-Slavonic parent language, whose place of articulation cannot be defined more precisely. They retained their character as *š*-sounds in Lithuanian: *k̂* = *sz*, *ġ* *ġh* = *ž*. In Prussian and Lettic as well as in the Slavonic branch they passed into *s*-sounds: *k̂* = *s*, *ġ* *ġh* = *z*. In Pruss. the letter *s* denotes both *s* and *z*, in Lett. *s* is the voiceless, and *š* the voiced sound.

The fact that the successor to Indg. *k̂* did not take part in the Slav. change of *s* to *ch* (§ 588), shows that Indg. *k̂* and



Indg. *s* were still distinguished not only in the Baltic parent language but also in the Slavonic.

§ 413. Indg. *k̄*. Lith. *száлта-s* Lett. *sa'lts* Pruss. *salta-* 'cold', Lith. *szalnà* O.Bulg. *slana* 'hoar frost': Skr. *śt-śira-* Av. *sar<sup>o</sup>ta-* 'cold, cool'. Lith. *szirsz-ũ* (gen. *szirsz-eñs*) Lett. *sirs-i-s* Pruss. *sirs-ili-s* O.Bulg. *srěš-en-ĩ* 'hornet', prim. Balt.-Slav. *\*širs-en-*: + OHG. *hornaz* from prim. Germ. *\*hurz-nata-z*, Lat. *crābrō* fr. *\*crās-rō*, cp. § 303. 306. Lith. *szveñta-s* Lett. *swéts* Pruss. *swints* O.Bulg. *svetũ* 'holy': Av. *spenta-* 'holy' + Goth. *hunsł* 'offering' fr. prim. Germ. *\*γunt-sla-n* (§ 180). Lith. *desziñta-s* Lett. *desmitá-is* Pruss. *dessimts* (*ss* indicates that the *e* is short), O.Bulg. *desetũ* 'decimus': Skr. *dáśa* etc., see § 387. Lith. *szakà* O.Bulg. *sakũ* 'branch, twig': Skr. *śákhā-* 'branch, twig' *śarókũ-ś* 'plug, bolt'. Lith. *nėszti* Lett. *nesti* O.Bulg. *nesti* 'to carry': Skr. *násāmi* 'I attain, reach' + Gr. *ποδ-ηρεκής* 'reaching down to the feet'. Lith. *szlaunì-s* 'hip, upper part of the thigh', Lett. *slauna* 'hip' Pruss. *slauni-s* 'shaft, bar': Skr. *śróñi-ś* 'buttock, hip' + Lat. *clūni-s*, O.Icel. *hlaun* 'buttock'.

§ 414. Indg. *k̄s* = Lith. *sz* Lett. Pruss. *s*, Slav. *s*, cp. § 544. Lith. *aszi-s* Lett. *as-s* Pruss. *assi-s* (*ss* as in *dessimts*, § 413) O.Bulg. *osĩ* 'axle': Skr. *ákśa-s* + Gr. *ἄξων* Lat. *axi-s* OHG. *ahsa* 'axle'. Lith. *s-fut. nėsziu* 'I shall carry' prim. f. *\*nėk-siō* (*nesziū* = O.Bulg. *nesq* 'I carry', § 413), *mĩlsziū* 'I shall milk' prim. f. *\*mĩk-siō* (*mėlziū* = Gr. *ἀμέλω*, rt. *melg-*, s. § 382), opposed to *ũksiu* 'I shall leave' prim. f. *\*ũq-siō* (*lėkiū* = Gr. *λείπω*, rt. *leiq-*, s. § 427 a). O.Bulg. *s-aorist 3. pl. nēsē* 'carried' prim. f. *\*nėk-s-ñt* (to *nesq*), as opposed to *rėšē* fr. *\*rėchē* 'they said' prim. f. *\*rėq-s-ñt* (to *rekaq*, rt. *req-*, cp. § 462). Indg. *k̄s* accordingly remained apart from *qs* in Baltic-Slav., as in Iran. (§ 401).

Rem. It is not quite clear what the regular treatment of the Indg. group *s̄k* was in Balt.-Slav.

After the analogy of Iran. (§ 400) we should expect *sz* in Lith. and *s* in Slav. Thus Lith. *száuju* 'I shoot' O.Bulg. *sujaq* 'I send forth, shoot': OHG. *sciozan* OS. *skeotan* 'to shoot' (prim. Germ. *\*skry-t-*, like Goth. *gutan* OHG. *giozan* beside Gr. *χί(τ)-ω*). Correspondingly Osthoff Zur Gesch. d. Perf. 493. 630 (cp. also J. Schmidt Kuhn's Ztschr. XXVII 332) traces the *sz* in Lith. *aũszta* 'it dawns' pret. *aũszo*, *auszrà* 'dawn' (rt. *aus-*,

Lat. *aur-ōr-a* Skr. *uṣ-*) and that in Lith. *gaisztū gaiszaū gaiszti* 'to linger, loiter' (rt. *ghais-*, Lat. *haer-eō*) back to (s)sk̄, according to which one might regard the *sz* in Lith. *maiszyti* and the *s* in O.Bulg. *mēsiti* 'to mingle, mix' (to Skr. *miṣ-rá-s* 'mixed') as the representatives of Indg. (k̄)sk̄ (cp. Lat. *misceō* = \*mic-sceō), just as Indg. *sk̄*, *ssk̄*, *k̄sk̄* had fallen together in *s* in Iranian.

But on the other hand we have: Russ. *ščiryj* Czech *čirý* Pol. *szczery* 'pure, clean, upright' = O.Bulg. \**štiryjǫ* (cp. § 147 p. 134 and Miklosich Vergl. Gramm. I<sup>2</sup> 288): Goth. *skeirs* 'clear' Ags. *scīr* 'pure, bright', Skr. *chāy-ā-* 'shade, glimmer' etc., see §§ 393. 400; Lith. *jėszkóti* O.Bulg. *iskati* 'to seek', Lith. dial. pret. *su-jėszkau* 'I began to seek': OHG. *eiscōn* 'to seek, ask', Skr. *ichāmi* 'I seek' (perf. *iy-ēṣ-a*), Suffix *-sko-*, see § 400.

Moreover we must bear in mind firstly that a \**k̄ey-ǰō* might be present in *szājuju sują*, as not unfrequently roots, which begin with *s* + tenuis, have old forms without *s-* (§ 589, 3), secondly that *jėszkóti iskati* and \**štiryjǫ* might be Germanic loan-words (cp. § 587 rem. 2). The balance as it seems to me, inclines in favour of *sk̄* = Lith. *sz*, Slav. *s*.

Slav. *sǰ* = Indg. *k̄ǰ* became *š*, e. g. *pišą* from \**pīs-ǰa*. See § 147 p. 134.

§ 415. Indg. *ǰ*. Lith. *žirni-s* Lett. *firni-s* 'pea' Pruss. *syrne* 'corn', O.Bulg. *zrīno* 'corn': Skr. *jīr-ná-* 'fallen to pieces, pounded' + Lat. *grā-nu-m*, Goth. *kaurn* 'corn' (cp. §§ 303. 306), rt. *ǰer-* 'to grind'. Lith. *žinóti* Lett. *finát* Pruss. *sinnāt* (*nn* like *ss* in *dessimts*, § 413) 'to know, recognise', O.Bulg. *znati* 'to know': + Gr. *γ-γνώ-σχω* etc., s. § 382. Lith. *bėrža-s* Lett. *bėrf-s* Pruss. *berse* O.Bulg. *brěza* 'birch': Skr. *bhūrja-s* a kind of birch + O.Icel. *björk* OHG. *pircha* 'birch'. Lith. *ožỹ-s* Lett. *afī-s* Pruss. *wosee* 'goat': Alban. *di* etc., s. § 411.

Slav. *zǰ* = Indg. *ǰǰ* became *ž*, e. g. *žuja* fr. \**ziū-ǰa*. See § 147 p. 134.

§ 416. Indg. *ǰh* fell together with *ǰ* in the prim. Balt.-Slav. period. Lith. *žėmà* Lett. *fīma* Pruss. *semo* O.Bulg. *zima* 'winter': + Gr. *χειμών* etc., s. § 383. Lith. *žāla-s* *žāle-s* Lett. *sa'ł-sch* Pruss. acc. *saliga-n* (*g = j*) 'green', Lith. *žolė* Lett. *fāle* Pruss. acc. *sāli-n* 'grass, herb', O.Bulg. *zelenū* 'green' *zelije* 'greens, vegetables': Skr. *hāri-ṣ* etc., s. § 389. Lith. *vežū* 'I drive' *važi-s* 'a small sledge' Pruss. *vessi-s* (*ss* as in *dessimts*, § 413) 'a sledging', O.Bulg. *veza* 'I drive': Skr. *vāhāmi* etc., s.

§ 383. Lith. *žibju* O.Bulg. *zijaǰa* 'I open my mouth wide': + Lat. *hiare*, OHG. *gāren* 'to gape'.

Slav. *zj* = Indg. *ghj* became *ž*, e. g. *liža* from *\*lǝz-ǝǰa*. See § 147. p. 134.

#### 4. The velar explosives.

§ 417. With regard to the development of *q*, *g*, *gh* the Indg. languages arrange themselves into the same two groups, as they did in the history of the palatals.

In the group, in which *k*, *g*, *gh* appear as explosives, *q*, *g*, *gh* frequently appear as *k*-sounds with following labialisation (*u*), as Lat. *quis* = Indg. *\*qi-s*, or as sounds, which presuppose this articulation, as Umbr. Osc. *pis* 'quis'. These labialised sounds were originally everywhere, as it seems, simple sounds and in Greek and probably also in Italic had not fallen together with prim. Indg. palatal + *u* (as in *\*ek̑uo-s* 'horse'). But the languages of this group do not all uniformly show this affection in each of the words in question. In numerous cases this affection appeared in one language, but not in another.

In the other group, Ar., Armen., Alban. and Balt.-Slav., the *u*-element is entirely wanting as an old inherited affection.

Here, as in the case of the palatals (§ 380), possibly exists a dialectical difference within the Indg. parent language<sup>1)</sup>.

In §§ 424 and 466 we shall have occasion to discuss the question of the historical relations between words with and words without labialisation in the *u*-languages, and whether the group which had no *u* was without this accessory element from the very beginning or had lost it in prehistoric times.

1) The maintenance of the existence of two dialects in the bosom of the Indg. prim. language on the basis of the differences of development of the palatal and velar explosives, does not imply that we ought to expect also the same boundary for other dialectical differences which we might feel inclined to ascribe to the Indg. prim. language. The limit, within which one dialectical peculiarity is confined, cannot without any further consideration be taken as typical for others. See Paul's *Principien der Sprachgeschichte* p. 237 f.

The following is the representation of the velar series in the separate Indo-Germanic languages: —

a. Languages with labialisation.

Indg.	Greek	Latin	Irish	Brit.	Germanic
<i>q</i>	with l. π, τ (σ), κ	<i>qu, c</i>	<i>c</i>	<i>p</i>	<i>χϰ, κ χ ζ, f ð</i>
	without l. κ	<i>c</i>	<i>c</i>	<i>c</i>	<i>k, χ, ζ g</i>
<i>g</i>	with l. β, δ (ζ), γ	<i>v, gu, g</i>	<i>b, g</i>	<i>b, g</i>	<i>kw, k, p</i>
	without l. γ	<i>g</i>	<i>g</i>	<i>g</i>	<i>k</i>
<i>gh</i>	with l. φ, θ, χ	<i>f, b, gu, v</i>	<i>b, g</i>	<i>b, g</i>	<i>ϰ, ζ, (ð)</i>
	without l. χ	<i>h, g</i>	<i>g</i>	<i>g</i>	<i>ζ g</i>

b. Languages without labialisation.

Indg.	Ar.	Armen.	Alban.	Lith.	Slav.
<i>q</i>	<i>k, c</i>	<i>k(k), č, g</i>	<i>k</i>	<i>k</i>	<i>k, č, c</i>
<i>g</i>	<i>g, j</i>	<i>k</i>	<i>g</i>	<i>g</i>	<i>g, dž, dz</i>
<i>gh</i>	<i>gh, jh</i>	<i>g, j ž</i>	<i>g</i>	<i>g</i>	<i>g, dž, dz</i>

Prim. indg. period.

§ 418. a. Tenuis *q* without labialisation in the *u*-languages. Rt. *qert*- 'plait, knit': Gr. *κάρταλο-ς* 'basket', Lat. *crātes* (§ 306), Goth. *hairds* 'door' OHG. *hurt* 'plait-work, hurdle' + Skr. *cytāmi* 'I tie together' fut. *cartiṣyāmi*, *kāta-s* 'hurdle-work, mat' (§ 259), Pruss. *korto* 'hedge, enclosure', rt. *grey-*: Gr. *κρέας* 'flesh', Lat. *cruor*, O.Ir. *crū* 'blood', O.Icel. *hrār* OHG. *rō* 'raw, uncooked' + Skr. *kraviṣ-* 'raw meat', Lith. *kraūja-s* O.Bulg. *krūv-ī* 'blood'. \**qarq*... 'crab': Gr. *καρκίνο-ς* Lat. *cancer* gen. *cancerī* fr. \**carcro-* (§ 269) + Skr. *karakaṭa-s*.

Forms with *-qt-* *-qs-* from rt. *jeug-* 'to harness, yoke': Gr. ζευκτό-ς ζεῦξις from \*ζευκτι-ς (§ 489) ζευκτήρ, ἔζεξα σύ-ζυξ, Lat. *jūnctus jūnctiō*, *jūnxi con-jux* + Skr. part. *yuktá-s* nom. agentis *yōktár-* 3. sg. pres. *yunaktē*, 3. sg. fut. *yōkṣyátē* nom. sg. *sa-yuk* from \*-*yukṣ* (§ 647, 7), Lith. part. *jūnktas* inf. *jūnkti*, fut. *yūnksiu*.

Suffix *-go-* see § 419.

§ 419. b. Tenuis *q* with labialisation in the *u*-languages. Pronominal stem masc. neut. \**go-* \**ge-* 'who, which' (interrogative and indefinite), fem. \**qā-*: Gr. πό-θεν 'whence?' Hom. τέο 'whose?' πῆ πῆ 'in what direction?' (Dor. πᾶ πᾶ), Lat. *quo-d cottī-diē* fr. \**quettī*, *qua-m*, O.Ir. *cia* (fr. \**cē*) Cymr. *pwŷ* 'who, what?' prim. Kelt. \**kyei*, Goth. *hva-s* 'who?' *hwē* 'by what?' fem. *hwō* + Skr. *ká-s* 'who?' Av. dat. *ca-hmāi* 'to whom?', Alban. *kē* 'which', Lith. *kà-s* 'who?' O.Bulg. *kū-to* 'who?'. \**getyer-* 'four': Gr. Ion. τέσσαρ-ες Lat. *quattuor* O.Ir. *cethir* O.Cymr. *petguar* Goth. *fidvōr* + Skr. *catvār-as* Arm. չոր-ի Lith. *keturì* O.Bulg. *četyrije*. Rt. *seq-*: Gr. ἔπ-ο-μαι 'I accompany, follow', Lat. *sequ-or*, O.Ir. *sech-em* 'a following', Goth. *saihv-a* 'I see' (follow with my eyes)? + Skr. *sí-ṣak-ti śac-a-tē* 'conducts, escorts', Lith. *sek-ù* 'I follow'. \**perqe* 'five': Gr. πέντε Lat. *quīnque* O.Ir. *cōic* O.Cymr. *pimp* Goth. *fimf* + Skr. *pāñca* Arm. *hing* Lith. *penkì*; \**perqto-s* 'the fifth' \**perqti-s* 'the number five': Gr. πέμπτο-ς Lat. *quīntus Quīnctiū-s* Osc. Πομπτιε-ς 'Quinctius' Goth. *fimfta-* (in *fimfta-taihunda* 'the fifteenth') + Skr. *parakti-ṣ* Alban. *pe-sē* fr. \**pe(rok)-ti-* (in the Gegic dial. of Alban. *pē-sē* perhaps still has the nasal of the original form in the nasalised *e*) Lith. *peñkta-s* O.Bulg. *petū petī* from \**pektū* \**pekti* (§ 545).

The suffix *-go-* occurs, partly with, and partly without labialisation. OHG. *zwī zwīes* beside *zwīg* fr. prim. Germ. \**twi-(3)wá-* (§ 444 c): Skr. *dvi-ka-* 'consisting of two, a pair'. O.Icel. *lqskr* 'soft, slack, loose' prim. Germ. \**laskwa-z*, Indg. \**lat-go-s*, see § 527. Lat. *tesquo-s* probably from \**ters-quo-*, to *torreō* rt. *ters-*, cp. Skr. *śúṣ-ka- śuṣ-ká-* 'dry' from rt. *saṃs-*. O.Ir. *sesc* 'unfruitful' Cymr. *hysp* 'arid' prim. Kelt. \**sis-kyo-s*, Lat. *siccū-s*, cp. \**sit-go-s* (§§ 436. 516). Gr. θή-κη 'case, box': Skr. *dhā-ká-s* 'receptacle'. Lat. *musculū-s* (cp. § 431 c), Skr.

*muš-ká-* 'testicle' *mūša-ka-s* *mūši-kā* 'rat, mouse', Armen. *mukn* (gen. *mkan*) 'mouse, muscle', O.Bulg. *mysš-ca* 'arm'. Cp. also Skr. *aja-kā-* *aji-kā-* 'kid', Lith. *osz-kā* 'goat'; Armen. *ju-k-n* 'fish', Pruss. acc. pl. *su-cka-ns* 'fishes' (§ 410).

§ 420. a. Media *g* without labialisation in the *u*-languages. Gr. *γέρανo-ς* Lat. *grū-s* Cymr. *garan* (Gall. *tri-garanus*, s. Curtius Grundz.<sup>5</sup> 176) Ags. *cran* OHG. *cranuh* + Armen. *kṙunk* Lith. *gėrvė* O.Bulg. *žeravŭ* 'crane'. Rt. *gar-*: Gr. *γηρώω* 'I speak, utter', Lat. *garriō* 'I chatter', O.Ir. *gair* 'call' Cymr. *gawr* 'clamor', OHG. *cherran* 'to scream, neigh, squeak' + Skr. *gr-ṇā-mi* 'I call, call to' *gir-* 'an invocation, speech, words'. Rt. *steg- teg-* 'cover': Gr. *στέγω* 'I cover' *στέγος* *τέγος* 'roof', Lat. *tegō*, O.Ir. *tech teg* 'house' O.Bret. *bou-tig* 'stabulum', OHG. *dah* O.Icel. *þak* 'roof' + Skr. *sthāgāmi* 'I cover, hide', Lith. *stōga-s* 'roof'. \**jugó-m* 'yoke' (rt. *jeug-*): Gr. *ζυγόν* Lat. *jugum* Goth. *juk* + Skr. *yugā-m* Lith. *jūnga-s* (with *n* taken over from *jūngiu* 'I yoke'), O.Bulg. *igo* (§ 145).

§ 421. b. Media *g* with labialisation in the *u*-languages. \**gūo-s*: Gr. *βίo-ς* 'life', Lat. *vīvo-s* O.Ir. *biu beo* Cymr. *byw* Goth. *qiu-s* + Skr. *jīvā-s* 'alive', Armen. *kea-m* 'I live', Lith. *gýva-s* O.Bulg. *živŭ* 'alive'. Rt. *gem-*: Gr. *βά-σκω* *βαίω* 'I go' (§§ 204. 233. 234), Lat. *veniō* (§§ 208. 239), Goth. *qim-an* OHG. *quem-an* 'to come' + Skr. *gá-chāmi* 'I go' (§ 228), Arm. *e-kn* 'he came', Lith. *gem-ù* 'I am born' (§ 249). \**regos* n.: Gr. *ἔρεβος* Goth. *riqiz-a-* n. 'darkness' + Skr. *rājas* 'duskiness', Armen. *erek* 'evening'. Root-form *aṛṅg-* 'smear, anoint, smooth': Gr. *ἀβρό-ς* 'delicate, luxurious', Lat. *unguō*, O.Ir. *imb imm* (gen. *imme*, st. *imben-*) 'butter', OHG. *ancho* 'butter' (Goth. \**agga*) + Skr. *añji-ṣ* 'salve, ornament, splendour' 2. pl. *anekthā* 'ye anoint'.

Indg. suffixes with *g* cannot be established with certainty.

§ 422. a. Media asp. *gh* without labialisation in the *u*-languages. Lat. *hosti-s* 'foreigner, enemy', Goth. *gasts* OHG. *gast* 'stranger, guest' + O.Bulg. *gostŭ* 'guest, companion, friend', cpf. \**ghos-ti-s* 'stranger'. Rt. *steigh-*: Gr. *στειχω* O.Ir. *tiagaim* 'I stride, go', Goth. *steiga* 'I mount' + Skr. *stigh-mu-tē*

'leaps up, ascends' (not found), Alban. *štek* (definite form *šteg-u*) 'entrance' Lith. *staigyti-s* 'to make haste' Lett. *staigāt* 'to go, travel' O.Bulg. *stigna* 'I come'.

§ 423. b. Media asp. *gh* with labialisation in the *u*-languages. Rt. *gher* : Gr. *θερμός* Lat. *formu-s* OHG. *warm* 'warm' from prim. Germ. *\*(z)uarma-z* + Skr. *gharmá-s* 'glowing fire', Armen. *jerm* 'warm' Pruss. *gorme* 'heat', Indg. *\*ghor-mo-* (Gr. Armen. with *e* in the root syllable). Rt. *sneiġh-* 'to snow' : Gr. *νίφ-α* acc. 'snow', Lat. *ninguīt*, acc. *niv-em*, Goth. *snáivs* 'snow' + Av. *snaēžaiti* 'it snows', Lith. *snėga-s* O.Bulg. *sněgŭ* 'snow'. Gr. *νεφρός* 'kidney, testicle', Praenest. *nefrōn-es* Lanuv. *nebrundin-es* 'kidneys, testicles', OHG. *nioro* 'kidney, testicle' O.Icel. *nýra* 'kidney' fr. prim. Germ. *\*ne(z)ur-en-*. Rt. *kneiġh-* : Lat. *cō-nīveō* (perf. *cō-nīxī*), Goth. *hneivan* OHG. *(h)nēgan* 'to bow'.

Indg. suffixes with *gh* cannot be established with certainty.

a. *The language-group with labialisation.*

§ 424. Many kindred words, which are found in all or several *u*-languages, appear in one language with labialisation, in another without it or in the same language show labialisation in one set of forms, but not in the others.

Manifold difficulties stand in the way of our being able to form a judgment of their history, especially in as much as we do not know how old the labial affection of the velar explosives is, or whether in the group of *u*-languages it belonged from the beginning to all forms of a form-system irrespective of the quality of the neighbouring sounds, or was connected with some definite vicinity of sounds, and whether, later, but still in prehistoric times, a new *u*-afterclap, caused by fresh sound-laws, did not here and there make its appearance quite independent of the first *u*-development.

The chief question is, to what extent can the disappearance of the old inherited *u*-affection be established or made probable within the circle of the *u*-languages? It is seldom that its

disappearance is to any extent carried out before our eyes, as in Lat. *secuntur* from *sequontur*. We may conclude that it was probably dropped in the following cases:

1. When other forms of the same kindred class of words have *u* and the sound-laws of the respective languages permit our assuming that the labialisation has been lost. We thus assume in regard to Goth. *qiman* OHG. *queman* 'to come' (§ 421) and prim. Germ. \**sum-da-* fr. \**sum-da-* etc. (§ 180 p. 158) that prim. Germ. \**kumana-z* 'come' pp. (OHG. *koman*) arose from \**kyum-ana-z* (§ 444*b*).

2. When closely related dialects (of the same language-branch) have *u* and the native sound-laws are not in the way. Thus the *-pt-* in Osc. Πομπτιες 'Quinctius' shows that the *-ct-* in Lat. *quīn(c)tu-s* goes back to prim. Italic *-k<sup>h</sup>t-*. O.Cymr. *petguar* 'four' permits our assuming an older *ky-* for Ir. *cethir*.

3. When other languages have *u* and the native sound-laws are not in the way. We thus conjecture prim. Germ. \**kyuru-* for Goth. *kaúru-s* 'heavy' and prim. Lat. (or prim. Ital.) \**g<sup>h</sup>raui-s* for Lat. *gravi-s* (§ 432*d*) on account of Gr. βαρύς, Indg. \**grr-u-* \**gr-u-*.

Several proofs may often be united together. Thus we may appeal 1. to *quīnque*, 2. to Osc. Πομπτιες, 3. to πέμπτος and Goth. *fimfta-* for Lat. *quīn(c)tu-s* from \**k<sup>h</sup>erak<sup>h</sup>to-s*.

Opposed to these cases there are many in which, by virtue of other forms of the same dialect or of the connected forms of a closely related dialect or of those of another *u*-language, one is inclined to maintain the loss of *u*, but is prevented from doing so by the sound-laws hitherto discovered. Thus Ion. κό-θεν κῶς etc. beside Att. etc. πό-θεν Lat. *quo-d* Goth. *hva-s* as opposed to Ionic ποιηή fr. Indg. \**qoǵ-nā* (§ 427*a*); Gr. λακείν 'to scream, speak' beside Lat. *loquē* as opposed to Gr. λιπεῖν ἐπεσθαι etc. with π = Indg. *q*; Lat. gen. *vōc-is vocāre* beside Gr. ὄψ 'voice' ἔπος 'word', as opposed to Lat. *coquis* etc. with *qu* = Indg. *q*. With our present state of knowledge we can, in such cases, only make uncertain conjectures, as e. g. that in forms connected with



Lat. *voc-* the *c* for *qu* had been extended by analogy from the nom. *vōx*, which can be regularly traced back to *\*uōk<sup>2</sup>s* (§ 431 *c*).

For words and groups of words, which do not appear in any language with labialised velar-sound, it must for the present be left undecided, as to whether they ever had the *u*-afterclap. In each language we give first the examples for this form-category apart from the other.

### Greek.

#### 1. Indg. *q*, *g*, *gh* without labialisation.

§ 425. Indg. *q*. καρπ-ό-ς 'fruit' κρόπ-ιο-ν 'sickle' : Lat. *carpō*, OHG. *herbist* 'autumn' + Skr. *kṛpāṇa-s* 'sword', Lith. *kerpū* 'I shear'. κολων-ό-ς 'hill' : Lat. *ex-cellō colli-s*, Goth. *hallu-s* 'rock' O.Icel. *hallr* 'hill, declivity' OS. *holm* 'hill' + Lith. *kėl-ti* 'to raise' *kál-n-a-s* 'a local elevation, mountain'. κλί-ς 'key' : Lat. *clāvi-s clāvo-s*, O.Ir. *clōi* Mid. Cymr. *cloeu* pl. 'nails', OHG. *sliozan* 'to shut' (prim. Germ. *\*sleut-* from *\*skleut-*, § 528 rem. 1) + O.Bulg. *klju-čŭ* 'hook, key', cp. § 589, 3. ἀγκών 'bow' ὄγκο-ς 'bow, hook, circuit' : Lat. *ancu-s uncu-s*, O.Ir. *ēcath* 'hamus', Goth. *hals-aggā* 'neck' OHG. *angul* 'angle' + Skr. *anākā-s* 'hook'.

Indg. *g*. ἀγείρω 'I collect' ἀγορά 'assembly' γάρ-γαρα 'heap' : Lat. *gre-x gre-g-is*, O.Ir. *graiḡ* 'herd of horses' (the Lat. and the Kelt. word with 'refracted reduplication') + Skr. *grāma-s* 'crowd, army, village'. ἐρύγομαι 'I spit out' : ē-rūgō, OHG. *itaruchian* 'to chew again' + Lith. *rūgiu* 'I belch' O.Bulg. *rygaja se* 'I belch, vomit'.

Indg. *gh*. χανδάνω 'I lay hold of' fut. χείσομαι fr. *\*χεντοομαι* : Lat. *pre-hendō praeda* from *\*prae-hedā*, Goth. *bi-gitan* 'find, get' O.Icel. *geta* 'to get, divine, guess' + Alban. *ḡndem* 'I am found', Pruss. *sen-gydi* 'he may receive, attain' O.Bulg. *gadaja* 'I guess, divine', rt. *ghed-1*). λέχος 'bed' : O.Ir. *lige* 'bed', Goth. *ligan* 'to lie' + O.Bulg. *leža* 'I lie down' *lože* 'place of rest'.

1) The nasalisation of this root in the present *\*ghendō* is explained in the same manner as the Skr. present formation *limpāmi* etc. (p. 189).

\*κ κκ, γκ = *qi ghī*, *qi* became σσ ττ, ζ(σδ) δδ, as in the case of the corresponding palatal sounds + *i*, see §§ 384—386. 489. 493. 497. ὀρύσσω 'I dig' fr. \*ὀρυκ-ιω : Lat. *runcāre* + Skr. *luñcāmi* 'I pull out, pluck'. φύζα 'fright' fr. \*φνυγ-ια, to φεύγω 'I flee' : Lat. *fugiō*, Goth. *biugan* 'to bend' + Skr. *bhugná-s* 'bent', Lith. *baugù-s* 'fearful', rt. *bheug-* *bheug-*.

2. Indg. *q*, *g*, *gh* = prim. Gr. *k<sup>h</sup>*, *g<sup>h</sup>*, *kh<sup>h</sup>*.

§ 426. The prim. Greek sounds partly became developed to π, β, φ, partly to τ σ, δ ζ, θ, and partly to κ, γ, χ. The conditions, under which these differences of the place of articulation were formed, were mostly the same for the three forms of articulation.

That the *u* following the explosive sound in prim. Greek was not a full *u*, can be concluded from the contrast between ἵππος 'horse' (fr. Indg. \**ekwo-s*, § 166 p. 147) and e. g. ἔλιπον 'I left' (fr. Indg. \**e-liq-o-m*). Cp. p. 305 f.

§ 427. Prim. Greek *k<sup>h</sup>* became

a) π before *o*-vowels, before sonant and consonant nasals and liquids, and before *t*, *th*, *s*. Stem πο- 'who' : Lat. *quo-*, Skr. *ka-* etc., see § 419. ποινή 'expiation, atonement, fine' : Av. *kaṣna* 'fine', O.Bulg. *cěna* 'price', Indg. \**goi-nā* from rt. *qeī-*, to which also Gr. τί-σι-ς 'atonement' : Skr. *āpa-ci-ti-* 'requital' (under *b*). λείπω 'I leave' : Lat. *linquō*, O.Ir. *lēcim* 'I leave', Goth. *leihva* 'I lend' + Skr. *rindāk-ti* 'leaves', Arm. aor. *e-lik* 'he left', Lith. *lėkù* 'I leave', rt. *leiḡ-*. ἥπαρ- 'liver', orig. form \**īēqq-t* : Lat. gen. sg. *jecin-or-is* (§ 431 c) + Skr. gen. sg. *yakn-ās*, Lith. nom. pl. *jėkn-os*. πεμπάς 'the number five' = Skr. *pañcāt* (§ 448 rem.), cpf. \**peṣṣqt-s*; Gr. α Skr. *a* in the last syllable instead of the expected *av an* (s. §§ 230. 235) are explained by the original accentuation of the weak cases, gen. sg. \**peṣṣqt-ós* etc.; concerning the δ of the stem πενταδ- see footnote 1 pp. 199—200. ὄμμα 'eye' fr. prim. Gr. \*ὄπ-μα (§ 488) : Lith. *akl-s* O.Bulg. *oko* 'eye'. In like manner also πέμμα 'any kind of dressed food' : Lat. *coquo* + Skr. *pācāmi* O.Bulg. *peka* 'I cook'. ἐπι-άμην 'I bought' : O.Ir. *cre-nim* 'I buy' *crithid* 'desirous of buying' O.Corn. *prinid* 'emptus' + Skr.

*κῠῖ-ῥᾶ-μι* 'I buy, purchase'. ἔ-πλ-ε-το 'versatus est' (περι-πλ-ό-μενο-ς) πόλο-ς 'the axis on which something turns, land turned up with the plough': Lat. *colō* fr. \**quelō* (§ 431 a), *in-quivlōnu-s* + Skr. *cārāmi* 'I move myself, wander', rt. *qel-*. πέμπτο-ς 'the fifth': + Lith. *peñkta-s* etc., see § 419. πεπτό-ς 'cooked': Lat. *coctu-s* from \**quecto-s* + Skr. *paḥtá-s*; fut. πέψω aor. ἔπεψα: Lat. *coxī* from \**quexī* + Skr. fut. *paḥṣyá-ti* aor. Ved. *páḥṣa-t*. νίπ-τρο-ν 'water for washing' fut. νίψω 'I shall wash' nom. sg. χέρ-νιψ 'water for the hands' + Skr. *niktá-s* 'washed off' fut. *nehṣyá-ti* 'he will wash off', rt. *neiq-* (acc. χέρ-νιβ-α, Skr. *ava-nēj-ana-m* 'washing-water').

π became ττ in Cret. πέντο-ς from \*πενιτο-ς = πέμπτο-ς 'quintus'. Cp. § 333.

b) τ before *e-* and (sonantal) *i-*vowels. τὲ 'and': Lat. *-que*, O.Ir. *-ch* Cymr. *-p* + Skr. *ca*, Indg. \**qe*, related to πό-θεν etc. Hom. τέο 'whose', Cret. (Gortyn) fem. ὀ-τείᾶ, as opposed to Att. ὀ-ποῖᾶ 'qualis' from the stem \**qe-* (§ 419). τέλλειν 'to rise' to πόλο-ς, rt. *qel-* see above under *a*. πέντε 'five': Lat. *quīnque* etc., see § 419. τί 'what?': Lat. *quid* + Skr. *-cid* Av. *-ciḥ* (indef.), Indg. \**qi-d*. τί-σι-ς 'atonement', rt. *qeḷ-*, see above under *a*.

That this τ arose from prim. Gr. *kʷ*, not *k* (as § 425), and that no direct historical connexion existed between the palatal articulation which is to be postulated as the previous stage for τ and the Aryan palatal *c* = Indg. *q* (§ 445) (as is maintained by some scholars e. g. J. Schmidt), follows from the fact, that τ only occurs in such kindred classes of words as have π = prim. Gr. *kʷ* beside τ (τέο beside πό-θεν) and, so far as they are at the same time represented in other *u*-languages, have a labialised sound opposite to the Gr. τ (τίς = Lat. *quis*). If τ had had no *u* from the most ancient times, this sound would also have to appear as representative of Indg. *q* in the words belonging to § 418, as e. g. κέλης 'runner' (Lat. *celer*, Skr. *cal-*, rt. *qel-*), where however it does not occur. The following palatal vowel, notwithstanding the *u*-afterclap, caused palatalisation of the *k*-sound (*kʷ* from *kʷ*), just as in the change of prim. Slav.

\**kyīstī* to O.Bulg, *cvisti* ('to blossom') *y* did not prevent the *i* from exercising its influence on the *k* (§ 462).

Thess. *ιίς* probably stands to Att. *τις* in the same relation as Mod.HG. *quāngen* to MHG. *tuengen* (§ 374), that is, before the disappearance of the *y* of the prim. Gr. form \**k<sup>u</sup>'is* this caused the change of the explosive sound back again to *k*. Also Cypr. *σί-ς* = *τί-ς* (cp. Arcad. *ζέλλω*, § 428 *b*.) supports the assumption that *k<sup>u</sup>* = Indg. *q* before palatal vowels and Indg. *t* had not yet fallen together in prim. Greek.

Rem. 1. Through new formations *π* and *τ* came to stand in sound-combinations, in which they had not regularly arisen. E. g. Dor. loc. *πεῖ* 'where?' instead of \**τεῖ*, Ion. Att. *λείπεις* *λείπει* *λείπετε* instead of \**λειτεις* etc., conversely *ἀνα-τολή* 'rising' instead of \**-πολη* (to *ἀνα-τέλλω*, Skr. *car-*). Cp. §§ 428 rem. 429 rem. 1 and 448 rem.

c) *κ*, when *υ* preceded or followed; in some cases this *υ* seems first to have been called into existence by the *y* in *k<sup>u</sup>*, a point, which still requires closer investigation. *λύκο-ς* 'wolf': Goth. *vulfs* + Skr. *vjka-s* 'wolf'. Gen. *νυκτός* 'noctis'? : + Skr. *nākti-ṣ* Lith. *naktis* 'night'. Nom. sg. *οἶνό-φλυξ* 'drunk with wine' (gen. *-φλυγ-ος*) *φλυκτί-ς* 'bladder' beside *φλέψ* *φλεβ-ός* 'blood-vessel'. *κύκλο-ς* 'circle': Aeg. *hweól* *hweowol* 'wheel' + Skr. *cakrá-s* 'circle, wheel'. Cp. §§ 428 *c*. 429 *c*.

Rem. 2. Also *κκ* in *ὄκκο-ν* acc. 'eye' in Hesych. (cp. *ὀπ-* in *ὀπή* 'a peephole, hole' etc.) for *k<sup>u</sup>+y*? Cp. *πελεκκῶν* § 166 with rem. Doubts remain on account of Bæot. *ὄκκαλλο-ς* 'eye', whose *κτ* must be taken into consideration in connexion with the *φθ* in *ὀφθαλμός* and the *κξ* in Skr. *akṣan-*.

d) With following *ι*, there arose *σσ*, *ττ*. Hence prim. Gr. *k<sup>u</sup>ι* thus fell together with *kι* = Indg. *k̄ι* (§ 384). Since Indg. *qι* and Indg. *tι* remained apart in Greek, we may assume that *k<sup>u</sup>ι* did not first become *tι* — as one might expect according to *τις* from \**k<sup>u</sup>i-s* —, but that the 'zetacistic' influence of the *ι* already began, when the explosive sound belonged to the sphere of the back articulation. *πέσσω* *πέττω* 'I cook' beside fut. *πέσω* etc., rt. *peg-*. Further under § 489.

§ 428. Prim. Greek *g<sup>u</sup>* became

a) *β* before *ο*-vowels and sonant and consonant nasals and

liquids. βοῦ-ς 'ox' : Umbr. *bue* 'bove', O.Ir. *bō* OHG. *chuo* 'cow' + Skr. *gāu-ṣ* 'ox', Armen. *kov* (gen. *kovu*) 'cow' O.Bulg. *gov-ędo* 'ox'. βολή 'a throw, cast' : OHG. *quellan* 'to spring' (of water) + Skr. *gālāti* 'trickles down', rt. *gel-*. βροῦά 'food' : Lat. *-voru-s vorāre* + Skr. *girāmi gilāmi* 'I swallow up', Armen. *ker* (gen. *keroy*) 'nourishment, food', Lith. *geriū* 'I drink' O.Bulg. *žira* 'I swallow', rt. *ger-*. σέβ-ομαι 'I feel awe, respect' (orig. 'start back before something') : Skr. *tyāj-a-ti* 'forsakes, forgoes' part. *tyakti-*, rt. *tjeg-*. ἔρεβ-ος n. 'darkness' : Goth. *riqiz-a-* etc., see § 421. βά-σκω βα-τό-ς βά-σι-ς = Skr. *gā-chāmi ga-tā-s gā-ti-ṣ*, βαίνω = Lat. *veniō*, from rt. form *gñ-* 'go', see § 421. μνάομαι 'I woo to wife' from \**μν-ā-* from \**βν-ā-* 'wife' (this denominativum was treated as a primitive verb, hence the σ in *μνηστό-ς*) : O.Ir. *muā* gen. sg. 'of a wife' out of \**bnās* (§ 520) + Skr. *gnā-* 'the wife of a god', Indg. \**gn-ā-*; beside these Bæot. βανά O.Icel. *kona* 'woman' + Armen. pl. *kanāi-kē* 'women', Indg. \**gñn-ā-*. σεμνός fr. \**σεβνο-ς*, part. to σέβ-ο-μαι, see above. ἀμνός 'lamb' fr. \**άβ-νο-ς* : Lat *avilla āgnu-s*, O.Ir. *uan* 'lamb' + O.Bulg. *jagne* 'lamb'. βαρύ-ς 'heavy' : Goth. *kaúru-s* + Skr. *gurú-ṣ* 'heavy', Indg. \**grr-u-s*. βι-βρώ-σκω 'I devour' βρω-τήρ 'devourer' : + Skr. *gīr-nā-* 'swallowed up', Indg. rt. form *gř-*, see § 306 p. 242. βρόχω 'I gnash' βρόκω 'I bite' (cp. Osthoff zur Gesch. d. Perf. 313 f.) : + Lith. *gráužiū* 'I gnaw, bite off' O.Bulg. *gryza* 'I bite', rt. *gra<sup>x</sup>uǵh-*. άβ-ρός 'pretty' from orig. form \**ῥg-ro-s* : Lat. *unguō* etc., see § 421. βάλλω 'I throw' from orig. form \**gl-ǵō*, aor. βαλ-εἶν βαλ-ῆναι fr. \**gl-*, aor. βλ-ῆναι fr. \**gl-*, beside βολ-ή, rt. *gel-*, see above. Aeolic βληῖρ beside Att. δέλεαρ (*b*) 'bait' either to βάλλω (the author Morph. Unt. II 225) or to OHG. *querdar* 'bait' (J. Schmidt Kuhn's Ztschr. XXV 153).

β before ι is remarkable. βί-ος 'life' : Lat. *vīvo-s* etc., see § 421. βιός-ς 'bow' : + Skr. *jyā-* Av. *jyā-* 'bow-string', Lith. *gijā gijē* 'thread' (cp. § 120 p. 111 f.). βία 'force' βι-νέω 'I ravish' : + Skr. *jyā-* 'supreme power' *ji-nā-mi* 'I overpower, subdue' *jáy-āmi* 'I overcome' perf. *ji-gāy-a*. Cp. J. Schmidt Kuhn's Ztschr. XXV 159. 161, the author Morph. Unt. IV 410 f.

b) δ before e-vowels. Arcad. δέλλω, Delph. Gortyn *όδελό-ς*,

to *βολ-ή ὀβολ-ός* *βάλλω*, rt. *gel-*, see *a*. Arcad. *δέρεθρο-ν* beside Att. *βάραθρο-ν* 'gulf, cleft', to *βορ-ά βι-βρώ-σκω*, rt. *ger-*, see *a*. Locr. Delph. *δέλεται* Dor. *δήλεται* 'wills, wishes' from orig. form \**gél-ne-taḡ*, beside Lesb. *βόλλεται* Att. *βούλεται* 'wills, wishes' fr. orig. form \**gǃ-né-taḡ* (§ 204 p. 170 f. § 306 p. 243), rt. *gel<sup>1</sup>*).

In Arcad. this *δ* must have been different from the *δ* = Indg. *d*. For it was also represented by *ζ*: *ζέλλω*, *ζέρεθρον*, cp. Cypr. *σίς* = *τίς* § 427 *b*. Hence Indg. *ge-* and *de-* had not yet fallen together in prim. Greek.

Rem. Through new formations, *β* and *δ* came to stand in sound-combinations, in which they would not have regularly arisen. E. g. *βέλος* 'shot' instead of \**δέλος* to *βάλλω*; *ῥβελός* beside *ῥδέλος* and *ῥβολός*; *δολφός* ἡ *μήτρα* Hesych., beside *δελφύς* ἄ-*δελφεός* *δελφίς*: Skr. *gárbha-s* 'womb'. Cp. § 427 rem. 1, § 429 rem. 1 and § 451 rem.

Does Bœot. *βέλετη* Thess. *βέλλεται* beside Locr. *δέλεται* Lesb. *βόλλεται* also belong here? The idea is not entirely to be rejected, since prim. Gr. *g<sup>h</sup>* may regularly have become *β* before *e* in Aeol. Cp. *β* before *i* in *βίος* etc.

*c*) *γ* in the vicinity of *υ*, corresponding to the *κ* in § 427 *c* and to the *χ* in § 429 *c*. Gen. *οινό-φλυγ-ος*, see § 427 *c*. *ἐγ-γνή* 'consent, surety, betrothal': Lat. *uoneō* from \**gμou-eō*, rt. *geu-*. *γογ-γύ-ζω* 'grumble, am unwilling' beside *βοή* 'call' from \**βοF-ā*: Skr. *jō-guv-ē* 'I proclaim aloud'; the *γ* in *γός* 'plaint' was transferred from *γυ-*. *γυνή* beside Bœot. *βανά* and Hom. *μνάο-μαι* see *a*.

The side by side existence of *πρέσβυ-ς* and *πρέσγυ-ς* is probably due to a double stem form *πρεσ-γυ-* and *πρεσ-βεF-* (to Lith. *žmo-gù-s* 'man'?). It is not clear whether *-βε-* was regular after *σ* (cp. *σβ-έννυμι σβ-ήναι* to Lat. *sēgni-s*, rt. *seg-*, § 432 *d*, beside *ζείναμεν* ὀ *σβέννυμεν* in Hesych.), or whether *β* was borrowed from *πρέσ-βιστο-ς* *πρέσβι-ς* *πρέσβος* etc. It must be observed that *g<sup>h</sup>* before *υ* lost its labialisation earlier than *g<sup>h</sup>* which led to *β* and *δ*. The last two sounds stood for a time in a closer relation to each other as compared with *γυ*. Association

1) Concerning this root cp. the author in de Saussure's *Mém. sur le syst. pr.* 256, Fick *Bezzenberger's Beitr.* VI 211 f., Blass *Rhein. Mus.* XXXVI 610.

with the form of the superlative etc. would have taken place at that period.

d) With following  $\dot{\lambda}$ , there arose  $\zeta$  ( $\sigma\delta$ ),  $\delta\delta$ . Prim. Gr.  $g^*\dot{\lambda}$  thus fell together with  $g\dot{\lambda}$  = Indg.  $\dot{g}\dot{\lambda}$  (§ 385).  $g^*\dot{\lambda}$  did not first become  $d\dot{\lambda}$ , any more than  $k^*\dot{\lambda}$  first became  $t\dot{\lambda}$  (427 d) <sup>1</sup>).  $\zeta\eta$  'lives' fr.  $*\zeta\eta$ -( $\lambda$ ) $\epsilon$ i, fut.  $\zeta\eta$ -σομαι : + Av. *jyāiti-jyātu*- 'life'.  $\nu\lambda\zeta\omega$  'I wash off' beside  $\nu\lambda\pi\rho\omega$ -ν etc., see § 427 a. For the rest see § 493.

§ 429. Prim. Greek  $kh^*$  became

a)  $\varphi$  before o-vowels and sonant and consonant nasals and liquids.  $\varphi\acute{o}\nu$ -ος 'murder' part.  $\varphi\alpha$ -τός perf.  $\pi\acute{\epsilon}\varphi\alpha$ -ται pret.  $\xi$ - $\pi\epsilon$ - $\varphi\nu$ -ο-ν : + Skr. *hán-ti* 'strikes, slays' 3. pl. *ghn-ánti*, Armen. *gan* 'blows', O.Bulg. *žīn-ja* 'I cut down, reap', rt. *ghen*-.  $\eta\lambda\varphi$ -ο-ν 'I acquired' pres.  $\acute{\alpha}\lambda\varphi$ -άνω from  $*\eta\eta\delta$  : + Skr. *árhāmi* 'I earn, deserve' *arghás* 'worth, price', Lith. *algà* 'pay, reward', rt. *algh*-.  $\sigma\tau\acute{\epsilon}\rho\varphi\omicron\varsigma$   $\tau\acute{\epsilon}\rho\varphi\omicron\varsigma$  n. 'leather, hide', esp. 'the hard hide on the back of animals': Lat. *tergus* 'thick hide' esp. 'the hide on the back of animals', then 'back'.  $\nu\epsilon\varphi\omicron\varsigma$  'kidney': OHG. *nioro* etc., see § 423.  $\acute{\epsilon}\lambda\alpha\varphi\rho\acute{o}\varsigma$  'quick, dextrous, nimble': OHG. *lungar*, cpf.  $*\lambda\alpha\eta h$ -τός; to  $\acute{\epsilon}\lambda\alpha\chi\acute{\upsilon}$ -ς, see c.

b)  $\theta$  before e-vowels.  $\theta\epsilon\acute{\iota}\nu\omega$  pres. to  $\acute{\epsilon}\pi\epsilon\varphi\eta\nu$  etc., see a.  $\theta\epsilon\rho\mu\acute{o}\varsigma$  'warm' = Armen. *jern* 'warm',  $\theta\acute{\epsilon}\rho\omicron\varsigma$  'summer' = Skr. *hāras* 'glowing heat', rt. *gher*-, see § 423.  $\theta\acute{\epsilon}\sigma\sigma\alpha\sigma\theta\alpha\iota$  'to obtain by entreaties' fr.  $*\theta\epsilon\tau$ -σ- : Av. *jaidyēmi*, O.Pers. *jaidyāmy* 'I beg, ask', rt. *ghedh*-; to which probably also  $\pi\acute{o}\theta\omicron$ -ς 'desire, a longing for', from  $*\varphi\omicron\theta\omicron$ -ς (§ 496), according to a.  $\theta\acute{\eta}\rho$  'animal': Lat. *ferus* + O.Bulg. (*d*)*zvěř* 'wild beast' from prim. Slav.  $*g\mu\acute{e}r\dot{\iota}$  (§ 464); it remains uncertain whether the  $\mu$  of the Slav. form was an old inherited  $\mu$  (J. Schmidt Kuhn's *Ztschr.* XXV 178).

Rem. 1. Through new formations  $\varphi$  and  $\theta$  came to stand in sound-combinations, in which they would not have regularly arisen. E. g.  $\nu\acute{\iota}\varphi$ - $\epsilon$ i  $\nu\acute{\epsilon}\lambda\varphi$ - $\epsilon$ i 'it snows' after  $\nu\acute{\iota}\varphi\omicron$ - (in  $\nu\acute{\iota}\rho\acute{o}\mu\epsilon\nu\omicron\varsigma$  and others)  $\nu\acute{\iota}\varphi$ - $\alpha$  etc., rt.  $\sigma\nu\acute{\epsilon}\lambda\eta$ gh-, see § 423.  $\eta\lambda\varphi$ - $\epsilon$  after  $\eta\lambda\varphi$ - $\omicron\nu$  etc.  $\xi$ - $\theta\alpha\nu$ - $\epsilon$  'he died', 3. pl. perf.  $\tau\epsilon$ - $\theta\nu$ - $\acute{\alpha}\nu$ i (for  $*\tau\epsilon$ - $\varphi\nu$ - $\alpha\nu\tau\iota$ ) after  $\theta\epsilon\acute{\iota}\nu\omega$  (s. above), see Osthoff *Zur Gesch. d. Perf.* 366 f. Cp § 427 rem. 1. § 428 rem. and 454 rem.

1) Hence we have also no right to maintain, that  $\zeta\eta$  proves, that  $\beta\acute{\iota}\omicron\varsigma$  stands for regular  $*\delta\iota\omicron$ -ς.

$\varphi = \theta$  in Aeol.  $\varphi\eta\rho$  (Thess.  $\Phi\iota\lambda\acute{o}-\varphi\epsilon\iota\rho\sigma\text{-}\zeta$ ) seems to be due to a change of  $\bar{p}$  to  $f$ , cp. §§ 365. 495.

Rem. 2. If  $\beta\epsilon =$  Indg.  $ge$  should have arisen regularly in Aeol. (§ 428 *b.* rem.), we might similarly trace  $\varphi\eta\rho$  directly back to  $*k\bar{h}^{\epsilon}\bar{e}r$ .

c)  $\chi$  corresponding to the  $\kappa$  in § 427 *c* and to the  $\gamma$  in § 428 *c*.  $\delta\nu\nu\chi$ - 'nail, claw' in the gen.  $\delta\nu\nu\chi\text{-}\sigma\varsigma$  etc. : Lat. *unguis*-s; it is here of course a question of prim. Gr.  $k\bar{h}^{\epsilon} =$  Indg.  $qh$  (§ 553).  $\epsilon\lambda\alpha\chi\acute{\upsilon}\text{-}\zeta$  'small, little' = Skr. *raghú*-ṣ *laghú*-ṣ 'quick, small' beside  $\epsilon\lambda\alpha\varphi\rho\acute{o}\text{-}\zeta$  'quick' see *a*; the  $\theta$  in  $\epsilon\lambda\alpha\theta\rho\acute{o}\text{-}\zeta$  (Hesych.) was perhaps transferred from the once existing forms  $*\epsilon\lambda\alpha\theta\epsilon\text{f-}$  (beside  $\epsilon\lambda\alpha\chi\nu\text{-}$ ) and  $*\epsilon\lambda\alpha\theta\iota\sigma\tau\text{-}\zeta$ .

d) with following  $\acute{\iota}$ , there arose  $\sigma\sigma$ ,  $\tau\tau$ .  $\epsilon\lambda\acute{\alpha}\sigma\sigma\omega\nu$   $\epsilon\lambda\acute{\alpha}\tau\tau\omega\nu$  'smaller, less' compar. to  $\epsilon\lambda\alpha\chi\acute{\upsilon}\text{-}\zeta$  (*c*). Cp. §§ 427 *d.* 428 *d.* 497.

### Italic.

#### 1. Indg. $q$ , $g$ , $gh$ without labialisation.

§ 430. Indg.  $q$ . Lat. *capitō*, *capis -idis*, Umbr. *kapiř-e* 'capide', Osc. *καπιδιτωμ*, i. e. *kapid-ī-to-m* 'ollarium' : Gr. *κάπη* 'manger' *κώπη* 'handle', O.Ir. *cacht* O.Corn. *caid* 'servus', Goth. *hafja* 'I raise' OHG. *haft* 'caught' + Armen. *kap* 'bond, fetter'? (Hübschmann Armen. St. I 12), Alban. *kap* 'I seize', Lett. *kampu* 'I seize, take hold of'. Lat. *canō*, Umbr. *kanetu* 'canito' : Gr. *κανάζω* 'I tune, sound', O.Ir. *canaim* 'I sing' O.Corn. *cheniat* 'cantor', Goth. *hana* 'cock' + Skr. *kan-kan-ī* 'an ornament with bells', Lith. *kañ-klai* and *kan-klės* pl. 'harp, guitar' (or is the Lith. word to be connected with *kinkyti* 'to stretch'?). Lat. *coxa* : O.Ir. *coss* 'foot' Cymr. *coes* 'femur', OHG. *hahsa* 'knuckle of the hind leg' + Skr. *kākṣa-s* 'arm-pit' Av. *kaša-* m. 'shoulder'. Lat. *cūpa* : Gr. *κύπη* 'a hole, hollow' *κύπελλο-ν* 'capacious drinking vessel, goblet' + Skr. *kūpa-s* 'ditch, hole'. Lat. *secō*, Umbr. *pru-sekatu -sektu* 'prosecato' *pro-sēsētir* 'prosectis' : OHG. *sega saga* O.Icel. *soq* 'a saw' O.Icel. *sigār* 'sickle' + O.Bulg. *sēka* 'I hew' *sēknā* 'I cut'. Lat. *auctu-s auctiō auctor*, Umbr. *uhtur* 'auctor' : + Pruss. *auckta-* Lith. *dukszta-s* 'high' Lith. *áukti* 'to grow', rt. *aug-*, s. below under Indg.  $g$ . Lat. *scandō* :



Gr. *σκάνδαλο-ν* 'stumbling-block', O.Ir. *ro se-scaind* perf. 'he leapt' + Skr. *skándāmi* 'I hasten, leap'.

Concerning Umbr. *ʒ* from *k* before *e*- and *i*-vowels see §§ 387. 502.

Indg. *g*. Lat. *gelu*, Osc. *γελαν* 'pruinam': Goth. *kalds* 'cold' O.Icel. *kala* 'to freeze' + O.Bulg. *žlédica* 'sleet'. Lat. *augeō augmentu-m* (cf. *auctor* Umbr. *uhtur* under Indg. *q*): O.Ir. *ōg* 'uninjured, whole', Goth. *áukan* 'to increase' + Skr. *ōjas-* Av. *aojah-* n. 'power, might', Lith. *áugu* 'I grow'. Lat. *tegō* (cp. *tēctu-s*, Umbr. *tehteři-m* 'tegimentum' with *qt*): Gr. *τέγος* etc., see § 420.

Indg. *gh*. Lat. *hosti-s*: Goth. *gasts* etc., see § 422. *prehendō*: Gr. *χανδάνω* etc., see § 425. *gradior*: O.Ir. *in-grennim* 'I pursue', Goth. *grīps* (st. *gridi-*) f. 'step, stride' + O.Bulg. *gręda* 'I come'. Cp. also *congiu-s*: Gr. *κόγχο-s* + Skr. *śanśkhá-s* 'muscle' with Indg. *gh*, § 553.

*foštis* beside *hostis* like *folus* beside *holus*. See § 389.

2. Indg. *q*, *g*, *gh* = prim. Ital. *k<sup>h</sup>*, *g<sup>h</sup>*, *č<sup>h</sup>*.

§ 431. Prim. Ital. *k<sup>h</sup>* became

a) Lat. *qu* before all vowel qualities except *u*<sup>1)</sup>, corresponding to *p* in Umbr.-Samn. Lat. *qui-s*, Umbr. Osc. *pi-s* 'quis': Gr. *τίς* etc., see § 427 *b*. Lat. *-que*, Umbr. *-pe* Osc. *-p*: Gr. *τέ* etc., see § 427 *b*. Umbr. *petur-* 'quadru' Osc. *petiro-pert* 'quater': Gr. *τέσσαρ-ες* etc., see § 419. Lat. *quīnque*, Umbr. *pumpeřias* Osc. *pumperias* '\*quintiliae' (cp. § 336): Gr. *πέντε* etc., see § 419. Lat. *quom-m quom-que*, Umbr. *pon-ne* Osc. *pún* 'quom' fr. *\*k<sup>h</sup>om-de* (§ 207), Umbr. *pum-pe* 'quomque': Gr. *πό-θεν* etc., see § 419. Lat. *coquō* fr. *\*quequō*, probably Osc. *popřina* 'coquina' (§ 336): Gr. *πέπων* 'ripe' *πόπανο-ν* 'sacrificial cake', Mid. Cymr. *popurpęyes* 'pistrix' (O.Ir. *cucann* 'pistrinum' was a Lat. loan-word) + Skr. *pácāmi* O.Bulg. *peką* 'I cook', rt. *peq-*. Lat. *quā qua-m*, Umbr. *pař-e* 'quas' Osc.

1) There is no satisfactory foundation for Bersu's assumption (Die Gutturalen p. 134 ff.) that the labial affection had disappeared before *o* in prehistoric Latin and had been restored again in *quod linquō* etc. by form-association.

paa-m acc. 'quam' : Goth. *hvō* fem. 'quae', s. § 419. Lat. *quoquo-s* 'cook', prim. Ital. \**k<sup>h</sup>ok<sup>h</sup>o-s* fr. \**pok<sup>h</sup>o-s* (s. above); the form *coquo-s* (*cocu-s*) had its *co-* through analogy to *coquō*.

That *k<sup>h</sup>* = Indg. *q* was still distinguished from Indg. *k<sub>w</sub>* in prim. Ital., follows from Umbr. *ekvine* loc. 'equini' (Skr. *áśva-s* etc.), in case this word was not borrowed from Lat. The Ital. form *epo-* is of Gallic origin. Cp. § 426.

Anteconsontantal *que-* became *co-* in Latin. *coquō* from \**quequō*, s. above. *colō* fr. \**quetō*, *incola* fr. \**quelā* beside *inqui-tīnu-s* : Gr. *τέλλω πόλο-ς* etc., see § 427 a. b. *cottī-diē* fr. \**quettī-*, s. § 419. This sound-change took place at the same time as \**mesōr* etc. became *soror*, see § 172, 3. *inquītīnu-s* shows that this change is younger than the weakening of *e* to *i* in unaccented syllables (§ 65 p. 53), and thus also forms like *linquis linquitis* (cp. Gr. *ἐλπες ἐλίπετε*), in like manner probably also *sequere* fr. \**sequiso* (Gr. *ἐπεο*), regularly came by their *qu*.

Rem. 1. The *ue* in *quercu-s* remains unclear. See Windisch in Kuhn-Schleicher's Beitr. VIII 39, W. Meyer Literaturbl. f. germ. u. rom. Phil. 1885 p. 154.

In the eighth century U. C. *quo-* became *cu-*. *sequontur* : *secuntur*, *-loquos* : *-locus*, *aequos* : *aecus*, *quom* : *cum*, *quomque* : *cunque*, \**quīnqu-onx* : *quīnc-unx* (cp. O. Lat. *oncia*) etc. See Bersu Die Gutturalen p. 53 ff. Correspondingly *ecus* fr. *equos*, see § 172, 2. *sequuntur*, *-loquus*, *equus* etc. were later new formations after forms with *qu + ĩ*, *ĕ* etc. as *sequitur*, *-loquĭ*.

*qu* passed into *c*, when it became final. *ne-c* from *ne-que*. *ac* fr. \**at-c* (cp. *quicquam* § 367) from *atque*.

Rem. 2. It seems to me very doubtful whether the *v* in Lat. *vermi-s*, *verrere*, *vellere*, *in-vītu-s*, *vapor*, is a regular continuation of *qu-* (*k<sub>w</sub>-*) (cp. Bersu in the above named work 144 f. 151 f., Stolz Lat. Gramm. § 48).

b) Lat. *c* before prim. Lat. *u*. Stem *arcu-* beside *arqui-tenēns* : Goth. *arhvazna* f. 'arrow, dart'. *quīncu-plex* a new formation after *quadru-plex*. *secūtu-s locūtu-s*, to *sequor loquor*, new formations after *solūtu-s*, *volūtu-s*.

c) Lat. *c* before consonants, especially before *t*, s. *coctu-s* fr. \**quecto-s* (*a*) : Gr. *πεπτό-ς*, in like manner *coxī* : *ἐπεψα*.

*in-section-ēs* 'narrationes' *in-sexit* 'dixerit' beside *in-seque* (see Bersu p. 125) *in-quam* (fr. \**in-squā-m*) : Gr. ἐν-σπ-ε-ν 'I said' fut. ἐνι-σπήσω, O.Ir. *in-sce* 'speech' O.Bret. *hepp* 'inquit' + Lith. *sakýti* 'to say' O.Bulg. *sokū* 'informer, accuser'. *unctu-s unxī* beside *unguō*, see § 421. *quñ(c)tu-s* : Gr. πέμπτο-ς, Goth. *fimfta-*; the Osc. form *Πομπτιες* shows, as was already remarked in § 424, that the labialisation before *t* had not yet disappeared in prim. Ital. Lat. *jecur jecin-oris*, beside Gr. ἥπατ-, seems to have developed *c* regularly in the stem-form \**jek<sup>m</sup>n-* (Skr. *yakn-*, Lith. *jekn-*, see § 427 a), after \**jecn-* then also *jecin-*. The *c* in *socius* beside *sequor* (Gr. ἀ-οσσητήρ 'helper' with σσ fr. *k<sup>m</sup>i* § 427 d, Skr. *sācyā-* 'meet to be assisted, valued', rt. *seq-*) and in *col-līciae* beside *liqueō* is easily understood from the older sound-combination *k<sup>m</sup>i*, see § 135, and likewise the *c* in *coculu-m* beside *coquō* and in *torculu-s* beside *torqueō*, is to be explained from older *k<sup>m</sup>l* (s. § 269); *musculu-s* may also have arisen from an older \**musk<sup>m</sup>lo-s* (§ 419).

Rem. 3. The relation of Lat. *u-ter u-bi nē-cubi* etc. to Umbr. *podruh-pei* 'utroque' *pu-fe ubi* Osc. *pútúrús-píd* 'utrique' *pu-f ubi*, still remains for the present enigmatical, see Corssen Krit. Nachtr. 26 ff., Bersu p. 138. May we perhaps assume that the three stems *u-*, *qu-* (Skr. *ká-tra*) and *go-* had become mixed? Cp. also § 604 rem. 2.

Rem. 4. The view, that Indg. *q* occasionally appears as *p* in pure Lat. words, is to be rejected. See Bersu p. 143, Stolz Lat. Gramm. § 48.

§ 432. Prim. Ital. *gu* became

a) Lat. *gu*, Umbr. *b* after *ɔ*. Lat. *unguō unguen*, Umbr. *umen* 'unguen' fr. \**umben* (§ 506) : Skr. *añjī-ṣ* 'salve', see § 421. Lat. *stinguō* : + Skr. *tigmá-s* 'sharp, violent' Av. *tiy-ra-* 'pointed'. Lat. *inguen* : O.Icel. *okkr* 'tumor' *okkvenn* 'swollen'.

Lat. *stingunt* fr. *stinguont*, like *secuntur*, see § 431 a p. 320.

b) Lat. *v*, Umbr.-Samn. *b* initially before sonantal vowels (except *u*). Lat. *veniō*, Umbr. *benust* 'venerit' Osc. *kím-bened* perf. 'convenit' : Gr. *βαίνω* etc., rt. *gem-*, see § 421. Lat. *vīvo-s*, Osc. *bivus* pl. 'vivi' : + Skr. *jīvā-s* etc., see § 421. Lat. *veru*, Umbr. *berus* 'verubus' : O.Ir. *bir* 'sting, spit, spear' Cymr. *ber* Corn. *ber* 'veru'. Lat. *-volu-s volāre* : Gr. *βολή βάλλω* etc., rt.

*gel-*, see § 428. *-voru-s vorāre* : Gr. *βορά* etc., see § 428 a. Lat. *valēre* : + Lith. *galėti* 'to be able'.

Rem. 1. Lat. *b-* = *g-* is probably to be denied. *bōs* can be explained as an Oscan loan-word, likewise *baetere*, in case it belonged to a root beginning with *g-* (some compare Osc. *baiteis*, to which they give the meaning 'baetis', and Umbr. *e-bet-raf-e* with the supposed meaning 'in exitus').

c) Lat. *v* between sonantal vowels. *avilla* beside *agnu-s* : Gr. *ἀμνός* etc., see § 428 a. *nūdu-s* fr. *\*no(g)uēdo-s* : Goth. *naqaþs* 'naked' + Skr. *nag-ná-* Lith. *nūga-s* O.Bulg. *nagŭ* 'naked'.

That *-rg<sup>h</sup>-* has become *-rv-* in Lat., does not seem to me to be proved with certainty. The bringing together of *torvo-s* with Gr. *τάρβος* n. 'fright, terror' Skr. *tárjāmi* 'I threaten, abuse, frighten', is not free from objection; the other conjectures, hitherto made, are quite doubtful.

d) Lat. *g* before consonants. *agnu-s* beside *avilla*, see c. *sēgni-s* : Gr. *σβ-ῆναι* 'to cease, become still, go out'. *gr-avi-s* : Skr. *á-gr-u-ṣ* 'young womanish' (s. § 290 p. 232). *migrāre* : Gr. *ἀμείβω* 'I change', rt. *meig-*. *glāns* : Gr. *βάλανο-ς* 'acorn' + Armen. *kalin* (gen. *kalnoy*) Lith. *glė* O.Bulg. *želadŭ* 'acorn', ablaut *gl-ǵl- gel-*, cp. § 291, 3.

Rem. 2. If *g* in *gula gulō gurguliō gurges*, which represent the rt. form *ǵl- grr-* (§ 297), had arisen from *g<sup>h</sup>-* which however may be doubted on account of Gr. *γασγασεῖν γέγερο-ς* and O.Ir. *geim* 'I consume, devour' (on the interchange *r* : *l* cp. § 282), on its account and at the same time in consideration of *gurdu-s* 'stupid, silly' (: *βραδύ-ς* 'slow, lazy') it must be assumed that orig. *g<sup>h</sup>ǵ-* *g<sup>h</sup>ǵ-* was differently treated from orig. *g<sup>h</sup>or-* *g<sup>h</sup>ol-* : in the former case the labialisation would have been dropped, before *ǵ*, *ǵ* became *or*, *ol*. Then *cultu-s* beside *colō* fr. *\*quelō* (cp. *pulsu-s* : *pellō*) would probably also have to be traced back first of all to *\*k<sup>h</sup>to-s*, the latter to *\*k<sup>h</sup>to-s*.

§ 433. Prim. Italic *χ<sup>h</sup>* became

a) Lat. *gn* after *n*. *ninguit* : Gr. *νίφει* + Lith. *sniŋga* 'it snows', rt. *sneigh-*, s. § 423. *angui-s anguilla* : O.Ir. *esc-ung* 'eel' (*esc* 'swamp') + Skr. *áhi-ṣ* 'snake' Av. *aži-š* 'dragon', Lith. *angl-s* 'snake'. Beside these Umbr. *ninctu* 'ninguito', with which *fiktu* 'figito' (O.Lat. *fivere* beside *fīgere*) is parallel.

b) Lat. *\*gn*, further *v* between sonantal vowels. Acc. *niv-em*

= Gr. *νίφ-α*, beside *ninguit* (*ninguem* a new formation to *nivem* like *con-junx* beside *con-jux*) and nom. *nix* (§§ 431 c. 552). In like manner *cō-nīveō* beside *cō-nīxī nīctāre*: Goth. *hneivan* 'to bow', rt. *kneigh-*. *g* occurs in Umbr. in *co-negos* ku-nikaz 'conixus'.

c) Lat. *f* both initially and medially before *r*; in the latter case *f* passed into *b* (§ 509).

*formu-s*: Goth. *varmjān* 'to warm' + Skr. *gharmā-s* 'glowing heat'; *fornu-s*, later *furnu-s*: + Skr. *ghṛ-ṇā-s* 'glowing heat', rt. *gher-*, see § 423. *feru-s fera*: Gr. *θήρ* etc., see § 429 b. *friō*: Gr. *χρίω* 'I rub over'. *fremō*, *frendō* (§§ 207. 349): Gr. *χρεμίζω* 'I neigh' *χρόμο-ς* 'noise, a lowing, neighing' Goth. *gramjan* 'to make furious' OHG. *gram* 'fierce, angry' + O.Bulg. *gromŭ* 'thunder'. In the case of the two last words the assumption of labialised prim. Ital. *χ* has, it is true, no support outside Italic.

Praenest. *nefrōn-es* Lanuv. *nebrundin-es*: Gr. *νεφρός* etc., see § 423.

Rem. That initial and medial *χ*<sup>2</sup> passed into *f* before *r* (whence *b* medially), but otherwise medially into *g*, brings to mind the relation *fūmu-s*: *rubrī*: *mediu-s* (§ 370).

### Old Irish.

#### 1. Indg. *q*, *g*, *gh* without labialisation.

§ 434. Indg. *q*. O.Ir. *cara* Cymr. *car* 'friend': Lat. *cāru-s*, Goth. *hōrs* 'fornicator' + Lett. *kārs* 'covetous, lascivious' *kār-dīnāt* 'to lead into temptation'. O.Ir. *canaim* 'I sing', O.Corn. *cheniat* 'cantor': Lat. *canō* etc., see § 430. O.Ir. *crū* Cymr. *crau* Corn. *crow* 'blood': Gr. *κρέας* etc., see § 418.

*ēcath* (pronounce *ēgāp*) 'hamus': + Skr. *anākā-s* etc., see §§ 212. 513.

O.Ir. *cuach* Cymr. *cog* 'cuckoo': Gr. *κόκκυξ* Lat. *cucūlu-s* MHG. *kuckuk* + Skr. *kōkīlā-s* 'cuckoo', Lith. *kukūti* 'to call cuckoo' O.Bulg. *kukavica* 'cuckoo'. See § 514.

O.Ir. *ōs uas* 'above, over', Cymr. *uch* 'above', Gall. *Uxello-dūnu-m* 'Hightown': Gr. *αὔξω* 'I increase', Lat. *auxiliu-m* 'increase, reinforcement' + Lith. *dukszta-s* 'high'. See § 517.

Indg. *g*. O.Ir. *gāir* 'call', Cymr. *gawr* 'clamor': Gr. *γηρόω* etc., see § 420.

O.Ir. *tech teg* 'house', O.Bret. *bou-tig* 'stabulum': Gr. *στέγω* etc., see § 420. O.Ir. *ōg* 'uninjured, whole': Lat. *augeō* etc., see 430. See § 522.

Indg. *gh* = prim. Kelt. *g*. O.Ir. *in-grennim* 'I pursue': Lat. *gradior* etc., see § 430.

O.Ir. *lige* 'bed': Gr. *λέχος* etc., see § 425. See § 526.

## 2. Indg. *q*, *g*, *gh* with labialisation.

§ 435. *k<sub>u</sub>* and *g<sub>u</sub>* (latter = *g* and *gh*), with full developed *u*, may be put down as prim. Kelt. Since there is no trace of a difference between these and Indg. palatal sound + *u*: cp. Gall. *epo-* prim. Brit. \**epo-* (Cymr. *ebol* 'foal', § 390 p. 293) O.Ir. *ech* 'horse' = Indg. \**ek<sub>u</sub>o-*.

The treatment of the various forms of articulation was just as little uniform as in Italic.

§ 436. Prim. Kelt. *k<sub>u</sub>* appears in Irish as *c*, in Brit. and Gall. as *p*<sup>1)</sup>. O.Ir. *cethir* 'four', O.Brit. *Πετοναρία* a town (Ptol.), O.Cymr. *petguar* Corn. *peswar* Bret. *pevar* 'four', Gall. *petor-ritum* 'a four-wheeled chariot': Gr. *τέσσαρες* etc., see § 419. O.Ir. *cōic* O.Cymr. *pimp* Corn. *pymp* Bret. *pemp* 'five', Gall. *πεμπε-δουλα* 'πεντάφυλλον' (Dioscor.) from prim. Kelt. \**k<sub>u</sub>erak<sub>u</sub>e* (§ 339), Indg. \**peraqe*, see § 419. O.Ir. *cruim* Cymr. *pryf* 'worm' (prim. Kelt. \**k<sub>u</sub>rimi-*): + Skr. *k<sub>f</sub>mi-š* Alban. *krimb-i* Lith. *kirmėlė* 'worm'. O.Ir. *co-sc* 'a setting right, punishment' Cymr. *co-sp*: Gr. *ἔν-σπ-ε-ν* 'I said', rt. *seq-*. O.Ir. *sesc* 'unfertile', Cymr. *hysp* 'dry, withered', prim. Kelt. \**sisk<sub>u</sub>o-s*: Lat. *siccus*, cpf. \**sit-qo-s* (§§ 419. 516).

O.Ir. *cōic* (pronounce *cōig*) 'five' fr. prim. Kelt. \**k<sub>u</sub>erak<sub>u</sub>e* (cp. above). See §§ 212. 513.

O.Ir. *ain-ech en-ech* 'face' Cymr. Corn. Bret. *en-ep*: Gr. *ἐν-ωπή* 'countenance', Lat. *oculu-s* + Lith. *akl̃-s* O.Bulg. *oko* (gen. *očese*) 'eye'. See § 514.

1) In Gall. probably dialectically also still *k<sub>u</sub>*, in *Sequana*.

*kut* probably became *kt* in prim. Kelt., then further *cht*, so that this combination fell together with *pt* and *kt* (§§ 515. 517). In Prim. Kelt. *kt* from *kut* stood beside *ky*, as in Lat. *coctus lictus* beside *coquō linguō*. O.Ir. *nocht* Cymr. *noeth*, Corn. *noyth* 'naked': Goth. *naqaþs* etc., see § 432 c. O.Ir. *snechta* 'snow' from rt. *sneigh-* (cp. § 552). Perhaps also here O.Ir. *in-nocht* 'hac nocte', Cymr. *peu-noeth* 'quavis nocte', since the *v* in G. *vúξ* seems to point to labialised *q* (§ 427 c).

Rem. From the form *maqa-* (gen. *maqi*) 'son' (Cymr. *map*), found on the Ogam inscriptions (p. 9), it cannot be concluded with certainty that *ky* was still generally spoken in Irish for intervocalic *c* at the time these inscriptions were written. In the first place it is a question how the 'status durus' in O.Ir. *mac macc* beside *en-ech* 'facies' and *ech* 'horse' is to be regarded (cp. § 514). A satisfactory explanation of the non-aspiration of the *c* in this word, as also in the forms *mucc* 'pig' (Cymr. *moch*: Gr. ἀπομύσω 'I blow my nose' *μυκτῆρ* 'nose', Lat. *mūcu-s* 'mucus of the nose' + Skr. *muñcāti* 'lets loose, lets out' also used of bodily secretions, Lett. *mukt* 'to flee' Lith. *maūkti* 'to strip, let glide'), *cacc* 'excrement' (Skr. *śākan-* 'stercus', Lith. *szikū* 'caco'), *lēicim* 'I leave', that is, \**leiky-iō* (Gr. *λείπω* etc., see § 427 a), has, so far as I know, not yet been given.

§ 437. Prim. Kelt. *gy* = Indg. *g* became

a) Ir. Brit. *b* initially. O.Ir. *biu beo* Cymr. *byw* 'alive': Lat. *vīvo-s* etc., see § 421. O.Ir. *bō* Mid.Cymr. *buch* 'cow': Gr. *βοῦς* etc., see § 428 a. O.Ir. *ben* 'woman', O.Corn. *benen* 'sponsa': Goth. *qinō* + Armen. *kin* Pruss. *genna* (i. e. *gēna*) O.Bulg. *žena* 'woman'; O.Ir. gen. *mnā* fr. \**bnās*: Gr. *μνάσμαι* etc., see § 428 a. O.Ir. *at-bail* 'perit' 3. pl. *at-balat*: OHG. *quelan* 'to have a violent pain' Ags. *cwelan* 'to die' + Lith. *gėlti* 'to feel great pain' *giltinė* the goddess of death, O.Bulg. *žalī* 'pain, grief' fr. \**gēti* (§ 76), rt. *gel-*. O.Ir. *broo brō* (gen. *broon*) Cymr. *breuan* 'mill-stone': + Skr. *grāvan-* 'stone for pressing out the soma-juice'. O.Ir. *brāge* (gen. *brāgat*) 'neck': Gr. *βρόχθος βρόγχος* 'throat', MHG. *krage* 'neck, gullet' (rt. *ger-* 'swallow'?).

b) Ir. *g* before *u*. O.Ir. *guth* 'voice, word' fr. \**gu-tu-s*, to Gr. *γυ-* beside *βο(φ)-ή*, see § 428 c.

c) Ir. Brit. *g* medially before *n*. O.Ir. *uan* Cymr. *oen* 'lamb': Gr. *ἀμνό-ς* etc., see § 428 a. On the transformation of *-gn-* cp. § 523.

§ 438. From prim. Kelt. *gu* = Indg. *gh* we may a priori assume that it was treated like *gu* = Indg. *g*.

a) Initially. Words with *b-* are unknown to us. O.Ir. *gonim* 'I wound, kill' perf. 3. sg. *geguin* is remarkable, since this word seems to belong to Gr. *γόνο-ς* rt. *ghen-* (§ 429 a. b.).

b) Medially. With *b* after a nasal O.Ir. *imb imm* (gen. *imme*) 'butter', Cymr. *ymen-yn*, stem \**imben-* = Lat. *unguen*, OHG. *ancho*, see § 421. Beside these Mid.Ir. *esc-ung* 'eel': Lat. *angui-s* etc., see § 433 a. Cp. also Mid.Ir. *inga* O.Cymr. *eguin* 'nail': Lat. *ungui-s* etc. with Indg. *gh* (§§ 429 c. 553). On what this difference of treatment depends, I cannot say.

O.Ir. *snigid* 'it drops': Gr. *νίφα* etc., see § 423. O.Ir. *laigiú* Mid.Cymr. *lleí* 'minor': Gr. *ἐλαφρό-ς* *ἐλαχύ-ς* etc., see § 429 a. c

#### Germanic.

##### 1. Indg. *q*, *g*, *gh* without labialisation.

§ 439. Indg. *q*. Goth. *us-skava-* 'cautious, sober', OHG. *scouwōn* 'to look', O.Icel. *skyn* 'insight': Gr. *θυνο-σκόο-ς* 'sacrificing priest' *κοίω* 'I mark', Lat. *caveō* + Skr. *kaví-ṣ* 'seer' *ā-kwatē* 'intends'.

Goth. *háils* 'healthy, wholesome', OHG. *heil* 'healthy, whole, rescued', Ags. *hæil* O.Icel. *heill* n. 'good fortune, favourable token': O.Ir. *cél* O.Cymr. *coil* 'augurium' + Pruss. *kail-ūstiska-n* acc. 'health' O.Bulg. *cělū* 'sound, whole'. Goth. *háidu-s* 'manner', OHG. *heit* Ags. *hād* 'state, condition, peculiarity' + Skr. *kētú-ṣ* 'luminous phenomenon, picture, form'. OHG. *houwan* O.Icel. *hoggva* 'to hew': Lat. *cū-dō* + Lith. *káu-ju* O.Bulg. *ku-ja* 'I strike, forge'. Goth. *hlifa* 'I steal': Gr. *κλοπέυς* 'thief', Lat. *clepō* + Pruss. *au-klipts* 'hidden' O.Bulg. *po-klopū* 'a covering'. Goth. *veiha* 'I fight': Lat. *vincō* + Lith. *vėkà* 'power, strength' *ap-veikiū* 'I compel', rt. *veiq-*.

Goth. *hals-aggā* 'curve of the neck', OHG. *angul* 'angle': Gr. *ἀγκών* etc., see § 425.

OHG. *wīgant* 'warrior', O.Icel. *vīg* 'battle' *veig* 'strength', fr. the same rt. *veiq-*, whence Goth. *veiha* s. above. Goth.



*hugs* O.S. *hugi* O.Icel. *hugr* 'mind, heart, courage' : + Skr. *śuc-* 'ardour, care, trouble', Armen. *sug* (gen. *sgoy*) 'grief'.

Indg. *g*. Goth. *kalds* OHG. *kalt* O.Icel. *kaldr* 'cold' : Lat. *gelu* etc., see § 430. Goth. *áukan* 'to add, augment', OHG. *auhhōn ouhhōn* O.Icel. *auka* 'to increase' : Lat. *augeō* etc., see § 430.

Indg. *gh*. Goth. *fra-gildan* 'to requite', OHG. *geltan* 'to repay, compensate' : + O.Bulg. *žlěda* 'I pay as a fine'. Goth. *gaggan* OHG. OS. *gangan* O.Icel. *ganga* 'to go' : + Skr. *janṅhā-* 'heel-bone', Lith. *žengtiū* 'I stride', rt. *gherogh-*.

Goth. *dags* OHG. *tag* O.Icel. *dagr* 'day' : + Skr. *ni-dāghá-s* 'hot season', Alban. *diek* (*dieg-*) 'I burn', Lith. *dagà* 'harvest time', Pruss. *daga-gaydis* 'summer-wheat' O.Bulg. *žega* 'I burn' (§ 379 rem.), rt. *dhegh-*. Goth. *steigan* OHG. *stīgan* O.Icel. *stīga* 'to climb' : Gr. *στείχω* etc., see § 422. Goth. *þragja* 'I run' OHG. *drigil* 'servant' (runner) : Gr. *τρέχω* 'I run' fut. *θρέξομαι* + Armen. *durn* (gen. *drgan*) 'a potter's wheel' (cp. Gr. *τροχός*-ς), rt. probably *thregh-* (§ 553).

## 2. Indg. *q*, *g*, *gh* with labialisation.

§ 440. Pre-Germanic *q*, *g*, *gh* became through the sound-shifting in prim. Germ. *χu* (*ʒu*), *ku*, *ʒu*. The labialisation may be put down as a full *u*, since no trace of a difference exists beside the combination palatal sound + *u*. Cp. e. g. on the one hand Goth. *leihva* 'I lend' = Gr. *λείπω* rt. *leiq-*, Goth. *hva* OHG. *waz* 'what' = Lat. *quo-d* st. *\*qo-* and on the other hand Goth. *aihva-* 'horse' (in *aihva-tundi* 'βάτος') = Skr. *dśva-* Indg. *\*ekhu-*, Goth. *hveits* OHG. *wīz* 'white' fr. rt. *kueid-* (§ 387); further prim. Germ. *\*snī(ʒ)wiþi* 'it snows' = Indg. *\*snēiǵheti* or *\*snīǵhēti* with the same dropping of the *ʒ* as in *\*ma(ʒ)-u-ī* (Goth. *mavi*) 'girl', fem. to Góth. *mag-u-s* 'boy' (see §§ 443. 444 c).

§ 441. Prim. Germ. *χu*, *ʒu* = Indg. *q*.

Interrog. pronoun Goth. nom. m. *hva-s* fem. *hvō* n. *hva*, gen. m. n. *hvi-s*, OHG. nom. m. *hver wer* n. *hwaz waz*, O.Icel.

nom. n. *hwat* gen. m. n. *hwess* : Gr. *πο-τε-* etc., see § 419. Ags. *hwōsta* OHG. *huosto* (fr. *\*hwuosto*) 'cough': + Skr. *kās-a-tē* 'he coughs', Lith. *kós-iu* 'I cough'. Goth. *leihvan* (pret. *láihv*) OHG. *līhan* (pret. *lēh*) 'to lend' : Gr. *λείπω* etc. see § 427 a. Goth. *saihvan* OHG. *sehan* 'to see' : Gr. *ἐπομαι* etc., see § 419. Goth. *ahva* OHG. *aha* 'water' : Lat. *aqua*. Goth. *þeihvō* f. 'thunder' from prim. Germ. *\*þeazχwōn* (§ 67, 1. § 214) : + O.Bulg. *tačā* fr. *\*tonk-īā* 'thunder-shower'. Goth. *arhvazna* 'dart' : Lat. *arqui-tenēns*, see § 431 b.

Goth. *siuns* OS. *siun* O.Icel. *sjōn* 'a seeing, face', prim. Germ. *\*se(ʒ)u-nī-s*, to Goth. *saihvan*. Other examples of this nature § 444 c.

On the cases, in which *f* or *þ* appear for *χw*, *ʒw* and in which *u* has disappeared after *χ*, *ʒ*, see § 444.

§ 442. Prim. Germ. *ky* = Indg. *g*. Goth. *qius* (st. *qiva-*) OHG. *quec* O.Icel. *kvíkr* 'alive' : Gr. *βίο-ς* etc., see § 421. Goth. *qiman* (pret. *gam*) 'to come', OHG. *quemān* (pret. *quam*) O.Icel. pret. *kvām* : Skr. *gám-a-ti* etc., see § 421. Goth. *qinō* OHG. *quena* 'wife' O.Icel. gen. pl. *kvenna* (concerning the nom. sg. *kona* see § 444 b) : O.Ir. *ben* + Armen. *kin* O.Bulg. *žena*, see § 437 a. Goth. *asilu-quairnu-s* 'μύλος ὀνικός, 'mill-stone', OHG. *chwirna* 'mill-stone, mill', O.Icel. *kvern* 'mill' : + Lith. *gimnos* pl. 'mill-stones, mill' O.Bulg. *žrīny* 'mill'. Goth. *riqis* (st. *riqiz-a-*) 'darkness' : Gr. *ἔρεβος* etc., see § 421. Goth. *naqaþs* 'naked' : Lat. *nūdu-s* etc., see § 432 c. Goth. *sigqan* OHG. *sinchan* O.Icel. *sökkva* 'to sink' : Gr. *εἶβω* 'I let fall in drops, pour down' (for *\*εἶβω*, cp. § 564), rt. *seiḡ-*, a secondary form of *seiḡ-* (Skr. *siñcdāti* 'pours forth', OHG. *sīhan* 'to filter'); the pret. Goth. *sagq* OHG. *sanch* O.Icel. *sqkk* arose through passing into the analogy of *bindan* : *band* (rt. *bhendh-*) etc. (cp. § 67 rem. 1).

On *p* for *ky* and the cases in which *u* had disappeared after *k*, see § 444.

§ 443. Prim. Germ. *ʒw* = Indg. *gh*. Goth. *varmjān* 'to warm', OHG. *warm* O.Icel. *varmr* 'warm' : Lat. *formu-s* etc., see § 423. Goth. *snáivs* OHG. *snēo* (gen. *snēwes*) O.Icel. *snær*

(gen. *snāvar*) 'snow', prim. Germ. \**snai(z)u-a-z*, OHG. *snāwit* Ags. *snāwēd* 'it snows', infin. MHG. *snāwen* 'to snow', part. O.Icel. *snivenn* 'covered with snow': Gr. *νίφ-α* etc., see § 423. Goth. *hneivan* 'to bow': Lat. *cō-nīvēd*, root *kneigh-*, see § 433 *b*. OHG. *nioro* m. O.Icel. *nýra* n. 'kidney', prim. Germ. \**ne(z)u-rōn*: Gr. *νεφρό-ς* etc., see §§ 423. 433 *c*.

On prim. Germ. *z* fr. *zu* see § 444 *b*.

§ 444. The following changes, which concerned the labialised sounds, as such, took place in the period of the prim. Germ. community.

*a*) *p*-sounds for the *k<sub>u</sub>*-sounds.

*f* for *χ<sub>u</sub>* = Indg. *q*. \**ulfa-z* 'wolf', Goth. *vulfs* OHG. *wolf* O.Icel. *ulfr*: Gr. *λύκο-ς* (§ 427 *c*) + Skr. *vṛka-s*, Indg. \**ulqo-s* 'wolf'. Goth. *fidvōr* OHG. *fior* Ags. *fyðer* O.Icel. *fjōrer* 'four': Gr. *τέσσαρ-ες*, Indg. \**getuer-*, see § 419. \**fimfi* 'five', Goth. *fimf* OHG. *fimf finf* Ags. *fif* O.Icel. *fimm*: Gr. *πέντε*, Indg. \**penqe*, see § 419. Less certain is OHG. *forha* 'pine' *vereh-eih* Lango-Bard. *fereha* 'aesculus': Lat. *quercu-s quercueu-s*, see § 431 rem. 1.

*b* for *z<sub>u</sub>* = Indg. *q*. By the side of \**ulfa-z* stood a fem. \**ulbī* 'she-wolf', by § 530 fr. Indg. \**ulqī* (Skr. *vṛkī*), hence OHG. *wulpa* MHG. *wülpe*, cp. § 532. Beside this O.Icel. *ylgr* 'she-wolf', the *g* of which arose regularly in the cases with suffix-form *-ið-*, e. g. gen. \**ulzu-iðs*; *u* was here forced out.

*p* for *k<sub>u</sub>* = Indg. *g*. Goth. *vairpan* OHG. *werfan* O.Icel. *verpa* 'to throw': + Skr. *vṛṇākti* 'throws to the ground' perf. *vavārja*, O.Bulg. *vriḡa* 'I throw'. OHG. *sweifan* 'to set in revolving motion, swing, meander' Ags. *swāpan* 'to swing': + Lith. *svaikstū* 'I become dizzy' pret. *svaigaũ*, *svaigulỹ-s* 'dizziness' *svaiginėju* 'I stagger with dizziness'.

This transition to *p*-sounds seems to have been occasioned by an *u* in the preceding or following syllable (dissimilation).

Rem. 1. So far as I can see, the only difficulty lies with *fimf*. It is possible that the orig. form was \**k<sub>u</sub>enk<sub>u</sub>e* as in Ital. and Kelt. (§§ 336. 339). Hence \**k<sub>u</sub>empe* like \**s<sub>u</sub>eip-* fr. \**s<sub>u</sub>eik<sub>u</sub>-*, further \**pempe* through assimilation of the initial sound to the medial *p* or to the initial sound of the word for four? Or did Indg. \**penqe* become \**pempe* in Germ. direct-

ly by assimilation? On these *p*-sounds for *q*-sounds, see now also Kluge in Paul-Braune's Beitr. XI 560 ff.

b) Loss of the labialisation before *u* (cp. § 180).

$\zeta(u) =$  Indg. *q* (§ 530). 1. pl. pret. \**sēz(u)umi* 'saw' (Goth. *saihvan*), \**līz(u)umi* 'lent' (Goth. *leihvan*) etc. : Ags. *sēzon* O.Fris. *sāgen*. Goth. *sēhvum* OHG. *sahun* Ags. *sāwon* (beside *sēzon*) were new formations.

$k(u) =$  Indg. *g*. Part. \**k(u)umana-* 'come' OHG. *koman* Ags. *cumen* O.Icel. *komenn*; OHG. *quoman* Goth. *qumans* were new formations. \**k(u)uru-z* 'heavy' Goth. *kairu-s* : Gr. βαρύς Skr. *gurú-ṣ*, see § 428 a. \**k(u)unō* 'wife' O.Icel. *kona* : Bæot. βανῶ, see § 428 a. \**swæk(u)umi* 'we sunk' OHG. *sunchun*; Goth. *suggum* was a new formation.

$\zeta(u) =$  Indg. *gh*. \**z(u)inþiō* 'battle' O.Low Germ. *gūdea* O.Icel. *gunnr* = Skr. *hatjā-* 'a killing' Lith. *gincziā* 'strife' (cp. § 249); to these Gr. φαρός φόνος etc., rt. *ghen-*, see § 429 a. § 438 rem. \**χniz(u)umi* 'we bowed' : OHG. *nigun* Ags. *hnizon* O.Icel. *hnigum* Goth. *hnivum* was a new formation.

c)  $\zeta u$  became *u*, a change, which befell every  $\zeta u$  that still remained over after the action of the sound-law, named under *b*.

$(\zeta)u =$  Indg. *q*. \**se(\zeta)u-ni-s* 'face' Goth. *siuns* etc., see § 441. \**tē(\zeta)u-ō* f. 'arrangement' Goth. *tēva*, to OHG. *gi-zehōn* 'to arrange, regulate', Gr. δειπνο-ν 'meal, meal-time' (fr. \**δειπνο-ν*, § 639), rt. *deq-*. \**a(\zeta)u-iō* 'marshy country, island' (adj. formation, properly 'the watery', to Goth. *ahva* OHG. *aha* 'water', § 441); OHG. *auwa ouwa* O.Icel. *ey* pl. *eyjar*. Part. \**li(\zeta)u-and-s* 'lent' (Skr. *ri-ric-and-s*, to Goth. *leihvan*) OHG. *-liwan*. Optative stem \**sē(\zeta)u-ī-* (to Goth. *saihvan* 'to see') OS. *gi-sāwi* pl. *-sāwin*.

$(\zeta)u =$  Indg. *gh*. \* $(\zeta)uar-ma-$  'warm' and other examples see § 443.

Rem. 2. Therefore towards the close of the prim. Germ. period there stood side by side: pres. \**līχūō* (Goth. *leihva*) : pret. indic. pl. \**lī-zumi* : pret. opt. \**liūī-* part. \**liūana-*; \**χnīūō* (Goth. *hneivā*) : \**χnizumi* : \**χnīūī-* \**χnīūana-*. The paradigms of the separate Germanic dialects were brought about by manifold levellings. The prim. Germ. phonetic position was nowhere purely retained.

Rem. 3. If Goth. *augō* OHG. *ouga* O.Icel. *auga* n. 'eye' belongs to Gr.  $\delta\pi\text{-}\omega\pi\text{-}\alpha$ . Lith. *akì-s* etc., the form must be explained from an old stem-change \**aǝ(u)-un-* (Indg. \**oq-u-*) and \**a(ǝ)u-n-* \**a(ǝ)u-én-* : \**aǝ-* and \**au-* became amalgamated to *auǝ-* in prim. Germ.

d) *ǝu* became *gu* after a nasal, and then this remained (§§ 530. 538). Hence prim. Germ. \**sinǝgwiđi* 'sings' Goth. *siggvīþ*. This verb however has not been etymologically satisfactorily explained, the root was probably *senǝgh-* or *seiǝg-*.

e) *χut* became *χt*. \**seχti-* 'sight, face' (to Goth. *saihvān*) OHG. *siht* OS. *gi-siht*. \**lewχta-* \**līχta-* 'light, easy' (§ 214) Goth. *leihts* OHG. *līht* O.Icel. *lēttr*, to Gr.  $\epsilon\lambda\alpha\varphi\omicron\varsigma$   $\epsilon\lambda\alpha\chi\acute{\upsilon}\varsigma$  etc., s. § 429 *a. c.*; *χt* was here = Indg. *gh+t*, concerning which s. § 552. *finfta-* = Indg. \**perǝqto-* has possibly preserved a trace of the labialisation once present, see above *a* with rem. 1.

The phonetic position, which was called into existence by these prim. Germ. changes, was on the whole preserved free from new shiftings in Goth.

Rem. 4. The form *ni-h* 'neque' fr. \**ni-hv(i)* suggests the conjecture that the *hv* in *lái hv* 'he lent' (*lei hvān*) *sahv* 'he saw' (*sai hvān*) was brought about by levelling.

Initial *hw-* became *w-* in OHG. (*huwer wer*), while medial *kw*, *hw gw* lost the *w* by § 180 (*sinchit* 'sinks', *līhit* 'lends', *singit* 'sings').

### b. The language-group without labialisation.

#### Aryan.

§ 445. Indg. *q*, *g*, *gh* were first of all universally *k*, *g*, *gh* in prim. Aryan. Then before original *e-* and *i-*vowels and before Ar. *i* = Indg. *ə*, they became the palatal explosives *c*, *j*, *jh*; after the completion of the palatalisation *e*, *ē* passed into *a*, *ā* (§§ 62. 70). All further sound-changes, which made their appearance in regard to the place of articulation, belong to the individual development of the Ar. dialects.

§ 446. Prim. Ar. *k*, *c* = Indg. *q*. The sounds remained unchanged in Sanskrit. In Iranian *k* became the spirant *x* be-

fore consonants, and *c* became an *š*-sound (Av. *š* O.Pers. *š*) before *i*.

§ 447. Prim. Ar. *k*. Skr. *ká-s* 'who?' Av. *kas-ciḥ* 'whoever, each' O.Pers. *kaš-ciy* 'whoever': Lith. *kà-s* etc., see § 419. Skr. *kakṣa-s* 'axilla', Av. *kaša-* m. 'shoulder': + Lat. *coxa* etc., Indg. \**qokso-* \**qoksā-*, see § 430. Skr. *kṛ-tá-* (*sq-skṛta-* 'prepared') Av. *ker'ta-* O.Pers. *kar-ta-* 'made': + Gr. *ῥαίνω* 'I accomplish', Lat. *ceru-s creāre*. Skr. *kās-a-tē* 'he coughs': Lith. *kós-iu* etc., see § 441. Skr. *vṛk-a-* Av. *vehrk-a-* 'wolf': Lith. *viška-s* etc., see § 427 c. § 444 a. Skr. *śúṣ-ka-* (fr. \**suṣ-ka-*, § 557, 4) Av. *huš-ka-* O.Pers. *uš-ka-* 'dry', suffix *-go-*, see § 419.

In like manner Skr. *k* also regularly before *ir* = Indg. *γr* and before *īr* = Indg. *ř* (§§ 287. 290. 306), as *kir-á-ti* 'pours out' *kīr-ná-* 'covered over', to perf. *ca-kār-a*. Cp. *gir- gīr-* § 450.

Iranian *x* = prim. Ar. *k* (§ 446). Part. Skr. *uktá-* Av. *uxta-* 'spoken' fut. Skr. *vakṣyati* Av. *vaxšyēiti* 'he will speak': Armen. *goč-e-m* 'I scream, roar' (?), Pruss. *en-wackē* 'he calls' + Gr. *ἔπος* 'speech, word', Lat. *vōx*, O.Ir. *iar-faigid* 'inquisitio', OHG. *gi-wahannen* 'to mention' perf. *gi-wuog*, rt. *ueq-*. Skr. *śukrá-* 'luminous, white', Av. *suxra-* 'red' O.Pers. *puxra-* (*p-* = *s-*, § 397) proper noun: to Skr. *śuc-* Goth. *hugs* etc., s. § 439. Skr. *rēkṣas-* 'kingdom', Av. *raexnah-*. Av. O.Pers. *taxma-* 'quick, strong', Av. *taka-* 'course', Skr. *tákti* 'runs, hastens': Alban. *ndiek* 'I pursue, drive away, hunt', Lith. *tekù* O.Bulg. *teka* 'I run' + O.Ir. *techim* 'I flee'.

§ 448. Prim. Ar. *c*. Skr. Av. *ca* O.Pers. *cā* 'and': + Gr. *τὲ* etc., see § 427 b. Skr. *catvār-as* Av. *caḥwār-ō* 'four': Lith. *keturì* etc., see § 419. Skr. *pāñca* Av. *panca*: Lith. *penkì* etc., see § 419. Skr. *sácatē* Av. *hacaitē* 'accompanies', Indg. \**segetaj*: Lith. *sekù* etc., see § 419. Gen. Skr. *vācas-as* Av. *vacanah-ō* 'of a word', Indg. st. \**ueges-*, to Skr. *uktá-* etc., see § 447. Skr. *ci-d* Av. *ci-ḥ* O.Pers. *ciy* 'any, some' (generalising particle): + Gr. *τι* 'anything whatever' Lat. *qui-d*, Indg. \**qi-d*, see § 427 b. Skr. *ápa-citi-* 'atonement, punishment': Gr. *τί-σις*, see

§ 427 a. Skr. *śuc-i-ṣ* 'luminous, bright', Av. *saoci-š* 'burning, splendour', to *śukrá- suvra-* § 447.

Av. *śy* O.Pers. *śy* (written *šiy*, see § 125 p. 116) = prim. Ar. Skr. *cy*. Skr. *cyáv-a-tē* 'is active, stirs', Av. *śyao-ḥna-* m. 'deed, work' (cp. Skr. *cyāu-tná-m* 'preparation, undertaking') O.Pers. *a-šiyav-am* 'I went, walked': Armen. *ču* 'a breaking up' + Gr. Hom. *ἔ-σσευε σεῦε* 'he drove, hunted', see § 427 d. § 489. Av. compar. *tašyah-* 'quicker' beside superl. *tancišta-*.

Rem. Through new formations *k* and *c* came to stand in the Ar. dialects in sound-combinations, in which they would not have regularly arisen. Cp. § 451 rem. § 454 rem. and § 427 rem.

*c* instead of *k*. Nom. acc. sg. Skr. *vácas* Av. *vacō* 'word' for *\*vakas* = Indg. *\*megos* (Gr. *ἔπος*) after *vácas* = Indg. *\*meges-* (cp. Gr. *ἔπε-ος*) in the other cases. Skr. 3. sg. perf. *ci-cāy-a* for *ci-kāy-a* 'disposed into strata' = Indg. *\*qe-gōi-e*, to pres. *ci-nō-mi*. Skr. *vāmi* 'I speak' for *\*vakmi*, cp. Ved. regular *vivakmi*. Skr. *pañcat-* 'the number five' for *\*pañkat-* = Indg. *\*perəqyt-* (§ 427 a) after *pāñca*.

*k* instead of *c*. Gen. Skr. *ká-sya* Av. Gāp. *ka-hyā* beside regular *ca-hyā* 'whose' (Indg. *\*qe-siō*, Gr. *τιο τοῦ*) after *ka-* = Indg. *\*go-* in *ká-s* etc. Skr. *ná-ki-ṣ* 'nobody' beside Av. *ci-š*. Skr. *upa-vāk-īya-s* beside *upa-vāc-īya-s* 'he who is to be addressed', cp. *upa-vāká-s* 'address'.

§ 449. Prim. Ar. *g, j* = Indg. *g*. The sounds remained unchanged in Sanskrit. In later Av. *g* became *γ* initially before consonants except *r* and medially everywhere except after *ṛ, z, ž*, the same sound was dropped before *v*, and medial *j* became *ž* except after *n* and *z*.

§ 450. Prim. Ar. *g*. Skr. *ga-tá-* Av. *ga-ta-* 'gone' Indg. *\*gm-tó-*, Skr. *gā-tú-ṣ* 'step, gait, place, place of sojourn' Av. *gā-tu-š* O.Pers. *gā-ḥu-š* 'place, chair, throne' prim. f. *\*gm-tu-s* : + Gr. *βα-ρό-ς* etc., rt. *gem-*, see § 421. Skr. *gāhṣ* Av. *gāu-š* 'ox': + Gr. *βοῦς* etc., see § 428 a. Skr. *grīvā-* Av. *grīva-* 'neck': O.Bulg. *grīva* 'mane'. Skr. *ugrá-* Av. Gāp. *ugra-* 'strong, powerful' beside Skr. *ōjas-* Av. *aojah-* (§ 451) : + Lat. *augeō* etc., see § 430. Skr. *bhāga-s* 'blessing, dispenser of blessings' *bhāgá-s* 'blessing, share, lot', Av. Gāp. *bāga-* 'distribution, portion' O.Pers. *baga-* 'god': O.Bulg. *bogo-* (nom. *bogŭ*) 'god' *u-bogŭ* 'not rich, poor' + Gr. *-φάγο-ς* 'enjoying, eating', rt. *bhag-* 'to distribute'. Skr. *yugá-m* 'yoke': O.Bulg. *igo* etc., see § 420.

Skr. *anagūli-ṣ* *anaguṣṭha-s* 'thumb, toe', Av. *anagušta-* m. 'toe': Alban. *gīšt* 'finger'. Av. *mazga-* 'marrow' beside Skr. *majjān-* (§ 590. 591): cp. O.Bulg. *mozgū* + OHG. *marg* n. O.Icel. *mergr* m. 'marrow'; the Skr. form points to *g*, the Germ. to *gh* (cp. Bartholomae Kuhn's Ztschr. XXVII 352).

In like manner Skr. *g* regularly also before *ir* = Indg. *γr* and before *ir* = Indg. *ṛ* (cp. § 447). *giri-ṣ* = Av. *gairi-ṣ* 'mountain', Indg. *\*grr-i-s*. Gen. *gir-ás* = Av. *gar-ō* 'hymn's', instr. pl. *gīr-bhīṣ* (*\*gīr-bhis*). *-gira-* = Av. *-gara-* 'swallowing', Skr. *girāti gilāti* 'swallows', part. *gīrná-* 'swallowed'.

Late Av. *γ* = Gāp. O.Pers. Skr. *g*, as *baya-* = O.Pers. *baga-* 'god', see § 478.

Late Av. *v* = Gāp. *gv. hvova* = Gāp. *hvogva-* a proper family name, cp. Bartholomae Bezenb. Beitr. VII 188.

§ 451. Prim. Ar. *j*. Skr. *jivá-* Av. *jivya-* 'alive', O.Pers. 2. sg. imper. *jīvā* 'live': + Gr. *βίω-ς* etc., see § 421. Skr. *jyá-* Av. *jyā-* 'bow-string': + Gr. *βίω-ς* etc., see § 428 a. Gen. Skr. *ójas-as* Av. *aojānḥ-ō* (i. e. *aožānḥ-ō*, see § 478 rem. 1.) 'of strength', orig. stem-form *\*auges-*, beside Skr. *ugrá-* Av. Gāp. *ugra-*, § 450. Skr. 3. sg. perf. *ja-gáma* Indg. *\*ge-góme*, Av. pres. 3. sg. conj. *jam-aitī* imper. *jan-tu* orig. form *\*gem-e-ti* *\*gem-tu*: + Gr. *βαίνω* etc., rt. *gem-*, see § 450.

Late Av. *ž*. *nae-niž-aiti* intens. 'washes off, removes' beside Skr. mid. *nē-nik-té* 'washes off': + Gr. *χέρ-νιβ-α* etc., see §§ 427 a. 428 d. Cp. § 478.

Rem. Through new formations Ar. *j* for *g* and vice versa. Cp. §§ 448 rem. 454 rem. and 428 rem.

*j* for *g*. Nom. acc. Skr. *ójas* Av. *aojō* 'strength' for Ar. *\*augus*, Indg. *\*augos* (cp. Lat. *augus-tu-s*) after the stem-form *\*aujas-* = Indg. *\*auges-* in the other cases, see above. Opt. Av. *jamyā* O.Pers. *jamīyā*, indic. Av. *jasaiti* (beside regular Skr. *gamyāt gáchati*, cp. §§ 228. 229. 450; Gāp. 2. sg. imper. *gaidī* = Skr. *gahi* was also regular) after the analogy of *jamaīti* etc. Skr. *yunájmi* 'I yoke' for *\*yunagmi*, cp. the conj. *yunáj-a-t* pass. *yujyátē* and *yugá-m* which are regular.

*g* for *j*. Skr. indic. *gám-a-ti* imper. *gántu* (beside regular Av. *jamaīti jantu*) after *gam-á-ti* i. e. *\*gmm-é-ti* etc. Skr. perf. mid. *ji-gy-ē* for *\*ji-jy-ē* after the act. *ji-gāy-a* from *ji-* 'conquer, win', rt. *geḷ-*.



§ 452. Prim. Ar. *gh*, *jh* = Indg. *gh*. *gh* remained in Skr., *jh* partly became *h*, and partly *j* (§ 480). In Iran. the two sounds fell entirely together with *g*, *j* = Indg. *g* (§ 449).

§ 453. Prim. Ar. *gh*. Skr. *gharmá-* Av. *gar<sup>o</sup>ma-* 'glowing heat': + Lat. *formu-s* etc., see § 423. Skr. *dīrghá-* Av. Gāp. *dar<sup>o</sup>ga-* O.Pers. *darga-* 'long': + Gr. *δολιχός* 'long' (§ 306 p. 243). Skr. *drōgha-s* 'a crafty damaging', O.Pers. *drauga-* 'untruth, lie': + O.Icel. *draugr* 'ghost' OHG. *triogan* OS. *bidriogan* 'to deceive', rt. *dhreugh-*. Skr. *janaghā-* Av. *zanaga-* 'instep': Lith. *pra-žanga* 'transgression' + Goth. *gagga-* (nom. *gaggs*) 'path, way'. Skr. *ghn-ánti* 'they strike' *ghan-á-* 'striking' (orig. f. \**ghñn-ó-*, § 231) *ghā-ti-š* 'a blow' (orig. f. \**ghñ-ti-s*): + Gr. *ἔπε-φν-ο-ν* etc., see § 429 a. b.

Late Av. *γ* = Gāp. O.Pers. *g*, as *draoγa-* = O.Pers. *drauga-* 'lie, untruth', see § 481.

Late Av. *v* = Gāp. *gv*. *drvant-* (read *druvant-*, see Bartholomae Handb. § 91 a) = Gāp. *drug-vant-* 'deceitful, cunning, bad', rt. *dhreugh-*, cp. Bartholomae Bezenb. Beitr. VII 187 f.

§ 454. Prim. Ar. *jh*. Skr. *hán-ti* Av. *jainti* 'strikes', conj. Skr. *hán-a-ti* Av. *jan-aiti*, orig. f. \**ghen-ti*, \**ghen-e-ti*, O.Pers. *a-jan-am* 'I struck' orig. f. \**e-ghen-ñim* (Skr. perf. *ja-ghán-a* 'he struck' orig. f. \**ghe-ghón-e*, § 480), rt. *ghen-*, see § 453. Skr. *raḥáyati* Av. *renjayeiti* 'he hastens' orig. f. \**lonogh-éyeti*: Gr. *ἐλαφρός* etc., see §§ 429 a. c. 444 e. Skr. *drúh-as*, Av. Gāp. *druj-ō* pl. 'fiends' orig. f. \**dhruugh-es*, part. Skr. *drúh-yant-* Av. Gāp. *drujyant-* 'injuring craftily', O.Pers. indie. *dūrūjyāmīy* (read *durujyāmi*; on the orthog. ep. pp. 25. 116), orig. f. 3. sg. pres. \**dhruugh-īe-ti*.

Late Av. *ž*. *snaežaiti* 'it snows' = Gr. *σιφει*, rt. *sneigh-*, see § 423. Cp. §§ 478. 481.

Rem. Through new formations Ar. *jh* for *gh* and vice versa. Cp. §§ 448 rem. 451 rem. and 429 rem 1.

*jh* for *gh*. Skr. *hatá-* Av. O.Pers. *jata-* 'struck' for Skr. \**ghatá-* Iran. \**gata-* = Gr. *παρό-*, Indg. \**ghñ-tó-*, likewise Skr. *hanyátē* Av. *jan-yetē* 'is struck' for Skr. \**ghanyatē* Av. \**ganyetē*, Indg. \**ghñ-īe-tai*, cp. O.Bulg. *žinjā* (§ 229). Skr. nom. sg. *drōha-s* beside regular *drōgha-s*

'craft, malevolence', Indg. \**dhrugh-s*; Av. 3. pl. *druženti* for regular \**druyenti* (orig. f. \**dhrugh-o-nti*) after forms like *družaiti* (orig. f. \**dhrugh-e-ti*).

*gh* for *jh*. Skr. superl. *drāghīṣṭha-* beside regular Av. *drājišta-*, to positive Skr. *dīrghá-s* 'long', see § 453.

### Armenian.

#### § 455. Indg. *q*.

*k, k̄.* *akn* (gen. *akan*) 'eye, hole, louver': Lith. *akl̄-s* 'eye' + Gr. ὄμμα 'eye' ὀπή 'louver', see § 427 *a*. *ju-k-n* 'fish' with suffix *-qo-*, § 419. *lk̄-ane-m̄* 'I leave': Gr. λιμπάνω λείπω etc., see § 427 *a*.

*g* after a nasal or liquid. *hing* (gen. *hmg-i-ç*) 'five': Skr. *pīñca* etc., see § 419. *argel* 'hindrance' *argel-u-m* 'I check, keep off': + Gr. ἀρξέω 'I ward off', Lat. *arceō*. *gail* (gen. *gailoy*) 'wolf' probably from \**galjo-* and this from \**galgo-* = Skr. *vṛka-s* O.Bulg. *vlūkū*; *g* = *u-* § 162, *-al-* = *-l-* § 291. 1.

ç fr. *k* before original *e-* and *i-*vowels (Hübschmann Ztschr. d. deutsch. morgenl. Ges. XXXV 172 f. Armen. St. I 66. 79). *aç-k̄* pl. (*i*-stem) 'eyes', cp. Gr. ὄσσε du. (§ 427 *d*. § 489), Lith. *akl̄-s* 'eye'. *çor-k̄* (gen. *çor-i-ç*) 'four' fr. \**qetūḍr-* or \**qetūr-* (cp. §§ 483. 602): Skr. *catvār-as* etc., see § 419. *çu* 'a breaking up': Skr. *cyāv-a-tē* etc., see § 448.

§ 456. Indg. *g*. *kin* (gen. *kn-oj*) 'woman': O.Bulg. *žena* etc., see § 437 *a*. *ker* (gen. *keroy*) 'food, meat', aor. *keri* 'I ate': Skr. *girāmi* etc., see § 428 *a*. *kov* (gen. *kovu*) 'cow': Skr. *gāú-ṣ* etc., see § 428 *a*. Aor. *e-kn* 'he came' orig. f. \**e-gem-t*: Skr. *á-gan* etc., see § 421. *erek* 'evening': Skr. *rājas-* etc., see § 621.

§ 457. Indg. *gh*. *gan* (gen. *gani*) 'a beating, flogging', rt. *ghen-* 'to strike' (§ 429 *a*), probably to the rt. form *ghyn-*, like Skr. *ghan-á-* 'killing' (§§ 232. 454). *mēg* (gen. *mīgi*) 'fog': Skr. *mēghá-s* 'cloud', Alban. *miégulë* 'fog', O.Bulg. *mǃgla* 'fog'. *durgn* (gen. *drgan*) 'potter's wheel': Gr. τροχός etc., see § 439.

*j* initially and *ž* medially from *g* before original *e-* and *i-*vowels (Hübschmann Ztschr. d. deutsch. morgenl. Ges. XXXV 173, Armen. Stud. I 66. 71. 79). *žerm* 'warm' *žer* 'warmth,

good weather': Gr. *θερμός* *θέρως* etc., see §§ 423. 429 *b. iž* (gen. *iži*) 'viper': Skr. *áhi-š* Av. *aži-š* 'snake, dragon'.

## Albanian.

§ 458. Indg. *q. krimb-i krum* 'worm': Skr. *kṛmi-š* etc., see § 436. *piék* 'I roast, bake': Skr. *pácāmi* etc., see §§ 427 *a.* 431 *a. ġak* 'blood': Lith. *sakuĩ* pl. 'resin' O.Bulg. *sokũ* 'juice'. *pik* 'I make bitter, salt': Lith. *pikta-s* 'angry, bad', Pruss. *popaikā* 'he deceives' + Gr. *πικρός* 'sharp, keen, piercing, passionate, harsh' O.Ir. *oech* 'enemy', Goth. *fáih* 'a wronging, deception' OHG. *gi-fēh* 'hostile'.

§ 459. Indg. *g. gur* 'rock, stone': Skr. *giri-š* 'mountain', Lith. *gìria gìre* 'forest' O.Bulg. *gora* 'mountain'. *ġist* 'finger': Skr. *anagushtha-s*, see § 450. *v'ig-u* 'bad, lean': Lith. *ligù* 'illness' + Gr. *ὀλίγο-ς* 'little'.

§ 460. Indg. *gh. ġendem* 'am found': O.Bulg. *gadajaq* etc., see § 425. *štég-u* 'entrance': Skr. *stigh-nu-tē* etc., see § 422. *diek* (*dieg-*) 'I burn': Lith. *degù* 'I burn' etc., see § 439.

## Baltic-Slavonic.

§ 461. Indg. *q, g, gh* were *k* and *g* (the latter = *g* and *gh*) in the period of the Balt.-Slav. primitive community.

These sounds remained in general unchanged in Lith.

In prim. Slavonic *k, g* became *č, dž* before the prim. Indg. sonantal *e-* and *i-*vowels as well as before *ĩ+nas.* and *ĩ+liq.* as continuation of Indg. *nas.* and *liqu.* sonans (§§ 248. 302) and *k<sub>2</sub>, g<sub>2</sub>* likewise became *č, dž*. After the completion of this process, but still in prim. Slavonic, *o<sub>2</sub>* (= Indg. *o<sub>2</sub>, a<sub>2</sub>*) became *ě*, and this new palatal vowel now changed preceding *k, g* into *c, dz*; contemporaneous with the latter change was the transition of the then newly arisen *k<sub>2</sub>, g<sub>2</sub>* into *c, dz*. Cp. § 84 pp. 81 f., § 147 p. 133. Further *kt* became *tχ'* and *ks* *χ* (*ch*) in prim. Slav.

§ 462. Prim. Balt.-Slav. *k* = Indg. *q*.

Lith. *kà-s* 'who?' *katrà-s* 'which of two?', O.Bulg. *kũ-to* 'who?' *ko-toryjĩ* 'which': Skr. *ká-s* etc., see § 419. Lith. *kārta-s*

O.Bulg. *kratū* (fr. \**kortū*, see § 281) 'time' : Skr. *sa-kṛt* 'once' Lith. *āt-lėka-s* O.Bulg. *otū-lėkū* 'remnant, rest' : + Gr. *λοιπό-ς* etc., see § 427 a. Lith. *velkū* O.Bulg. *vlėka* 'I draw, drag' : Gr. *ἔλω* 'I draw' (cp. § 164 rem.). Lith. *kraūja-s* O.Bulg. *krāv-ī* 'blood' : Skr. *kraviṣ-* etc., see § 418.

Prim. Slav. *č = k* (§ 461). O.Bulg. *četyrije* Lith. *keturi* 'four' : Skr. *catvār-as* etc., see § 419. Voc. sg. O.Bulg. *vlūče* Lith. *vilkė* to nom. *vilkū* *vilka-s* 'wolf' : Skr. *vṛka-s* etc., see §§ 427 c. 444 a. 455. O.Bulg. *pečeti* 'cooks' (1. sg. *peka*) = Skr. *pācati* Lat. *coquit*, Indg. \**pegeti*. *čara* 'incantatio' fr. \**kērā* (§ 76) : to Lith. *kerėti* 'to enchant'. *čapū* 'bee' fr. \**kēpū* (§ 76), probably to Gr. *κηγήν* 'a drone'. *č-to* 'what?' : Skr. *ci-d* etc., see § 427 b. *črīnū* Pruss. *kīrsna-* 'black' : Skr. *kṛṣṇā-* 'black', Indg. \**gṛsno-* (cp. § 302 rem. 1). Prim. Slav. *č = k̑*. *pri-tūča* 'likeness' fr. \**tūk-iā*. Cp. § 147 p. 133.

Prim. Slav. *c = k* (§ 461). *cēna* 'price, honour' (Lith. *kaina* according to Mikuckij) : Av. *kaenā-* etc., see § 427 a. Loc. pl. *vlūčėchū* (*vilkū* 'wolf') = Skr. *vṛkēṣu*, cp. \**ulqai-su*, cp. Gr. Hom. *λύκοι-σι*. Prim. Slav. *c = k̑*. *juniči* 'young bullock' fr. \**iūnik̑i*. Cp. § 84 p. 81 f., § 147 p. 134.

This same change of *k* to *c* was repeated in the combination *ky* before palatal vowels in the course of the individual dialects (cp. § 427 b). O.Bulg. indic. *cvīta* inf. *cvīsti* 'to blossom', O.Croatian *cvasti* (= \**cvīsti*, a new formation after the indic. *cvātēm*), Little Russ. *cvysty* Great Russ. *cvēstī* (*č* transferred from *cvētū*?) beside Low Sorabian *kviśé* Czech *kvisti* O.Pol. *kwiśé* 'to blossom', prim. Slav. \**kyīstī*. Cp. (d)zvěřī § 464.

Prim. Slav. *tχ' = kt* through the intermediate stage *χ't*. This sound-group thus fell together with Indg. *tj* and had the same further development as the latter. *χ't* became *št* in the Bulgarian branch. O.Bulg. *noštē* : Lith. *nakti-s* 'night', Skr. *nākti-ṣ*. *vlēšti* 'to draw' sup. *vlēštū*, to indic. *vlėka*, cp. Lith. inf. *vilkti*. *tešti* 'to run', to indic. *teka*. *vrēšti* 'to throw' to indic. *vrėga*. Cp. § 147 p. 132 f.

Rem. That the stage *χ't* lay between *kt* and *tχ'*, is confirmed by the inf. *vrēšti* 'to thresh' (indic. *vrīch-a* = \**uṛs-ā-m*, rt. *uṛs-*, cp. O.Lat. *vorrō*

'I draw through, sweep' = \**uŕs-ó*), since it must be traced back to prim. Slav. \**uerχ'ti*; it is uncertain whether *χ'* had arisen regularly in this form or whether it had been transferred from the indic. Serv. *vrijěci vrići* beside O.Bulg. *vrěšti* shows the falling together with original *kt* and *tj*. Cp. § 588 rem. 1.

Prim. Slav. *χ* (*ch*) = *ks* (except before *t*, see 2. pl. *těste* § 545) through the intermediate stage *χχ*. We leave it undecided whether the course was *ks-kχ-χχ* or *ks-χs-χχ*. *těchū* 'I ran', orig. f. \**tēg-s-o-m*, pres. *teka*. *běchū* 'I save, run away with' orig. f. \**bhēg-s-o-m*, inf. *bēgati*, rt. *bheg-* (§ 463). On the change of the *ch* to *š* in the 3. pl. *těšē běšē* cp. § 588, 1.

*ks* remained in Baltic. Lith. fut. *lėksiu*, to *lėkū* 'I leave' (cp. Skr. *rekṣyāmi*, Gr. *λείπω*), *bėksiu*, to *bėgu* 'I run, flee'. Pruss. *lauxnos* pl. 'constellations': Av. *raoxšna-* 'shining'. Hence Indg. *qs* and *ks* did not fall together in Baltic-Slavonic, see § 414.

§ 463. Prim. Balt.-Slav. *g* = Indg. *g*.

Lith. *gìria* 'forest', O.Bulg. *gora* 'mountain': Skr. *giri-ṣ* etc., see § 459. Lett. *gūvs* 'cow', O.Bulg. *govędo* 'bullock': Skr. *gāu-ṣ* etc., see § 428 a. Lith. *bėgu* 'I run, flee' *boginū* 'I save, run away with something', O.Bulg. *bėgū* 'flight': + Gr. *φέβομαι* 'I flee' *φόβο-ς* 'flight, fear', rt. *bheg-*.

Prim. Slav. *dž* = *g* (§ 461). Thence O.Bulg. *ž*. *žeravi*, Lith. *gėrvė* 'crane': Gr. *γέρας* etc., see § 420. 3. sg. *vrězetī* (beside 1. sg. *vrěga* 'I throw'), cp. Goth. 3. sg. *vairpiþ* 'throws', rt. *uerg-*, § 444 a. Voc. *bože*, to nom. *bogū* 'god' adj. *božiskū* 'divine': Skr. *bhāga-s* etc., see § 450. *žaba* 'frog' fr. \**gēbā* (§ 76) Pruss. *gabawo* 'toad': OMG. *quappa* Du. *kwab* 'eel-pout'. *po-žarū* 'incendium' fr. \**po-gērū* (§ 76) beside *žera-tūlcū* 'heap of coals' *gorēti* 'to burn': Lith. *gāra-s* 'vapour', Skr. *gharmā-s* 'glowing fire'. *živū* Lith. *gyva-s* 'alive': Skr. *jīvā-s* etc., see § 421. *žrėny* 'mill' Lith. *gìrnos* pl. 'mill-stones, mill' (§ 303): + Goth. *asilu-quairnu-s*, see § 442. *žūra* 'I swallow': Skr. *girāmi gītāmi*, Indg. \**gŕr-ó* (§ 305). Prim. Slav. *dž* = *g*. *osteža* 'chlamys' fr. \**o-steg-ǰā* beside *ostegū* 'vestis': Lith. *stōga-s*, Lat. *tegō toga* etc., see § 420. Cp. § 147 p. 133.

Prim. Slav.  $dz = g$  (§ 461). Still  $dz$  in the oldest O.Bulg. monuments, in the later almost exclusively  $z$  (Miklosich Vergl. Gramm. I<sup>2</sup> 251 ff.). Loc. pl. *bo(d)zěchŭ* (*bogŭ* 'god') = Skr. *bhāgēṣu* epf. \**bhagoṣu*. Opt. 2. pl. *vrŭ(d)zěte* (*vrŭga* 'I throw') orig. f. \**vrŭgoŭte*, ep. Goth. *vairpáiþ*. Sure examples seem to be wanting for prim. Slav.  $dz = gŭ =$  Indg.  $gŭ$ . Cp. § 84 p. 81 f., § 147. p. 133.

§ 464. Prim. Balt.-Slav.  $g =$  Indg.  $gh$ .

Lith. *geniù* 'I chop off (branches)' *genù* 'I drive (cattle)', *ganaù* 'I tend (cattle)', O.Bulg. *iz-gonŭ* 'a driving away, chasing': Skr. *hán-ti* 'strikes' etc., see § 429 a. Lith. *grúda-s* 'earn' *grúdzŭ* 'I pound', O.Bulg. *gruda* 'elod': + OHG. *gruzzi* O.Icel. *graut* 'grit' OHG. *grioz* OS. *griot* 'sand, gravel', rt. *ghreud-*. O.Bulg. *gostŭ* 'guest, companion, friend': + Lat. *hosti-s* Goth. *gasts*, see § 422. Lith. *snėga-s* O.Bulg. *snėgŭ* 'snow': + Gr. *vŭga* etc., see § 423. Lith. *angŭ-s* 'snake', O.Bulg. *agorištŭ* 'eel': Skr. *áhi-ṣ* etc., see § 433 a. O.Bulg. *lŭga* 'I lie down', adj. *sa-logŭ* 'consors tori' + Gr. *λέχος* ἄ-λοχο-ς etc., see § 425.

Prim. Slav.  $dž = g$  (§ 461). Thence O.Bulg. *ž. žŭnja* 'I eut (fruit), reap' inf. *žŭti*, to Lith. *geniù* (s. above), ep. Skr. *hanyátē* (§ 454 rem.). *snėžŭnŭ* 'snowy', to *snėgŭ*, s. above. *sa-lože* voc. to *salogŭ*, s. above. Prim. Slav.  $dž = gŭ$ . *lŭžŭ* 'lying, false' fr. \**lŭg-ŭ*, to *lŭgati* 'to lie': OHG. *liogan* 'to lie', rt. *lŭgh-*. *lože* n. 'couch, bed' fr. \**log-ŭe*, to *lŭga*, s. above. Cp. § 147 p. 133.

Prim. Slav.  $dz = g$  (§ 461), O.Bulg.  $dz$ , later  $z$  (§ 463). (*d*)*zělŭ* 'vehemens': Lith. *gailŭ-s* 'passionate', OHG. *geil* 'extravagant, petulant, wanton'. *snė(d)zi* pl. to *snėgŭ* 'snow', orig. f. \**snoighož*. *lŭ(d)zěte* 2. pl. opt. to *lŭga*. Prim. Slav.  $dz = gŭ$ . *stŭ(d)za* 'way' fr. \**stŭg-ŭa*, to *stigna* 'I come from': Skr. *stighnutē* etc., see § 422. Cp. § 84 p. 81 f., § 147 p. 133.

The same change of  $g$  to  $tz$  was repeated in the combination *gu* before palatal vowels in the course of the individual dialects. O.Bulg. (*d*)*zvěrŭ* 'animal, wild animal' fr. prim. Slav. \**gučrŭ*: + Gr. *θήρ* Lat. *fera*, see § 429 b. Cp. *cvisti* § 462.

§ 465. Prim. Slav. *sk, zg* before palatal vowels and before *ŭ*. In the period of prim. Slav., in which *k, g* became

*tš* (*č*), *dž*; *šk*, *zg* correspondingly passed into *stš*, *zdž*, hence *štš*, *ždž*, further O.Bulg. *št žd*. Cp. § 147 p. 133 f. Suffix *-go-* seems to be contained in O.Bulg. *-ište* fr. *isk-je-*, a further formation of *-isko-*, e. g. *ognište* n. 'hearth, fire-side' (cp. the primary form Pol. *ognisko* n.). *moždanŭ* 'having marrow, marrowy' fr. *\*mozgěniŭ* (cp. *běžati* 'to flee' fr. *\*běgěti*, § 76) from *mozgŭ* 'marrow'; whether we have here Indg. *zg* or *zgh*, is doubtful, see § 450.

*Retrospect of the history of the velar explosives.*

§ 466. Words containing Indg. velars show these partly with and partly without labialisation in Greek, Ital., Kelt. and Germ. The *u*-afterelap, brought along from prehistoric times, could disappear in the separate languages by certain fixed sound-laws. But we thought that such a disappearance might only be assumed in such forms, as had parallels which were etymologically related, and which actually occurred with labialisation either in the same language or in another of the *u*-languages, e. g. in Goth. *kairu-s* 'heavy' (§ 444 b). We thought that it must be left undecided whether labialisation was ever present in those words, which certainly had an Indg. velar, but do not appear in any of the *u*-languages with labialisation. The dropping of *u* can be assumed in some of these words, without the sound-laws of the separate languages standing in the way, thus e. g. in Gr. *κίτρο-ς* Lat. *cuti-s* OHG. *hūt* 'skin, hide' (cp. Pruss. *keuto* 'skin', Lith. *kiantai* pl. 'corn-hulls, -husks') from the fact that *u* disappeared before *u* in each of these languages (§§ 427 c. 428 c. 429 c. 431 b. 444 b). In other cases the known sound-laws of the separate languages do not furnish any positive support for the assumption of the disappearance of *u*. But sound-laws may have operated in prehistoric times, which brought about the loss of *u* (e. g. perhaps before Indg. *a*, *ā*, as in Gr. *κακίνος*: Skr. *karakaṭa-s*, and if *u* or *u* directly preceded the velar, as in Gr. *ζυγό-ν*: Skr. *yugá-m*?) and the activity of which may have become so concealed by the later development that it is no longer possible for us to fix them.

Of late years the question has several times been raised

(most recently by Bersu p. 4 ff.) as to whether the words, in which the velars appear in Greek etc. with labialisation, were also once spoken in Ar., Armen., Alban. and Baltic-Slavonic with labialised *q*, *g*, *gh*, or whether the labialisation was an innovation of the *u*-languages — ultimately an innovation which took place in one portion of the prim. Indg. language-terrain. But nothing has hitherto been adduced which admits of a sure decision being formed either on the one side or the other. At all events *u* may equally well have disappeared from those languages in which labialisation does not occur, as it did e. g. in Irish (*cethir* beside O.Cymr. *petguar* 'four') and in French (*quatre* pronounce *katʁ* from Lat. *quattuor*).

#### Interchange of the palatal and velar explosives.

§ 467. In Aryan, Armenian and Baltic-Slavonic we occasionally find a guttural explosive or its regular successor, where we should expect the descendant of an Indg. palatal explosive, i. e. spirant or affricata, and conversely. Examples from the first and last named language-groups, have been collected by J. Schmidt in Kuhn's Ztschr. XXV 114 ff. 125 ff. A final answer to the question, how this interchange is to be explained, must be left for the future. For the present the following seems to me probable.

1. In one portion of the cases the mixing of the two classes of consonants was caused by form-transference.

This is seen clearest of all in Sanskrit, where certain sounds, which were originally different, regularly fell together: *kš* = *qs* and *ks*, *j* = *g* and *ḡ*, *h* = *gh* and *ḡh*.

Thus *bhiṣákti* 'he heals' *bhiṣáktama-* superl. from *bhiṣáj-* 'healing', with *kt* instead of *ṣt* on account of 2. sg. *bhiṣákṣi* nom. sg. *bhiṣák* (fr. *\*bhiṣakṣ*, § 647, 7) loc. pl. *bhiṣákṣu*, cp. Av. *baṣaz-a-* = Skr. *bhēṣaj-á-* 'medicine'. After the analogy of *tyāgá-* 'abandonment, resignation' beside *tyájatē* (rt. *tjeg-*) etc. was formed *yāga-* for older *yājá-* 'an offering' beside *yájatē* (rt. *iaḡ-*), correspondingly after *ni-dāghá-s* 'heat' beside *dah-* (rt. *dhegh-*) etc., *sq-dēghá-s* for older *sq-dēhá-s* 'a cementing to-



gether' (rt. *dheighh*-). With misplaced *g* also *bhārga*-s 'splendour' (cp. Av. *brāzaiti* 'beams, radiates'), *nir-mārgá*- 'a stripping off' (cp. indic. 3. sg. *mārṣṭi*), *sargá*- 'gutter' (cp. part. *ṣṛṣṭá*-). Further part. *digdhá*- 'besmeared' for regular *\*dīdha*-.

The converse transference occurred less often. Thus *drōdhar*- for and beside *drōgdhar*- part. fut. from *druh*- 'injure', rt. *dhreugh*-<sup>1</sup>).

In Armenian the *st* in *dustr* 'daughter', which does not agree with the root-final velar of the other languages<sup>2</sup>), may have come into existence through the influence of *ustr* 'son' (etymologically unexplained), with which according to Hübschmann Arm. St. I 47 it is mostly used.

2. Where *k* and *g* appear in Baltic-Slavonic in place of sibilants, they are due to a borrowing from the circle of languages with guttural explosives; this borrowing may partly be dated back to the period of the Indg. prim. community, if by § 380 we already ascribe to this the difference of articulation, which permits the Indg. languages to be divided into two great groups. Thus O.Bulg. *svekrū* 'socer', *svekry* 'socrus' beside Lith. *szeszura*-s etc., which point to Indg. *\*suekuro*- *\*suekrū*- (§ 381), O.Bulg. *gasī* beside Lith. *žāsi*-s etc., Lith. *klausau* 'I obey' beside O.Bulg. *sluchū* 'hearing, obedient' Skr. *śrōṣamāna*-s 'gratifying', Pruss. *pecku* Lith. *pėku*-s 'cattle' beside Skr. *pāṣu* etc., Lith. *smakrā* 'chin' beside Skr. *śmāśru*- 'moustache' (to which O.Ir. *smech* 'chin'), Lith. *gařda*-s 'hurdle' O.Bulg. *gradū* 'inclosure, town', beside Lith. *žarđi*-s 'pasture-ground' (cp. § 389).

3. In one portion of the cases, which are generally classed under this category, we have different roots. Thus e. g. we separate *gnā*- *\*genā*- 'wife' (Skr. *gnā*- etc., s. §§ 428 a. 437 a) from rt. *\*gen*- 'gignere'; Skr. *āhi*-ṣ 'snake' Av. *aži*-ṣ etc. (§ 433 a) from rt. *añgh*- 'to lace, string'; Skr. *mēghā*- 'cloud' from *mēha*- Av. *maēza*- 'urine'. Such like roots, which are

1) With these Skr. new formations cp. § 480 rem. 4.

2) The *h* in Skr. *duhitār*- is the regular representative of prim. Ar. *jh* = Indg. *gh* by § 445, as must be remarked because of J. Schmidt, Kuhn's Ztschr. XXV 68. 116. 122.

similar in sound and meaning, but nevertheless not related etymologically, occur indeed often enough elsewhere, as e. g. Skr. *skāmbh-* and *stambh-* 'fasten, support', *uegh-* and *uedh-* 'lead'.

Rem. The manner in which J. Schmidt (in the article quoted above) attempts to explain the interchange of the two classes of consonants, is in my opinion by no means convincing.

## B. THE EXPLOSIVES AFTER THEIR FORM OF ARTICULATION.

### Primitive Indg. period.

§ 468. The Indg. prim. language had, as we have seen in § 322, four forms of articulation: tenues, voiced mediae, aspirated tenues and aspirated voiced mediae, e. g. *t*, *d*, *th*, *dh*. Examples for the two first and for the last class have been given in §§ 324—326. 348—350. 381—383. 418—423.

We have not yet given examples for the tenues aspiratae in section A. And, owing to their comparatively small number and the peculiar difficulties with which the question of their regular representation in the various languages is surrounded, it seems appropriate not to treat this form of articulation in this section either, in each of the separate language-groups, but to treat it collectively at the end (§ 553), in order that everything, which belongs here from the various languages, may be brought together under one head. Before then however we shall have to discuss the history of the prim. Ar. tenues asp. in § 475.

§ 469. Several of the changes in the form of articulation, which are exhibited by the Indg. explosives and which in many cases are regarded as having taken place within each development, had in all probability already arisen in the period of the Indg. prim. community. Eight cases are to be taken into consideration.

1. The change of mediae into tenues before voiceless explosives and spirants. Indg. *\*juqtó-* 'yoked' i. e. *\*jug+to-* from rt. *jeug-*: Skr. *yuktá-* Gr. ζευκτός Lat. *junctu-s* Lith. *jũnkta-s*. Indg. *\*petsú* loc. pl. fr. *\*ped-* 'foot': Skr. *patsú* Gr. ποσὶ ποσί.

2. The change of tenues into mediae before voiced explosives and spirants. Indg. *-bd-* weakest form of *ped-*: Skr. *upa-bd-á-* 'a pounding, trampling' Gr. *ἐπι-βδ-αι* 'day after the feast' (§ 325). We assume *\*dṛdbhis*, *\*ṛiḡbhis*, *\*ṛgbhis* as the Indg. prim. forms for the instr. pl. Skr. *dadbhiṣ* (*dat-* *dant-* 'tooth'), *vidbhiṣ* (*viṣ-* 'clan, village community', cp. § 404, 3), *ṛgbhiṣ* (*ṛc-* 'hymn'). This assimilation may also have extended itself to double consonants, as Skr. instr. pl. *nádbhiṣ* (*napt-* *napāt-* 'offspring') fr. *\*nabdbhiṣ*, Indg. *\*nebdbhis*. Cp. also Av. instr. pl. *azd-biṣ* fr. *ast-* 'bone': Gr. *ἄστ'ε-ν* and Indg. *zd* from *sd* in *\*z-dhi* 'be' imper. fr. rt. *es-*, *\*se-zd-* perf. st. from rt. *sed-* and similar forms, § 589, 1.

3. The side by side existence of Gr. *ἑβδομο-ς* and O.Bulg. *sedmyjǎ* 'septimus' (§ 547 rem. 2) permits our assuming that in Indg. there stood beside *\*septm* the ordinal *\*sepdmó-* or *\*sebdmó-*. In that case Gr. *ἑβδοο-s* would be a special Greek transformation of *ἑπτ-* after the analogy of *ἑβδ-*. Similarly Osthoff Zur Gesch. d. Perf. 321.

4. *t* before *t th* and *d* before *d dh*. Geminated explosives were probably not spoken here, but affricata + explosive. We write *t<sup>s</sup>t(h)* and *d<sup>s</sup>d(h)* but at the same time readily admit that it might perhaps have been more correct to have written *tḫt(h)* and *dḫd(h)*. For the literature on this point see Osthoff Zur Gesch. d. Perf. 560<sup>1</sup>). E. g. *\*set<sup>s</sup>tó-* (part. fr. rt. *sed-* 'sit'): Skr. *sattá-* Av. *hasta-* Lat. *ob-sessu-s*; *\*ded<sup>s</sup>dhi* (that is, *\*de-d+dhi*, 2. sg. imper. of the reduplicated pres. of *dō-* 'give'): Skr. *dēhi* Av. *dazdi*.

5. Aspirates probably lost their aspiration before aspirates. We regard e. g. *\*iudbhis* as the Indg. prim. form of Skr. instr. pl. *yudbhiṣ* (*yudh-* 'fight, battle'). If Gr. *νόσθο-ς* 'a hollow, pudenda muliebria', Lat. *custōs*, Goth. *huzd* 'treasure', which

1) The objection raised by Bartholomae in his recent work Ar. Forsch. II 79 against what we have stated above for the Indg. prim. language, is not valid. If *ks* became *k* before explosives, it by no means follows that the affricata *ts* (*t<sup>s</sup>*) must under the same conditions have become *t*. *kx*, *pf*, not *ks*, *ps* correspond to *ts*.

belong to rt. *keudh-* in Gr. *κρύθειν* Ags. *h̄ydan* 'to hide', were an extension of this rt. by means of the 'root-determinative' *dh* as we assume in §§ 494. 507. 536., then *\*kud<sup>s</sup>dh-* (s. above 4) was probably spoken in prim. Indg.

6. How was the combination — which must be presupposed etymologically — media asp. + *t* or *s* spoken at the time immediately preceding the disintegration of the Indg. prim. community? What was e. g. the Indg. prim. form of Av. *dug<sup>o</sup>dar-* Lith. *dukter-* 'daughter', which, on etymological principles, would have to be put down as *\*dhughter-*? A positive answer has not yet been found. We leave out the question in our exposition of the history of the Indg. forms of articulation in the separate languages and discuss it at the end in § 552. In the section on Aryan § 482 we shall however previously treat the special history of media + media asp., which can be put down with certainty as the prim. Ar. order of articulation.

7. Change between tenuis and media at the end of roots, e. g. *sqap-* : *sqab-* in Gr. *σκαπάνη* 'spade', O.Lat. *scaprēs* : Lat. *scabō*, Lith. *skabū-s* 'cutting' (§ 345); *pāh-* : *pāg-* in Lat. *pāx pācis* Skr. *pāśa-s* 'loop, cord' : Gr. *πήγνυμι* 'I fasten', Lat. *pangō*; (*s*)*pēh-* : (*s*)*peġ-* in Skr. *pāśyāmi* 'I see', Lat. *-spicio*, OHG. *spehōn* 'to spy' *spāhi* 'prudent, wise' : O.Icel. *spakr* 'prudent, sensible', O.Bulg. *paziti* 'attendere', refl. with *se* 'cavere'. The tenuis is probably rightly considered as the older articulation. The circumstances, under which this sound-modification made its appearance, still remain undetermined. Cp. p. 188 f.

Probably here also belong irregularities in the form of articulation, which occur in other positions than at the end of roots, e. g. Skr. *daśat-* : Gr. *δεκάδ-* 'decade' (cp. § 238).

8. Change between media asp. and media. *stembh-* : *stemb-* in Skr. *stabhnōmi* 'I fasten' prop', perf. *tastāmbha*, Gr. *ἀ-στεμφής* 'unpressed' *στέμφυλο-ν* 'a grape or olive already pressed' : Gr. *στέμβω* 'I shake, tread on', OHG. *stampfōn* 'to stamp' *stumpf* 'stump' (Lith. *stambra-s* 'trunk, stem', *stiūmbra-s* 'stump of the tail, stump' may belong to either root-form). *bhudh-* : *bhud-* (weak rt. forms) in Skr. *budhnā-* 'bottom', Gr. *πυθμῆν* 'bottom,

end of a root': Gr. *πύρδαξ* 'bottom' (with *π-* for *φ-*, like *πίστις* for *\*φιστις* etc., see § 496), Ags. *botm* O.Icel. *botn* 'bottom' (Lat. *fundu-s* and O.Ir. *bond bonn* 'solea' are ambiguous). *meġh-*: *meġ-* in Skr. *mahán* 'great': Skr. *majmán-* 'greatness', Gr. *μέγας* Goth. *mikils* 'great'. Skr. *ahám*: Gr. *ἐγώ*, Lat. *ego* Goth. *ik* T. The media asp. is possibly the older sound. The circumstances, under which the modification made its appearance, are also here undetermined. In most of the cases a nasal is in the vicinity. Cp. Arkiv for nordisk Filologi I 176 rem.

Rem. J. von Fierlinger Kuhn's Ztschr. XXVII 478, following up J. Schmidt's theory, conjectures that in those cases where it is a question of *ġh*: *g*, 'the sound was neither *g<sup>h</sup>* [*ġh*] nor *g<sup>l</sup>* [*ġ*] in the parent language, but a voiced palatal spirant *γ'*. So long as a more special (urgently needed) investigation into the whole question of the change in the form of articulation in the Indg. prim. period is still wanting, it seems to me more prudent not to separate the change *ġh*: *ġ* from the cases *bh*: *b* and *dh*: *d*. With these it is hardly possible to start from a spirant, which is homogeneous with the '*γ*'.

### Aryan.

§ 470. The difference between the Indg. forms of articulation was still preserved in the period of the Aryan prim. community.

The palatals *k̄*, *ġ*, *ġh* appeared as *š*-sounds: *š*, *ž*, *žh* (§ 396).

Indg. *d<sup>z</sup>d(h)* (§ 469, 4) probably then became *zd(h)*, e. g. *\*dazdhi* = Indg. *\*ded<sup>z</sup>dhi* 'give' imper., and thus fell entirely together with Indg. *zd(h)* (§§ 590. 591). See § 476.

The order med. asp. + *t*, *s* — which is etymologically to be postulated — was represented by med. (or voiced spirant) + *dh*, *zh* (§§ 469, 6. 552): *bdh*, *d<sup>z</sup>dh*, *gdh*, *ždh* and *bzh*, *dzh*, *gžh*, *žžh*. For the further history of these combinations in Aryan see § 482.

The Sanskrit separate development left the Indg. forms of articulation separate.

In Iranian the mediac asp. became mediae and *žh* became *ž*. These sounds thus fell entirely together with the Indg. mediae.

§ 471. Tenuēs. Prim. Ar. *p, t, k c, ś* == Indg. *p, t, q, k̄*.

Skr. Av. O.Pers. *pat-* 'fall, fly', Indg. \**pet-*. §§ 327. 351.

Skr. Av. O.Pers. interrog. stem *ka-*, Indg. *qo-*. Skr. Av. *ca* O.Pers. *cā* 'and', Indg. \**qe*. §§ 445—448.

Skr. *áśva-* Av. O.Pers. *aspa-* 'horse', Indg. \**ékwo-*. §§ 396 — 401.

*k* seems to have disappeared in the prim. Ar. period in Skr. *túrya-* Av. *tūrya-* 'quartus' fr. \**ktur-*, to Indg. \**getyer-* Skr. *catvār-as*, cp. Av. *āxtūrya-* 'every fourth time' (cp. § 646); so also *t* in \**napt-su* Av. *naḥšu* loc. pl. from Ar. *napāt-* *napt-* 'offspring' (s. Osthoff Zur Gesch. d. Perf. 600).

§ 472. Further shiftings of the prim. Ar. form of articulation did not take place in Sanskrit.

Rem. In forms like *vagnú-* 'tone, sound' (*vak-* *vac-*), *ṛgmin-* 'praising' (*ark-* *arc-*), *śāgmá-* 'wealthy, benevolent' (*śak-*), *vāgmin-* *vāgvín-* 'eloquent' (*vāk-* *vāc-*) *g* had not regularly arisen from *k* (*-kn-*, *-km-*, *-kv-* remained, cp. *rēkṇas-* 'wealth, riches', *rukṃá-* 'shining', *pakvā-* 'ripe'), but was borrowed partly from other forms of the same roots as instr. *vāgbhīṣ*, *ṛgbhīṣ*, 2. sg. imper. *śāgdhī*, partly from forms of roots with original *g* (*g*) as *tigmá-* 'sharp' rt. (*s*)*tīg-* (*śāgmá-* to *śaktá-* like *tigmá* beside *tiktá-*). Similar occurrences in Gr. see §§ 486 rem. 495 rem.

§ 473. In Iranian *p, t, k, c* were only retained before vowels and after *s, ś*. Otherwise they became spirants before consonants. This change took place before *i, u*, after these consonantal vowels had become spirantal (§§ 127. 161).

1. Prim. Ar. *p*. Av. O.Pers. *fra-* 'before, fore': Skr. *pra-* Gr. *πρό*, Indg. \**pro*. Av. *er<sup>e</sup>zifya-* 'stretching itself, falcon': Skr. *ṛjipyá-* 'stretching itself, seizing on the wing', Armen. *arciv* 'eagle' (§§ 291, 1. 330). Av. *āfant-* 'aquosus' from prim. Ar. \**āp-uant-* (§ 159 p. 143) to *āp-* (acc. *āpem* nom. *āfš*) 'water': Skr. *ap-* *āp-* 'water'.

Av. *-pt-* beside *-fdr-* fr. *-ptr-* (2.) and beside Pers. *-ft-* is strange. *hapta* 'seven': Skr. *saptá*. *ker<sup>e</sup>pta-* 'put in order, made right': *klptá-*. Prim. Iran. *-ft-* probably became *-pt-*, cp. O.Icel. *epter* fr. *efter* 'after' etc. (Noreen Aisl. Gramm. § 183).

2. Prim. Ar. *t*. Av. *ṽwam* O.Pers. *ṽwām* (*ṽw-* = *ṽv-*) 'thee': Skr. *tvām*. Av. *ṽpyejah-* n. 'need, danger': Skr. *tyájas-*. Av. *miṽpra-* 'contract': Skr. *mitrá-*. Av. *ṽyaoṽna-* 'deed, work': Skr. *cyāutná-*.

In O.Pers. *ṽr*, *ṽy* passed into *ṽ*, *ṽy*. *ṽi-* 'three': Av. *ṽri*- Skr. *tri-* (§ 261). *haṽiya-* (*-ṽiy-* = *-ṽy-*) 'true': Av. *haiṽya-*, Skr. *satyá-*.

In Av. *ṽr*, *ṽw* passed into *ḍr*, *ḍw* after *f* and *x* (voiceless spirants after the voiceless spirants *f x* became voiced). Acc. *f<sup>e</sup>ḍr-ō* 'patres' (cp. Gr. *θίγα-το-ας*) beside dat. sg. *piṽrē* acc. sg. *ptarem*, cp. Skr. *pitṽ- pitár-*. *vaxḍra-* 'word, speech': *vak-trá-* 'mouth'. *vaxḍwa-* 'word' fr. prim. Ar. *\*yak-tya-*. Cp. *ḍ* fr. *ṽ* = prim. Ar. *th* § 475.

Prim. Ar. Skr. *tk* = Av. *ṽk*. *aṽka-* 'dress': Skr. *átka-*. *ta-ṽk-uš-* weak st. of the part. perf. act. to *tacaiti* 'runs'.

Prim. Ar. *tc* (Skr. *cc*) = Av. *sc* O.Pers. *šc*. Av. *yas-ca* 'quod-que', also inexactly written *yaṽca* (according to the etymology: *yaṽ+ca*): Skr. *yác-ca*, prim. Ar. *\*ṽatca* Indg. *\*ṽotqe*, *\*ṽod qe*. O.Pers. *aniyaš-ciy* 'anything else': Skr. *anyác-cid* prim. Ar. *\*anyatcid*. Cp. Kelt. Germ. *sk* fr. *tk*, §§ 516. 527.

Prim. Ar. *ts* became *s* in Av. (O.Pers.) through the intermediate stage *ss*. Av. *masya-* 'fish': Skr. *mátsya-*. Av. Gāṽ. loc. pl. *drug-vasū* fr. *drug-vant-* 'lying, false', cp. Skr. *kéša-vatsu* fr. *kéša-vant-* 'having a mane'. Av. nom. sg. *a-mer<sup>e</sup>ta-tās* 'immortality' fr. *\*-tāt-s*, cp. acc. sg. *amer<sup>e</sup>tatāt-em*. Correspondingly Indg. *t<sup>s</sup>i(h)* = prim. Ar. *tst(h)* (§ 469, 4) became *st* in Av. and O.Pers. Av. *ava-pasti-š* 'a falling down': Skr. *pattí-š*, prim. Ar. *\*patsti-š*, Indg. *\*pet<sup>s</sup>ti-s*, rt. *pet-*. Av. *ašavastema-* superl. fr. *ašavant-* 'pious, holy', cp. Skr. *-vat-tama-*. Av. *ustema-* 'utmost': Skr. *uttamá-*. Av. Gāṽ. 2. sg. perf. *vōistā* 'knowest': Skr. *vēttha* Gr. *οἶσθα*, Indg. *\*vōi<sup>s</sup>tha*, rt. *ueṽd-*. O.Pers. *a-yastar-* 'possessor', to Skr. *ā-yat-* 'attain, reach'.

Rem. 1. Observe that this Iran. *st* also appears after *i* and *u* and their diphthongs, as in *vistu-* = Skr. *vittá-*, *vōistā* = Skr. *vēttha*, Gāṽ. *raostā* (3. sg. mid. from *raod-* 'grow up'), whereas Indg. *st* had become *št* after the same sounds. The transition of *is*, *us* into *iš*, *uš* was already completed and was closed, when *tst* became *st* in Iranian. See § 556, 1.

Rem. 2. Indg. *-st* and Indg. *-t<sup>s</sup>t* remained separate in Av. also when final. The former appears as *-s* (after *a*-vowels), the latter as *-st*, e. g. 3. sg. imperf. *ās* 'erat': Skr. Ved. *ās* prim. Ar. *\*āst* Indg. *\*ēst* (Gr. Dor. *ȳc*); 3. sg. imperf. *hīśast* fr. rt. *sed* 'sit' fr. Indg. *\*si-set<sup>s</sup>t*, that is, *\*si-sed+t*. Cp. Bartholomae Handb. §§ 139—141, Ar. Forsch. II 78 f.

3. Prim. Ar. *k*. Av. *yuxta-* 'yoked': Skr. *yuktá-*. Av. *suxra-* 'red' O.Pers. *ḫuxra-* a proper name: Skr. *śuk-rá-* 'bright, white'. For further examples see § 447.

4. Prim. Ar. *c* was regular before no consonant except *ḷ*. Av. *śy* O.Pers. *šy*. Av. *śyao-ḫna-* 'deed, work' O.Pers. *a-šiyav-am* (*-šiy-* = *-šy-*) 'I went, walked': Skr. *cyáv-a-tē* 'stirs, moves'. Cp. § 448.

§ 474. Prim. Ar. prim. Iran. non-final *t* with preceding spirantal *r* became *š* in Avestic, as *mašya* (*mašiya-*) = O.Pers. *martiya* Skr. Ved. *mártiya-* 'mortal being'. See §§ 260. 288. 353.

§ 475. The prim. Ar. tenues aspiratae. *ph*, *th*, *kh*, *ch* were not rare sounds in the period of the Ar. prim. community. It is by no means definitely settled that these sounds are to be traced back in every case to Indg. tenues asp. (§ 553). This form of articulation may partly have arisen in the prim. Ar. period from non-aspirate tenuis, e. g. Skr. *path-* 'path', *sthā-* 'stand'. It is certainly not clear by what laws this aspiration arose.

In the following §§ we shall discuss the history of the prim. Ar. ten. asp. without taking into consideration whether this form of articulation was old inherited or newly developed. From § 553 it is obvious in what cases we hold the ten. asp. for prim. Indg.

The only case in which the sounds underwent a change in Sanskrit, was when the following syllable began with an asp. or with *s* + asp. A tenuis then arose by dissimilation. *kumbhá-s* 'pot, mug' fr. *\*khumbha-s* = Av. *xumba-*. Perf. *cichēda* 'I cut off' fr. *\*chi-chēda* from prim. Ar. *skhaiḍ-*. Cp. the dissimilation of the mediae asp. § 480.

Rem. 1. Forms like instr. pl. *khē-bhiḥ* from *kha-* 'opening in the body, mouth, ears etc.', *pathi-bhiḥ* from *pathi-* 'path' were forms made by analogy after the cases, in which there was no reason for dissimilation. Cp. § 480 rem. 1.



In Iranian the tenues asp. became spirants except after *s*, *š* and nasals, where they passed into tenues.

Av. *safa*- 'hoof' : Skr. *śaphá-*. Av. *paṣ-* O.Pers. *paṣi-* 'path' : Skr. *path-* *pathi-*. Av. *bara-pā* 'ye bear' : Skr. *bhāra-*tha**. Av. *haxa* 'companion, friend' O.Pers. *haxāmani-š* proper name : Skr. *sákhā*. Av. st. form *haši-* 'companion, friend' (only in compounds as *hašid-biš-* 'friend tormenting') fr. prim. Ar. *\*sachi-*; Skr. *sakhi-* was formed after the analogy of *sákhā* etc.

Av. *sparāmi* 'I push, jerk' : Skr. *sphurāmi* (cp. § 290). Av. O.Pers. *stā-* 'stand' : Skr. *sthā-*. Av. Gāp. *vōistā* 'knowest' : Skr. *vēthā*. Av. *pantan-* 'path' : Skr. *pánthan-*, beside *paṣ-* : *path-*. Av. *skārayant-* 'leaping' (or 'letting leap') in the proper name *skārayaṣ-*raṣa-** : Skr. *skhālati* 'stumbles, makes a false step sticks fast'.

*p* became *ḍ* after *x*, *f* (cp. *f<sup>e</sup>ḍr-ō* etc. § 473, 2). Av. *uxḍā-* 'spoken' : Skr. *ukthā-*m** 'a saying'. Av. *praḍā-* 'satisfied, content' fr. prim. Ar. *\*trmp-*tha-**, cp. Skr. *trmpāmi* 'I satisfy my appetite, become satisfied'.

Rem. 2. Fierlinger Kuhn's Ztschr. XXVII 334 f. conjectures that the tenues asp. lost their aspiration in prim. Aryan before *m*, *n*, *r*. This however postulates the originality of the tenues asp. as proved, which I cannot hold as certain.

§ 476. Mediae. Prim. Ar. *b*, *d*, *g* *j*, *ž* = Indg. *b*, *d*, *g*, *g̃*.

Skr. *upa-bd-á-* 'a stamping, trampling' Av. *upa-bd-a-* 'foot', Indg. *\*bd-* weak st. form of *ped-*. §§ 325. 328.

Skr. *dū-rá-* Av. O.Pers. *dū-ra-* 'distant', rt. *deu-*. § 354.

Skr. *bhāga-s* 'giver of blessings' O.Pers. *baga-* 'god', Indg. *\*bhago-s*. Skr. *jīvā-* Av. *jīvya-* 'alive', Indg. *\*gīyó-*. §§ 449—451.

Skr. *jōṣa-* Av. *zaoša-* 'favour, kindness', O.Pers. *dauštar-* 'friend', rt. *geus-*. §§ 402—404.

The transition of Indg. *d<sup>s</sup>d(h)* to *zd(h)* (§ 470) may be regarded as prim. Ar.; it was in any case younger than the change of prim. Ar. *z* to *ž* (§ 591). *z* remained in Iranian; *azd(h)* became *ēd(h)* in Skr., cp. *ōdḥ* from prim. Ar. *aždh* § 404, 2. Skr. *dēhí* Av. *dazdi* 'give' imper., Indg. *\*de-d<sup>s</sup>-dhí*, rt. *dō-* 'give'. Skr. *kiyēdhā-* 'extensive, capax', prim. Ar. *\*kiyad<sup>s</sup>dhā-*

i. e. \**kīyat+dhā-*. Here belongs also *zdh* for Indg. *dh+t* (§ 552). Skr. *mēdhas-* Av. *mazdah-* 'wisdom', prim. Ar. \**mazdhas-*, that is, Indg. \**mṛdh+tos-*, rt. *mendh-*. Av. *ver<sup>o</sup>zda-* 'grown up, powerful' fr. prim. Ar. \**ṽrzdha-* i. e. Indg. \**ṽrdh+to-* (Skr. *vardh-* 'grow'). Osthoff Morph. Unt. IV 261 f. conjectures, that Av. *uz* 'out, upwards' beside Skr. *ud*, is a generalisation of the form regularly developed before *d-*, as in *uz-daēza-* 'accumulation', and that *us* was developed from *ud* in compounds like *us-tāna-* 'stretched out' = Skr. *ut-tānā-*, *us-ca* 'high up' = Skr. *uc-cā*; ep. also Gr. *ύς-πληξ* beside *ύς-τοίχες* and Cypr. Pamph. *ύ* as also Germ. *uz-* § 536 rem.

Rem. This regular state was frequently altered through new formations in Sanskrit and Iranian. Skr. *daddhi* for *dēhi*, *addhi* 'eat' imper. for \**ēdhi*, *ruṃāddhi* 'he checks' (*rudh-*) for \**runēdhi* (*ṛnēdhi* arose at the time when such pres. forms in *-ēdhi* were in existence, see § 404, 2). Av. *masti-* 'insight' for \**mazdi-* i. e. \**mṛdh+ti-* (after the analogy of *cisti-* etc.). See the author in Morph. Unt. III 144 ff., Bartholomae Kuhn's Ztschr. XXVII 360 ff.

§ 477. Prim. Ar. *ž* (= Indg. *ǵ*) became the explosive *j* (§ 402) in Sanskrit, and the *ž* (= Indg. *ǵ*) in *žd ždh* = prim. Ar. *žd, ždh* was lost (§ 404, 1. 2), whereas in *žbh* = Prim. Ar. *žbh* it became *đ* (§ 404, 3).

*-dn-* became *-nn-* : *bhinnā-* 'split, divided', from *bhid-*.

Rem. Analogously *-nn-* from *-dn-* : gen. pl. *šannām* (*šakš-* 'six'), a new formation after *šadbhiš* etc.; on this *đbh* cp. § 591.

No consistency exists in the treatment of *-dm-* and *-gm-*. *kakūnmant-* beside *kakūdmant-* 'providing with a point'. *mṛnmāya-* 'consisting of earth, elay' fr. \**mṛd-māya-*. *vānmāya-* 'consisting of speech' fr. \**vāg-māya-* beside *vāgmīn-* (§ 472 rem.). Whence this fluctuation arises, is not clear to me. Are the forms with *-dm-* and *-gm-* new formations as compared with the others?

§ 478. In Iranian *b, d, g j* apparently remained explosives throughout in O.Pers. and the Gāpā dialect, whereas in later Av. they became the spirants *w, ā, γ ž* medially except after sibilants and nasals, *g* also initially before consonants except *r*.

Late Av. *vaēda* Gāp. *vaēdā* 'he knows' : Skr. *vēda*. *dadmahī* Gāp. *dad<sup>e</sup>mahī* 'we give' : Skr. *dadmasī*. *bāya-* O.Pers. *baga-*

'god' : Skr. *bhága-*. *uyra-* Gāṇ. *ugra-* 'strong, powerful' : Skr. *ugrá-*. *ja-γm-ūši* fem. part. perf. act. from rt. *gem-* 'go' : Skr. *ja-gm-úṣṭi*. *γ<sup>o</sup>nā-* Gāṇ. *g<sup>o</sup>nā-* 'wife' : Skr. *gnā-*. *taeṣā-* 'sharpness, edge' : Skr. *téjas-*, beside late Av. *tiyra-* 'pointed' : Skr. *tigmá-* 'sharp, vehement'.

Rem. 1. *j* is often written for *ž*, e. g. *aojah-* 'strength' : Skr. *ójas-* (§ 451). See Hübschmann Kuhn's Ztschr. XXIV 353, Bartholomae Handb. § 129 rem.

Rem. 2. *der<sup>o</sup>wā-* 'plait' may be held as an example for *v = b* : Skr. (and prim. Ar.) *ḍṛbāhá-* 'knitted, wound' from rt. *derbh-*, it is however not certain, that prim. Ar. *b* was a continuation of prim. Indg. *b*, see §§ 469, 6. 552.

On the other hand the late Av. explosives initially (except *g* before consonants s. above) and after sibilants and nasals. Late Av. *dadmahī*; Gāṇ. *dad<sup>o</sup>mahī*. *hazdyāḥ* : Skr. *sēdyāt*, 3. sg. opt. perf. from rt. *sed-* 'sit', Indg. \**se-zd-žē-t*. *vandaitē* 'he loves' : Skr. *vāndatē* 'he praises'. *gāu-š* 'bullock' : Skr. *gāu-ṣ*. *mazga-* 'marrow' : cp. Skr. *majjan-* fr. prim. Ar. \**mazjan-* (§§ 450. 590. 591). *arəgušta-* 'toe' : Skr. *arəguṣṭha-*.

Prim. Ar. *dy* appears in Av. as *dv*, *db*, *ḍb*, *b*. See § 356.

Late Av. *nm* from *dm* in *nmāna-* : Gāṇ. *d<sup>o</sup>māna-* n. 'house', to Skr. *dāma-s* Gr. *δόμο-s* etc., similar in formation to Gr. *δμη-* in *δέδμη-κα εὔδμητο-s*. Cp. Skr. *kakūnmant-* § 477.

Late Av. *v* fr. *gv*, see § 450.

Prim. Ar. *žn* = Indg. *gn* became *šn*, in Iran. prim. Ar. *žm* = Indg. *gm* became *sm* in Av. See § 403.

§ 479. Mediae aspiratae. Prim. Ar. *bh*, *dh*, *gh* *jh*, *žh* = Indg. *bh*, *dh*, *gh*, *gh*.

Skr. *bhrātā* Av. *brāta* O.Pers. *brātā* 'brother', Indg. \**bhrātō(r)*. § 329.

Skr. *dhārṣ-ā-mi* 'I venture', Av. *darš-i-š* 'vehement, eager', O.Pers. *a-darš-nau-š* 'he ventured', rt. *dhers-*. § 357.

Skr. *gharmā-* Av. *gar<sup>o</sup>ma-* 'heat', rt. *gher-*. Skr. *hānti* Av. *jainti* 'strikes', O.Pers. *ajan-am* 'I struck', rt. *ghen-*. §§ 452—454.

Skr. *hāv-ana-* Av. *zav-ana-* 'call', weak rt. form *ghu-*. §§ 405—407.

§ 480. In Sanskrit *śh* became in the first instance *jh*, e. g. prim. Ar. \**śhau-* 'to call' became \**jhau-*, prim. Ar. \**śhā-* 'leave, forsake' became \**jhā-* (cp. § 406).

Then the law of the dissimilation of aspirates operated, by which the aspiration was dropped when the next syllable began with an aspirate. *bōdhati* 'awakes, is heedful of' fr. prim. Ar. \**bhauḍh-a-ti*, rt. *bheudh-* (Gr. *πένθομαι* 'I inquire', Goth. *ana-biuda* 'I bid, command'). *drōgha-s* 'malicious injury' fr. prim. Ar. \**dhraugh-a-s*, rt. *dhreugh-* (O.Icel. *draugr* 'ghost'). *dādhati* 'places, lays' from prim. Ar. \**dha-dhā-ti*, rt. *dhē-* (Gr. *θήσω* 'I shall put, place'). *durbhiṣ durbhyās durbhyām* (from Indg. \**dhur-'door'*, Armen. *durn*, Gr. *θύρα*, Goth. *daúr*) from \**dhur-bhiṣ* etc.; then after these *dūr-as dvār-as* etc. instead of regular \**dhūr-as* etc.; observe, that the word was current in the Veda only in the pl. and du., fewer case forms than was otherwise usual therefore stood opposite to the *bh*-cases. *jaghāna* perf. 'he struck' fr. prim. Ar. \**jha-ghān-a* Indg. \**ghe-ghon-e*, imper. *jahi* 'strike' fr. prim. Ar. \**jha-dhi* (a new formation for regular \**gha-dhi*, see § 454 rem.) Indg. \**ghṇ-dhī*, rt. *ghen-* (Gr. *φόνος* 'murder'). *jā-hā-ti* 'leaves, forsakes' fr. prim. Ar. \**śha-śhā-ti* (Av. *za-zāiti*) through the intermediate stages \**jhajhāti* \**jajhāti* (s. below). *janṅghā-* 'the lower part of the leg' fr. prim. Ar. \**śhanṅghā-* (Av. *zanṅga-* 'instep', Goth. *gaggs* 'way, street').

From the similar law affecting the tenues asp., which was undoubtedly specially Skr., I conclude that this law of dissimilation operated first in Skr., not already in prim. Aryan. See § 475.

Rem. 1. Forms like *vṛtra-hā-bhiṣ* (*vṛtra-hān-* 'vritra killing') instead of \**ja-bhiṣ* (cp. *jahi* above) are easily explained as new formations. So far as I know, dissimilation never appears, when the two aspirates belonged to different members of a compound, cp. e. g. *abhī-bhūti-ṣ* 'ascendency', *garbha-dhī-ṣ* 'the place for coition, nest', *ahi-hān-* 'serpent-killer'; cp. on the other hand Gr. *ἰκε-χρηία* § 496. It must here be observed that such compounds might have been formed anew, after the above law had ceased to operate, and that the simple form — which was felt as a factor in composition — might always have exercised an influence on the old inherited and actually reproductive forms.

Rem. 2. In forms like 2. sg. *dhatsē* beside 1. sg. *dadhē* 'I place for myself', fut. *bhōtsyātē* beside pres *bōdhatē* 'people often speak, in an

unscientific fashion, of a 'leaping over of the aspiration' on to the media of a preceding syllable. *dhatsé*, *bhōtsyātē* had much rather retained the Indg. initial (Indg. *dhē*, *bheydh-*). *-ts-* was here already in existence before the operation of the law of dissimilation, and when this came into operation there was nothing to be dissimilated in these forms, hence the initial remained intact. Cp. Gr. *θηξ*: *τηξός*; § 496.

Rem. 3. In what manner did dissimilation regularly take place, when aspirates formed the initial sound in three or more syllables? e. g. Skr. *bu-bōdha* 3. sg. perf. = prim. Ar. *\*bhu-bhaydh-a*. This question requires further investigation.

*jh* (= Indg. *gh* and *ǵh*) became *h* after the conclusion of the aspirate-dissimilation, as *hānti* fr. *\*jhanti*, Indg. *\*ghen-ti* (Av. *jainti*), *jāhāti* fr. *\*jajhāti*, prim. Ar. *\*ǵhu-ǵhā-ti* (Av. *zazāiti*).

*h* appears several times for *dh* and *bh* without the reason for the change being clear. Thus *-hi* beside older *-dhi* Gr. *-θι*, ending of the 2. sg. imper.; *-mahē* Av. Gāp. *-maidē* Gr. *-μεθα*, ending of the 1. pl. mid.; *sa-há* beside older *sa-dhá* 'at the same time, with' Av. *ha-ḍā*; *grh-ṇā-mi* beside older *grbh-ṇā-mi* 'I seize'. [Cp. von Bradke Ztschr. d. d. morg. Ges. XL, p. 65 sqq.]

Rem. 4. This change of *dh bh*, which caused the meaning of Skr. *h* to be fourfold, (Indg. *bh*, *dh*, *gh*, *ǵh*), gave rise to several 'deviations' (Entgleisungen). Thus desiderative *jighṛkṣāti* 'he desires to seize' for *\*ji-ghṛps-a-ti*, to *grhṇāmi*.

§ 481. In Iranian prim. Ar. *bh*, *dh*, *gh*, *jh*, *ǵh* fell together with prim. Ar. *b*, *d*, *g*, *j*, *ǵ* (cp. Keltic § 524 and Baltic-Slav. §§ 542. 549). Hence all the mutations, mentioned in § 485, took place here also.

The spirants *w*, *ḍ*, *γ* *ǵ* in later Av. *aiwi* Gāp. *aibī* 'above, thereto, hither': Skr. *abhī*. *awra-* n. 'cloud': Skr. *abhrā-*. Pres. stem *da-ḍā-* Gāp. *da-dā-* 'put, place': Skr. *da-dhā-* prim. Ar. *\*dha-dhā-*. *dar<sup>e</sup>ya-* Gāp. *dar<sup>e</sup>ga-* 'long': Skr. *dirghā-*. *γn-ē* 1. sg. pres. mid. from *jan-* (Indg. *ghen-*) 'slay': Skr. *ghn-ē*. *snaeṣaiti* 'it snows', prim. Ar. *\*snajhati*: Gr. *σειπει* Indg. *\*sneiǵh-e-ti*. *daṣaiti* 'burns': Skr. *dāhati* (cp. *ni-dāghā-s* 'heat'), Indg. *\*dhegh-e-ti*.

Rem. *j* written for *ǵ* e. g. in *ar<sup>e</sup>jaiti* 'deserves, is worth': Skr. *ārhati*, rt. *arǵh-* (§ 429 a). Cp. § 478 rem. 1.

Explosives (*b, d, g j*) in later Av. *barāmi* 'I bear': Skr. *bhārāmi*. *skemba*- 'pillar': Skr. *skambhā*- 'supporting pillar'. *dāma* 'creature': Skr. *dhāma*, rt. *dhē*-. *mīžda*- 'pay, reward': Skr. *mīdhā*- Gr. *μισθός*-. *dazdi* 'give' imper.: Skr. *dēhi*. *bandayēiti* 'binds': Skr. *bandhāyati*. *gar<sup>e</sup>ma*- 'glowing heat': Skr. *gharmā*-. *zarōga*- 'instep': Skr. *jarōghā*-. *jainti* 'strikes, kills': Skr. *hānti*. *renjayēiti* 'he hastens': Skr. *raḡhāyati*.

Late Av. *n* fr. *dn*: *buna*- 'ground, bottom': Skr. *budhnā*-.  
 Late Av. *v* fr. *gv*, see § 453.

Prim. Ar. *žhn*, *žhm* = Indg. *ḡhn*, *ḡhm* became Av. *šn*, *sm*. See § 407.

§ 482. The prim. Ar. combinations *bdh*, *d<sup>h</sup>dh* (thence *zdh* already in prim. Ar.), *gdh*, *ždh* = original *bh*, *dh*, *gh*, *ḡh* + *t* and *bzh*, (*dzh*, thence *zh*,) *gžh*, *žžh* = original *bh*, (*dh*,) *gh*, *ḡh* + *s*. Cp. §§ 469, 6. 470.

Skr. *dybdhá*- 'knitted; tied, wound', Av. *der<sup>e</sup>wāda*- 'plait' (§ 478 rem. 2), rt. *derbh*-. Skr. *mēdhas*- Av. *mazdah*- 'wisdom' = \**m<sup>h</sup>dh*+*tos*-, see § 476. Skr. *drugdhā*- n. 'offence, insult', rt. *dhreugh*-. Av. Gāp. 3. sg. imperf. mid. *aog<sup>e</sup>dā* (*aog*- *aogj*- 'speak, name') = \**ueḡh*+*to*, cp. Gr. *εὔχομαι* *εὔκτο*. Skr. inf. *vōdhum* 'vectum' = \**ueḡh*+*tu-m*, Av. *važdri-š* 'promoter' = \**ueḡh*+*tri*-, rt. *ueḡh*-, see § 404, 2.

Rem. 1. Many exceptions to this law — especially in Iranian — arose through the analogy of other words of the same suffix-category, in which the suffix had *t* (e. g. Skr. *yuktā*- Av. *yuxta*- 'junctus'). Examples: Av. *dapta*- 'deceived, cheated' for \**dawāda* = Skr. *dabdhā*-. Av. O.Pers. *basta*- 'bound' for \**bazda*-, cp. Skr. *baddhā*-, rt. *bhendh*-. Av. *druxta*- O.Pers. *dūrūxta*- 'cheated, belied' for Av. \**druyāda*- (Gāp. \**drug<sup>e</sup>dā*-) O.Pers. \**dūrūgda*- = Skr. *drugdhā*-. Av. *aoxta* beside Gāp. *aog<sup>e</sup>dā*, see above. Av. *vaštar*- 'beast of draught' for \**važdar*- (cp. *važdri-š* above) = Skr. *vōdḡhār*-. Skr. Ved. 2. du. *dhaktam* for \**dagdham* from *dagh*- 'reach to, attain', 1. pl. *daghma*. 3. sg. mid. *dhattē* 'ῥίθεται' probably in the first instance for \**daddhē* (see below). Cp. Lat. part. *com-ēstus* for *com-ēsus*, 2. pl. *ēstis* for \**ēsis* etc., § 501 rem. 2, OHG. *wista* for *wissa* etc., § 527 rem. 3.

The Skr. forms with *dh*, as *baddhā*-, *buddhā*-, arose by attraction to the other forms of the same root, thus also \**daddhē* probably as intermediate stage between \**dēdhē* and *dhattē*. Cp. *daddhi* for *dēhi* § 476 rem. 1, *dididdhi* for \**didāḡhi* § 404 rem. 2.

Skr. *dīpsati* 'intends to injure', Av. *diwšaidiyāi* 'to wish to deceive', desiderat. formations to Skr. *dabh-* Av. *dab-*. Skr. 2. sg. *dhōkṣi* 'thou milkest' (3. sg. *dōgdhī*); Av. Gāp. 2. sg. *aoyžā* (3. sg. *aog<sup>h</sup>dā* see above). Skr. 3. sg. *vákṣat* Av. *važāp* s-aorist to Skr. *váhati* Av. *vazaiti* 'vehit', rt. *uegh-*.

Rem. 2. Examples for *dh + s* seem to be wanting. The *-ts-* in Skr. *bhōtsyātē* (fut. fr. rt. *bheydh-*) cannot be regarded as the regular continuation of *dzh*, because after prim. Ar. *zd(h)* from *dzd(h)* (§ 476) it is probable that *d* became assimilated to the following *zh* already in prim. Ar.

### Armenian.

§ 483. The tenues were very variously treated as regards their form of articulation.

*p* appears as *p̄* in the vicinity of original *s*: *ḥoit̄* 'σπονδή', *eḥem* 'I cook' probably to Gr. *εψω*. As *v* after vowels: *ev* 'and, also', Gr. *ἐν*, *evēn* 'septem'. As *h* (*y*) initially before vowels: *hing* 'πέντε', *heḥi* 'distant' Gr. *πέραν*. See § 330.

Initial *p* disappeared before *l*. *li* (gen. *lioy*) 'full' fr. *\*plē-jo-*: Skr. *prā-tā-* 'filled', Gr. *πλήρης* 'full', Lat. *plē-ni-s*, O.Ir. *lī-naim* 'I fill'. *luana-m* 'I wash': Skr. *plāv-ayāmi* 'I inundate, pour over, wash', Gr. *πλύνω* 'I wash'.

*t* appears as *t* after *s*: *astl* 'star' Gr. *ἀστήρ*. As *t̄* initially before vowels and (under what conditions?) medially: *t̄aram-i-m* 'I become dry, wither' Gr. *τέρομαι*, *ut̄* 'eight' Gr. *ὀκτώ*. *k̄* fr. *ty*: *k̄o* 'of thee' Skr. *tvám*. *t* appears as *d* after *r*, *n*: *mard* 'man, homo' Skr. *mṛtā-*, *dr-and* 'door-post' Lat. *antae*; cp. *g* fr. *k̄* below. See § 360.

Intervocalic *t* became *ḫ* and then disappeared: *hair* 'father' Gr. *πατήρ*, nom. pl. *har-k̄* first probably fr. *\*hair-k̄*. *-aur-* from *-atr-*: *haur* 'father's' Gr. *πατρός*. *-rh-* *-h-* fr. *-rt̄-* or *-rtr-*: *marh mah* 'death' Skr. *mṛtyú-ṣ* or Goth. *maírþr*. See § 360.

*t-* had disappeared initially in *ere-k̄* 'three', first of all from *\*re-k̄*: Skr. *tráyas*. See § 263.

*q* appears as *k* (*k̄*) and *ç* except after nasals and liquids: *akn* 'eye' Lith. *ak-ī-s*; *lk̄-ane-m* 'I leave' Gr. *λιμπάνω*; *aç-k̄* pl. (*i*-stem) 'eyes' Lith. *akl-s*. As *g* after liquids and nasals: *arge*

'impediment' Gr. ἀρρέω; *hing* 'five' Skr. *pāñca*; cp. *d* fr. *t* above. See § 455 1).

Examples for the dropping of *q* are uncertain. See Hübschmann Arm. St. I 76.

*k* generally appears as *s*: *sar* 'height' Skr. *śiras-*. *ç* fr. *sk* (*kšk*, *ssk*) and *ks*: *harç* 'question' Skr. *prchā*, *veç* 'six' Gr. ἕξ. See §§ 408. 561.

Loss of *k* before *t* in *ut* 'eight' (Skr. *aṣṭā*), probably also before *l* in *lu* 'audible' (cp. Skr. *śru-*). See § 408.

§ 484. The mediae *d*, *g* became tenues, *ḡ* became a voiceless affricata. Cp. the shifting of the mediae in Germanic, § 533.

*d* became *t*. *tiv* 'day': Skr. *divā* instr. 'by day'. See § 361.

*g* became *k*. *ker* 'food, meat': Skr. *girāmi*, rt. *ger-*. See § 456.

*ḡ* became *c*. *cer* 'old man': Av. *zaurvā-* 'age', rt. *ḡer-*. See § 409.

Examples for the shifting of *b* to *p* are unknown to me. Cp. § 331.

§ 485. The mediae aspiratae *bh*, *dh*, *gh* became *b*, *d*, *g*; *ḡh* became the voiced affricata *j*, or the voiced spirant *z*.

*bh* became *b*, which remained initially and after *λ*, *r*, *m*, but became *v* after vowels. *ba-n* 'λόγος': Gr. φημι. *elbeur* 'spring, source': Gr. φρέαρ. *arbi* 'I drank': Lat. *sorbeō*. Instr. sg. *akam-b* pl. *akam-bk* from *akan-* 'eye': Skr. *-bhiṣ*. *lus-a-vor* 'clear, bright': Gr. λευκο-φόρο-ς. See § 332.

*dh* became *d*. *diem* 'I suck': Skr. *dhāyāmi*. See § 362.

*gh* became *g*, which remained except before original *e-* and *i-*vowels, before these it passed into *j* initially, and into *ž* medially. *gan* 'strokes, blows': Skr. *ghan-ā-*. *žerm* 'warm': Gr. θερμό-ς. *iž* 'viper': Av. *aži-š*. See § 457.

*ḡh* became *j* initially and after *n* and *r*, and *z* after vowels. *jaune-m* 'I consecrate, sacrifice': Av. *zaotar-*. *anjuk* 'narrow':

1) The *j* in *arj* 'bear': Skr. *ākṣa-s* Gr. ἀρκτο-ς is probably parallel to this *g* and *d*. Cp. § 561.



Av. *qzah.* *barjr* 'high': Av. *ber<sup>o</sup>zant.* *lizu-m* 'I lick': Lith. *lėžiù.* See § 410.

## Greek.

§ 486. The tenues generally retained their form of articulation.

*p.* *πλέ(φ)ω* 'I swim': Skr. *plāv-ē.* See § 333.

*t.* *τάλ-αντο-ν* 'balance': Skr. *tulā-*. See § 363.

*k.* *καρδ-ιά* 'heart': Lat. *cor.* See § 384.

*q.* *καρπ-ός* 'fruit': Skr. *karpāṇa-s.* *πουνή* 'atonement': Av. *kaṛṇā-*. *τὲ* 'and': Lat. *que.* See §§ 425. 426. 427.

These sounds seem to have been spoken with aspiration for a time in some districts, especially in Attica. Owing however to the inexactness and inconsistency of the written language it is impossible to determine accurately how far this tendency extended.

Rem. Many of the cases, where the aspiration was formerly regarded as being purely phonetic, are rather new formations made by analogy, e. g. *ἀλείφω* 'I anoint with oil' (beside *λίπα*, Skr. *limpāṁti*), *δέχομαι* 'I receive' (beside Ion. Dor. Lesb. *δέκομαι*), perf. *τέτροφα τετράφαται* (to *τρέπω* 'I turn'). See Osthoff Zur Gesch. d. Perf. 284 ff. In the same manner mediae also came into the place of tenues, as *κεκλεβίς* (Messen.) to *κλεπ-* 'steal', *ὠρύγην* to *ὄρυκ-*. See Osthoff in the above work.

§ 487. Tenuis became ten. asp. before *ῥ* i. e. voiceless *r* (cp. § 266). *τέθριππο-ν* 'four-horse chariot' = *τέτρηππο-ν* fr. *\*τετρο-ίππο-ν.* *φροῦδο-ς* 'gone away' = *φρόυδο-ς* fr. *\*προ-όδο-ς.* This affection corresponds exactly to *ἔροδος* 'approach' = *ἔπόδος.*

Tenuis became media before media. *ἐγ-δίδωμι* fr. *ἐκ+δίδωμι* (cp. Cret. *ἐδδίηται* with *δδ* fr. *γ-δ*, cp. *νυττί* § 384), *ἐγ-βάλλω*, *ἔγ-γονο-ς*, *ὑβ-βάλλω*. The etymological orthography was frequently used, *ἐκ-δίδωμι* etc., and probably it was also pronounced -*κδ-* etc.

*ντ* = Indg. *nt*, *νq* (§ 427 b) became (*ν*)*δ* in Pamphyl. (for *-(ν)-* cp. § 205). 3. pl. conj. *ἄγω(ν)δι* = Dor. *ἄγωντι.* *πέ(ν)δε* = Att. *πέντε*, Indg. *\*preqde.*

§ 488. *πμ* mostly became *μμ*, Lesb. *ππ.* *ὄμμα* 'eye' fr. *\*ὀπμια*, Lesb. pl. *ὀππατα.* *κέκαμμαι* 'I am bent' from *\*κεκαμμ-μμαι* *\*κεκαμπ-μμαι*, cp. 3. sg. *κέκαμπται.*

When  $\lambda$  in the combination  $\tau\nu\lambda$  suffered epenthesis (cp.  $\tau\epsilon\kappa\tau\alpha\acute{\iota}\nu\omega$  etc. §§ 130. 639),  $\tau$  became assimilated to the  $\nu$  and disappeared.  $\delta\acute{\epsilon}\sigma\text{-}\rho\omicron\iota\nu\alpha$  'mistress of the house' fr. \* $\rho\omicron\tau\text{-}\nu\lambda\alpha$  beside  $\rho\acute{\omicron}\tau\nu\iota\alpha = * \rho\omicron\tau\text{-}\nu\lambda\alpha$ . Cp.  $\rho\acute{\alpha}\iota\nu\omega$  fr. \* $\rho\acute{\alpha}\delta\nu\omega$  § 492.

§ 489.  $\lambda\acute{\iota}$ ,  $q\acute{\iota}$  became a geminated spirant ( $\lambda\lambda$ ?) in prim. Greek; this sound was represented by  $\text{-}\tau\tau\text{-}$  medially in Bœot., Thess., Att., and in the other dialects by  $\text{-}\sigma\sigma\text{-}$ , but initially universally, as it seems, by  $\sigma\text{-}$ . On account of the vowel-length in  $\lambda\acute{\lambda}\acute{\alpha}\tau\tau\omega\upsilon$  (§ 479) it must be assumed that  $\tau\tau$ , and  $\sigma\sigma$  arose first from a geminated spirant, since  $\alpha\nu$  would not have been subjected to the process of compensation lengthening before an explosive. Cp. § 427 *d*.  $\mu\acute{\alpha}\sigma\sigma\omega\upsilon$  'longer' (to  $\mu\alpha\kappa\rho\acute{\omicron}\text{-}\varsigma$ ): Av.  $mas\text{-}y\acute{d}$  'greater'.  $\rho\acute{\alpha}\sigma\sigma\alpha\lambda\omicron\text{-}\varsigma$  'plug, nail', rt.  $\rho\acute{\alpha}\lambda\text{-}$  (Skr.  $\rho\acute{\alpha}\acute{s}\acute{a}\text{-}s$  'string, sling').  $\rho\acute{\epsilon}\sigma\sigma\omega$   $\rho\acute{\epsilon}\tau\tau\omega$  'I cook', rt.  $\rho\epsilon\tau\text{-}$ .  $\delta\acute{\omicron}\sigma\sigma\epsilon$  'both eyes': Lith.  $ak\acute{i}\text{-}s$ . Hom.  $\sigma\epsilon\tilde{\upsilon}\epsilon$  ( $\xi\text{-}\sigma\sigma\epsilon\upsilon\epsilon$ ) 'he drove, hunted, scared': Skr.  $cyav\text{-}cyu\text{-}$  'put in motion'. Megar.  $\sigma\acute{\alpha}$  'tina' fr. \* $\lambda\acute{\iota}\text{-}a$  beside  $\acute{\alpha}\text{-}\sigma\sigma\alpha$   $\acute{\alpha}\text{-}\tau\tau\alpha$  (on  $\acute{\alpha}\text{-}$  s. § 654). In Att.  $\tau\epsilon\nu\mu\acute{\alpha}\omicron\mu\alpha\iota$  'I pursue' and  $\tau\epsilon\nu\tau\acute{\alpha}\zeta\omega$  'I busy myself eagerly with something', in case they are from the same root as Hom.  $\sigma\epsilon\tilde{\upsilon}\epsilon$ , the initial  $\tau$  may have come from the augmented and reduplicated forms.

$t\acute{\iota}$  became  $ss$  in prim. Gr. Hence universally  $\sigma$  after consonants. Fem. Cret.  $\rho\acute{\alpha}\nu\sigma\alpha$  Att. etc.  $\rho\acute{\alpha}\sigma\alpha$  Lesb.  $\rho\acute{\alpha}\sigma\alpha$  'tota' (§ 205) fr. \* $\rho\acute{\alpha}\nu\tau\text{-}\lambda\alpha$ .  $\delta\acute{\omicron}\delta\acute{\alpha}$  'doctrine, opinion' fr. \* $\delta\omicron\kappa\text{-}\tau\text{-}\lambda\alpha$ .  $\kappa\alpha\mu\phi\acute{\omicron}\text{-}\varsigma$  'bent' (Hesych.) fr. \* $\kappa\alpha\mu\pi\text{-}\tau\text{-}\lambda\omicron\varsigma$ . Cp. the  $\sigma\text{-}$  of  $\sigma\acute{\epsilon}\beta\epsilon\tau\alpha\iota =$  Skr.  $ty\acute{a}j\acute{a}t\acute{e}$  (cp. § 428 *a*), which probably arose from Indg.  $tj\text{-}$  (§§ 117. 598). Otherwise medial  $\sigma\sigma$ , which was retained in Homer and elsewhere, seems to have become regularly partly  $\sigma$  (Ion. Att.), and partly  $\tau\tau$  (Bœot. Cret.).  $\tau\acute{\omicron}\sigma\sigma\omicron\text{-}\varsigma$  'tantus'  $\rho\acute{\omicron}\sigma\sigma\omicron\text{-}\varsigma$  'quantus',  $\tau\acute{\omicron}\sigma\sigma\omicron\varsigma$   $\rho\acute{\omicron}\sigma\sigma\omicron\varsigma$  (cp.  $\mu\acute{\epsilon}\sigma\sigma\omicron\text{-}\varsigma$   $\mu\acute{\epsilon}\sigma\omicron\text{-}\varsigma$  § 497), Bœot. Cret.  $\acute{\omicron}\text{-}\rho\acute{\omicron}\tau\tau\omicron\text{-}\varsigma$ . With this  $\tau\tau$  cp. Bœot.  $\kappa\omicron\mu\iota\tau\acute{\tau}\acute{\alpha}\mu\epsilon\upsilon\omicron\varsigma =$  Hom.  $\kappa\omicron\mu\iota\sigma\acute{\delta}\acute{\alpha}\mu\epsilon\upsilon\omicron\varsigma$  fr. \* $\kappa\omicron\mu\iota\tau\sigma\acute{\alpha}\mu\epsilon\upsilon\omicron\varsigma$ , Cret.  $\delta\acute{\alpha}\tau\tau\alpha\theta\theta\alpha\iota =$  Hom.  $\delta\acute{\alpha}\sigma\sigma\alpha\theta\theta\alpha\iota$  fr. \* $\delta\alpha\tau\sigma\alpha\theta\theta\alpha\iota$ .

Rem. 1. The regular representatives of  $\lambda\acute{\iota}$ ,  $q\acute{\iota}$  mostly appear for  $t\acute{\iota}$  e. g. Att.  $\acute{\epsilon}\rho\acute{\epsilon}\tau\tau\omega$  ( $\acute{\epsilon}\rho\acute{\epsilon}\sigma\omega$ ) fr.  $\acute{\epsilon}\rho\epsilon\tau\text{-}$  like  $\phi\acute{\rho}\acute{\epsilon}\tau\tau\omega$  ( $\phi\acute{\rho}\acute{\epsilon}\sigma\omega$ ) from  $\phi\acute{\rho}\epsilon\kappa\text{-}$ ,  $\kappa\acute{\rho}\acute{\epsilon}\tau\tau\omega$  ( $\kappa\acute{\rho}\acute{\epsilon}\sigma\omega$ ) fr.  $\kappa\acute{\rho}\epsilon\tau\text{-}$  like  $\eta\acute{\tau}\tau\omega$  ( $\eta\acute{\tau}\sigma\omega$ ) from  $\eta\acute{\kappa}\text{-}$ . These were probably new formations after the analogy of those with original  $\lambda\acute{\iota}$ ,  $q\acute{\iota}$ . Cp. the author's Griech. Gramm. p. 36 note 1.

The Indg. combination *ti* appears medially, in most dialects, generally as *si* after other sounds than *s* (cp. ἔστι, πῶστι-ς). Att. δίδω-σι 'gives': Skr. dáda-ti; βή-σι-ς 'step, stride': Skr. gá-ti-ḥ; ἀνεψιός 'first cousin': O.Bulg. netijǎ cpf. \*nept-iŋo-s.

Rem. 2. The combination -τι was frequently retained in Bœot., Pamphyl. and Dor., where the other dialects had -σι, as Dor. δίδωτι πλούτιο-ς. But also in those dialects, which show -σι, -τι occurs beside this, as Ion. Att. ἔτι, αἴτιο-ς (cp. πλούσιο-ς), ἀντί, κέρατι, φάτι-ς (cp. φάσι-ς). Form-transference may be assumed in many cases, e. g. κέρατι after κέρατος etc.; σκότιο-ς after σκότος-ς; φάτι-ς μάρπτι-ς μάντι-ς after the cases with -τέη-. Cp. Hom. Ποσειδάων Arcad. Ποσειδάωνος Lac. Ποσιδάωνος with σ instead of τ (Bœot. Ποτειδάων Ποτειδάωνος) after Ποσιδ- in Hom. Ποσιδήιος etc. Nevertheless this does not clear the matter up satisfactorily. It is questionable, whether -σι did not already arise, to a certain extent, in prim. Greek. Such a great antiquity is especially to be conjectured for the -σι in nouns like βήσι-, since these also occur with σ in Bœotian and the whole of Doric.

In Lac. and Cypr. σ = τί, in Cypr. at the same time the σ of -σι = -τι passed into *h*: Lac. part. fem. ἐν-ῆβιώαις, Cypr. 3. pl. conj. φρονέωι. This σ became ρ in Eretria: part. fem. ὀμνονύρας, 3. pl. conj. παρα-βαίνωριν.

Medial *tu* became σσ in Ion. etc., and ττ in Bœot. and Att. Hom. τέσσαρες Herod. τέσσερες Lesb. πέσσυρες Arcad. τεσσαρόκοντα + Bœot. πέτταρες Att. τέτταρες 'four': Skr. catvāṛ-as. Initially: Cret. τFέ 'thee' (wrongly written τρέ in Hesych.) Dor. τέ Bœot. τίν Lesb. Ion. Att. σέ: Skr. tvá-. On the enclitic Ion. Att. etc. τοῖ see § 187.

§ 490. *ts* became σσ in prim. Greek, thence σ in later times. Hom. aor. πάσσασθαι ἐπάσαντο fr. \*πατ-σ-: pres. πατέομαι 'I eat, consume'. Hom. aor. ἐφ-εσσάμενο-ς ἀν-έσαντες fr. \*ἐτ-σ-: ἔδ-ος 'seat'. Hom. ποσσί ποσί Att. ποσί fr. \*ποσι: πόδ-ες 'feet', cp. Skr. patsú. Correspondingly Indg. *tʰst(h)* became *st(h)* in prim. Greek. ἄ-παστο-ς 'jejeune': πατ-έομαι. ἴσσι 'ye know' οἶσθα 'thou knowest' (Skr. vṛttha): ἴδ-μεν οἶδ-α. Cp. σθ fr. dʰdh § 494.

σκ from κσκ. διδάσκω 'I teach': δι-δακ-τό-ς, Lat. di-dic-ē. ἐίσκω 'I make like': ἔοικα. Bœot. ἐς-κη-δεκάτη = ἐξ-κ. Cp. also ἐς- fr. ἔξ- 'ex' in Arcad. ἐςδοτηῆρες, Bœot. Gortyn ἐς τῶν.

τρά-πέζα '(four-legged) table' fr. \*πτρα-, Indg. \*qtuz-, cp. Skr. tūrṅa- § 471.

§ 491. In most dialects, e. g. Ion.-Att., the mediae were voiced explosives in the oldest monuments.

*b.* βάββαρο-ς 'foreign': Skr. *balbalā-karōmi*. See § 334.

*d.* δέκα 'ten': Skr. *dāśa*. See § 364.

*g.* γεῖω 'I let taste': Av. *zaoša-* 'favour, kindness', rt. *geus-*. See § 385.

*g.* ἐρσέγομαι 'I spit out': Lith. *rūgiu*, rt. *reug-*. βοῶς 'bullock': Skr. *gāū-ṣ*, Indg. *\*gōw-s*. δελφύ-ς 'womb': Skr. *gārbha-s*, rt. *gelbh-*. See §§ 425. 426. 428.

The voiced mediae became voiced spirants. We may conclude that β had already become *b̄* in Lac. and El. before the beginning of the Roman period, from the fact that *u* (*F*) was represented in these dialects by β. In the oldest El. monuments δ appears as ζ i. e. *ā*, e. g. ζέ, ζέκαια, Φειζώς; this affection, so far as we can see, did not take place in the other dialects until later. Forms like *ύγγαίνις*, *Σαραπιγῆον*, *κλαίγω*, occurring in the second century B. C., exhibit the transition of γ into the spirant *j* (in any combination whatever). The γ, which here represents the consonantal *i*, is only conceivable on the supposition that it denoted elsewhere a spirantal sound; the loss of γ after ι in Bœot. *ιών* = *έγών*, Tarent. and elsewhere *ὀλιος* = *ὀλίγος* etc., also points to this change.

In Arcad. ζ was also written for δ = Indg. *g*, e. g. ζέλλω beside *δέλλω* 'I throw'. Hence a spirant was also spoken here. Cp. § 428 *b*.

§ 492. βν, βμ became μν, μμ in prim. Greek. μνάομαι 'I woo to wife' from *\*βνā-* 'wife', Indg. *\*gnā-*, see § 428 *a*. σεμνό-ς adjectival part. to σέβομαι 'I feel awe', rt. *tjeg-*, see § 428 *a*. τριμμα (τριμμα) 'that which is rubbed', perf. mid. τίτριμμα, to τρίβω 'I rub'.

In like manner *gn*, *gm* probably became *ɳn*, *ɳm*<sup>1)</sup> in the same period. γί-γν-ο-μαι 'am born' i. e. *gɳnomaῖ*. στυγ-νό-ς

1) For the grounds on which this theory is based see Ebel Kuhn's *Ztschr.* XIII 264, Westphal *Method. Gramm.* I 1, 17, the author in Curtius' *Stud.* IV 103 f., L. Havet *Mém. de la soc. de lingu.* IV 276.

'hated' i. e. \**stynanos*. *ison* became *in* in Dor., Thess., Bœot. and later Att., as Dor. γίνομαι γινώσκω (cp. § 618). ἀγ-μύς 'breakage' i. e. \**anamos*. *ragm* became *am* (written γμ) through the intermediate stage *ramm*, just as *mrm* became *mm* through *mmm* (§ 488): ἔφθεγμα, ἐλήλεγμαι beside -γζαι -γκται.

ραίνω 'I sprinkle' fr. \*ῥαδ-νιω (Osthoff Zur Gesch. d. Perf. 457 ff.), like δέσ-ποινα fr. \*-ποτνια, see §§ 488. 639.

Lac. ἐλλά 'seat' fr. \*ἔδ-λα, see § 364.

§ 493. *dī*, *gī*, *qī* became one sound, which was mostly written ζ. Ζεύς: Skr. *dyāvī-ṣ*; πεζός 'on foot', to πεδά πέδο-ν ἄζομαι 'I stand in awe of', to ἄγιο-ς, Av. *yazaitē*, rt. *iaq-*. ζῆ 'lives' fr. \*ζηει, to Av. *jyāiti-*, stem *gīē-*; νίζω 'I wash', to νίπτρο-ν, rt. *neiq-* (cp. § 428 d).

*oδ* was also written for ζ in Lesb., e. g. ἐικάσδω. -δδ-, for which, initially, δ-, appears in Lac., Gortyn, Bœot., and Megar., e. g. the verbal endings -άδδω -ιδδω = -άζω -ιζω, Δεύς = Ζεύς, δωός = ζωός. Seldom τ = ζ in Cret., as Τῆνα = Ζῆνα, also Ττῆνα.

Owing to the uncertainty which exists regarding the value of these different letters, it is impossible to determine accurately the course of development, which the prim. Gr. combinations *dī*, *gī*, *g<sup>h</sup>i* passed through.

Rem. ζ was probably pronounced *zδ* in Ion.-Att.; cp. O Bulg. *žd* fr. *dī* § 147 rem. 1. δδ might possibly go back first of all to *zδ* — or *žd* —. See the author's Griech. Gramm. § 52 with addendum to p. 47, G. Meyer Gr. Gr.<sup>2</sup> 274 f.

§ 494. ἴσθι i. e. *isthi* arose fr. Indg. \**uid<sup>h</sup>dhi* 'know' imper. (cp. Skr. *viddhi*, § 476). Whether the intermediate stage was \**uid<sup>h</sup>dhi* or \**uitsthi*, remains doubtful. Gr. κύσθο-ς 'a hollow, pudenda muliebria' was probably a similar case (§ 469, 5).

§ 495. The mediae aspiratae *bh*, *dh*, *gh*, *qh* became tenues aspiratae in prim. Greek. These then probably remained unchanged in most dialects, certainly e. g. in Ion.-Att., down to historic times.

*bh*. ὀφρῶ-ς 'eye-brow': Skr. *bhrū-ṣ*. See § 335.

*dh.* *θυμός*-ς 'heart, courage, passion': Skr. *dhū-má*-s. See § 365.

*gh.* *ἔχω* 'I have, hold': Av. *haz-ah-*, rt. *segh-*. See § 386.

*gh.* *λέχος* 'bed': O.Bulg. *leqa*, rt. *legħ-*. *φόνος* 'murder' and *θείνω* 'I strike': Skr. 3. pl. *ghn-ánti*, rt. *ghen-*. See §§ 425. 426. 429.

The tenues aspiratae became voiceless spirants in most combinations, through the intermediate stage of affricatae. We are not in a position to determine precisely the place and time of this shifting, since the written language offers too few sure holds. The affricata-stage seems to occur in such spellings as *ὄκχος σκύπρος* and in measures like *ὄφιν* (Hom.) *βρόχον* (Theognis) as trochees. Cp. Roscher Curtius' Stud. I 2, 63 ff. Blass Auspr.<sup>2</sup> 84 ff. [G. Meyer Gr. Gramm.<sup>2</sup> 207 ff.]. Spirantal value (*ḫ*) can be established most extensively for *θ*. *θ* remained an explosive in Cret. (Gortyn) before *ρ ν*, as is seen by the writing *τρ τυ*, and was a spirant before vowels. *θ* probably only remained an explosive after *σ* in Bœot., El., and Loer. (cp. Att. *ἔστι* beside *δίδωσι*, § 489), hence the writing of *στ* for *σθ*. In Lac., where *ḫ* can be established with the greatest certainty, it passed (before palatal vowels?, see Baunack Die Inschr. von Gortyn p. 36) further into *σ*, as *Σίων* = *Θέων*. *θ* as *ḫ* became *f* in Bœot. and Epir., as is shown by the writing *φ* in *φρός* = *θρός* etc. This *φ* also shows that prim. Gr. *ph* (*φέρω*) had become *f* in these dialects.

Rem. The often assumed change of prim. Gr. tenuis asp. to media never existed. In cases like *στέμβω* beside *ἀστεμφής*, *πύδαξ* beside *πυθμήν* it is a question of Indg. media (§ 469, 8), whereas in such as *κατα-λέγμενος* (beside inf. *κατα-λέχθαι*, rt. *λεχ-*), *δράγμα* 'handful' (to *δραχμή* *δράσομαι*, Skr. *darh-* 'fasten') we have merely new formations, made after the analogy of similar forms from roots with media (Osthoff Zur Gesch. d. Perf. 301 ff.).

§ 496. The tenuis aspirata lost its aspiration in prim. Greek, when a tenuis aspirata followed at the beginning of the next syllable. *τίθημι* 'I place' fr. *\*thi-thē-mi*, aor. *ἔτεθην* fr. *\*e-the-thēn*, rt. *dhē-*. *ἐπύθετο* 'he inquired for' fr. *\*e-phuth-e-to*, rt.

*bheǵdh-*. Gen. τριχ-ός 'hair's' fr. \**thrikh-os*. ἐνε-χειριᾶ 'cessation of hostilities', Delph. Ἐκέ-φῦλο-ς fr. \**ekhe-kh*, \**ekhe-ph*.

θριξ: τριχός and θέσσασθαι: πόθο-ς (§ 429 *b*) = Skr. *dhatsé: dadhé*, see § 480 rem. 2. Hence forms like πεύσομαι πύστις, πείσω πίστις (rt. *bheǵdh-*) are shown to be new formations for \**φεύσομαι* etc.; cp. fut. αὔσω for regular αῶσω § 564.

The remark, made in § 480 rem. 1 on Skr. *vṛtra-hábhīṣ abhī-bhūti-ṣ*, also holds good for the forms ἐχύθην (χέω 'I pour out'), θεθμός Locr. 'statute' beside τεθμός Pind., θίθεθθαι Cret. Gort. = τίθεσθαι, ἀμφι-φαλο-ς 'having a double comb', ἀμφι-χέω 'I pour around', παχύ-χῦμο-ς 'with thick juices' etc.

It is difficult to ascertain in what manner the law of the dissimilation of aspirates operated in cases where three or more aspirates followed one after the other (cp. *πέποιθε*, prim. Gr. \**phe-phoǵth-e*, *τέθητι* prim. Gr. \**the-thē-thi*). Only so much is as yet clear, that the regular operation had been crossed in many ways by analogical formations. Cp. Osthoff's attempt in his *Zur Gesch. d. Perf.* 305.

§ 497. Indg. *dhǵ, ghǵ, ghǵ* as *thi, khǵ, khǵ kh<sup>h</sup>ǵ* fell together in prim. Gr. with *tǵ, kǵ, kǵ k<sup>h</sup>ǵ* and accordingly experienced the same treatment as these (§ 489).

*μέσο-ς μέσο-ς* 'medius' (Skr. *mádhya-s*) like *τόσο-ς τόσο-ς. ἄσων* 'nearer' (*ἄγχι*, root *añgh-*) like *μάσων*.

*ἐλάσων ἐλάτων* 'less' (*ἐλαχύ-ς*: Skr. *laghú-ṣ*) like *πέσσω πέττω*.

#### Italic.

§ 498. The tenues remained unshifted on the whole.

*p.* Lat. *pāx*, Umbr. *pase* 'pace', Osc. Paakul 'Paculus': Skr. *páśa-*. See § 336.

*t.* Lat. *tono-s tuo-s*, Umbr. *tover* 'tui', Osc. *tuvai* 'tuae': Skr. *táva*. See § 366.

*k̄.* Lat. *cl̄-nō*, Umbr. *kle-tram* 'lecticam': Skr. *śráy-a-ti*. See § 387.

*q.* Lat. *canō*, Umbr. *kanetu* 'canito': Skr. *kan̄-kan-ī*. Lat. *quis-s*, Umbr. Osc. *pi-s* 'quis': Av. *ci-š*. See §§ 430. 431.

Where shifting of the tenues happened through sound-change, in combinations, it is frequently not evident — owing to the scantiness of the Umbr.-Samn. monuments — whether this change is to be regarded as having taken place in prim. Italic or only in single dialects.

§ 499. Lat. *b* from *p* before voiced explosives. *ob-dūcō*, *ab-dūcō*, *sub-dūcō*: cp. *op-eriō* 'I close', *ap-eriō* 'I open' (cp. Skr. *ar-* 'move something', *apa+ar-* 'remove, put aside, open'), Osc. *op eizois* 'apud eos', Gr. ἄπο, Lat. *super* Gr. ὑπο. Hence probably original *p* in *optineō*, *suppōnō* etc.; *ab-* *ob-* *sub-**eō* made by analogy; *abs*, *obstrūdō*, *obtrūdō*, *subter* etc. phonetically wrongly spelt.

Lat. Umbr. *g* from *c* in the combination *-akl-*. Lat. *angulu-s*, Umbr. *anglom-e* 'in angulum' fr. \**aaklo-* (§ 269), to Lat. *ancu-s uncu-s*. Lat. *singulu-s* fr. \**sem-klo-* (§ 269). The cause of the same change is less clear in *septin-gentī nōn-gentī* beside *du-centī* (Gr. ἑπτα-κόσιοι); *vīgintī* beside *vīcēsīmus* no doubt owed its *g* to form-transference. Cp. Thurneysen Kuhn's *Ztschr.* XXVI 312 f.

Media from tenuis after nasals and before *r* in Umbrian. *tursiandu* 'terreantur'. *ander* 'inter'. *an-dendu* 'intendito' fr. \**an-tenttu* i. e. \**an-tend-tō*. *ivengar* pl. 'iuvencae'. *abrof* 'apros'. *subra* 'supra'. *adrer* 'atris'. Cp. also Osc. *embratur* 'imperator'.

§ 500. Lat. *mn* fr. *pn*. *somnu-s*: *sopor*, Skr. *svāp-na-s* etc., see § 324. *omni-s* fr. \**opni-s*, to *ops opēs*. Cp. *mn* fr. *bn* § 506.

Lat. *æn* (written *gn̄*) from *cn* already in prehistoric times. *dīgnu-s* fr. \**decno-s*: *decus*; *tīgnu-m* fr. \**tecno-m*, to Gr. τεκ- (cp. § 65 p. 53). *īlīgnu-s* *īlīgneu-s*: *īlex -icis*. *āgna* 'spica' (Saliar hymn), to *acus* 'chaff', Goth. *ahana*, OHG. *agana* 'chaff' (otherwise Kluge Kuhn's *Ztschr.* XXVI 88, who postulates Indg. *akh-* because of Gr. ἄχνη 'chaff, foam'). *nīxu-s*, too, fr. \**cnīxo-s* (rt. *kneigh-*, § 433 b) had passed through the stage *ænīxo-s* (cp. *Gnīxī dī*). Analogously Umbr. *co-negos* *ku-nikas* 'conixus'<sup>1</sup>). On *æn* fr. *gn* (with original media) cp. what is said in § 506.

1) Cp. also Lat. *cygnu-s* beside *cycnu-s* fr. Gr. κύκνος, *Prognē* fr. Πρόγνη, *Gnōssu-s* fr. Κνωσσός.



Lat. *mm* fr. *pm. summu-s*: *superior*. So also Umbr. *somo* 'summum'.

Lat. *nm* (written *gm*) fr. *cm. sēgmentu-m*: *secāre*. Cp. *nm* fr. *gm* with original *g*, § 506.

§ 501. The change of *ts* to *ss* seems to have been prim. Italic. After a long syllable and finally *ss* became *s* in Lat.

Lat. *con-cussī*: *con-cut-iō. suāsī* fr. *\*sūātsī*: *suād-eō. scāla* fr. *\*scanslā* *\*scantslā*: *scandō* (§ 208 pp. 175—176). *novi-tās* fr. *\*-tāt-s. ferēns* fr. *\*ferent-s. con-cors* fr. *\*-cort-s* (gen. *-cord-is*). That *-ss* = *-ts* had not yet fallen together with Indg. *-s* after nasals and liquids in Latin, follows from the contrast of *ferēns* with *ped-ēs* Indg. *\*-ŋs* (§ 208 p. 175) and of *con-cors ars* etc. with *par fūr* (§ 655, 9). Cp. also the contrast of *penna* O.Lat. *pesna* fr. *\*pet-snā* with *pēni-s* fr. *\*pes-ni-s* (Skr. *pās-as* Gr. *πέος* 'penis'), § 570.

Umbr. *zeřef serse* 'sedens', *kutef* 'cautus' ('cautens', as it were), Volsc. *asif* 'incendens, adolens flammis'. *-f* first of all fr. *-p*, further fr. *-ns* = *-nts*, see § 209.

Where *ts* (*z*) appears in Umbr.-Samn., it was of later origin: in Umbr. *pihaz* 'piatus' Osc. *húrz* 'hortus' etc.; in Osc. *az* 'ad', an extension of *ad* after the analogy of Ital. *aps, ops, eks*; in Umbr. *-nts-* fr. *-ns-* (§ 209).

The change of *ts* to *ss* was repeated in Latin. *possum* fr. *\*pot-sum*, which was either a new formation after *potest* (fr. *pote est*) or had arisen by syncope (§ 633) fr. *\*póte-sum*.

Rem. 1. Compounds like *assequor* fr. *\*atsequor* (*ad sequor*) were formed at various periods of the language. It is difficult to say, in which examples *ss* had arisen regularly, and in which by analogy.

Indg. *t<sup>st</sup>t* apparently became *ss* everywhere except before *r*<sup>1</sup>) in prim. Italic, thence *s* after long syllables. Lat. *ob-sessu-s*: Skr. *sattá-* Av. *hasta-*, Indg. *\*set<sup>st</sup>to-s* i. e. *\*sed+to-s*, rt. *sed-sit*. *fassu-s*: *fateor. fossu-s*: *fodiō. vorsu-s*, Umbr. *trah-vorfi* 'transverse' (*rf* from *rs*, cp. § 209): Skr. *vřttá-* 'versus', O.Bulg. *vřřta* f. 'state, situation', Indg. *\*vřt<sup>st</sup>to-s*, rt. *vřert-* 'vertere'.

1) And except finally? Cp. Lat. *ēst* 'eats' from rt. *ed-*.

*morsu-s* : *mordeō*. *scānsu-m* : *scandō*, cp. Skr. gerund. *skanttvā*. *vīcēnsimū-s* *vīcēsīmus* : Bæot. *Ἰκαστό-ς*, cpf. \**uīknt<sup>s</sup>to-*. *vīrōsu-s* fr. \**uīso-unt<sup>s</sup>to-s*, see § 238. *ūsū-s* *ūsiō* fr. \**oiso-s* \**oisiō*, Pelign. *oisa* abl. 'usa, consumpta' : *oetor* *ūtor*. Cp. also *fīsu-s*, with which Bücheler connects Umbr. *Fisiu* abl. 'Fisio', from *feidō* *fīdō*, rt. *bhejdh-* (§ 552).

Rem. 2. Lat. *ēstis* *ēste* (rt. *ed-*) for \**ēsis* \**ēse* after the forms of other verbs in *-tis -te*. *com-ēstu-s* for and beside *com-ēsu-s* after forms like *ges-tu-s*, etc.

*cette*, *mattu-s*, O.Lat. *ad-gretu-s* by syncope (§ 633) fr. \**ced(i)te*, \**mad(i)to-s*, \**ad-gred(i)to-s*; cp. *alītu-s* and *alītu-s*, *ē-licītu-s* and *al-lectu-s*. Correspondingly Osc. *úittiuf* 'usio, usus' fr. \**oit(i)tiuf* (cp. Lat. *vomitīō*). This new *tt* remained unchanged like the *tt* in *attulī* fr. *ad tulī*. Cp. the author in Morph. Unt. III 133 f., Osthoff Zur Gesch. d. Perf. 555 ff.

On the other hand *t<sup>s</sup>tr* became *str*. *pedestri-s* : *pedit-ēs*. *assestrīx*, *ēstrīx* to *sed-*, *ed-*. Umbr.-Samn. examples are wanting.

Rem. 3. That the course of development was not here *ssr* — *sr* — *str*, as some maintain, but that the *t* e. g. in *ēs-trī-x*, was the same as that in *vīc-trī-x*, follows from the fact that *sr* did not become *str* but *fr* — *br* (§ 570).

The Italic treatment of Indg. *t<sup>s</sup>t* was precisely parallel to that of the Germanic. See § 527.

On initial *s-* fr. *ps-* and *x-* see § 568, 2.

Lat. *ff* from *pf* : *offerō*, *sufferō*.

Osc. *meddīss* *meddīs* 'meddix', cp. Lat. *jū-dex*; nom. pl. *meddīss* beside *μεδδειξ* fr. \**-dik-(e)s*. Umbr. *osatu* 'operato, facito' *oseto* 'facta' beside Osc. *úpsannam* 'operandam, faciendam'.

§ 502. Prim. Ital. *kt* passed into *xt* (*ht*) in Umbr.-Samn., and prim. Ital. *pt* into *ft* (in Umbr. further into *ht*). Umbr. *rehte* 'recte', *aan-fehtaf* 'infectas', *uhtur* 'auctor'. Osc. *saah-túm* 'sanctum', *Úhtavis* 'Octavius'. Umbr. *screhto* 'scriptum', Osc. *scriftas* pl. 'scriptae'.

The combination *kt* arose anew in Umbr.-Samn. by vowel syncope (§ 633) and was now treated differently from prim. Italic *kt*. Osc. *factud* 'facito', *actud* 'agito'. Umbr. *feitu* *fetu* *feetu* 'facito', *aitu* 'agito', to which *ař-veitu* *ars-veitu* 'advehitō' (rt. *uegh-*) joined itself.

Rem. Prim. Italic *k*\* = Indg. *q* seems to have remained an explosive both where it was followed by a *t* in prim. Italic, and where it later came together with *t* by syncope. Osc. Πομπτιεϛ 'Quinctius', Indg. \**perqto-* 'quintus'. Umbr. *ninctu* 'ninguito' (cp. § 570), *fiktu* 'figito' (O.Lat. *fivere* beside *figere*, *fibula* fr. \**fi(g)me-blā*), *umtu* 'unguito' in the first instance from \**umptō*.

*k* became *ś ś* before *e-* and *i-*vowels in Umbrian, e. g. *faśia* 'faciat'. See § 387. How the form *feia* beside *faśia* is to be explained, I am unable to say. Cp. *muieto* 'muttitum', where *i* seems to express a voiced spirant (§ 508).

Osc. *s* fr. *tj*. *Bansae* loc. 'Bantiae', cf. *Bantins* 'Bantinus'.

§ 503. Loss of *tenuēs* in consonantal groups.

Lat. *poscō* fr. \**porc-scō* : *prec-or* (§§ 269. 288). *miscēō* fr. \**mic-scēō* : Skr. *miś-rā-* 'mixed'. *illūstri-s* fr. \**in-louc-s-tri-s* : *lūc-eō*. *discō* from \**ditcscō* i. e. \**di-dc-scō* : *di-dic-ī*, cp. Gr. δι-δά(χ)-σκω § 490. *asportō* fr. \**aps-portō* : *abs* i. e. *aps. ostendō* fr. \**ops-tendō* : ob. *sternuō* fr. \**pster-* : Gr. πτόρνυμαι 'I sneeze' fr. \**πσταρ-*.

Lat. *lūna*, O.Lat. inscrip. *losna* fr. \**louc-s-nā* : Av. *raoxšna-* 'shining, luminous'. *sēnī* fr. \**sexnī. sēmēnstri-s* fr. \**sex-mēnstri-s. sub-tēmen* fr. \**-teimen*. *āla* fr. \**axlā* : *axilla*, OS. *ahsla* 'axilla'. *ē-nūntiō ē-mergō ē-ligō ē-dō* fr. \**ex-nūntiō* etc. (cf. *dī-numerō dī-moveō dī-luō dī-dūcō* fr. \**dis-numerō* etc.). Cp. § 570.

Lat. *mulsi*, *fulsi* fr. \**mulxi*, \**fulxi*. *ursu-s* fr. \**urxu-s* : Skr. *fkṣā-s. torsī, sparsī* fr. \**torxi*, \**sparxi*. *ultu-s* fr. \**ulctu-s. tortu-s* fr. \**torctu-s*, cp. *forti-s* O.Lat. *forti-s* : Skr. *dydhā-s* (§ 295). *quintu-s* (beside inscrip. *Quinctu-s*), but *junctu-s fūctu-s* with *c* probably not without the influence of *jungō jūnxi, fungor; defuntus, nantus, santo* first on late inscriptions. *urna* fr. \**urnā* : *urceu-s. pāstu-m* from \**pāscu-m, postulō* fr. \**po(r)sctulō*, formed from the presents *pā-scō po-scō*.

*l-* from *spl-* *stl-* through the intermediate stage *sl-*. *lien* : Gr. σπλήν. *locu-s, līs* fr. O.Lat. *stlocu-s, stlīs*. The stage *stīs* is found twice on inscriptions. On *ilicō* cp. § 570.

Umbr. *ostendu* 'ostendito' fr. \**ops-t*. Cp. also *osatu* 'operato, facito', § 501.

§ 504. The mediae generally retained their form of articulation.

b. Lat. *bibō* : Skr. *pībāmi*. See § 337.

d. Lat. *dīcō*, Umbr. *deitu* 'dicito' Osc. *deikum* 'dicere' : Skr. *diśāmi*. See § 368.

ġ. Lat. *gen-us*, Osc. *Genetaí* 'Genetici' : Skr. *jan-* Av. *zan-*. See § 388.

g. Lat. *gelu*, Osc. *γελαν* 'pruinam' : O.Bulg. *žlédica*. Lat. *unguō*, Umbr. *umen* 'unguen' fr. *\*umben* : Skr. *añjī-ṣ*. Lat. *veniō* fr. *\*gweniō*, Umbr. *benust* 'venerit' : Gr. *βαίνω*, rt. *gem-*. See §§ 430. 432.

In the Italic branch other sounds — in Lat. especially the Indg. med. asp. — fell together with the Indg. mediae. Some of the changes of articulation, discussed in the following sections, equally concerned these other sounds.

That Lat. *b* (= Indg. *b*, *dy*, *bh*, *dh*, *gh*) was spoken as *ĥ* from the second century onwards, seems to follow from such inscriptional forms as *quivus* for *quibus* and *cibes* for *cives* (Corssen Ausspr. I<sup>2</sup> 131 ff., Seelmann Ausspr. 239 f.).

§ 505. A media became a tenuis, when it came to stand before a voiceless spirant or explosive. Lat. *cette* fr. *\*ce-dite* etc., see § 501 rem. 2. Osc. *actud* 'agito', Umbr. *aitu* 'agito' fr. *\*aktōd*, prim. Ital. *\*agetōd*, Umbr. *fiktu* 'figito' *umtu* 'unguito', see § 502. Cp. also Lat. *attuli*, *accumbō*, *appellō* fr. *ad tulī* etc.

§ 506. Lat. *mn* fr. *bn*. *scamnu-m* : *scabellu-m*. Cp. *mn* fr. *pn* § 500.

*ɲn* (written *gn*) from *gn* already in prehistoric times. *īgnu-m* fr. *\*legno-m* : *legō*, see § 65 p. 53. *benīgnu-s*. *\*ad-gnōscō* became *\*aggnōscō*, further *āgnōscō*, written *agnosco*. *ɲgn* became *ɲn* : *īgnōscō* i. e. *īɲnōscō* fr. *\*iɲ-gnōscō*; *cōgnōscō* i. e. *cōɲnōscō* fr. *\*cōɲ-gnōscō*. *ɲn* became *n* initially, probably at the same time as the *ɲn* which had arisen from *cn* (§ 500); this change took place about 150 B. C. : *gnātu-s* *nātu-s*, *gnōscier* *nōscō*. So also Umbr. *naratu* 'declarato', to Lat. *gnāru-s* *nāru-s*.

Rem. 1. The *n* instead of *gn* in *renum*, *propunatori* etc, on inscriptions under the Empire, is also to be explained from the pronunciation *ɲn*.

*am* from *gm*. *āgmen* i. e. *āramen* from \**agmen*. From *exāmen* beside *āgmen*, the former of which points to \**āgmen* with originally long *ā* (cp. *amb-āgēs*, *co-āgulum*) — \**exāgmen* would have become \**ex-egmen*, see § 97 — we may conclude that the simplification of *gm* to *m* took place regularly only before orig. long vowels, or diphthongs. With this also agree *con-tāmin-ō* : *con-tāgiu-m* and *jūmen-tu-m* : Gr. ζῆγμα Lat. *jūger-a*. Cp. *am* from *cm* § 500.

*m* from *dm*. *caementu-m* : *caedō*. *rāmentu-m* : *rādō*. *flāmen* to Goth. *blōtan* 'to honour (the deity) with offerings' or to *flagrāre*? *cacūnen* fr. \**cacūdmen*? : Skr. *kākud-* 'top'.

Rem 2. I do not venture to express an opinion as to the treatment of *dn* in Latin, but merely refer to the conjectures by W. Meyer Kuhn's Ztschr. XXVIII 164 f.

*nd* (which had partly arisen from *md*) became *nn*, *n* in Umbr.-Samn. Umbr. *ponne pone* Osc. *pún* 'quom' fr. \**pon-de*; Umbr. *pane* Osc. *pan* 'quam' = Lat. *quan-de*, see § 207. Umbr. *an-penes* 'impendes', *pihaner* 'piandi'. Osc. *úpsannam* 'operandam'. This change was older than that of *nt* to *nd* in Umbr. *ander* 'inter' (§ 499).

Umbr. *umen* 'unguen' fr. \**umben*, § 432 a.

Rem 3. The *l* in the Umbr. fut. ex. *en-telust* 'intenderit' and *a-pelus* 'impenderis' *a-pelust* 'impenderit' is unexplained. That the *l* goes back to *ndf* (Bücheler), is incredible to me; the composition of a participial stem \**entendlo-* with *fust* (Bechtel Bezenb. Beitr. VII 7) is impossible.

Lat. *ll* fr. *dl* and *ld*. *sella* fr. \**sedlā*. *sallō* fr. \**saldō*. See § 369.

Loss of *d* before *i*, *u*. Lat. *Jov-is*, Umbr. *Iuv-e* Osc. *Iuv-eí* 'Jovi': Skr. *dyāu-ṣ* Gr. Ζεύ-ς. Concerning Osc. *zicolo-m* 'diem' see § 135 extr. Lat. *suāvi-s* fr. \**suād-u-i-s* : Skr. fem. *svād-v-ī* 'suavis'.

Lat. *v* fr. *gu* = Indg. *g*. *vīvo-s* : Osc. *bivus* 'vivi', Skr. *jīvā-s* etc. See § 432 b.

§ 507. Prim. Indg. *d<sup>h</sup>dh* became in prim. Ital. *zd<sup>h</sup>* — *sth* — *sp* (§ 509), hence Lat. *st*. Thus *custōs* : *huzd* 'treasure', see § 469, 5, perhaps also *hasta* : Goth. *gazds* 'a prick'.

Rem. For Lat. *crēdō*, first of all from *\*crezdō* (cp. *pēdō* fr. *\*pezdō*, § 594), it would hardly be right to assume a *\*kred<sup>h</sup>dhē-*, even in Indg. since in Skr. the two members of the compound, *\*kred* 'heart' and rt. *dhē*, were not yet fused into an inseparable unity (cp. e. g. *śrād asmāi dhatta* 'believe in him' ṛgv. II 12, 5). We must nevertheless start out from a prim. Ital. *\*cre(d)zdh-*, cp. § 521 on O.Ir. *cretim* 'credo'. It may be assumed that in Italic, as in Sanskrit, the feeling for the connexion with the other forms of rt. *dhē-* was not yet extinct, and that *d* for regular *ḃ* was thus introduced after *con-dō ab-dō* etc. (cp. W. Meyer Kuhn's Ztschr. XXVIII 166), just as *nōbis* stood for regular *\*nosḃs* (§ 594).

§ 508. *l* from *d* in Lat. *lēvir*: Skr. *dēvár-* and others. See § 369.

ř, *rs* from *d* in Umbrian between vowels and finally, e. g. *te-řa di-rsa* 'det.' See § 369.

In Umbr. *muieto* 'mutterium' beside *mugatu* imper. 'mutterio' (Lat. *mūgīnor* 'I murmur') *i* probably represents a voiced spirant. It may be conjectured that palatal vowels had a similar influence upon a preceding *g* as they had upon a preceding *k* (§ 502).

§ 509. The mediae aspiratae became tenues asp. in prim. Ital., then voiceless affricatae, and lastly voiceless spirants: *f*, *ḃ*, *χ*, *χ<sup>h</sup>*. Probably in the same period *ḃ* was further shifted to *t* after *s* and the non-labialised *χ* to *h* except after and before nasals and before *r* and *l*.

This state of the form of articulation generally remained in Umbr.-Samn., whereas medially the spirants were developed to mediae in Lat.: *b* fr. *f* = older *f* (§ 338) *ḃ* (§ 370) *χ<sup>h</sup>* (§ 433c); *d* fr. *ḃ* = older *ḃ* (§ 370); *g* fr. *χ* = older *χ* (§§ 389, 430); *ngu* (*ṛgṇu*) fr. *ṛχ<sup>h</sup>* = older *ṛχ<sup>h</sup>* (§ 433a)\*; *gu* (whence *v*) between vowels from *χ<sup>h</sup>* = older *χ<sup>h</sup>* (§ 433b). Further, initially, *g* from *χ* before *r* (§ 430).

### 1. Initially.

Prim. Ital. *f* (Lat. Umbr.-Samn. *f*) = Indg. *bh*. Lat. *ferō*, Umbr. *ferar* 'feratur' Marruc. *feret* 'feret': Skr. *bhārāmi*. See § 338.

Prim. It. *f* (Lat. Umbr.-Samn. *f*) = Indg. *dh*. Lat. *fēlare*, Umbr. *feliuf* 'lactantes': Skr. *dhāyāmi*. See § 370.

Prim. Italic *h* (Lat. U.-S. *h*) = Indg. *gh gh* except before *r*. Lat. *humu-s*, Umbr. *hondra* Osc. *huntru* 'infra': Gr. *χαματ*, Indg. *gh-*. Lat. *hosti-s*: O.Bulg. *gostŭ*, Indg. *gh-*. A dialectical (Sabine) pronunciation of the *h* was represented by *f*: *folus*, *foſtis*. See §§ 389. 430.

Prim. It. *χr* (Lat. *gr*) = Indg. *ghr*. Lat. *gradior*: Goth. *gridi-* O.Bulg. *gręda*. See § 430.

Prim. It. *f* (Lat. *f*) from *χ<sup>h</sup>* = Indg. *gh*. Lat. *formu-s*: Skr. *gharmá-s*, Goth. *varmjan*. See § 433 c.

## 2. Medially.

Prim. It. *f* (Lat. *b*, U.-S. *f*) = Indg. *bh*. Lat. *ti-bŕ*, Umbr. *te-fe* Osc. *t(i)-fei* 'tibi': Skr. *tú-bhyam*. See § 338.

Prim. It. *p* (Lat. *d*, Osc. *f*) = Indg. *dh* except before and after *r* (however in the combination *rþu*), before *l* and after *u* (*u*), perhaps also after *m*. Lat. *mediu-s*, Osc. *mefiaí* 'in media': Skr. *mádhyā-s*. See § 370.

Prim. It. *f* (Lat. *b*, U.-S. *f*) = Indg. *dh* before and after *r* (except the combination *rþu*), before *l* and after *u* (*u*), perhaps also after *m*. Lat. *rubro-*, Umbr. *rufru* 'rubros': Gr. *ἐρυθρός*. See § 370.

Prim. It. *t* (Lat. *t*) fr. *p* = Indg. *dh* after *s*. Lat. *custōs*: Goth. *huzd*, Indg. *\*kud<sup>h</sup>dh-*. See §§ 469, 5. 507. Cp. also Lat. *st* fr. *sþ* = Indg. *sth* in *vīdisti* § 553.

Prim. It. *h* (Lat. U.-S. *h*) = Indg. *gh* except after and before nasals and before *l*. Lat. *vehō*, Osc. *vehia* 'plaustrum': Skr. *váhāmi*. See § 389. This early weakening of *χ* to *h*, in this position, explains why the explosive *g* does not appear in Latin.

Prim. It. *χ* (Lat. *g*) = Indg. *gh* (*gh*) after and before nasals and before *l*. Lat. *lingō*: Skr. *lĕhmi*, rt. *leiĝh-*. *mingō* beside *mĕjō* (§ 510). *māgnu-s* beside *mājor* (§ 510). *trāgula* fr. *\*trāglā* beside *trahō*. See § 389.

Rem. 1. The *g* (instead of *h*) in *magis* and *liguriō* was perhaps transferred from *māgnu-s* and *lingō*. But whence the *g* in *ad-āgiu-m* *prōd-igiu-m*, to *ājō* (§ 510)?

Prim. It.  $\chi^*$  (Lat. *gū*) = Indg. *gh* after *o*. Lat. *ninguit*: Lith. *snīnga*. See § 433 a.

Prim. It.  $\chi^*$  (Lat. *\*gū*, whence *v*) = Indg. *gh* between sonantal vowels. Lat. *niv-em*: Gr. *νίφ-α*. See § 433 b.

Rem. 2. The forms *levi-s* (Skr. *laghú-ṣ*, Gr. *λάχύ-ς*, Goth. *leihts*, Lith. *leŋgv-as*) and *brevis* (Gr. *βραχύ-ς*) still remain obscure.

Prim. It. *f* (Lat. *b*, Praenest. *f*) fr.  $\chi^*$  = Indg. *gh*. Lanuv. *nebrūndin-es*, Praenest. *nefrōn-es*: Gr. *νεφρό-ς* OHG. *nioro*. See § 433 c.

§ 510. The fricative sound of *h* was reduced to a minimum in the Italic languages. In certain positions the sound was entirely dropped.

The weakness of articulation betrays itself in Latin through the doubt which existed as to where *h* should be written, and where not, e. g. *hālāre* for *ālāre* (§ 208 p. 176), *ānser* for *hānser* (Gr. *χίψ*).

*h* disappeared uniformly before *i*. *mājor* fr. *\*mahīōr* (beside *māgū-s*): Skr. *māhīyas-* 'greater'. *ājō* fr. *\*ahīō* or *\*āhīō* (beside *axāre* 'to call to, nominare'): Skr. *āha* 'he spoke'. Further, often between vowels, especially after *i*-vowels (accentual relations also formed a factor). *lien*: Skr. *plihán-* 'spleen' Gr. *σπλάγχνο-ν* 'entrails'. *mējō* probably from *\*meihō*: Skr. *mēhāmi* 'I make water'. *bīmu-s* fr. *\*bi-hīmu-s*. *nēmō* fr. *\*ne-hemō*. Further *nīl* = *nihil*, *prēndō* = *prehendō*, *praebeō* = *praehibeō*, *cōrs* = *cohors*, *prōbeō* = *prōhibeō* etc., which stand on a level with *dēsse* = *dēesse*, *coepī* = *coēpī*.

Cp. also *dirībeō* = *dis+habeo* with the same *r* from *s* as *dir-imō* etc. (§ 569).

The same fluctuation in the writing of *h*- exists in Umbr.-Samn. as in Lat. Umbr. *eretu* part. pass. to *heri* 'vult', conversely *he-* for *e-* 'ex' in *he-bet-af-e* beside *e-bet-raf-e* 'in exitus' (to Lat. *baetere*, cp. § 432 rem. 1). Osc. Herukinaí 'Erycinae', 'Equivínŋ'.

It was dropped medially in Osc. *mais* 'magis' *maimas* gen. 'maximae' beside *Mahii[s]* 'Magius'.



§ 511. In Lat. the *b*, *d*, *g*, which arose from voiceless spirants, underwent the same treatment as the corresponding original mediae. *grallae* 'stilts' fr. \**grad-lae*, see § 369. *amni-s* fr. \**abni-s*, along with O.Ir. *abann* 'river' is probably to be connected with Skr. *abhṛá-* 'thunder-cloud'; *Samniu-m* beside *Sabīnu-s* Osc. *Safinim* 'Samnitium', see § 506.

### Old Irish.

§ 512. The tenues except *p* were generally retained in prim. Kelt. *p* disappeared at that period in all positions except before consonants and before consonants it became a spirant.

*t*, *c* appear in Irish as the successors of prim. Kelt. *t*, *k ky* (Indg. *t*, *k̄ q*) in absolute initiality and after spirants and *r*, *l*.

*temen* 'dark-gray': Skr. *támas-*. *tiagam* 'I stride, go': Gr. *στειχω*, rt. *steigh-*. *ocht* 'eight': Gr. *ὀκτώ*. *t*-pret. *al-t* 'educavit'. See § 371.

*críde* 'heart': Lith. *szirdì-s*. *cara* 'friend': Lett. *kārs*. *cethir* 'four': Gall. *petor-ritum*, Skr. *catvār-as*. *scáth* 'shadow': Goth. *skadu-s*. *iasc* 'fish' (*a*-stem): Lat. *pisci-s* Goth. *fiska-*. *ro sescaind* 'he leapt': Skr. *caskánda*. *scél* 'narration, tidings': Cymr. *chwedl* fr. prim. Kelt. \**skye-eltlo-n* (Cymr. *chw-* first fr. \**sy-*), rt. *seq-* 'say'. *sesc* 'barren': Cymr. *hysp* 'dry, withered', Lat. *siccu-s* (cp. § 516). *ad-con-darc* 'I saw': Skr. *dadárša*, rt. *derk-*. *orc* 'pig': Lith. *pařsza-s*, cpf. \**porko-s*. See §§ 390. 434. 436.

§ 513. *t*, *c* became voiced mediae after nasals, then the nasal disappeared (with compensation lengthening). The letters *t*, *c* were retained in the O.Ir. period. It was not until a later period that the orthography was set straight by the introduction of *d*, *g*. *cēt* 'hundred': Cymr. *cant*, Lat. *centu-m*. *ōac* *ōc* 'young': Cymr. *ieuanc*, Lat. *juvencu-s*. See § 212.

§ 514. After vowels *t c* became *þ*, *χ*, which were written *th*, *ch*. Hence *ð*, *ʒ* in unaccented syllables (except finally). These were written *d*, *g*, like the voiced spirants which had arisen from original mediae (§ 522). *d*, *g* however occur consistently only for the palatalised *ð*, *ʒ*.

*máthir* 'mother' : Lat. *māter*. *cath* 'fight' : Gall. *catu-* (in prop. names), OHG. *hadu-* 'fight'. *cloth* 'renowned' : Gr. *κλυτός*. 2. pl. *carthe*, no *charid*, to *caraim* 'I love'; cp. the personal endings Gr. *-τε* Lat. *-tis*. 3. sg. pass. *car-thir* 'amatur' *midi-dir* 'iudicatur' : cp. Lat. *-tur*. *beothu* 'life' gen. *bethad* dat. *bethid*, suffix *\*-tūt-* : Lat. *-tūt-*.

*fiche* 'twenty' : O.Cymr. *uceint*, Skr. *viśati-*. *sechur* 'sequor' rt. *seq-*. *marc-ach* 'equester' : Cymr. *march-awc*, Gall. *Ben-ācu-s*; *cumacht-ach* 'potens', 1. sg. *cumacht-aigim* 'potior'. *cathr-ach* gen., *cathr-aig* acc., to nom. *cathir* 'town'.

On the like origin of voiceless spirants in conditional initiality, e. g. *ā thuath* 'O folk', see § 658, 1.

Rem. 1. On *mac* 'son', *mucc* 'pig', *cacc* 'dirt', *lēicim* 'I leave', whose 'status durus' is remarkable, see § 436 rem.

Rem. 2. The spirants of the prepositions *aith-* 'against' (Gall. *ati-*) and *frith-* 'towards' became assimilated to the initial consonant of the following word, when the preposition had the chief accent. *tht* to *tt*: *nī frittāit* 'non obsistunt'. *thc* to *cc* (*c*): *teccmno cuir* 'accidit' fr. *\*to-aith-com-nocuir*, *frendaire* 'present' fr. *\*frith-con-daire*. *thg* to *gg* (written *c* or *cc*, cp. § 519): *frecre* 'responsum' from *\*frith-gaire*, *zēne* 'cognitio, sapientia' fr. *\*aith-gne* (cp. Thurneysen *Revue Celt.* VI 320), *taccair tacair* 'congruus, decens' fr. *\*to-ath-gair*. *thb* to *bb* (written *p*, cp. §§ 519. 524): *epert* 'speech' fr. *\*aith-bert*.

§ 515. *pt* probably became *cht* even in prim. Kelt. O.Ir. *secht* Mid.Cymr. *seith* 'seven' : Lat. *septem*. See § 339.

Indg. *pn* in O.Ir. *suan* Cymr. *hun* 'sleep' : Skr. *svāpna-s* Gr. *ὑπνο-ς* etc. It is highly probable that *p* was here also no longer an explosive in prim. Kelt., see § 339 rem.

§ 516. *tk* became *sk* in Kelt. O.Ir. *sesc* 'barren' Cymr. *hysp* 'dry', fr. *\*siskyo-s* : Lat. *siccus*, orig. form *\*sitgo-s*. O.Ir. *mesc* 'intoxicating, drunk' : Skr. *māda-* 'drunkenness'. *lesc* 'piger' : Goth. *lats* 'lazy'. *uisce* 'water' : Skr. *udān-udakā-* 'water'. Here belongs also O.Ir. *brisc* Bret. *bresk* 'brittle', in case it comes from the rt. *bherdh-*, § 298. Cp. Av. *ḫk*, *sc* from prim. Ar. *tk*, *tc* § 473, 2 and Germ. *sk* fr. *tk* § 527. From the Gallic belong perhaps also here *Pruscia Prudca* (d'Arbois de Jubainville *Études grammaticales sur les langues celtiques* I p. 31\* ff.).

The Ð in the latter form denotes here, as also elsewhere, a voiceless spirant.

ss (whence further also s) from *ts* in the prim. Kelt. period. O.Ir. 1. pl. of the *s*-fut. *messimir* to *midíur* 'I judge'. Fut. *ro-fessur* 'I shall know', rt. *ueid-*. Future stem *sēs-* fr. \**syents-* i. e. \**syend+s-* (*syend-* 'drive, hunt') 1. sg. *cu-du-sē[s]-sa*, fut. sec. 1. sg. *du-sēsainn* (Thurneysen Kuhn's Ztschr. XXVIII 148).

ss from *t<sup>st</sup>*. inf. *mess* 'a judging', orig. form \**met<sup>st</sup>tu-* i. e. *med+tu-*. Inf. *fiss* 'a knowing' i. e. \**uid+tu-*. It is uncertain whether this change be prim. Kelt., because of the Gallic spellings with Ð, as MEÐÐVLVS beside *Messulus* (to O.Ir. *mess*).

O.Ir. -ss- fr. -st-. *ro chloss* 'was heard' fr. \**klus-to-*, *cluas* 'ear' fr. \**kleys-tā-* or \**klous-tā-*, to *cloor* 'I hear', cp. Skr. *śruṣ-ti-ṣ* 'compliance', OHG. *hlos-ēn* 'to listen' OS. *hlust* 'a hearing', O.Bulg. *sluchū* 'a hearing'. *ais aes* (gen. *aisso aisa*) 'age' fr. \**aiues-tu-*: cp. Gr. *aiés* 'always'. *is* 'is': Gr. *ἴστυ*. *tair-issíur* 'I stand, stand still', *sessam* 'a standing': Gr. *ἵστημι* 'I place', Lat. *sisto*.

§ 517. *kt* became *cht* (*xt*) in prim. Kelt. O.Ir. *ocht* Cymr. *wyth* Corn. *eath* Bret. *eiz* 'eight': Skr. *aṣṭā*, Gr. *ὀκτώ*. *recht* 'law' *as-r-ēracht* 'surrexit': Lat. *rēctus*, rt. *reġ-*. *ro iar-facht* 'he asked' (pres. *iarmi-foig* 'he asks'): Gr. *ἔρω*, Lat. *vōx*, rt. *ueq-*. *in-nocht* 'hac nocte': Lith. *naktis*.

Rem. *ct* was often written instead of *cht* in O.Ir.: *oct rect* etc. That *cht* (*xt*) was nevertheless spoken, is shown by Thurneysen Keltoromanisches p. 14 f., where the stage *cht* is also found for Gallic in the name *Luxterios* on coins (written *Luclerius* in Caesar).

*ks* = O.Ir. *ss*, *s*, Brit. *ch*, prim. Kelt. probably *chs* (*xs*). O.Ir. *sessad* O.Cymr. *chuechet* 'sextus': Gr. *ξξ*, orig. f. \**syēks-*. O.Ir. *dess* Cymr. *deheu* 'dexter': Goth. *taihsva*, Indg. \**deks-*. O.Ir. *ōs uas* Cymr. *uch* 'above': Lith. *auksz-ta-s* 'high', rt. *aug-*. *no tes* 'effugiam' *s*-fut. to *techim* 'fugio', Lith. *tekū* 'I run', rt. *teq-*. *x*, *xs*, probably to be read as *xs*, appears in Gall.: *Uxello-dūnum* 'Hightown', to O.Ir. *ōs uas*; *Dexsiva*, to O.Ir. *dess*.

§ 518. *t* and *c* were dropped before liquids and nasals (with 'compensation lengthening' after short vowels, § 620). *cenēl* 'race': O.Cymr. *cenetl*, suffix *-tlo-* (§ 110 p. 104). *anāl* 'breath':

Cymr. *anadl*, prim. Kelt. \**anatla*. *dāl* 'a meeting together': O.Cymr. *datl* 'forum'. *ēn* 'bird': O.Bret. *etn*, rt. *pet-* 'fly'. *dēr* 'tear': O.Bret. *dacr* Gr. *δάκρυ*. Reduplic. fut. 1. sg. *cēl*, to *celim* 'I conceal'. Cp. also *suan* 'sleep' § 339 rem.

*rect* (*rcht*) was simplified to *rt*: *ro ort* 'delevit', part. *timmorte* 'compressus', to *orgun* 'occisio' (rt. *ergh-*, cp. § 552).

Correspondingly *rcs* to *rs*, whence *rr* (cp. § 574): 3. sg. of the *s*-fut. *orr*, of the same verb.

§ 519. The mediae generally preserved their form of articulation in prim. Kelt. In O.Ir. they remained mediae in absolute initiality likewise after *r* and *l*, *g* also after nasals. These medial mediae were also written (*bb*), *dd*, *gg* or (*p*), *t*, *c* after *r* and *l*, in order to indicate that they were not to be spoken as spirants (§ 522)<sup>1</sup>).

*d*. *dēr* 'tear': O.Bret. *dacr*, Gr. *δάκρυ*. *cerd cerdd cert* 'artist, smith': Cymr. *cerdd* 'art', Gr. *κέρδος* 'gain', Lat. *cerdō* 'workman'. See § 372.

*ġ*, *g*. *gein* 'birth': Cymr. *geni*, Skr. *jan-* Av. *zan-*, rt. *ġen-*. *gāir* 'call': Cymr. *gawr*, Skr. *gir-*, rt. *gar-*. *biu* 'alive': Cymr. *byw*, Goth. *gius* Lith. *gyva-s*, Indg. \**ǵǵ-uo-s*. *garg gargg* 'rough, wild': Gr. *γοργός* 'spirited, wild'. *serg sergg serc* 'a passing away, decay, illness': according to Windisch to OS. *swercan* 'to become obscure, gloomy'. *ferg ferc* 'anger': Gr. *ὄργή* 'impulse, feeling, disposition'. *bongaim* 'I break, reap': Skr. *babhānja* 'he broke'. See §§ 391. 434. 437.

*g* remained also after *d* = Indg. *z*, see § 521.

§ 520. The media *d* in the prep. *ad-* = Lat. *ad* was assimilated to a following voiceless consonant, e. g. *-acciu* 'I see' fr. *ad+ciu*.

*mb*, *nd* became *mm*, *nn*. The O.Ir. monuments frequently preserve *mb*, *nd* beside *mm*, *nn*, probably contrary to the then living pronunciation. *camm* 'crooked': Cymr. *cam* 'crooked' Bret. *kamm* 'crooked' Gall. *cambo-*, Gr. *καμβός*

1) An example for *b*, *bb*, *p* = Indg. *b* is wanting. But cp. *orbe* with Indg. *bh* § 524.

'crooked'. *ro se-scaind* 'he leapt': Lat. *scandō*, Skr. *skánd-ā-mi*. *cenn cend* 'head, top, point': Cymr. *penn pen* Corn. *pen*, prim. Kelt. \**kuindo-*, according to Windisch (Kuhn-Schleicher's Beitr. VIII 44) to Skr. *śvi-* 'to swell' and identical with Gr. *Πλυδο-ς*. *mennant mendat* Mid.Ir. 'dwelling': Skr. *mandirā-m* 'lodging, habitation'. Cp. § 525.

Ir. *mn* from *bn* (= Indg. *bn*, *gn*). *fu-domain* 'deep', compar. *fu-dumnu*: Cymr. *dwfn* 'deep', Goth. *dīups* Lith. *dubū-s* 'deep', rt. *dheyb-* (§ 325); with these is said to be related O.Ir. *domun* 'world', Gall. *Dumno-rīx*, older *Dubno-rīx*. *mā* fr. \**bnās*, gen. to *ben* 'woman', Indg. stem form \**gnā-* \**genā-*, see §§ 428 a. 437 a.

§ 521. O.Ir. *net nett* Cymr. *nyth* 'nest' fr. Indg. \**nizdo-* through the intermediate stage \**neđdo-*. Cp. *medg* Cymr. *maidd* 'whey', fr. \**međgā*, older \**mezgā*, Gallo-Lat. *mesga* 'whey', according to Thurneysen Kuhn's *Ztschr.* XXVIII 152 to Slav. *mozgū* etc., hence uncertain, whether Indg. *zg* or *zgh* (§ 450). See § 595.

It seems to follow from Cymr. *credu* that Indg. \**kred dhē-*, which is to be presupposed for *cretim* 'credo' and the Skr. and Lat. related forms (§ 507 rem.), had not passed through \**kredzd-* to \**krezd-* in prim. Kelt., but that the nearest older form \**kredd-* rather came direct from \**kred d(h)-*.

Here may further be mentioned *ro-fetar* 'I have experienced, know' fr. rt. *ueid-*, which Thurneysen Kuhn's *Ztschr.* XXVII 174, XXVIII 151 regards as an *s*-aorist: \**uīdes-ar* gave rise to \**fedšar* (§ 634), and this to *fetar*, since *d* remained an explosive before *s*, or *h* (§ 576).

§ 522. *b*, *d*, *g* became spirants after vowels: *ḃ*, *ḋ*, *ḡ*. The letters *b*, *d*, *g* were generally retained for these (*bh*, *dh*, *gh* in the modern orthography), on the other hand a double media or tenuis was written in cases where the sound had remained explosive (§ 519). *ph f*, *th*, *ch* were more seldom used to express *ḃ*, *ḋ*, *ḡ* (Zeuss-Ebel Gr. C. p. 62 sq.).

*b*. *ebaim* 'I drink': Skr. *pībāmi*. See § 340.

*d*. *crīde* 'heart': Gr. Ion. *καρδ-ιη*. *adfiadaim* 'I announce': Skr. *vēdāyāmi*. See § 372.

*ġ, g.* Imper. *agat* 'agant': Lat. *agō*, rt. *aġ-*. Gen. *tige* 'of a house': Gr. *στῆγος*, rt. *steg-*. See §§ 391. 434.

These voiced spirants probably became voiceless when final, cp. *tech* beside *teg*, *camaiph* beside *cammaib* 'notwithstanding' etc.

On the spirantal pronunciation of *b, d, g* in conditional initiality see § 658, 1.

§ 523. Loss of *d, g* (with 'compensation lengthening' after short vowels) before liquids and nasals. *ar* 'battle, slaughter, butchery': Cymr. *aer* fr. \**agro-*, to O.Ir. *āg* (gen. *āga*) 'battle', Gr. *ἀγών*, rt. *aġ-*. *ām* 'manus hostium' fr. \**agmen* or \**āgmen*: Lat. *āgmen ex-āmen*, rt. *aġ-* (cp. § 506). Perf. *ro gēnar* 'natus sum' fr. \**ge-gn-*, rt. *ġen-*. *uan* 'lamb': Cymr. *oen*, Lat. *āgnus* with Indg. *g*, see § 437 c.

*ng* = Indg. *ŋg* had been dropped before *n* in *buain* 'a harvesting, reaping', inf. to *bongaím* 'I break, reap' (§ 519).

Assimilation of *ng* to following *m* with lengthening of the preceding vowel. *cēmim* 'a striding, step', to *cingim* 'I stride' (to Gr. *σκάλω* 'I limp'?). Analogously *grēmim* 'progressus', to *in-grennim* 'I pursue' fr. *grend-* with original *dh*, § 526.

§ 524. The mediae aspiratae fell together with the mediae in prim. Keltic, as in Iranian (§ 481) and in Baltic-Slavonic (§§ 542. 549). The laws, which obtain for the Indg. mediae (§§ 519—523), thus operated here also.

Media appears initially after *r* and *l, g* also after *n* (*ŋ*):

*bh.* *biu* 'sum': Lat. *fīō*, rt. *bheu-*. *orbe orbbe orpe* 'hereditas': Goth. *arbi* 'heritage', Gr. *ὀρφανός* 'left, orphan'. See § 341.

*dh.* *dī-th* Mid.Ir. 'he sucked': Skr. *dháyāmi*. *ard ardd art* 'high, great, noble', to which probably also *Arduenna silva*: Skr. *ūrdhvá-s. mēd-ach mellī-ach* 'acceptus, gratus': OS. *mīldi* 'mild, kind, gracious'. See § 373.

*ġh, gh.* *gam* 'winter': Lith. *žėmà*. *in-grennim* 'I pursue': O.Bulg. *grędą* 'I come'. *orgun orggun orcun* 'a laying waste, devastating, killing, predatory excursion', Gall. *Orgeto-rīx*: Skr. *ṛghāyati* 'trembles with passion, rages, raves', OHG. *arg* 'that which is worthless, vile, bad'. *cum-ung* 'narrow': Gr. *ἄγχι*, rt. *añġh-*. *esc-ung* 'eel': Lat. *angui-s*. See §§ 392. 434. 438.

§ 525. Ir. *mm*, *nn* from *mb*, *nd* = Indg. *mbh*, *ndh*, cp. § 520. *imm*, *imb* 'about, around': Gall. *ambi-*, Gr. ἀμφι. *immlind* 'umbilicum': Gr. ὀμφαλό-ς Lat. *umbilicu-s*. *in-grennim* 'I pursue': O.Bulg. *gręda* Goth. *gridi-*. It is doubtful whether *bonn bond* 'solea' belongs here or to § 520, since this word seems to have had in prim. Indg. partly *dh* (Skr. *budhná-s*) and partly *d* (Gr. πίνδαξ) (§ 469, 8). *mm* fr. *mb* = Indg. *ægh* in *imm imb* 'butter', see § 438 b.

A sure example for *mn* fr. *bn* = Indg. *bhn* (or *ghn*) is unknown to me. *tamun* 'stem' may belong to Skr. *stambh-*, with which it is generally connected, but the root had in prim. Indg. partly *bh*, and partly *b* (see § 469, 8), besides we probably ought to start out here from an original *mb(h)n* (cp. *buain* with *ægn* § 523).

To the form *net* 'nest' (§ 521) corresponds *brot* 'prick' fr. prim. Kelt. *\*brozdo-s*, the *d* of which was Indg. *dh*, as is shown by Ags. *brord* O.Icel. *broddr* 'prick'. See § 595.

§ 526. *b*, *d*, *g* as spirants, cp. § 522.

*bh*. *tri-b* 'tribus': Skr. *-bhiš*. See § 341.

*dh*. *riad* 'a riding': O.Icel. *rīða*. See § 373.

*gh*, *gh*. *ligur* 'tongue': Lith. *lēžiù*, rt. *leiğh-*. *lige* 'bed': O.Bulg. *leşa*, rt. *legħ-*. *snigid* 'it drops': Gr. νίφει, rt. *sneiğh-*. See §§ 392. 434. 438.

Dropping of *b*, *g*, as in § 523. Reduplic. fut. *do-bēr* (*do-biur* 'I give', rt. *bher-* 'carry, bear') fr. *\*bebr-*. *nēl* 'cloud' fr. *\*neblo-*: OHG. *nebul* O.Icel. *nift-*, Gr. νεφέλη. *fēn* 'waggon, cart': O.Icel. *vagn* 'waggon', rt. *æğh-*.

*grëimm* fr. *\*grend-men* has already been mentioned in § 523.

### Germanic.

§ 527. History of the *tenues*.

*p*, *k* (*ku*) before *t* and *s* became *f*, *χ* (*χ\**) in prim. Germ. similarly as in Iran. (§ 473), Umbr.-Samn. (§ 502) and Keltic (§§ 339. 515. 517<sup>1</sup>).

1) Cp. also Mod.Gr. ἐφτά κόφτω, ὀχτώ νόχτα.

Goth. *hliftu-s* 'thief' : Gr. κλέπτης. OHG. *nift* 'neptis', privigna' : Lat. *nepti-s*. OHG. *wafsa* 'wasp' : Lith. *vapsà* 'horse-fly', O.Bulg. *vosa* 'wasp' fr. \**uopsā* (§ 545). OHG. *refsan* 'to scourge, punish, blame', O.Icel. *refsa*, prim. Germ. \**rafsiana-n* : Skr. *rāpas-* n. 'bodily injury, violation'.

Goth. *raih̄ts* OHG. *reht* 'right' : Gr. ὀρεκτός 'stretched out', cpf. \**rehtó-s*, rt. *reġ-*. Goth. *nahts* OHG. *naht* 'night' : Lat. *nox noctis* etc., orig. f. \**noqti-* \**noqt-*. Goth. *fimfta-* 'quintus' : Gr. πέμπτος, see § 444 a. e. Goth. *saihs* OHG. *sehs* 'six' : Gr. ἕξ, cpf. \**seġhs*.

Rem. 1. Goth. *niþji-s* 'cousin, relation', O.Icel. *niðr* 'descendant' pl. *niðjar*, Ags. *niðas* pl. 'homines' fr. prim. Germ. \**niþja-* and this from \**ne(p)tiō-* in consequence of the combination of three consonants. Similarly Ved. dat. abl. pl. *nádbhyas* from \**nabd-bhyas* i. e. \**napt+bhyas*.

The shifting of *ts* and *tþt* began simultaneously or even earlier; we put the latter for the prim. Germ. period in place of *t<sup>s</sup>t*, see § 469, 4.

*ts* became *ss*, *s*. OHG. OS. *wissun* O.Icel. *visso vissu* (Goth. *vissēdun*) 'they knew', probably to Hom. ἴσων, cpf. \**uitsūt* i. e. \**uid+s+yt* (Osthoff Zur Gesch. d. Perf. 398. 561). OHG. *zan* 'tooth' fr. prim. Germ. \**tans*, Indg. \**dont-s*, cp. Skr. *dán* fr. \**dants* (§ 647, 7), Gr. ὀδούς. Cp. also Goth. *ana-busns* 'command' fr. \**butsni-*, to *ana-biudan* 'to bid, command', rt. *bheydh-* (§ 552).

*tþt* became *ss* except before *r*, whence *s* after a long syllable. Goth. *ga-qissi-* (nom. *ga-qiss*) 'agreement', to *qiþan*. Goth. *us-viss* 'unbound', to *viþan*. OHG. *gi-wis* 'certain, sure' adv. *gi-wisso* : Gr. ἄωρος 'unseen, unknown', cpf. \**uit<sup>s</sup>tó-s* i. e. \**uid+to-*, rt. *ueid-*. Ags. O.Icel. *sess* m. 'seat' : part. Skr. *sattá-* Av. *hasta-* Lat. *ob-sessu-s*, Indg. \**set<sup>s</sup>tó-s*, rt. *sed-*. Goth. *missa-* in *missa-dēþs* 'misdeed', OHG. *missen* O.Icel. *missa* 'to miss', to OHG. *mīdan* 'to avoid, intermit' : Lat. *mitto* fr. \**mītō* (§ 612), part. *missus*.

*s* from *ss* after long syllables. Goth. *un-veis* (gen. *-veisis*) 'unknowing', OHG. *wīs* O.Icel. *vīs-s* 'wise' : Lat. *vīsu-s*, orig. form \**uit<sup>s</sup>to-s*, rt. *ueid-*. OHG. *ās* n. 'carrion' : Lat. *ēsu-m*, orig. f. \**ēl<sup>s</sup>to-*, rt. *ed-* 'eat'.



The proper names *Chattus* (with Lat. ending) OHG. *Hassi Hasso* (to Skr. *śad-* 'to distinguish oneself, Gr. Dor. *κακαδμένος?*) and Lango-Bard. *Tatto Tasso* i. e. 'regulator, distributor' (Goth. *ungatass* 'disordered' Ags. *tass* 'acervus, congeries frugum', Gr. *δατέομαι*) seem to show that *tĕt* had become *ss*, *s* through the intermediate stage *tĕp*.

*st* arose before *r*. Goth. *blōstreis* 'sacrificer' OHG. *bluostar* 'sacrifice', to Goth. *blōtan* 'to sacrifice'. Ags. *fōstor* O.Icel. *fōstr* 'maintenance, support', to Goth. *fōdjan* 'to feed, nourish', Gr. *πατέομαι* 'I eat'. The course of development seems to have been *tĕt*, *pĕt*, *st*.

Rem. 2. The Lat. development (cp. § 501 rem. 3) renders it improbable that the course was *ssr*, *sr*, *str* (cp. § 580), as is assumed by Kluge Paul-Braune's Beitr. IX 150. 157.

Rem. 3. Where *st* occurs in other positions than before *r*, they are new formations, e. g. Goth. *kāupasta* pret. of *kāupatjan* 'to box one's ears', OHG. *wista* beside *wissa* 'I knew', *wurst* 'sausage' from rt. *uert-* 'turn' (after *virlust* 'loss' etc.). Cp. § 501 rem. 2.

*tk* became *sk* (cp. § 516). OHG. *rasc* 'quick, active, strong' O.Icel. *raskr* 'bold, brave' (Goth. *\*rasqs*), prim. Germ. *\*raskya-z* fr. *\*ratkya-z*, to OHG. *rad* 'wheel'; O.Icel. *laskr* 'soft, slack, loose', prim. Germ. *\*latkya-z*, to Goth. *lats* 'weary'; on the suffix *-kya-* = Indg. *-go-* cp. § 419. OHG. Ags. *horsc* 'quick, smart, prudent' O.Icel. *horskr* 'prudent, wise' Goth. *and-hruskan* 'to investigate, examine', probably to Goth. *hard-u-s* 'hard' Gr. *καρ-ί-ς* 'strong', orig. form *\*krt-ko-*, cp. also Mid.English *harsk* Dan. *harsk* 'rough, hard'. O.Icel. *beiskr* 'sharp', to Goth. *bait-ra-* 'biting, bitter'. Here probably also Ags. *tusc* or *tusc* 'tusk, tooth' (see Kluge Paul-Braune's Beitr. VIII 537) = Goth. *\*tunska-*, with which Skr. *a-datka-* 'toothless' may be compared, although this was a Skr. new formation.

*h* had disappeared in OHG. before *s*+consonant. *mist* 'dung': Goth. *mathstu-s*. *wast* 'growth': Goth. *vahsts*. Cp. Kögel Paul-Braun's Beitr. VII 193 ff.

§ 528. A general shifting of the still remaining tenues to voiceless spirants, e. g. Indg. *\*potér-* 'father' to *\*faþér-*, and *\*péku* 'cattle' to *\*féxu*, probably did not take place until after

the tenues had modified their original manner of articulation in the position before *t*, *s* (*þ*) and *k* (§ 527).

The only exception to this law is that the tenues stood in combination with preceding spirants: *sp*, *st* (= Indg. *st* and = Indg. *tʰt* before *r*, see § 527), *ft* (= Indg. *pt* and *qt*, see § 527), *xt* (= Indg. *kt* and *qt*, see § 527), *sk* (= Indg. *sk̄*, *sq* and Indg. *tq*, see § 527). Cp.:

Goth. *speivan* OHG. *spīwan* 'to vomit': Lith. *spidūju* etc., see § 342. Goth. OHG. *ist* 'is': Gr. ἔστι, Indg. \**és-ti*. Goth. *ga-kusts* 'a trying, testing': Skr. *júṣṭi-ṣ*, Indg. \**gus-ti-s*. Goth. *blōstreis* 'sacrificer' OHG. *bluostar* 'sacrifice, offering' with *str* = Indg. *tʰtr*. Goth. *hliftu-s* 'thief': Gr. κλέπτη-ς. Goth. *fimfta* 'quintus': Gr. πέμπτο-ς, Indg. \**perəqto-s*. Goth. *rahts* OHG. *reht* 'right': Gr. ὀρεκτό-ς, cpf. \**rekto-s*. Goth. *nahts* OHG. *naht* 'night': Lith. *nakti-s*, Indg. \**noqti-s*. Goth. *skeinan* OHG. *scīnan* 'to shine': Gr. σκιά, weak rt. form *skī-*, see § 393. Goth. *us-skava-* 'considerate, sober', OHG. *scouwōn* 'to look, see': Skr. *kav-í-ṣ* 'seer, teacher' weak rt. form *sqā-*, see §§ 439. 589, 3. O.Icel. *lōskr* 'soft, tender, slack', orig. f. \**lōt-qo-s*, rt. *lōd-*, see § 527.

Rem. 1. The combination *skl-* probably lost its *k* already in the prim. Germ. period. OHG. *sliozan* 'to shut' O.S. *slutil* 'key': Gr. κληίς etc., see § 425.

Rem. 2. *sd*, *fd*, *hd* are also written for medial *st*, *ft*, *ht* in OHG. Franconian monuments. See Kögel *Üb. d. Keron. Glossar* p. 70 f., *Zu den Murbacher Denkm.* (Leipz. 1883) 13 ff. On the value of the spellings *sg*, *sch* beside *sk*, *sc* see Kögel in the first named treatise p. 93, *Braune Ahd. Gramm.* p. 127.

It is however quite possible that the tenues first underwent the same affection after spirants as in other cases and then after that became explosives again; that is Indg. \**ésti* became \**isþi* and then \**isti* (Goth. *ist*). Cp. 2. sg. *last* (*lisan* 'to collect, gather') fr. \**las-þa* (§ 541, 7), OHG. *cumft* fr. \**kumfþi-* (§§ 214. 529) and Goth. *huzd* 'treasure' fr. \**huzþa-n* (§ 538).

§ 529. The voiceless spirants in \**faþér-* 'father' etc., which had arisen according to § 528, remained voiceless spirants initially in prim. Germ., and also medially if the sonant next preceding

received the principal accent (according to the old Indg. accentuation, § 686). The fricative sound of  $\chi$  was reduced initially before vowels, and perhaps also medially under certain circumstances (not before consonants).

### Gothic.

Initially. *fadar* 'father' : Lat. *pater*. *fōt-u-s* 'foot' : Lat. *pēs*. *pat-a* 'that' : Gr. *τό*. *ƿaha* 'I am silent' : Lat. *taceō*. *hund* 'hundred' : Skr. *śatá-m*. *hairtō* 'heart' : Lith. *szirdė-s*. *háidu-s* 'way, manner' : Skr. *kētú-ṣ*. *hlifa* 'I steal' : Pruss. *au-klipts*. *hwa-s* 'who' : Skr. *ká-s*.

Medially. *uf* 'under' : Skr. *úpa*, Indg. *\*úpo*. *brōƿar* 'brother' : Skr. *bhrátar-*, Indg. *\*bhrátor-*. *vairƿa* 'I become' : Skr. *vártami*, Indg. *\*uértō*. *faihu* 'cattle' : Skr. *páśu*, Indg. *\*péku*. *svaihra* 'father-in-law' : Skr. *śváśura-s*, Indg. *\*syékkuro-s*. *saihva* 'I see' : Skr. *sácatē*, Indg. 3. sg. mid. *\*ségetai*. *vulfs* 'wolf' : Skr. *vŕka-s*, Indg. *\*uŕgo-s*. See §§ 342. 374. 393. 439. 440. 441. 444 a.

### German.

*f* remained. OHG. *fater* 'father'. OHG. *nefo*, cp. Ags. *nefa* O.Icel. *nefe nefi* 'relation, nephew' : Skr. *nápāt* 'descendant', Indg. *\*népōt-*.

$\bar{p}$  became  $\bar{d}$ , this remained down to the time of the OHG. monuments, and was represented by *th* (more rarely *dh*). In the course of the OHG. period however it was developed to *d* in different parts at different times (first in Bavaria during the eighth century). OHG. *thorn dorn* : Goth. *ƿáurnu-s*, O.Bulg. *trǎnǔ*. OHG. *bruother bruoder* 'brother'.

The letter *h* appears for prim. Germ.  $\chi$  in HG., as in Goth. The sound was merely an aspirate in every case initially, and medially certainly at least between vowels. OHG. *hunt* 'hundred'. OHG. *fāhan* 'to catch' : Goth. *fāhan*, prim. Germ. *\*fanoχana-n* (cp. § 214 p. 182). The *h* in initial *hw*, *hr*, *hl*, *hn* disappeared from the eighth century onwards, earliest in *hw*, e. g. *hwaz was* 'what' : Goth. *hva*; *hliumunt liumunt* 'renown' : Goth. *hliuma* m.

'hearing', rt. *kley-*. Spellings like *Chlodovichus* (*Hludwīg*) show that the value  $\chi$  still prevailed in the fifth and sixth centuries.

West Germanic consonant lengthening (gemination) through following  $i$ . OHG *heffen* OS. *hebbian* 'to raise': Goth. *hafjan*, Lat. *capio*. OHG. *hlahhen* Ags. *hliehhan* 'to laugh': Goth. *hlahjan*. Cp. §§ 532. 535. 540 and the similar doubling of nasals and  $l$  §§ 216. 277.

$m\bar{p}$  seems to have become  $mfp$  *mft*. OHG. *cumft* 'a coming' (Goth. *ga-qumþi-*), *numft* 'a taking', *ramft* 'edge', MHG. *brunft* 'rutting time of the red-deer' (*nf* from *mf*). Cp. §§ 214. 528.

Rem. In like manner perhaps  $n\bar{p}$  became  $ns\bar{p}$ , *nst*: OHG. *kunst* 'art', cp. Goth. *kunþi* 'knowledge'. Doubts remain because of Goth. *anþar*: OHG. *ander*. On the  $s$  in Goth. *anst*s etc. see Kluge Paul-Braune's Beitr. IX 154 f.

§ 530. Medial  $f$ ,  $\bar{b}$ ,  $\chi$  ( $\chi^*$ ) became  $\bar{b}$ ,  $\bar{d}$ ,  $\bar{z}$  ( $\bar{z}^*$ ) in prim. Germ. — and at the same time  $s$  became  $z$  (§ 581) —, when the next preceding sonant did not have the principal accent (§ 529) or  $t$ ,  $s$  directly followed (§ 527). This phenomenon is called 'Verner's law' (see Kuhn's *Ztschr.* XXIII 97 ff.). The Indg. tenues, which were thus affected, fell together with Indg. *bh*, *dh*, *gh*, *gh* (§ 538) and underwent all further developments in common with these.

$\bar{b}$ ,  $\bar{d}$ ,  $\bar{z}$  ( $\bar{z}^*$ ) became  $b$ ,  $d$ ,  $g$  ( $gu$ ) after nasals, very probably in the prim. Germ. period, and  $\bar{z}u$  became  $u$  after vowels (§ 444 c).

These voiced spirants also became mediae after  $r$ ,  $l$  in Gothic, while in other cases they remained spirants, but were not distinguished from mediae in writing.

The West Germanic dialects changed every other remaining  $\bar{d}$  to  $d$ . Then in Upper Germany and East Franconia  $d$  became  $t$  (which partly suffered further affections that need not be taken into consideration here), elsewhere it remained.  $\bar{b}$  and  $\bar{z}$  became  $b$  and  $g$  in HG. (while they remained spirants in other West Germ. dialects), and these became  $p$  and  $k$  in Upper Germany, but not universally.

$p$ . Prim. Germ. *\*lībó* fr. *\*lifó* 'I adhere, remain' (rt. *-leip-*, cp. Skr. *limpāmi* Lith. *limpù*): Goth. *bi-leiba* ( $\bar{b}$ ), OHG. *bi-tibu*

Ags. *be-līfe* (*f* is to be read as *þ*). OHG. *uoba* 'festival' *uobo* 'colonus', to Skr. *āpas-* 'religious work' Lat. *opus*.

*t.* Prim. Germ. \**faðēr-* fr. \**faþér-* 'father' (Skr. *pitár-*, Gr. *πατέρ-*) : Gr. *fadar* (*ð*), OHG. *fater fader* OS. *fader* Ags. *fæder* O.Icel. *faðer faðir*. Goth. *háidu-s* (*ð*) 'way, manner', OHG. *heit heid* : Skr. *kētú-ṣ*. Goth. *ga-tami-da-* (*ð*) 'tamed', OHG. *gi-zemit gi-zemid* : cp. Skr. *dami-tá-* Lat. *domi-tu-s*. Prim. Germ. \**χumđá-m* 'hundred' (whence \**χumda-m*, further \**χunda-m*) fr. \**χumþá-m* (Skr. *śatá-m*, Indg. \**ḥṣṭó-m*) : Goth. *hunda-*, OHG. *hunt hund* OS. Ags. *hund* O.Icel. *hund-rað*. Goth. *mun-da-* 'believed' *ga-mundi-* 'memory' : Skr. *ma-tá-* *ma-tí-*. Goth. *sandjan* 'to send', OHG. *sentan sendan* OS. *sendian*, orig. form of the 1. sg. indic. pres. \**sontéið*, cp. Goth. *sinþs* (st. *sinþa-*), O.Ir. *sét* 'way', epf. \**sénto-*. Prim. Germ. \**χarđú-* fr. \**χarþú-* 'hard' (cp. Gr. *χατύ-* with weak grade vowel in the root-syllable) : Goth. *hardu-s*, OHG. *hart hard* OS. *hard* Ags. *heard*, O.Icel. *harðr*. Goth. *fra-wardja* 'I destroy, spoil' : Skr. *vartáyāmi*, Indg. \**uortéið*.

*h, g.* On Prim. Germ. \**suegrú-* fr. \**suegrú-* (Skr. *śvaśrú-*, Gr. *ἐνυρά*) are founded OHG. *swigar* Ags. *swezer* 'mother-in-law', cp. Goth. *svaihra* § 529. Goth. *tigu-s* (*ʒ*) 'decade', OHG. *-zig* Ags. *-tiʒ*, O.Icel. *tegr* (*g* is the sign for *ʒ*) are founded on Indg. \**dékṃ* with accented suffix (cp. Skr. instr. *daśábhiṣ* *daśábhiṣ*), dat. pl. Goth. *tigum* fr. \**teʒṃ-mi* (§ 244), cp. Goth. *taihun* orig. f. \**dékṃt* § 529. Goth. *vigana-* (*ʒ*) m. or n. 'fight', OHG. *wīgant* OS. *wīgand* (*g* is the sign for *ʒ*) Ags. *wīgend* 'warrior' fr. the prim. Germ. tense stem \**uīχá-*, rt. *ueiq-* (§ 439), cp. Goth. *veiha* 'I fight' orig. form \**uēiqō*. Prim. Germ. \**χūwoga-* fr. \**χūwǝǝá-* fr. \**χūwǝǝá-* 'young' (Skr. *yuva-śá-s*) : Goth. *juggs*, OHG. OS. *jung*, O.Icel. *ungr*, cp. compar. Goth. *jūhiza* O.Icel. *öre* 'younger' fr. prim. Germ. \**χū(ṃ)χizō* (§ 214). Goth. *hals-aggja* m. 'bend of the neck, nape' : Skr. *anáká-*.

Verner's law is of special importance for the proper understanding of the 'grammatical change' in the verb. In this respect the West Germ. dialects show a variety of more archaic relations

than Gothic, since the regular differences had been levelled out in this language by form-transference. To Skr. *vartāmi* 1. sg. pres., *vavārta* perf. indic. 3. sg., *vavrtimā* 1. pl., *vavrtānā*-part. from rt. *uert* 'turn' corresponded prim. Germ. *\*uérþō*, *\*uárþi*, *\*uurdūmí*, *\*uurdānā*-. From these regularly Ags. *weorðe*, *weard*, *wurdon*, *worden* OHG. *wirdu*, *ward* (*wirthu*, *warth*), *wurtum*, *wortan*. On the other hand Goth. *vairþa*, *varþ*, *vairþum*, *vairþans*, regular *d* (cp. *fra-wardjan*) having been supplanted by *þ* in the two last forms. OHG. regularly *ziuhu*, *zōh*, *zugum*, *zogan* (rt. *deyk*- 'draw'), but Goth. *tiuha*, *tāuh*, *tauhum*, *tauhans*, the two last for *\*tugum*, *\*tugans* (ʒ), etc.

On prim. Germ. (ʒ)u = Indg. *q* in Goth. *siuns* OS. *siun* 'countenance', OHG. part. *-liwan* 'lent' etc. see §§ 441. 444 c.

In prim. Germ. *bn*, *dn*, *zn*, before the principal accent of the word, passed into *bb*, *dd*, *zz*, further into *bb*, *dd*, *gg*, and these — still in the prim. Germ. period — became the tenues *pp*, *tt*, *kk* at the same time with the Indg. mediae (§§ 533. 534). Further shiftings took place in HG. viz. *pp* to *pf* (but Rhenish-Franconian *pp*), *tt* to *zz* (MHG. *tz*), *kk* to *cch*, that is, *kx* (but Franc. *kk*). MHG. *hopfen* (Mod.HG. Rhenish-Franc. *hoppe*) Ags. *hoppian* O.Icel. *hoppa* 'to hop' = Goth. *\*huppōn*, MHG. *hüpfen* (Mod.HG. Rhenish-Fr. *hippe*) Mid.Engl. *hyppen* 'to hop' = Goth. *\*huppjan*, prim. Germ. *\*χupp-* fr. *\*χub-n-*, orig. *\*qap-n-*: O.Bulg. *kypēti* 'to hop, leap'. OHG. *\*snizzen* (to be inferred from *snizzāri* 'carver') MHG. *snitzen* 'to cut', prim. Germ. *\*snitt-*, fr. *\*snið-n-* orig. *\*snit-n-*, cp. Goth. *sneiþa* 'I cut' from original *\*snéitō*. OHG. *zocchōn* MHG. *zocken* 'to pull, tug' = Goth. *\*tukkōn*, OHG. *zucchen* MHG. *zücken* 'to drag' = Goth. *\*tukkjan*, prim. Germ. *\*tukk-* fr. *\*duz-n-*, orig. *\*duk-n-*, cp. Goth. *tiuhan* 'to draw', rt. *deyk-*. The nasal in these intensives was the nasal of the present stem-suffix *-nā-* (Gr. *δάμ-νν-μ* etc.). On the other hand e. g. OHG. *smoccho* Ags. *smocc* O.Icel. *smokkr* 'underdress' (beside the intens. MHG. *smücken* 'to bevel, dress, adorn' to MHG. *smiegen* 'to press tightly' O.Icel. *smjūga* 'to creep through': Lith. *smūkti* 'to slide, glide' O.Bulg. *smykati se* 'to creep') contained a nominal weak stem-form *\*smuq-n-* (cp. Gr. *ἀρ-ν-* 'ram', Skr. *ud-n-* 'water'),

which underwent various transformations by analogy, after the strong forms \**smuq-én-* etc. had died out (s. Kluge in Paul-Braune's Beitr. IX 169). Cp. §§ 214. 534. 538.

§ 531. The voiced spirants, which had been received from prim. Germ., passed into the corresponding voiceless spirants in Goth., when they came to stand finally or before *s*. Nom. masc. *tamiþs* 'domitus' neut. *tamiþ* 'domitum' beside gen. *tamidis* (*ð*) 'domiti' etc. 3. sg. pres. *bairiþ* 'bears' fr. \**birið(i)*: Skr. *bhárati*. *af* 'of' beside *ab-u* with *b* (*-u* interrogative particle). 3. sg. pret. *bi-láif* (*bi-leiba* [*b*] 'I remain') fr. \**-láib(i)*, a new formation for prim. Germ. \**láifi* = Indg. \**le-lóip-e*. The letter *g* was retained to express *χ*, see § 539.

*b*, *d*, *g*, which are to be read as mediae after consonants, probably became tenues in the same position, but this change was not represented in writing. Part. nom. *nasjands* acc. *nasjand* 'saviour' from prim. Germ. \**-anda-z* \**anda-n*. 3. pl. *nasjand* 'they rescue' prim. Germ. \**-andi*. Nom. *alds* 'age' prim. Germ. \**aldē-s*. Nom. masc. *juggs* neut. *jugg* 'young' prim. Germ. \**-ūwagá-s* \**-wagá-n*.

§ 532. Prim. Germ. *b*, *d*, *g* became *bb*, *dd*, *gg* (gemination) before *i* in West Germanic, and these were further shifted to *pp*, *tt*, *kk* throughout the whole of High German. OHG. *uppi* 'ill-natured' prim. Germ. \**ubia-*, to OHG. *ubil* Goth. *ubils* 'evil', which as original \**upélo-* 'going over the mark, bounds' is connected with OHG. *ubir ubar* OS. *ōbar* 'over' Skr. *upári* Hom. Gr. *ὑπέλο*. OHG. *dritto dritto* 'tertius' OS. *thriddio* Ags. *ðridda*: Goth. *þridja* (*ð*) O.Icel. *þride þridi* (fem. *þridja*), prim. Germ. nom. masc. \**þriðio(n)* fr. \**þri-þio(n)*: cp. Skr. *trtīya-s* Lat. *tertius*. OHG. *ehka* 'point, edge, corner' OS. *eggia*: Goth. \**agja* (*ǰ*) O.Icel. *egg*, gen. *eggjar* (*ggj* fr. *ǰǰ* by a special Norse law), prim. Germ. \**aǰio-* fr. \**aχio-*: cp. Lat. *aciē-s*, rt. *ak-*. OHG. *wulpa* MHG. *wülpe* 'she-wolf', with simplification of the *pp* after *l*, prim. Germ. \**wulbi* (Indg. \**wlq̃i*, Skr. *vṛk̃i*), gen. \**wulbiós* (a new formation for \**wulziós*), fem. to OHG. *wolf* Goth. *vulfs* prim. Germ. \**wulfa-z* (Indg. \**wlgo-s*), see § 444 a. Cp. §§ 529. 535. 540.

## § 533. History of the mediae.

These became tenues in prim. Germanic, except *d* in the Indg. combination *d<sup>h</sup>dh*.

Gothic like the other Germ. languages, except High German, retained these tenues.

*b. diups* 'deep': Lith. *dubù-s*, rt. *dheub-*. See § 343.

*d. tiuhan* 'draw': Lat. *dūcō*. *hairtō* 'heart': *αρδ-ία*. *asts* 'twig, branch': Gr. *ὄζο-ς*, Indg. *\*ozdo-s*. See § 375.

*ġ, g. kairn* 'corn': O.Bulg. *zrĭno*, cpf. *\*ġr-no-m*. *uf-rak-jan* 'to lift up': Av. *raz-išta-* 'straightest, most just', rt. *reġ-*. *juk* 'yoke': Skr. *yugá-m*, Indg. *\*jugó-m*. *qima* 'I come': Skr. *gám-ā-mi*, rt. *gem-*. *vairpa* 'I throw': O.Bulg. *vrĭga*, rt. *uerg-*. See §§ 394, 439. 440. 443, 444 a.

The character of these sounds remained unchanged in West Germanic in the period of the prim. community. In HG. however they underwent further shiftings.

In Upper and Middle German dialects *p* became *pf* (written *pf* and *ph*) initially and after consonants, but *ff* (*f*) between vowels. This *pf* became *f* (*ff*) initially in certain dialects and in most of them medially after consonants. OHG. *pflegan flegan* (Renish-Franconian *plegan*) 'to care for': OS. *plegan* 'to promise, pledge', perhaps to Gr. *βλέφαρο-ν* 'eyelid' (Kluge Et. Wörterb.). OHG. *werpfan werfan* 'to throw': OS. *werpan*, Goth. *vairpan* with *p* fr. Irdg. *g*, see above. OHG. *slaf* (gen. *slaffes*) 'slack, lax': Du. *slap*; OHG. *slāffan slāfan* 'to sleep': OS. *slāpan*, Goth. *slēpan*, O.Bulg. *slabŭ* 'slack, weak', rt. *slēb-*. OHG. *scaffōn* 'do, make': O.Icel. *skapa* (beside this OHG. *scepfen* 'to scoop': OS. *skeppian*, see § 535); this category has been ascribed to the rt. *sqab-* in Lith. *skabù-s* 'cutting' etc. (§ 346), the intermediate meaning being regarded as 'to bring to pass by hollowing out'.

*t* became *z*, that is *ts*, in HG. initially (except before *r*) and after consonants (except after *s*); after vowels it became the voiceless spirant *ʒz* (*z*), see § 375. OHG. *ziohan* 'to draw, pull': OS. *tiohan*, Goth. *tiuhan*. OHG. *herza* 'heart': OS. *herta*, Goth. *hairtō*. OHG. *smelzan* 'to smelt, melt, become liquid' *smalz* n. 'grease': Ags. *smolt* 'soft, quiet', Gr. *μέλω* 'I soften,



melt'. OHG. *wizzan* 'to know' *weiz* 'I know': OS. *witan wēt*, Goth. *vitan vāt*.

Initially OHG. *tr-* = Goth. *tr-*: *triuwa* 'fidelity': Goth. *triggva*, Pruss. *druwi* (§ 375); on the spelling *dr-* for *tr-* in Franc. sources, as *driuwa*, see Kögel Keron. Gloss. 70 f., Zu den Murbacher Denkm. (Leipz. 1883) 13 ff.

OHG. *ast* 'branch': Goth. *asts*, Indg. *\*ozdo-s*. *nest* 'nest': Ags. *nest*, Skr. *nīdā-s* 'lair of animals', Lat. *nīdu-s*, Indg. *\*ni-zd-o-s* (§ 355).

OHG. *quīfalōn* beside *zwiīfalōn* 'to doubt': Goth. *twEIFls*. See § 375.

*k* became *kx* (written *cch*, *ch* etc.) in Upper German initially and after consonants (except *s*), whilst it remained *k* in Middle Germ. It became *χχ*, *χ* (*hh*, *h*) universally between vowels. OHG. *chorn korn* 'corn': Goth. *kaurn*. *chniu kniu* 'knee': Goth. *knīu*. *chweman queman* 'to come': Goth. *qīman*. *werch werk*: OS. *werc*, Gr. *ἔργο-v*. *danch thank* 'thought, thanks': OS. *thanc*, Goth. *þagks*, Lat. *tongeō* 'I know'. *wahhēn* 'to wake': OS. *wakōn*, Goth. *vakan*, Skr. *vājāyati* 'urges on, drives on'. *dah*, gen. *dahhes*, 'roof': O.Icel. *þak*, Lat. *tegō*.

OHG. *masca* OS. *māska* 'mesh, stitch': Ags. *mæsce*, O.Icel. *mōskve mōskvi*, Lith. *mezgù* 'I knit' *māzgas* 'knot', rt. *mezg-*.

§ 534. *bn*, *dn*, *gn* became *bb*, *dd*, *gg* before the principal accent in prim. Germ., thence by § 533 *pp*, *tt*, *kk*, which were further treated just the same as the *pp*, *tt*, *kk* (§§ 530. 538) which had arisen from Indg. *pn*, *tn*, *kn qn* and from Indg. *bhn*, *dhn*, *ghn ghn*. OHG. *topfo* 'top' MHG. *topf* 'pot' (Rhenish-Franc. *topp*), Ags. *doppa* 'mergus', to Goth. *diups*, rt. *dheub-*. MHG. *rupfen ropfen* 'to pluck' (Rhenish-Franc. *roppe*), to OHG. *roufen* Goth. *rāupjan* 'to pluck, tear out', rt. *reub-* (§ 343). MHG. *stutzen* 'to push (with the horns), start back', to OHG. *stōzan* Goth. *stāutan* 'to push', Skr. *tudāmi*, Lat. *tundō*. MHG. *slitzen* 'to slit', to OHG. *slīzan* OS. Ags. *slītan* 'slit, split', rt. *sleid-*. OHG. *loc loch* (pl. *loccha*) MHG. *loc* (pl. *locke*) 'lock, ringlet', Ags. *locc* O.Icel. *lokkr* = Lith. *lugna-s* 'pliable', to Gr. *λύγο-ς* 'pliant twig or rod' *λυγώω* 'I bend, tie', OHG. *sluccho*

*slukko* 'glutton' MHG. *slucken* 'to gulp, have hiccup', to Gr. *λύζω λυγγάνομαι* 'I have the hiccup'.

§ 535. The prim. Germ. tenues, which had arisen from Indg. mediae, became *pp*, *tt*, *kk* (gemination) in West German. not only before *î*, but also before *r*, *l* and *w*. *pp* became *pf* (Rhenish-Franc. *pp*) in HG.; *tt* became *zz* before *î*, but remained before *r*; *kk* became *kx* in Upper German. but remained in Middle German. OHG. *scepfen* 'to scoop' (Rhenish-Franc. *scheppe*), OS. *skeppian*, see § 533. OHG. *lezzan* MHG. *letzan* 'hinder, hurt', OS. *lettian* Ags. *lettan*: Goth. *latjan*, rt. *lēd-* 'leave, let'. OHG. *ottar* 'otter' (on the anaptyctic *a* in this and the following forms see §§ 277. 628): O.Icel. *otr* pl. *otrar*, Skr. *udrā-s* 'water animal', Gr. *ὑδρο-ς ὑδρα* 'water serpent'. OHG. OS. *bittar* 'bitter': Goth. *báitrs* (ablaut difference \**bhidro-*: \**bhoïdro-*), to Goth. *bitan* 'to bite'. OHG. *hlütтар* 'clear, pure', Ags. *hlüttor*: Goth. *hlútr̥s*, Gr. *κλύζω* fr. \**κλυδ-ζω* 'I wash out, clean'. OHG. *wecchen wecken* to wake', OS. *wekkian*: Goth. *wakjan*, O.Icel. *vekja*, to OHG. *wahhēn* etc., see § 533. OHG. *acchar accar* 'acre, field', OS. *accur*: Goth. *akrs*, Gr. *ἀρό-ς*. OHG. *facchla facchala faccala* 'torch', it is doubtful whether it was borrowed from Lat. *facula*. OHG. *nacchot naccot* 'naked': Goth. *naqaþs*, Lat. *nūdu-s* fr. \**no(g)uēdo-s*, Skr. *nagnā-s* (§ 432 c). OHG. *chuecchēr quekkēr* infl. adj. form 'alive, quick': O.Icel. *kykr* acc. *kykvan*, prim. Germ. \**kwikya-*, beside Goth. *qiu-s* (st. *qiva-*). On the loss of the *w* after medial *k* in OHG. see § 180. Cp. §§ 529. 532. 540.

§ 536. The *d* in *dzdh* became assimilated to the following *z* in prim. Germ. Goth. *huzd* 'treasure' OHG. *hort*, Indg. \**kuǵdho-*. Perhaps also Goth. *gazds* 'sting, prick' OHG. *gart* 'rod, switch' O.Icel. *gaddr* 'sting': Lat. *hasta*. See §§ 469, 5. 507. 538.

Rem. Osthoff (Morph. IV 262 f.) attempts to adjust Goth. *uz-* OHG. *ur- ar-* (Mod.HG. *ur- er-* in *ur-teil er-teilen*) to Skr. *ud* and Goth. *ūt* OHG. *ūz* 'out' by assuming that the form arose regularly in compounds like Goth. *us-dreiban* (for \**uz-dreiban*) 'to drive out'. Cp. Av. *uz* § 476. OHG. *ori* OS. *ord* O.Icel. *oddr* 'point, top', fr. \**ud+dhē* 'put up, lift up'?

The *z* in Goth. *uz-* became assimilated to a following *r*, as *ur-reisan* 'to rise up'.

§ 537. History of the mediae aspiratae.

In prim. Germ. they first became the voiced spirants *b̄*, *d̄*, *z̄* (*z̄u*).

1. Initially. In the course of the individual dialects they were shifted to *mediae*; in Gothic all three in prehistoric times; in West Germanic *b* and *d* in all branches likewise in prehistoric times, whilst *z* remained as *z* in OS. and Ags. down to historic times; in the period of the oldest runic monuments all three were still spirants in Norse. In HG. *b* and *g* were further shifted to *p* and *k* in Upper Germany, *d* was shifted to *t* both there and in East Franconia.

*bh.* Goth. *beitan* 'to bite', OHG. *bīzzan* *bīzan* Upper Germ. *pīzzan* OS. Ags. *bītan*, O.Icel. *bīta* (prim. Norse \**bītan*) : Skr. *bhédāmi*, rt. *bhejīd-*. See § 344.

*dh.* Goth. *dags* 'day', OHG. Rhenish-Franc. *dag* East Franc. and Upper Germ. *tag* OS. *dag* Ags. *dæz*, O.Icel. *dagr* runic. *dagaR* (read *ḍaḡaR*) : Lith. *dāga-s*, rt. *dhegh-*. See § 376.

*gh gh.* Goth. \**gans* 'goose' (from which Span. *ganso* was borrowed), OHG. *gans* Upper Germ. *cans* Ags. *zōs*, O.Icel. *gās* : Lith. *žasī-s*. Goth. *gasts* 'guest', OHG. *gast* Upper Germ. *cast* OS. *gast* (*z*) Ags. *ziest*, O.Icel. *gestr* runic. *gastiR* (*z*) : Lat. *hosti-s* O.Bulg. *gostī*. In *zū-* (= Indg. *gh- z-*) was dropped already in prim. Germ. : Goth. *varmjān* 'to warm', OHG. *warm* O.Icel. *varmr* 'warm' : Skr. *gharmā-s*. See §§ 395. 439. 443.

§ 538. 2. Medially. The Indg. *mediae aspiratae*, through their being developed to voiced spirants, fell together with the Indg. *tenues* according to § 530, and thus the laws given in §§ 530—532 operated here also.

The following forms, in the first place, are to be judged of by § 530.

*bh.* Goth. *liuba-* (*b̅*) 'dear', OHG. *liubo* adv. 'with pleasure' Ags. *leófost* 'dearest' (*f* is *b̅*), O.Icel. *ljúfr* 'dear' (*f* is *b̅*) : Skr. *lúbhyati* 'fosters a vehement longing', rt. *leubh-*. Goth. *kalbō* 'female calf', OHG. *chalba* f. *chalb* n., Ags. *cealf* (*b̅*) n., O.Icel. *kalfr* (*b̅*) : Gr. *δολφός-ς* *δελφύ-ς* 'womb' *δέλφαξ* 'pig'. OHG. *chamb* (gen. *chambes*) 'toothed instrument, comb', Ags. *comb* : Skr. *jāmbha-s* 'tooth', Gr. *ρόμφο-ς* 'plug, peg, pin, nail', O.Bulg. *zabŭ* 'tooth'.

*dh.* Goth. *ana-biudan* (*ā*) 'bid, command', OHG. *biotān*

*biodan* OS. *biodan* Ags. *beódan*, O.Icel. *bjōða*, prim. Germ. \**beyðana-n* : Skr. *bódhāmi*, rt. *bheydh-*. Goth. *bindan* 'to bind', OHG. *bintan bindan* OS. Ags. *bindan*, O.Icel. *binda*, prim. Germ. \**bindana-n* : Skr. *bándhana-m*, rt. *bhendh-*. Goth. *hairda* 'herd', OHG. *herta herda* Ags. *heord*, O.Icel. *hjrǫð*, prim. Germ. \**χerðō* : Skr. *śárdha-s* 'herd, troop'.

*gh, gh*. Goth. *steigan* (ʒ) 'to ascend, climb', OHG. *stīgan* OS. *stīgan* (ʒ) Ags. *stīzan*, O.Icel. *stīga* (ʒ), prim. Germ. \**stīzana-n* : Gr. *στειχω*, rt. *steigh-*. Goth. *aggvu-s* 'narrow', OHG. *engi*, O.Icel. *qngr* : Gr. *ἄγχω*, rt. *añgh-*. Goth. *guggan* 'to go', OHG. *gangan*, O.Icel. *ganga* : Skr. *javghā-* 'heel-bone', rt. *ghæng-*. Goth. *láuna-varga-* 'unthankful man', OHG. *warg* 'strangler' MHG. *er-wergen* 'to strangle', O.Icel. *vargr* (ʒ) 'wolf, outlawed evil-doer' : Lith. *veržiù* 'I string, compress, straiten', rt. *uergh-*.

On prim. Germ. (ʒ)*u* in Goth. *snáivs* fr. orig. \**snoigho-s* and similar forms see §§ 443. 444 *b*. In the cases there quoted prim. Germ. *ʒu* was the labialised form of Indg. *gh*. The same loss of a suffixal *-u-* occurs in prim. Germ. \**maʒu-ī* 'girl' (Goth. *mavi*, gen. *máujōs*), to masc. Goth. *magu-s* 'boy, child, servant' = O.Ir. *mug* 'slave, servant'; cp. Skr. *svād-v-ī* fem. to *svād-ú-ṣ* 'suavis'.

Here is further to be added — in contrast to § 530 — the case when prim. Germ. *ð*, *ʒ* followed *z*. Goth. *mizdō* 'pay, reward', in West Germ. with 'compensation lengthening' of the *e = i* OHG. *mēta miata* OS. *mēda* O.Fris. *mēde* Ags. *mēd* beside *meord* (*r* from *z*) : Gr. *μισθός*, Indg. \**mizdhó-* \**mizdhá-* (§§ 596. 621). Goth. *huzd* 'treasure', OHG. *hort* OS. *hord* (*horth*) Ags. *hord*, O.Icel. *hodd* : Indg. \**kud<sup>h</sup>dho-*, cp. §§ 469. 5. 507. 536. OHG. *marg* 'medulla' Ags. *mearʒ*, O.Icel. *mergr* (ʒ), Goth. *mazga-*, pre-Germ. \**mozgho-*, cp. §§ 450. 590. 596.

Prim. Germ. *pp*, *tt*, *kk* from *bn*, *ðn*, *ʒn*. Sure examples are known to me only for *kk*, as OHG. *lecchōn* Mid.HG. *lecken* 'to lick', OS. *leccōn*, prim. Germ. \**likkōna-n* (cp. Goth. *bi-láigōn*) : Gr. *λίχρος* 'lickerish', Lat. *lingō*, rt. *leigh-*. Cp. §§ 214. 530. 534.

§ 539. A change of *ð*, *ð*, *ʒ* to *f*, *p*, *χ* (*g*) in Gothic, cp. § 531. Masc. nom. *liufs* acc. *liuf* 'dear' beside gen. *liubis*

(*þ*). *ráuþs rauþ* 'red' beside gen. *ráudis* (*ð*), rt. *reudh-*. *vigs vig* (*χ*) 'way' beside *vigis* (*ʒ*), rt. *uegh-*.

Pret. *svarb* to *svairban* 'to wipe from', rt. *suerbh-*; pret. *band*, to *bindan*, rt. *bhendh-*; *gild* n. 'tax', to *fra-gildan* 'to requite', rt. *gheldh-*; *gaggs gagg* 'way, street'; *láuna-vargs* 'unthankful man' -*varg* are parallel to the forms like *nasjands nasjand* etc. in § 531. The forms *gazds*, *huzd* (st. *gazda-*, *huzda-*) were accordingly possibly pronounced with *st*.

§ 540. West Germ. *bb*, *dd*, *gg* (H. German *pp*, *tt*, *kk*) before *i*, see § 532. OHG. *sippia sippa* 'relationship', OS. *sibbia sibbea* Ags. *sib* (gen. *sibbe*): Goth. *sibja* (*þ*), O.Icel. *Sif* (gen. *Sifjar*, *f* is *þ*) goddess of the family and wedlock, Skr. *sabhá-* 'assembly, society of kinsfolk'. OHG. *mitti* 'medius', OS. *middi* Ags. *mid* (gen. *middes*): Goth. *midjis* (*ð*), O.Icel. *miðr* (acc. *miðjan*), Skr. *mádhyā-s* 'medius'. OHG. *bitten* 'to request', OS. *biddian* Ags. *biddan*: Goth. *bidjan* (*ð*), O.Icel. *biðja*, Gr. *πειθω*, rt. *bheidh-* (§ 67 rem. 3). OHG. *likken* 'to lie down', OS. *liggian*: O.Icel. *liggja* (*ggj* fr. *ʒi* by a special Norse process), prim. Germ. *\*liʒiana-n*, Gr. *λέχος* 'bed', rt. *leg-*. Cp. §§ 529. 535.

§ 541. Chronology of the prim. Germ. shiftings of the explosives. The following is probably the order in which the chief acts of the prim. Germ. shifting of the Indg. explosives took place; we include at the same time the history of the Indg. tenues aspiratae, which will be more fully discussed in § 553.

Act 1 (or 2). The aspirates become spirants. *bh*, *dh*, *gh* become *þ*, *ð*, *ʒ*, e. g. *\*bheudhō* becomes *\*þeudō* (Goth. *biuda*), see § 537. *ph*, *th*, *kh* become *f*, *þ*, *χ*, e. g. 2. sg. perf. *\*le-lós-tha* (rt. *les-* 'gather together') becomes *\*(le)-lasþa* (Goth. *last*), *\*nokh-ló-* 'nail' becomes *\*naxlá-* (OHG. *nagal*), see § 553.

Act 2 (or 1). *p*, *k* become *f*, *χ* before *t* and *s*, e. g. *\*rekto-s* 'right' becomes *\*reχta-s* (Goth. *raihts*), see § 527.

Falling together of the tenues asp. with a portion of the tenues.

Act 3. The tenues become voiceless spirants elsewhere, *p*, *t*, *k* become *f*, *þ*, *χ*, e. g. *\*pōtēr*, *\*bhrátōr* become *\*fapēr* *\*brōþōr* (Goth. *fadar*, *brōþar*), see § 528.

Falling together of a further portion of the tenues (eventually of all tenues, see the end of § 528) with the tenues asp.

Act 4. The voiceless spirants become voiced by Verner's law, *f*, *þ*, *χ* become *b*, *d*, *z*, e. g. *\*nazlá-* becomes *\*nazlá-*, *\*faþér* becomes *\*faðér*, see § 530.

Falling together of tenues asp. and tenues with the mediae asp.

Act 5. The *b*, *d*, *z*, which had arisen from mediae asp. and tenues, assimilate a following *n* before the principal accent: *bb*, *dd*, *zz*, e. g. pres. stem *\*liǰ-nó-* 'lick' (Indg. *\*liǰh-ná-*) becomes *\*liǰǰó-* (OS. *leccōn*), noun stem (weak) *\*smuǰ-n-* 'dress' (Indg. *\*smuǰ-n-*) becomes *\*smuǰǰ-* (O.Icel. *smokkr*). Indg. *b*, *d*, *g* with a following *n* simultaneously become *bb*, *dd*, *gg* when the accent is in the same position, e. g. *\*lug-ná-* 'lock, ringlet' (Indg. *\*lug-nó-*) becomes *\*luggá-* (O.Icel. *lokkr*). Then *bb*, *dd* *zz* become *bb*, *dd*, *gg*: *\*liǰǰó-* *\*smuǰǰ-* become *\*liggó-* *\*smugg-*. See §§ 530. 534. 538.

Falling together of mediae with tenues and tenues asp.

Act 6. The mediae become tenues, *b*, *d*, *g* become *p*, *t*, *k*, e. g. *\*deuǰō* 'I draw' (rt. *deuǰ-*) becomes *\*teuǰō* (Goth. *tiuha*), *\*azda-* 'branch' becomes *\*asta-* (Goth. *asts*), *\*liggō-*, *\*smugg-*, *\*lugga-* (see 5.) become *\*likkō-*, *\*smukk-*, *\*lukka-*. See § 533.

Act 7. *sþ*, *zð*, *mþ*, *nð*, *ǰz* become *st*, *zd*, *mb*, *nd*, *ǰg*, e. g. *\*(le-)lasþa* (1.) becomes *\*lasta* (Goth. *last*), *\*mizðō-* 'pay, reward' becomes *\*mizdō-* (Goth. *mizdōn-*), *\*(þe-)bande* 'he bound' becomes *\*bande* (Goth. *band*). See §§ 530. 538.

Rem. That *sþ* first became *st* at this period, is only deduced from the change of *zð* to *zd*, which cannot have taken place earlier. Here belongs eventually also the origin of the tenuis in Goth. *speivan*, *ist* etc., see § 528 (end) and 3 above.

### Baltic-Slavonic.

§ 542. The Indg. tenues and mediae remained in the period of the Balt.-Slav. prim. community, while the mediae aspiratae, as in Iran. (§ 481) and Kelt. (524), became mediae and thus fell together with the Indg. mediae.

Indg. *ĥ*, *ǵ*, *ǵh* were *š*-sounds in this period. See § 412.

§ 543. History of the *tenues*, prim. Balt.Slav. *p*, *t*, *k* and *š*. These sounds generally remained unshifted.

*p*. Lith. *pìna-s* O.Bulg. *plünü* 'full': Av. *per<sup>e</sup>na-*, rt. *pel-*. See § 345.

*t*. Lith. *tā* O.Bulg. *tū* 'the' acc.: Skr. *tá-m*. See § 377.

*q*. Lith. *kà-s* O.Bulg. *kū-to* 'who?': Skr. *ká-s*. See § 462.

*ĥ*. Lith. *szvit-ėti* O.Bulg. *svit-ėti* 'to shine': Skr. *švit-rá-s*, rt. *ĥueit-*. See § 413.

§ 544. The assimilation of Indg. *ts* to *ss*, of Indg. *t<sup>s</sup>t* to *st* and of Indg. *ĥs* to *šš* seems to have been effected in the period of the Balt.-Slav. prim. community.

*ts* to *ss*. Lith. *ėsiu* 'I shall eat': cp. Skr. fut. *atsyámi*, O.Bulg. 2. sg. *jasi* 'thou eatest': cp. Skr. *átsi*, O.Bulg. aor. *jasū* 'I ate' fr. *\*ēt-s-o-m*, pl. *jasli* 'manger' fr. *\*ēt-slo-*, rt. *ed-* 'eat'. Lith. *mėsiu* fut. to *metū* 'I throw'. Lith. *kĩrsiu* fut. to *kertū* 'I hew sharply': cp. Skr. *kartsyámi* 'I shall cut', rt. *qert-*. Lith. *krìsla-s* 'crumb, scrap', to *krintū* (pret. *kritaũ*) 'I fall'. O.Bulg. *čisū* s-aorist 'I counted' *čislo čismę* 'number', to *čita* 'I count'. Lith. part. *vežās* 'vehens' fr. *\*ueghont-s* = Skr. *váhan*; the corresponding forms of O.Bulg. probably also came from Indg. *\*-ont-s*, as *vezy* 'vehens' *spěje* 'hastening', cp. acc. pl. *vľuky* 'lupos', *konje* 'equos' from *\*-ons* (§§ 84. 219).

It may be concluded that this *ss* = *ts* had not yet entirely fallen together with Indg. *s* in prim. Slav., since *s* = *ts* did not become *ch* as was the case with Indg. *s* (§ 588, 2). Forms like 1. sg. *jachū* 1. pl. *jachomū* 3. pl. *jašę* beside *jasū jasmū jaseę* (s-aorist from rt. *jad-* 'eat') were later formations (§ 588 rem. 2).

*t<sup>s</sup>t* to *st*. Lith. *viršti* 'to fall down, change', O.Bulg. *vrìsta* 'state, condition': Lat. part. *vorsu-s*, Skr. *vyttá-m* 'state, situation', Indg. *\*yrt<sup>s</sup>tó-*, rt. *yert-*. Lith. *ėst* O.Bulg. *jastī* 'eats': cp. Lat. *ēst* Skr. *átti*. Lith. *dūst* O.Bulg. *dastī* 'gives': cp. Skr. 3. sg. mid. *dattē*, from the reduplic. root *dō-* 'give'. Lith. *pėsczia-s* 'being on foot' first of all from *\*pēstja-s* (§ 147), to *pėdà* 'foot-

step'; on the East Lith. form *pėsščia-s* see § 587, 3. O.Bulg. *čřstř* 'honour', to *čřta* 'I count, reckon, honour'.

*ks* became *šš*. Lith. *aszi-s* O.Bulg. *osi* 'axis': Lat. *axi-s*. Lith. *deszině* 'right hand' O.Bulg. *desinũ* 'dexter': Skr. *dákšina-* Av. *dašina-*. See § 414.

With the reduction of *ss* to *s* and *šš* to Lith. *sz* O.Bulg. *s*, compare that of prim. Balt.-Slav. *ss* = Indg. *ss* to Lith. O.Bulg. *s*, as Lith. *lėsiu* fr. *\*les-siu*, fut. to *lesũ* 'I pick up, peck at', O.Bulg. *otũ-tręse* fr. *\*-tręs-se*, *s*-aorist to *otũ-tręsa* 'I shake off'. See § 585, 3.

Further the loss of the dental in Lith. *āszma-s* 'octavus', Pruss. *asma-n* acc., O.Bulg. *osmyjř* might also be prim. Balt.-Slav.: cp. Skr. *ařtamā-* O.Ir. *ochtmad*. —

Lithuanian. In forms like partic. pres. act. *lřpdama-s* (*lipũ* 'I climb, mount'), *viřkdama-s* (*veřkũ* 'I trail, drag') the pronunciation has apparently fluctuated for centuries between *pd*, *kd* and *bd*, *gd* in some parts of Lithuania. Analogously *mėsdama-s* and *mėzdama-s*, to *metũ* 'I throw'. This phenomenon is easily explained from the fact that the constant striving after assimilation has been again and again counteracted by the feeling of relationship between kindred forms, e. g. *lřpti lřpsiu* etc., *viřkti viřksiu* etc., *mėsti* etc. Cp. the fluctuation between *přsiu* and *přnsiu* § 218 rem.

Rem. 1. The change between *āugti* (inf.) *āugsiu* (fut.) and *āukti* *āuksiu* (pres. *āugu* 'I grow'), between *dřrbti* *dřrbsiu* and *dřrpti* *dřrpsiu* (pres. *dřrbu* 'I work') etc. in Lithuanian writings is merely of an orthographical nature, only *kt ks pt ps* is spoken everywhere. Cp. the phonetically inexact Mod.HG. spellings like *sagte*, *raubte*, *flugs*.

The simplification of consonantal groups is rare, as *desziņš* beside *desziņts* 'ten'.

Rem. 2. It is not certain whether *naktvõju* 'I pass the night with', *naktvõnė* 'night quarters' belong here, since *naktvõju*, *naktvõnė*, existing side by side of these and regarded as the original forms, might have got their *t* from *naktĩ-s* an older stem *\*noqtu-* is by no means proved for certain through Lat. *noctũ* (see the author in Ber. d. sächs. Ges. der Wiss. 1883 p. 192).

*sztr* from *szr* in *asztrũ-s* 'sharp' beside *aszru-s* (Dowkont): O.Bulg. *ostrũ* 'sharp' from *\*osrũ* (§ 545), Skr. *āřri-ř* 'corner',



Gr. ἄκρο-ς 'pointed'. It is however questionable whether the Lith. word has not acquired its *t* through the influence of the corresponding Slav. word.

§ 545. Slavonic. On prim. Slav. *č*, *c* from *k* = Indg. *q*, prim. Slav. *tx'* (O.Bulg. *št*) from *kt* = Indg. *qt*, prim. Slav. *χ* (*ch*) from *ks* = Indg. *qs* see § 462.

Loss of tenues before following consonants (cp. § 281 rem. 3):

*p* disappeared before *t*, *n*, *s* in the prim. Slav. period. O.Bulg. *netijǎ* 'nephew, cousin' fr. \**neptijǎ* (§ 36) = Gr. ἀνεπίο-ς, cpf. \**nept-iǰo-s*. *po-črěti* 'lade, scoop' fr. \**čerti* \**čerpti*, to 1. sg. pres. *po-črĭpa*. Correspondingly *greti* 'to scrape, scratch' fr. \**grepti*, to 1. sg. *greba* with *b* = Indg. *bh* (§ 552). The forms *po-črěsti* -*črĭsti* -*črĭpsti* and *gresti* *grebsti*, met with in later monuments, were new formations, which seem to have arisen from a dislike — also met with elsewhere — for infinitive forms with short stem-syllable; the *s* was transferred from *plesti nesti* etc. *sĭnŭ* 'sleep' from \**sŭpnŭ* = Gr. ὕπνο-ς. *pri-lĭna* 'I stick to' from \**lĭpna*, cp. *pri-lĭpěti* 'to stick to'; *pri-lĭpna*, which occurs beside *pri-lĭna* in the literary monuments, had borrowed *p* anew from form-association. *vosa* 'was' fr. \**uopsa* = Lith. *vapsà* 'gad-fly'. *osina* 'aspen-tree': Lett. *apse* Pruss. *abse*. Cp. also the *s*-aorist *grěsŭ*, to *greba* 'I scrape, scratch'.

*t* disappeared before *l*, *n*. O.Bulg. part. pret. *pletŭ* fr. \**plet-lŭ*, to *pleta* 'I twist'. This disappearance before *l*, like that of *d* before *l* (§ 548), seems to be old only in the southern and eastern dialects; in the western dialects prim. Slav. *tl* seems to have prevailed down to historical times, e. g. Upper Sorabian *pletŭ* = O.Bulg. *pletŭ*. Examples for the disappearance of *t* before *n* occur in all branches, as O.Bulg. *o-svĭnati* 'to become light' fr. \**svĭt-naŭi* (cp. *svĭtĕti* 'to shine'), Servian *svanuti*. Nevertheless I do not know whether this dropping of *t* is to be regarded as prim. Slav. Cp. *dn* § 548.

*k* disappeared in the prim. Slav. period in *peŭi* 'five' = Skr. *pañcĕti-š* 'the number five' (cp. Av. *pañtanaha-* 'fifth part' beside *pañca* 'five', Lat. *quĭntus* beside *quĭnque*). This

reduction of *ɲkt* to *ɲt* must be older than the change of *kt* to *tχ'*. *k* disappeared also in the prim. Slav. period in *-kst-* (Indg. *-gst-*). 2. pl. of the *s*-aorist *těste*, to 1. sg. *těchŭ* = orig. *\*tēg-s-o-m* (§ 462). In like manner *plesti* 'to twist' from *\*plekstī* i. e. *\*plekt+tī* (cp. Lat. *plectō*, OHG. *flehtan*), which gave the impulse to the new formations pres. *pleta* noun *plotŭ* 'twist, plait' etc., forms, in which *t* cannot be explained as having arisen phonetically from *kt*.

Loss of tenues between *s*+conson. O.Bulg. *slězena slezena* 'spleen': Gr. *σπλήν σπλάγγνο-ν*. *plesnati* 'to clap' fr. *\*plesk-nati*, to *pleskati* 'to clap'.

Development of *t* as glide in *sr* = Indg. *kr* in prim. Slavonic. O.Bulg. *ostrŭ* 'sharp': Gr. *ἄκρο-ς* etc., see end of § 544. *pŭstrŭ* 'variegated' fr. orig. *\*pŭk-ro-s*: Skr. *piśāmi* 'I adorn, shape', Gr. *ποικίλο-ς* 'variegated'. The same development occurs also at a later period, e. g. O.Bulg. *strŭšen-ŭ* beside *srŭšen-ŭ* 'hornet, gad-fly': Lat. *crābrō* (§ 303). Cp. Slav. *str* = Indg. *sr*, § 585, 2.

§ 546. History of the mediae, prim. Baltic-Slav. *b*, *d*, *g* and *ž*.

*b*. Lith. *dubŭ-s* 'deep, hollow', O.Bulg. *dŭbrŭ* 'ravine, valley': Goth. *diups*. See § 346.

*d*. Lith. *dŭ-ti* O.Bulg. *da-ti* 'to give': Lat. *dōs dōtis*. See § 378.

*g*. Lith. *gŭria* 'forest', O.Bulg. *gora* 'mountain': Skr. *giri-ś*. See § 463.

*ž*. Lith. *žŭrni-s* 'pea', O.Bulg. *zrŭno* 'corn': Goth. *kaurn*. See § 415.

§ 547. The transition of *d<sup>s</sup>d(h)* to *zd(h)* and of *dm* to *m* seems to belong to the period of the Baltic-Slav. prim. community.

The 2. sg. imper. O.Bulg. *viždŭ* 'see', *věždŭ* 'know', *jaždŭ* 'eat' from *\*viždŭ*, *\*věždŭ*, *\*ēždŭ*; the *ž* instead of *z* arose from a contamination with the optative forms which had *-iē-* and were used imperatively (see Osthoff Morph. Unt. IV 387 and the accidence). *\*vēždŭ* = O.Lith. *veizd(i)* 'see'. The cpf. was

\**veizdi* fr. \**veid<sup>z</sup>-dhi* (with different, older root-vocalism Gr. *ῥοθη* and Skr. *viddhi*).

Rem. 1. O.Lith. *veizd(i)* coming to be on a level with forms like *leid(i)* *ved(i)*, the *z* forced its way into the remaining forms of the verbal system also (first of all into the imper. pl.), hence *vėizdmi vėizdžiu* instead of \**veidmi \*veidžiu*, lastly into noun formations also, hence e. g. *ap-veizda-s* 'providence' beside *vėida-s* 'face, countenance'.

It is doubtful whether O.Bulg. *daždĭ* 'give' imper. also belongs here, since it might possibly stand for \**dādĭ* and along with O.Lith. *dūdi dūd* represent an orig. \**dō-dhi*. Cp. the accidentence.

*dm* (partly from Indg. *dhm*) became *m*. Lith. *ėmi* O.Bulg. *jamĭ* 'I eat' fr. \**ēd-mi*; Lith. *ėdmi* is a new formation (cp. rem. 3). Lith. *dĭmi* O.Bulg. *damĭ* 'I give' fr. \**dōd-mi*. Lith. *dėmi* 'I place, put' fr. \**dēd-mi*, O.Lith. *demi* fr. \**ded-mi*, rt. *dhē-*. O.Bulg. *vėmĭ* 'I know' fr. \**uoīd-mi*, rt. *ueīd-*. O.Bulg. *vyme* 'udder' fr. \**ūd-mēn*; Skr. *ūdhar*.

Rem. 2. The loss of the labial in O.Bulg. *sedmyŕi* 'septimus' must be younger than this dropping of *d*. It may however have been effected already in the Baltic-Slav. prim. language, since by § 469, 3 the tenues in Lith. *sėkma-s* (first of all from \**sepma-s* or from \**setma-s*? § 345) and Pruss. *septma-s sepma-s* seem to be due to a new formation after the analogy of the cardinal number.

Rem. 3. The apparent dropping of *d* before the suffix of the 1. du. in Lith. *dĭva* O.Bulg. *davė javė* etc. has probably arisen from analogy with the 1. sg. and 1. pl. The regular form may be retained in Lith. *ėdva* and this might have aided in the creation of *ėdmi ėdme*.

§ 548. No further changes, which need to be mentioned here, took place in Lithuanian.

Slavonic. On prim. Slav. *dž dz* fr. *g* = Indg. *g* see § 463.

Loss of the mediae *b d* before following consonants. We also take into account here the mediae which had arisen from Indg. mediae aspiratae.

*b* disappeared before *n* in prim. Slavonic. O.Bulg. *dĭno* 'ground, bottom' fr. \**dūbno*, beside Lith. *dūgna-s* (§ 346), to *dūbrĭ* 'ravine, valley', rt. *dheyb-*, see § 325. O.Bulg. *sū-gĭna* 'I fold' fr. \**gūb-na*, to *sū-gybati* 'to fold', Lith. *dvi-guba-s* 'two-fold, double'. *gyna* beside *gyb-ajā* 'I sink, go to ruin'; *b* has been restored in *gybna* like the *p* in *pri-ŕipna* (§ 545).

*d* disappeared before *l*, *n*. O.Bulg. part. *palŭ* fr. \**pād-lŭ*, to *padā* 'I fall', rt. *ped-*. *šilo* 'awl' fr. \**šī-dlo*, *ralo* 'plough' fr. \**rā-dlo*, *želo* 'point, prick' fr. \**žē-dlo* with suffix *-dlo-* from Indg. *-dhlo-* (Gr. *-θλο-*, Ital. *-flo-*). *jela* 'fir': Pruss. *adde* Lith. *ėglė* fr. \**edlė* (§ 378). This loss of *d* before *l* is old only in the southern and eastern dialects, it was retained in the western dialects, as Czech *šidlo* Sorab. *šidlo* Polish *szydło* 'awl', Polish *żądło* 'edge' *jodła* 'fir'. Examples for the loss of *d* before *n* occur in all branches, as O.Bulg. *za-gana* 'coniectura assequor' fr. \**gād-na*, to *gad-aja* 'conicio' O.Icel. *geta* 'to get, hit upon, guess', rt. *ghed-* (§ 425); *vüz-bŭna* 'I awake', to *bŭdėti* 'to wake, be awake', Skr. *budh-*, rt. *bheydh-*; *u-vŭna* 'I become withered', to *u-veđ-aja* 'I become withered'; the *d* in *padna* 'I fall' (beside *padā padaja*) etc. had been restored by form-association. It is however questionable whether the dropping of *d* before *n* took place so early as the prim. Slav. period. Cp. *tn* § 545.

§ 549. History of the mediae aspiratae. They fell together with the mediae in the period of the Balt.-Slav. prim. community, as was the case also in Iranian (§ 481) and Keltic (§ 524). The laws, which have been laid down for the Indg. mediae (§§ 546—548), therefore held good also here.

*bh.* Lith. *bijóti-s* O.Bulg. *bojati se* 'to be afraid': Skr. *bháy-a-tē*. See § 347.

*dh.* Lith. *dė-ti* O.Bulg. *dě-ti* 'to lay, put': Skr. *dhā-ma*. See § 379.

*gh.* Lith. *snėga-s* O.Bulg. *sněgŭ* 'snow': Gr. *νίφα*, rt. *sneigh-*. See § 464.

*ǵh.* Lith. *žėmà* O.Bulg. *zima* 'winter': Gr. *χειμών*. See § 416.

§ 550. Prim. Baltic-Slav. change. *dm* became *m*: O.Lith. *demi*, O.Bulg. *vyme*, see § 547.

§ 551. On prim. Slav. *dž dz* from *g* = Indg. *gh* see § 463. O.Bulg. *ralo* fr. \**rā-dlo* with suffix *-dhlo-*, *vüz-bŭna* fr. rt. *bheydh-* and similar forms see, § 548.

The combination media aspirata + t, s.

§ 552. It has already been remarked in § 469, 6 that a sure answer has not yet been found to the question how the combination media asp. + t or s was pronounced at the time just before the dissolution of the Indg. prim. community.

In Aryan we must hold as the regular continuations of the Indg. prim. forms such forms as Skr. *dybdhá-* Av. *der<sup>e</sup>wāda-*, Skr. *dīpsati* Av. *diwžaidyāi*, which yield for the Ar. prim. community *bdh* as the continuation of *bh+t* and *bzh* as that of *bh+s* etc. The history of these Ar. groups is treated in § 482.

All the European languages have for the original combinations the same representations as for Indg. *pt ps*, *t<sup>t</sup> ts*, *kt ks*, *qt qs*. Examples:

Greek *ρόπτός* 'sipped, supped', to *ρόφέω*, Lith. *srebiù* 'I sip', rt. *srebh-*. *ἄπυστος* 'not heard of' (*πύθομαι*), Skr. *buddhá-s*; *πέσσει* 'he will search, inquire': Skr. *bhōtsyātē*, rt. *bheṃdh-*. *ἀνεκτός* 'bearable' (*ἔχω*): Skr. *sādhá-s* fr. *\*sāždha-s*; fut. *ἔξω*: Skr. 1. sg. aor. mid. *ásākṣi*, rt. *segh-*. *εὐκτο*, *εὐξομαι* (*εὐχομαι* 'I supplicate, pray'): Av. 3. sg. *aog<sup>d</sup>dā*, 2. sg. *aogžā*, rt. *eugh-* (§ 482). *ἐνψε* 'it snowed' (*νίφει*), rt. *sneigh-*.

Italic. Lat. *nūptum nūpsī*, to *nūbō* Gr. *νύμφη* (Fick Vergl. Wörterb. I<sup>3</sup> 648). *ab-sorpsī*, to *ab-sorbeō* (*sybh-*), Gr. *ρόφέω*, see above. *gressu-s*, to *gradior*, Goth. *gridi-*. *jussu-s*, perf. *jussī*, to *joubeō*, see § 370. *dī-vīsu-s*, perf. *dī-vīsī*, to *dī-vidō*, Skr. *vidhyāmi* 'I pierce through'. *vectum vector*, *vēxī* (*vehō*): Skr. *vōdhum* Av. *važdri-š*, Skr. *vákṣat*, rt. *meḡh-* (§ 482). *forti-s fortis*: Skr. *dydhá-s* 'fastened, fast', rt. *dherḡh-*. *ānctu-s anxius*, to *angō angor*, rt. *añgh-*. *lectus* 'couch', to Gr. *λέχος*, rt. *legh-*. *nīctō cō-nīxī*, to *cō-nīveō*, rt. *kneigh-*. *nix nīncit*, to *ninguūt*, rt. *sneigh-*.

Old Irish. *tachtæ* (*\*to-achtæ*) 'angustus', rt. *añgh-*. *snechta* 'snow', rt. *sneigh-*. *for-tiasam* 1. pl. of the s-fut. to *for-tiagaim* 'I help', cp. Gr. *σείζομεν*, rt. *steigh-*.

Germanic. MHG. *wift* 'fine thread' OHG. *wiften* 'texere' O.Icel. *veftr veptr* 'weft', to OHG. *weban* O.Icel. *vefa* 'to

weave', Skr. *ubhnāti* 'binds, fastens' part. *ubdhā-*, Gr. *ῥφος* 'web', rt. *uebh-*. OHG. *musse* f. 'spring, source' prim. form \**mudh+tē* : cp. OHG. *mutilōn* 'to murmur, mutter', Gr. *μῦθο-σ* 'speech' (Kögel Paul-Braune's Beitr. VII 180 f.). Goth. *gīlstr* 'tax', to *gīld* 'tax', rt. *gheldh-*. Goth. *ana-busns* 'commandment' prim. Germ. \**-butsni-*, to *ana-biudan*, rt. *bheydh-*. Goth. *daūhtar* OHG. *tohter* 'daughter': Av. *dug'dā duyda*, Indg. \**dhugh+ter-*. Goth. *mahts* OHG. *maht* 'might, power', to Goth. *magan* 'may, be able', O.Bulg. *moga* 'I can, may'. Goth. *leihts* OHG. *liht* 'light, easy', prim. Germ. \**leaxta-z* : Skr. *laghū-* Gr. *ἐλαχύ-ς*, rt. *lengh-*.

Baltic-Slavonic. Lith. *skrepti* 'to dry' fut. *skrepsiu*, to pres. *skrebiu*, Gr. *κάρφω* 'I make dry or withered' (cp. § 589, 3). O.Bulg. *greti*, *grēsū* fr. \**greptī*, \**grēpsū*, to *greba* 'I scrape', Goth. *graba* 'I dig' (§ 545). Lith. *vėsti* O.Bulg. *vesti* 'to lead', Lith. fut. *vėsiu* O.Bulg. aor. *vėsū*, to pres. Lith. *vedū* O.Bulg. *veda*, Skr. *vadhū-* 'bride, young woman' (she who is to be led home, she who is led home). Lith. *vėzti* O.Bulg. *vesti* 'to drive, ride', Lith. fut. *vėziu* O.Bulg. aor. *vėsū*, to pres. Lith. *vežū* O.Bulg. *veza*:Skr. *vāhāmi*, rt. *uegh-*. Lith. *duktė* O.Bulg. *dūšti* 'daughter': Av. *dug'dā*. Lith. *dėkti* O.Bulg. *žėšti* 'to burn', Lith. fut. *dėksiu* O.Bulg. aor. *žėchū*, to pres. *degū*, *žega*, Skr. *ni-dāghā-s* 'heat', rt. *dhegh-*; for the initial sound in Slav. cp. § 379 rem.

Rem. 1. I do not know any examples from Armenian which belong to this class. By § 467, 1 the word *dustr* does not come under consideration.

The question now remains, is this representation of the original sound-combinations in the European languages the regular continuation of the Indg. forms, or have new formations arisen of the nature of Av. *dapta-* for \**dawda-* = Skr. *dabdhā-* etc. (§ 482 rem. 1)?

Some scholars have come to the conclusion that the latter is the case at least as regards the combination media asp. + t, because they thought that they had also found in the Europ. languages an aspect differing from Indg. tenuis + t, which is to be regarded as the regular development. Nevertheless all

the cases, which have been brought forward, also admit of a different decision regarding them.

Rem. 2. Bartholomae (Kuhn's *Ztschr.* XXVII 206) explains Gr. *θυγάτηρ* on the ground of a presupposed prim. Gr. double form \**dhughater-* and \**dhugdher-*. But the form may also belong to the class *ἔγω μίγας* etc. (§ 469, 8). Gr. *κῦθος*- Goth. *huzd* Lat. *custōs* need not contain \**kudh+t-* (cp. Bartholomae *Ar. Forsch.* I 176, Kluge in *Paul-Braune's Beitr.* IX 153), but admit of being traced back to \**kudh+dh-*, so, too, Goth. *ga-hugdi-* 'understanding' to \**kug+dh-*, whence \**kugdh-* (cp. §§ 469, 5. 507. 536. 538). Still more uncertain is the material which W. Meyer in Kuhn's *Ztschr.* XXVIII 166 f. has brought forward from Lat. and Kelt. beside *custōs*.

Therefore the possibility still remains, that forms like Gr. *ῥοπτός* etc. exhibit the regular continuation of the Indg. prim. forms.

Rem. 3. Osthoff *Zur Gesch. d. Perf.* p. 320 f. regards *bth*, with voiced media *b*, as being the form which was in existence in the last stage of the Indg. prim. language, from which was regularly developed on the one hand Skr. *bdh*, and on the other hand Gr. *πτ* etc. This is however not very probable from a phonetic point of view.

### The Indg. *tenuis aspiratae*.

§ 553. It is less doubtful that the Indg. prim. language possessed *tenuis aspiratae* than, to what extent it possessed this mode of articulation. Of late there has been a tendency to regard all or almost all of the *Ar. tenuis asp.* (§ 474) as being old inherited, according to which e. g. \**sthā-no-* 'stand' (noun), not \**stā-no-* would have to be put down as the Indg. form (Skr. *sthāna-* Gr. *δύστηνος* Lith. *stōna-s*). But in my opinion we have no right, with the present state of our knowledge, to put down the Indg. prim. forms with *ten. asp.* in such cases where only Aryan points to *tenuis asp.*, but the other languages to *tenuis*. For the question would be asked in vain, why e. g. in Greek does not an \**ἔσθην*, but *ἔστην* (Skr. *ásthām*) stand beside such cases as *ἦσθα οἶσθα* with Indg. *sth*, *t<sup>s</sup>th* (see below), and why do not \**πάθος* \**πόνθος*, but. *πάτος* *πόντος* correspond to Skr. *path-* *pánthā-* 'path, way'.

Therefore prim. Indg. *tenuis asp.* can, as yet, only be put down with any degree of probability in such words, where the

languages outside the Aryan group exhibit an aspirate or a sound which can be traced back to an aspirate. Such forms are the following:

1. Suffix 'of the 2. sg. perf. Indg. *\*-tha*. Indg. *\*uoit<sup>s</sup>tha* 'knowest' fr. rt. *ueid-*, Skr. *véttha* Av. Gāp. *vōistā* Gr. *οἶσθα*. Gr. *ἤσθα ἔησθα* 'wast' (originally a perf. form, see the accidentence), Skr. *ásitha*. Lat. *dix-ti dix-is-ti* (for the vowel of the suffix see the accidentence). Goth. *last* (*lisa* 'I gather together'), *slōht* (*slaha* 'I strike'), *hlaft* (*hlifa* 'I steal'); after such forms arose *gast* (*qiþa* 'I say') *haiháist* (*háita* 'I name') etc., in which *-ss* was the regular ending (cp. *káupasta* for *\*káupassa* etc., § 527 rem. 3), then also *bart* (*baira* 'I bear'), for *\*barþ*, etc. 1).

2. Skr. *skhálāmi* 'I stumble, stick fast, go wrong' Av. *skārayant-* 'leaping, letting leap' (in the proper name *skārayaþ-raþa-*), Arm. *sxalem* 'I go wrong, stumble, err, sin', Gr. *σφάλλομαι* 'I stumble, fail, suffer a disaster' (also Lat. *scelus* 'crime, impious action' and OHG. *sculd* 'guilt' Goth. *skulan* 'to owe, shall?'), rt. *sqhel-*.

3. *chinád-mi* 'I cut off, tear' Av. opt. perf. *hi-sið-yāþ*, Gr. *σχίζω* 'I split' *σχινδαλμός-ς* 'a piece of cleft wood, splinter', Lat. *scindō caedō*, Goth. *skáidan* 'to divide, separate' OHG. *scintan* 'to flay' rt. *skhajt-* *skhajt-*.

4. Skr. *śanókhá-s* 'muscle, shell' Gr. *κόγχο-ς*, Lat. *congiu-s*.

5. Skr. *nakhá-s* Mod. Pers. *nāxun* Osset. *nūx* 'nail', Armen. *magil* 'claw, talon' (whence *m-* for *n-*?), Gr. *ὄνυχ-ος* gen. to *ὄνυξ* 'nail, talon', Lat. *ungui-s*, Mid.Ir. *inga* O.Cymr. *eguin* Mod.Cymr. *ewin* 'nail, talon', Goth. *nagljan* 'to nail', Lith. *nāga-s* O.Bulg. *noǵūtī* 'nail, talon'.

Without representation in Aryan are:

6. Armen. *durngn* 'potter's wheel', Gr. *τροχός-ς* 'wheel, potter's wheel' *τρέχω* 'I run' fut. *θρέξομαι*, Goth. *þragja* 'I run' OHG.

1) Cp. the ending of the 2. du. act. Goth. *-ts* = Skr. *-thas* or *-tas*. We must assume that original *-ts* stood regularly only in forms like perf. *\*lęsts*, *\*lęsts*, *\*slōhts*, *\*hlęfts* (transformed into *lęsuts*, *lęsuts*, *slōhts*, *hlęfuts*) and in the pres. *\*s-tas* or *\*s-tis* (Skr. *sthás* 'ye two are') and then was transferred to the other verbs. See the accidentence.



*drigil* 'servant' (runner), rt. *thregh-*. It is doubtful whether O.Ir. *traig* 'foot' Gall. *ver-trago-s* name of a kind of dog (= 'great foot, swift runner'?) belong here; cp. O.Ir. *droch* 'wheel'.

7. Lat. *habēō*, Goth. *habáiþ* 'has' common stem form \**khabhē-*.

The Indg. *tenuēs* asp. fell together with the Indg. *mediae* asp. in Greek and Italic (see §§ 495. 509), and with the Indg. *tenuēs* in Germanic (see §§ 528—530. 509). The voiceless spirants, which arose after *s* in Lat. and Germanic, passed into *tenuēs* (cp. §§ 507. 528 end. 541, 7). *Tenuēs* arose after *s* in Balt.-Slav., elsewhere the *tenuēs* asp. fell together with the *mediae* asp. in this branch also, just<sup>1)</sup> as in Armen. If O.Ir. *traig* belongs to the rt. *thregh-*, it follows that Indg. initial *th-* was treated differently in Kelt. before *r* from Indg. *qh* after *ə* (*inga*).

## THE SPIRANTS.

§ 554. Spirants are produced by the mouth channel being narrowed at one part in such a manner that the expiratory current gives rise to a grating noise on the edges of the narrowed part.

The following spirants are to be ascribed to the Indg. prim. language:

1. A voiceless *s*-sound, whose place of articulation cannot be exactly defined (cp. the various *s*-sounds in Sievers' *Phonet.* <sup>3</sup> p. 122 f.).

2. The voiced sound *z*, corresponding to this *s*.

Rem. 1. As a hypothesis which is at any rate worth noticing, we may mention here that Bartholomae (*Ar. Forsch.* I 18 ff. II 54 ff.) ascribes aspirated *s* und *z* (*sh* and *zh*) also to the Indg. prim. language. E. g. he puts down *qshez-* as the rt. for Skr. *kṣhīṇāṇī* 'ruins' Gr. *φθίνω*, and *gzhom-*, *ghm-* (the latter with loss of *z*) as the stem forms for Skr. *kṣām-* Av. acc. *zqm* gen. *z<sup>m</sup>m-ō* Gr. *χθών* O.Bulg. *zemlja* 'earth'. Cp. also prim. Ar. and perhaps Indg. *bzh* from *bh+s* etc. §§ 469, 6. 470. 482. 552. 589, 4.

1) According to this it would also be possible to trace the suffix Slav. *-dlo-* Gr. *-θλο-* Ital. *-flo-* back to Indg. *-thlo-*, as has been done.

3. The palatal spirant *j*, strictly to be distinguished from consonantal *i* (*ĭ*).

To these is probably to be added:

4. The labial spirant *v*, strictly to be distinguished from consonantal *u* (*u*). *v* and *u* have fallen together in most languages, and as was already mentioned in § 117 it is often difficult to decide whether the one sound or the other is to be assigned to the Indg. prim. form. The surest criterion for Indg. *v* is want of an old inherited weak grade form, in which *v* was fused with the neighbouring vowel to sonantal *u*, e. g. rt. *ves-* 'clothe' (§ 555).

Rem. 2. The question of the separation of Indg. *v* and *u* is so involved and still so little investigated that we must content ourselves here with having referred to it generally.

It has been conjectured that the sound, from which Skr. *h* Gr. Lat. *g* in cases like Skr. *ahám* Gr. *ἐγώ* Lat. *ego* 'I' have arisen, was a spirant which closely resembled *j*. Attention has already been drawn to the uncertainty of this hypothesis in § 469 rem.

Lastly the question may still be raised whether a sibilant was not spoken after the *k*-sound in words in which a Gr. *κτ* stands opposite to a Skr. *kṣ*, as in *tákṣan-* *τέκτων* 'carpenter' *fkṣa-* *ἄρκυτο-ς* 'bear', and whether it differed from the Indg. *s* sound which is to be presupposed for cases like Skr. *ákṣa-s* Gr. *ἄξων* 'axle' Skr. *dákṣina-s* Gr. *δεξιό-ς* 'dexter', and was perhaps a *ḥ*. For it has not hitherto been possible to discover a law by which the difference *κτ* : *ξ* might have arisen specially in Greek.

### Indg. s.

#### Prim. Indg. period.

§ 555. \**septm* 'seven': Skr. *saptá śapta*, Arm. *evēn*, Gr. *ἑπτά*, Lat. *septem*, O.Ir. *secht n-*, Goth. *sibun*, Lith. *septyni* O.Bulg. *sedmŭ*. \**seno-* 'old': Skr. *sána-s*, Arm. *hin*, Gr. fem. *ἔνη*, Lat. *senex*, O.Ir. *sen*, Goth. superl. *simista*, Lith. *sėna-s*. Reflexive pronoun \**smo-* \**smo-*: Skr. *svá-s* 'own' Gr. *ὄ-ς* 'own' *εἰ* 'se', Goth. *svēs* (gen. *svēsis*) O.Bulg. *svoji* 'own'. Rt. *sneigh-* 'to snow': Av. *snazǰaiti* Gr. *λείπει* 'snows' *ἀγά-ννιφο-ς* 'much snowed upon',

Lat. *ninguit*, O.Ir. *snechta* Goth. *snáivs* Lith. *snĕga-s* O.Bulg. *snĕgŭ* 'snow'. Rt. *srey-* 'flow': Skr. *sráv-a-ti* Gr. *ῥέει* 'flows', O.Ir. *sruth* OHG. *stroum* 'stream', Lith. *sravà* 'a flowing, bleeding' O.Bulg. *o-strovŭ* 'island'. Rt. *stā- stō-* 'stand': Skr. *sthī-ti-ṣ* Gr. *στα-σι-ς* 'a standing', Lat. *statiō*, O.Ir. *-tau* 'sum' from *\*stā-īō*, Goth. *staþs* 'stead', Lith. *stóna-s* O.Bulg. *stanŭ* 'stand' (noun). Rt. *ves-* 'clothe': Skr. *vás-tē* 'puts on' (perf. *va-vas-ē*), *vás-ana-m* *vás-tra-m* 'cloak, dress' *vás-man-* 'cover', Arm. *z-ges-t* (gen. *z-gesti*) 'dress' *z-ge-nu-m* 'I dress myself' (*z-* prefix), Gr. Hom. aor. *ἔσ-σαντο ἔσαντο* 'they put on' *ἔσ-θής* 'clothing' *εἶμα* Lesb. *Ἐμίμα* 'dress', Lat. *ves-ti-s*, Goth. *ga-vas-ĵan* 'to dress' MHG. *wester* 'baptismal robe'. Rt. *dhers-* 'dare': Skr. *dhárṣ-āmi* 'I dare', Gr. *θάρσ-ος* 'boldness' *Θερό-της* prop. name ('bold one'), Goth. *ga-dars* 'I dare', Lith. *drĩs-ti* 'to dare' (§ 285 rem.). *\*aĥs(i)-* 'axis': Skr. *ákṣa-s*, Gr. *ἄξων*, Lat. *axi-s*, OHG. *ahsa*, Lith. *aszì-s* O.Bulg. *osŭ*.

*s* a frequent suffixal element. *-sjo-* future and *-s-* aorist suffix: Skr. *dhā-syā-mi á-dhā-s-am* from rt. *dhē-* 'put, place', *dĕk-ṣyā-mi á-dik-ṣ-ata* (3. pl. mid.) from rt. *deĭk-* 'show', *á-sahī-ṣ-ata* from rt. *segh-* 'subdue'; Gr. *ἔδειξ-α, ἤδ-ε-α* (on the function of the latter cp. the accidence); Lat. *dĕx-ī, fax-ī-s, vīder-ī-s*; O.Ir. aor. conj. (= fut.) 2. sg. *for-tĕis*, 2. pl. *for-tĕsid* from *\*tĕssis, \*-tĕssit(e)*, prim. f. *\*steigh+s-e-s, -te*, to pres. *for-tiagaim* 'I help' (cp. Gr. *στειζω*); Lith. fut. *dĕ-siu* from rt. *dhē-*, *vīlk-siu* from rt. *uelq-* 'trail, drag', O.Bulg. part. fut. *byšašte-je* 'το μέλλον' (to Lith. *bŭ-siu* 'I shall be'), aor. *dĕ-chŭ*, 2. pl. *dĕ-s-te*, from rt. *dhē-*. Personal ending of the 2. sg. *-s* as in *\*bhĕroĭ-s* 'feras' *\*s-ĭĕ-s \*s-ĭĕ-s* 'sis': Skr. *bhárĕ-ṣ syā-s*, Gr. *φῑροι-ς εἷης*, Lat. *ferĕ-s siĕ-s sĕ-s*, Goth. *bairái-s* OHG. *sĭ-s*, O.Bulg. *beri* (from *\*berĕ-s*). Noun-stem suffix *-es-* (as *\*ġén-es-* neut. 'genus'): gen. sg. Skr. *ján-as-as*, Gr. *γέν-ε-ος γέν-ου-ς*, Lat. *gen-er-is*, O.Ir. *tige* 'of the house' = Gr. *στέγε-ος τέγε-ος*, Goth. *riq-iz-a* neut. 'darkness' (cp. Skr. *ráj-as-*), Lith. nom. *deb-es-ī-s* 'cloud', O.Bulg. gen. *neb-es-e* 'of the sky' = Skr. *nābhas-as*. Sign of the nominative *-s* (as in *\*ĕkmo-s* 'equus'): Skr. *áśva-s* Gr. *ἵππο-ς* Lat. *equo-s*, Gall. *tarvo-s* 'bull', Goth. *vulf-s* Lith. *vīlka-s* 'wolf'.

## Aryan.

§ 556. Indg. s experienced several changes in the period of the Aryan primitive community.

1. s passed into ś and ss into śś after *i ī* and *u ū*, *ī* and *ū* (as second component of diphthongs), *r r̄*, *q, k̄*. By this means Indg. *st* and *kt*, *sq* and *kq* and probably also *ss* and *ks* fell together at that period, see §§ 396. 399. 401.

This ś remained in Iranian, but in Sanskrit it was further changed to cerebral ś, and śś (= Indg. *ss* and *ks*) became *kś* (as *ss* became *ts*, see § 557, 1).

After *i-* and *u-*vowels. 3. sg. pres. act. Skr. *tī-ṣṭh-a-ti* Av. *hi-št-a-iti*, O.Pers. 3. sg. imperf. mid. *a-i-št-a-tā*, from rt. *stā-* 'stand': Gr. *ἵ-στῆ-μι*, Lat. *si-stō*. Skr. *ni-ṣīd-a-ti* 'he sits down', causat. *ni-ṣādayāmi* Av. *ni-ṣādayēmi*; O.Pers. *niy-ašādayam* with ś carried over into the augmented form (like Skr. *ny-aṣīdam* beside regular *ny-asīdam*, *pary-aśahata* beside regular *pary-asahata* imperf. to *pari-śahatē* 'he endures', *savya-ṣṭhār-* after *savyē-ṣṭhar-* 'standing on the left'). Nom. Skr. *pāti-ṣ* Av. *paiti-ś* 'master': Gr. *πόσι-ς*. Loc. pl. *áśvē-ṣu* Av. *aspaē-ṣu -šv-a* O.Pers. *aspai-šuv-ā* (*áśva- aspa-* 'horse'), cp. Skr. *sénā-su* Av. *haenā-hu-hv-a* O.Pers. *hainā-uv-ā* (*sénā- haenā- hainā-* 'army'): O.Bulg. *vlūčē-chū* (*vlūkū* 'wolf') beside *raķa-chū* (*raķa* 'hand'). Part. Skr. *uṣṭá-* Av. *ušta-* = Lat. *ustu-s*, Indg. *\*us-to-s*, rt. *eys-* 'burn'. Skr. *śuš-ka-* (from *\*suš-ka-*, § 557, 4) Av. *huš-ka-* O.Pers. *uš-ka-* 'dry', prim. f. *\*sus-qa-*, rt. *says-*. Skr. *jōṣ-a-* Av. *zaoš-a-* 'favour', Skr. *jōṣṭár-* 'loving' O.Pers. *dauštar-* 'friend': Gr. *γεύο-τε-ν* 'meet to be tasted', Lat. *gus-tu-s*, Goth. *kius-a* 'I test, choose'. Skr. 2. sg. *dvēkṣi* 'thou hatest' from *\*dvēṣ-ṣi*, 1. sg. *dvēṣ-mi*. Skr. fut. *śōkṣyāmi* 'I shall dry up' fr. *\*śōṣ-ṣyāmi*, pres. *śūṣ-yāmi* (§ 557, 4), cp. Gr. fut. *αῖσω* fr. *\*αῖσ-σω*, rt. *says-*<sup>1)</sup>.

1) Some assume that Skr. ś also regularly stands for s after *ī, ū*, e. g. *piṣ-ānti* 'they pound': Lat. *pīnsō*; then the forms *pināś-mi* etc. for *\*pinas-mi* etc. would have been formed after the analogy of *piṣ-* (cp. Av. *cinah-mi* 'I announce' 3. sg. *cinas-ti*, from *caēṣ-*). I consider not only *pināś-mi* but also *piṣ-ānti* as a new formation (after *pipēṣa*, *piṣṭá-* etc.). For in the period of the Ar. prim. community, when s became ś, the preceding

After *r*-sounds. Skr. *dhṛṣ-ṇó-mi dhárṣ-āmi* 'I dare', Av. *der<sup>o</sup>-š-nao-mi* 'I dare' *darš-i-š* 'vehement', O.Pers. *a-darš-nau-š* 'he dared' (-š taken over from the *s*-aorist). Skr. *śīrṣ-á-m* 'head': Gr. *κόρση* 'head, temple', Indg. *ḷṛs-* (§ 306).

Indg. *qs* = prim. Ar. *kš*: Skr. *kṣ* Av. *xš*. Future Skr. *vakṣyāmi* Av. Gāp. *vaxšyā* 'I shall speak', nom. Skr. *vāk* from \**vākṣ* (§ 647, 7) Av. *vāxš* = Lat. *vōx*, rt. *ueq-*.

Rem. 1. The Av. combination *xš* became voiced in the dat. abl. pl. *vāyṣ<sup>a</sup>-byō* which was formed anew from the nom. sg. Cp. *awš-dāta-* § 558, 2.

{Indg. *ḷs*: Skr. *kṣ* Av. O.Pers. *š*. 2. sg. Skr. *vākṣi* Av. *vaši* 'thou art willing', to 1. sg. *váš-mi vas<sup>e</sup>-mi*, rt. *uek-*. Cp. § 401.

2. *sc* (Indg. *sq*) became *šc* or *šč*: Skr. *šč* Av. *sc* O.Pers. *šč*. Skr. *káš-cid* Av. *kas-ciḥ* O.Pers. *kaš-ciy* 'any one'. Av. *sc*: Skr. *šč* = Av. *nc*: Skr. *ñc* (*panca*: *pāñca*), see § 200.

3. Final *s* in prim. Ar. *-as* and *-ās* underwent a change which gave to these endings the form *-ō* and *-ā* in Skr., *ō* and *-a* (Gāp. *-ā*) in Av., e. g. nom. sg. Skr. *áśvō* Av. *aspō* = prim. Ar. \**aśva-s*, nom. pl. Skr. *áśvā* Av. *aspa* (*aspā*) = prim. Ar. \**aśvās*. This change cannot have taken place before voiceless dentals and palatals, as is shown by the combinations Skr. *aśvas tad*, *aśvaš ca* etc. and Av. *aspas ca* etc., also not in pausa, as clearly follows from the Skr. usual forms *áśvah*, *áśvāḥ* (Av. *aspā*, the more rare secondary form of *aspa*, seems to be most closely related to *áśvāḥ*). It may however belong to Skr. *-ḥ* from Indg. *-s* in as much as *-aḥ* *-āḥ* might both be regarded as the previous stages of Skr. *-ō*, *-ā* Av. *-ō*, *-a*. It is not improbable that the *-aḥ*, *-āḥ*, which arose in pausa in prim. Ar., forced their way at that period into the place of *-as*, *-ās* before voiced explosives and spirants and of *-as*, *-ās* before vowels; and whilst they were now retained in pausa down to the time of

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nasals cannot at that time have been so absorbed in the vowels, that only a nasal vowel was spoken, and the latter would in all appearance be the necessary presupposition for the influence of the *i* or *u* on the *s*-sound. Cp. § 199 rem. 1. *ñsanti* 'they injure', *ñisatē* 'they kiss', gen. *puš-ás* 'of the man' show the regular development.

the Skr. separate development, where they settled also before *k*, *p*, and *-āh* became *-ā* in Av., they regularly passed into *-ō*, *-ā* before voiced sounds; and these two stages might have been reached already in the prim. Ar. period. When *-ō* came to stand before other vowels than *a* in Skr., it became shortened to *a*, e. g. *aśva upa*; whereas *\*aśvō api* became *aśvō 'pi*. Cp. Bloomfield in the American Journal of Philology III 25 ff., Osthoff Zur Gesch. d. Perf. 36 ff., furthermore §§ 646. 647, 1 and 6. 649, 7.

Rem. On O.Pers. final *-a* = prim. Ar. *-as* see § 558, 4.

§ 557. The Indg. *s*, which had come over from prim. Ar., mostly remained unchanged in Sanskrit, e. g. *saptā* 'septem', *āsti* 'est', *jānas-as* 'generis'. Changes took place in the following cases:

1. Prim. Ar. *-ss-* became *-ts-*, just as prim. Ar. *-šš-* led to *-kš-* (§§ 401. 556, 1) and probably prim. Ar. *-sš-* to *-tš-* (2 below). *vātsyāmi* from *\*vas-syāmi* fut. from *vas-* 'clothe' (cp. Gr. fut. εἶσ-σω). *vātsyāmi* fut., *āvātsam* aor. from *vas-* 'stay, dwell' (cp. Gr. ἄεσα). Loc. pl. *vid-vātsu* from *\*vid-vas-su*, to acc. sg. *vid-vāṣ-am* instr. sg. *vid-ūṣ-ā*, part. to *vēda* 'I know'. *-dhvatsu* loc. pl. to *-dhvas-* 'falling', the final member of compounds. The *-t* of the form *tānt* acc. pl. masc. 'the', which appears before *s*, had perhaps also arisen from *s* (cp. *tās* before *t*, elsewhere generally *tān*). Av. *-s-* corresponded to this *-ts-*.

Rem. The *ss* in the loc. *vācassu* (*vācās-* 'word', cp. Gr. ἑπεσσι ἑπεσι), *māhīyassu* (*māhīyas-* 'greater' cp. Gr. μᾶλλοσι), *māssu* (*mās* 'moon, month') is due to analogy. In like manner also *āssē* 'thou sittest' (Gr. ἦσαι) for *\*ātsē* after *āstē* etc. *vidvātsu* in union with *vidvādbhiṣ* and the other *bh*-cases, in which *dbh* arose from *zbh* (§ 591), produced the form *vidvāt*. Cp. the accidence.

2. Indg. *sč* appears as *ch* (*cch*) = Iran. *s*. *gā-chā-mi* (*gācchāmi*) 'I go': Av. *ja-sā-mi*, Gr. βά-σκω, Indg. *\*gṃ-sčō*. See § 400. *sč* was probably spoken in the prim. Aryan period. *sč* passed into *tš* in Skr. (cp. *ts* from *ss* above), and this into *ch*, as in *pachās* (*pacchās*) 'pada by pada' from *\*pat-šas* from *pad-* (§ 351). *tānchatrūn* acc. 'these enemies' = *tān(s)* + *šatrūn* is

perhaps also to be traced back to \**tāntšatrūn* with transition of *śś* to *tś*. Cp. *tānt* before *s*- above.

3. *s* was dropped between *t* or *p* and following explosive or spirant. *áčhāntta* from \**a-chānt-s-ta* 2. pl. of the *s*-aorist from *chand*- 'shine'; *utthā*- 'rise' from \**ut-sihā*-, e. g. inf. *utthātum*; correspondingly *sattā*- = Av. *hasta*- from prim. Ar. \**satstā*- Indg. \**set<sup>o</sup>tō*-, part. from rt. *sed*- 'sit' (§ 469, 4). *átāpta* from \**a-tāp-s-ta* 2. pl. of the *s*-aorist to *tāpati* 'is warm'. Cp. the analogous treatment of *z* at the end of § 591.

4. *s* became *ś*, if *ś* or *ṣ* stood at the beginning of the next syllable.

*śvāśura*- 'father-in-law' from \**svāśura*-, cp. Av. *xwasura*- Gr. *ἐκγόος* Goth. *svaihra*. *śmāśru*- 'moustache': O.Ir. *smech* Lith. *smakrà* 'chin' (§ 467, 2), perhaps also Lat. *maxilla*. *śá-śvant*- 'complete, whole, each' fr. \**sa-śvant*-, cp. Gr. *ἄ-πᾶς* (§ 166).

*śušká*- 'dry' *śúśyati* 'drys in' fut. *śōkšyāti* (from \**śōššyati*, § 556, 1): Av. *huška*- O.Pers. *uška*- 'dry', rt. *saṣs*-. The change of the initial *s* might have taken place here at the time when the root-final *s* was already an *ś*-sound, but had not yet acquired the cerebral articulation (§).

The same assimilation as in *śvāśura*-, only in the opposite direction, seems to exist in *śaśá-s* 'hare': OHG. *haso* Ags. *hara* (*r* from *z*, § 581) Pruss. *saśn-i-s* 'hare'.

Cp. the analogous assimilation in Lith., § 587, 2.

§ 558. Prim. Ar. *s* was retained in Iranian before *n*, *p*, *t*, *k* and after *t*. It became *ś* after *p* (*f*). In other cases it either became an aspirate or disappeared.

1. Retention of *s*. Av. *snaēžaiti* 'snows': Goth. *snāivs* 'snow', rt. *sneigh*-. Av. *sās-na*- 'a teaching': Skr. *śás-ana*- 'assignment'. Av. *spas*- 'spy': Skr. *spáś*- Lat. *au-spez*. Av. *as-ti* O.Pers. *as-tiy* 'is': Skr. *ás-ti* Gr. *ἔσ-τι*. Av. *skemba*- 'pillar': Skr. *skambhá*-. *s* along with a preceding *t* became *ss*, whence *s*, as in Av. *masya*- 'fish' = Skr. *mátsya*-, see § 473, 2 p. 349.

2. *ś* from *s* after *f* (cp. § 473), except when *r*, *tr* followed, in which case *s* remained (Bartholomae Handb. § 149 rem. 1). Av. *drafša*- 'drop': Skr. *drapsá*- 'drop'. *āfš* (acc. *āp-em*) 'water':

Skr. *áp* from \**aps* (§ 647, 7). With *āfš* the new formation *awž-dāta* 'resting in the water', where *fš* had become voiced, cp. *vāγž<sup>e</sup>-byō* § 556 rem. 1.

### 3. Aspirates from *s*.

Initially.

Av. O.Pers. *h* before prim. Ar. *a ā, i ī, y*. Av. O.Pers. *hama* 'equal': Skr. *samā-*. Av. *haenā-* O.Pers. *hainā-* 'army': Skr. *sénā-*. Av. *hindu-š* O.Pers. *hidū-š* (§ 197 rem.) 'country of the Indus': Skr. *sindhū-š* 'river, Indus'. Av. opt. *hyāp* 'it may be': Skr. *syāt*. O.Pers. *hya* 'qui' (relat.): Skr. *syá* 'that'. In Av. also before *u, ū*, and in the Gāpā dialect before *v. hu-* 'well, very, rich': Skr. *su-*. Gāp. *hva-* 'own': Skr. *svá-*.

For *hy-* Gāp. also *xy-*. For Gāp. *hv-* Late Av. *xw-*. See its treatment medially.

In O.Pers. *h* is wanting before *u* and *uy = ū*. *u* 'well': Av. *hu-* Skr. *su-*. *uva-* 'own': Av. Gāp. *hva-* Skr. *svá-*. Cp. medially.

Prim. Ar. *sm-* = Av. *m-* (intermediate stage \**hm-*): *maraiti* 'is mindful': Skr. *smárati*; *mahi* 'sumus': Skr. *smási*. Prim. Ar. *sr-* = O.Pers. *r-*: *rauta* neut. 'river': Skr. *srótas* neut. It cannot be decided whether *s* had also disappeared in O.Pers. before *m* and in Av. before *r*.

Medially.

Av. *h* after prim. Ar. *a*-vowels before *i ī, u ū*. 2. sg. *bara-hi* (Gāp. *bara-hī*) 'fers': Skr. *bhára-si* Goth. *bairi-s* O.Bulg. *bere-ši*. *ahura-* 'master': Skr. *ásura-* 'alive, spiritual, spirit'. *yāhu* loc. pl. from stem *yā-* 'quae': Skr. *yā-su*.

Av. *nh* between *a*-vowels. Sg. instr. *mananēh-a* dat. *mananēh-ē* gen. *mananēh-ō* (*manah-* neut. 'sense, mind', Gr. *μένος*) = Skr. *mánas-ā, -ē, -ō*, prim. Ar. \**manas-ā, -a<sub>2</sub>, -as*; cp. loc. *manah-i* = Skr. *mánas-i*. Conj. 3. sg. *anēh-a<sub>2</sub>* from *ah-* 'be': Skr. *ásat* Lat. *erit*. *yānēham* gen. pl. from *yā-*: Skr. *yā-sām*, cp. Av. loc. *yā-hu*.

O.Pers. *h* corresponded to this Av. *h* and *nh* except before *u*. 2. sg. conj. *bavā-hy* 'sis': Av. *bavā-hi* Skr. *bhāvā-si*.



*nāha-m* acc. 'nose': Av. *nā̄nāhā-* Skr. *nāsā-*. *h* is wanting before *u*, as initially (see above). *aura-mazdāh-* Ormazd: Av. *ahura-*. It is improbable that *h* was here also entirely unpronounced, cp. below on *w* = prim. Ar. *sy*.

Rem. 1. *h* remained here and there unwritten in O.Pers. also before other vowels than *u*, e. g. imperf. *a-ištātā* 'he placed himself', cp. Av. pres. *hištātē*; *ḫātiy* (probably to be read *ḫātiy*) for *ḫahatiy* 'he announces' beside imperf. 3. sg. *aḫaha*.

Av. *h̄* before *r* (also written *ṛ*, *ṛg*, *ṛh*). *ha-zañra-* 'thousand': Skr. *sa-hāsra-* Gr. Lesb. *χέλλιοι*, Indg. \**gheslo-*.

Av. *hm* O.Pers. *m* from *sm*. Av. *ahmi* O.Pers. *amīy* 'sum': Skr. *ās-mi*. Av. *ahmākem* O.Pers. *amācam* gen. 'of us': Skr. *asmākam*.

Av. *ñh* Gāḫ. *hy*, O.Pers. *hy* from prim. Ar. *sj*. Av. *vañhō* Gāḫ. *vahyō* 'melius': Skr. *vās-yas*. O.Pers. gen. sg. *kāra-hyā* (*kāra-* m. 'people, army') Gāḫ. *haoma-hyā* (*haoma-* 'somadrink'): Skr. *sōma-sya*. For this and the initial *hy* in Gāḫ. also *xy*: *axyā* beside *ahyā* 'huius': Skr. *asyā*; *xyāḫ* 'sit': Skr. *syāt*.

Prim. Ar. *sy* became Av. *xw* and *ṛuh*. *haraxwaiti-* = Skr. *sārasvat-i-* prop. name, cp. initial *xw*, as *xwa-* 'own' = Gāḫ. *hwa-*. 2. sg. imper. mid. *bara-ṛuha* = Skr. *bhāra-sva*, rt. *bher-* 'bear'. The duality *xw*: *ṛuh* was originally probably such that *xw* made its appearance under the conditions by which *s* without *u* passed into *h*, but *ṛuh*, where *s* without *u* had become *ṛh*. Also for medial *sy* in Gāḫā *hv*: imper. *gūša-hvā* 'hear', cp. *hva-* 'own'. In O.Pers. *w* from *sy*. 2. sg. imper. *pāti-paya-wā* 'protect thyself': Skr. *-sva*, cp. *wā-* 'own'. The pronunciation of this *w* is not clear, it follows however from Gr. *Χουσομία* = O.Pers. *wārazmī-š* and similar forms, that a spirantal element was not wanting. Cp. § 159 p. 143.

4. Aryan final *-s* was entirely lost in O.Pers. (but not so *-š*, cp. *kūrū-š* Cyrus). Nom. sg. *aniya* 'alius' (stem *aniya-*): Av. *anyas(-ca)* *anyō* Skr. *anyās anyō*. Nom. acc. sg. neut. *rauca* 'day' (st. *raucah-*): Av. *raocas(-ca)* *raocō*. 2. sg. impf. *gaudaya* 'thou concealedst': Av. *-ayas(-ca)* *-ayō*. It is not clear whether prim. Iran. *-s* was dropped here or whether we have to do

with the offspring of an already prim. Ar. further development of *-as* (see § 556, 3).

Rem. 2. If it were certain that the nom. *napā* 'grand-child' had arisen from *\*napās* and were identical with Skr. *nāpāt* from *\*napāts*, the form *aniya* would be supported as the regular continuation of prim. Pers. *\*anyas*.

### Armenian.

§ 559. *s* was retained before *t*, *x*, in combination with *s* and after (dropped) *n*, *m*. *astl* (gen. *astel*) 'star': Skr. *stṛ-* Gr. *ἀστὴρ* Lat. *stella* Goth. *stairnō* 'star'. *sterj* 'barren' (of animals): Skr. *starī-* § Gr. *στειρα* Lat. *sterili-* 'unfruitful', Goth. *stairō* 'barren woman'. *z-gest* 'dress': Lat. *ves-ti-* etc., see § 555. *szalem* 'I go astray, err': Skr. *skhālāmi* 'I stumble', Gr. *σφάλλομαι* 'I stumble, fail', rt. *sqhel-*. 2. sg. *es* 'art' from *\*es-si*: Gr. Hom. *ἔσσι*. *amis* (gen. *amsoy*) 'month': Gr. Lesb. gen. sg. *μῆνι-ος* from *\*μηνσ-ος*, Lat. *mēns-i-*s, O.Ir. gen. *mīs*, cpf. *\*mēns-*. Acc. pl. *eris* 'three' from *\*tri-ns*: Goth. *pri-ns*. *us* (gen. *usoy*) 'shoulder': Skr. *āsa-*s 'shoulder', Umbr. *onse* loc. 'in umero', Goth. *ams* m. 'shoulder', Indg. *\*ómso-*.

§ 560. Initial *s* disappeared before sonantal vowels and before nasals. *al* 'salt': Gr. *ἄλ-ς* Lat. *sāl* O.Ir. *salann* Goth. *salt* O.Bulg. *solǎ* 'salt'. *evēn* 'seven': Skr. *saptá* etc., see § 555. *amařn* 'summer' OHG. O.Icel. *sumar* 'summer' (§ 232). *m-i* (gen. *m-iqj*) 'one' from *\*sm-*: Gr. *μία* 'one' fem. from *\*σμ-ια*, *μῶνυξ* 'with single uncloven hoof' from *\*σμ-ωνυξ*, Indg. *\*sm-* weak stem-form beside *sem-* (Gr. *ἔν*). *nu* (gen. *nuoy*) 'daughter-in-law' Skr. *snušá-* OHG. *snur* O.Bulg. *snūcha* 'daughter-in-law'. *neard* (gen. *nerdi*) 'nerve, sinew': Skr. *snāvan-* 'string, sinew': Av. *snāvar*<sup>6</sup> 'sinew'. *h-* occurs however before vowels in two words at least without any apparent reason: *hin* 'old': Skr. *sána-*s etc., see § 555; *h-* from *\*hu-* prefix, e. g. *h-lu* 'obedient': Skr. *su-* O.Ir. *so-* *su-* 'well, very'.

*þ-* probably from *sp-* in *þoit* 'σπονδή'. *Ƿ-* from *spi-* probably in *Ƿukē* 'spattle' *e-Ƿukē* 'he spat': Gr. *πτύω* from *\*(σ)πιϋ-ω* Lat. *spuō* Lith. *spidu-ju* 'I spit' (cp. § 149).

*k-* from *su-* (cp. *g(u)* from *u*, § 162). *koir* 'sister': Skr. *svásar-* Lat. *soror* from *\*suesōr* (§ 172, 3) Cymr. *chwaer* Goth.

*svistar* Pruss. *swestro* 'sister', Indg. \**syēsor-*. *Kirtn* (gen. *krtan*) 'perspiration' (-*rt-* from -*tr-*, § 263) : Skr. *svīdyāmi* 'I perspire', Gr. ἰδρωΐς Lat. *sūdor* from \**suoi̯l-ōr* (§ 170 p. 150.) Cymr. *chwys* 'perspiration' OHG. *sweiz* 'perspiration', rt. *sueid-*. *Kun* (gen. *knoy*) 'sleep' : Skr. *svāpna-s* Lat. *somnu-s* from \**syepno-s* (cp. *soror*) O.Icel. *svefn* 'sleep'.

Rem. If *veç* 'six' in Armen. arose from \**syēks*, the duality *k-* and *v-* = *su-* must probably be placed on a level with the duality *g* and *r* in *loganam* and *kor* (§ 162). But it may also represent a pre-Armenian form \**ye̯ks*, see § 589, 3.

### § 561. Medially and Finally.

*epem* 'I cook' to Gr. ἐψω ὄψο-*v* with orig. *ps?*

*ç* = Indg. *ks* and *sk̄*. *veç* 'six' : Gr. ἕξ Lith. *szesz-ì* (cp. § 560 rem.). *harç* 'quaestio' *harç-ane-m* 'I ask' : Skr. *pr̥chāmi*, Lat. *poscō*, OHG. *forsca*, prim. f. \**pr̥(k)-sk̄-*. See § 408.

The *š* in *gišer* 'night' is not clear : Gr. ἑσπέρα Lat. *vesper* O.Ir. *fescor* Cymr. *ucher* Lith. *vākara-s* O.Bulg. *večerŭ* 'evening'.

The *j* in *arj* 'bear' (Skr. *śkṣa-s* Gr. ἄρκτο-ς Lat. *ursus*) probably arose from *č* (p. 358 footnote 1), but on account of Gr. ἄρκτο-ς, it is questionable whether the Indg. prim. form contained *s*, cp. § 554.

-*y-* from -*si-*. Gen. *mardo-y* (*mard* 'man, homo') : Skr. *mṛtā-sya*, Gr. Hom. βροτοῖο from \**-o-σio*.

Intervocalic *s* disappeared. *koir* 'sister', pl. *kor-k̄* : Skr. *svāsā svāsār-as*. *nu* 'daughter-in-law' : Skr. *snušā*.

*s* disappeared between a vowel and *k* (Indg. *q*), *r*, *m*, *n*. *mukn* (gen. *mkan*) 'mouse, musc' : Skr. *muṣ-kā-* 'testicle' *mūṣaka-s māṣikā-* 'rat, mouse', Lat. *mus-culu-s*, O.Bulg. *myšica* 'arm'. *bok* 'bare footed' prim. form \**bhos-ḡo-s* : OHG. *bar* 'naked, only' prim. Germ. \**bazā-s*, O.Bulg. *bosŭ* 'bare footed'. Gen. *ker* 'sororis' : Goth. *svistrs*, prim. f. \**syesr-os* or *-es*. *em* 'I am' : Skr. *āsmi*, Indg. \**és-mi*. Pronominal dative ending -*um*, e. g. *im-um* 'to my' *or-um* 'to which' : ep. Skr. -*a-smāi* in *tā-smāi* 'to the', Pruss. -*e-smu* in *ste-smu* 'to this'. *z-ge-nu-m* 'I dress' : Gr. Ion. εἶνῆμι from \**ḡes-nv̄-mi* (§ 565), rt. *ves-*, see § 555.

*s* disappeared after *r* (probably only under certain conditions).

*i ver* 'up, above, over', *i veroy* 'above': Skr. *várṣṅyas-* 'higher' Lith. *virsz-ù-s* 'the upper part, point' (Hübschmann Ztschr. d. deutsch. morg. Ges. XXXVI 121). *tar-am-im* 'I cause to fade, dry up': Skr. *tarṣ-a-s* 'thirst'. Gr. *τέρομαι*, 'I become dry', Lat. *torreō*, Goth. *ga-þairsan* 'to be arid, gape from dryness', rt. *ters-*. But beside this appears also *taršam-im*, the relation of which to *tar-am-im* is not clear to me.

*s* disappeared finally after vowels. Nom. sg. *mard* 'homo': Skr. *mṛtá-s*. Gen. sg. *haur* 'of a father': Gr. *πατρ-ός*. But acc. pl. *z mards* Indg. *\*mṛtóns*, cp. Goth. *vulfa-ns*.

§ 562. Indg. *s* seems to have been assimilated to the *k* at the beginning of the following syllable in *skesur* (gen. *skesri*) 'mother-in-law': Gr. *ἐκυρά*, Goth. *swigar*, Indg. *\*smekrū-*; *sk-* thus = *k-*, see § 162. Cp. Skr. *śvaśrū-* § 557, 4 and Lith. *szeszura-s* § 587, 2.

#### Greek.

§ 563. *s* was preserved down to historical times in the following cases:

1. In combination with voiceless explosives. *σπύρω* 'I pant, gasp': Skr. *sphurāmi* 'I push away with my foot, pant, tremble', Lat. *spernō*, OHG. *sporo* 'spur', Lith. *spiriù* 'I push with my foot', rt. *sper-*. *ἀλείψω* 'I shall anoint': Skr. *lēpsyāmi* 'I shall spread upon, besmear', Lith. *līpsiu* 'I shall remain sticking', rt. *leip-*. *ἵσ-ται* 'sits': Skr. *ās-tē*. *ἦσ-θα* 'thou wast': cp. Skr. *ās-i-tha* (cp. § 553). Aorist Hom. *πάσασθαι* 'to eat, consume' from *\*πατ-σασθαι*, to pres. *πατέομαι*; with reduction of the *σσ* to *σ* Hom. *ἐπάσαντο* (cp. § 490). *βάσκω* 'I go': Skr. *gáčhāmi*, Indg. *\*gm-skō*, rt. *gem-*. *ἄξ-ων* 'axis': Skr. *ákṣ-a-s* etc., Indg. *\*aks-*, see § 555. *σκάνδαλον* 'stumbling-block': Skr. *skándāmi* 'I jerk, leap upon', Lat. *scandō*, O.Ir. perf. *ro se-scaind* 'he leapt', rt. *sqand-*. *σφάλλομαι* 'I stumble, stagger, fail': Armen. *szalem* etc., rt. *sqhel-* (§ 553). Fut. *λείψω* 'I shall leave': Skr. *rēk-ṣyāmi* 'I shall leave, give up to', Lith. *līksiu* 'I shall leave', rt. *leiq-*.

Rem. 1. For the *κτ* in *τέκτων* 'carpenter' *ἄρκτο-ς* 'bear' *κτιο-ς* 'a founding' (Skr. *tákṣā kṣā-s* *kṣi-ti-ṣ*) etc. see § 554.

2. In combination with *s*. Hom. aor. ζέσ-σ-α, to ζέω 'I seethe, bubble': Skr. *yás-āmi* 'I bubble seethe, boil', OHG. *jesan* 'to ferment, froth', rt. *jēs-*. Hom. loc. pl. ἔπεσ-σι (ἔπος 'word'): cp. Skr. *vācas-su*, § 557 rem. This *σσ* became *σ* at the same time with the *σσ* = *ts* (above n. 1 and § 490) and *σσ* = *tš* *thš* (§ 489). Hom. already ἔπεσι etc., Att. only *σ*, ἔζεσα ἔπεσι.

3. With preceding *ρ* (Indg. *r*, *r̥*, *r̄*). Aeolic θέρρος (cp. Θεραΐτης) Att. θάρρος 'boldness', rt. *dhers-*, see § 555. *σ*-aorist Hom. ἔφθερσα (φθειρω 'I destroy'): cp. Skr. *ābhārṣam* (*bhārāmi* 'I bear'). ἔρση 'dew': Skr. *varṣ-ā-* 'rain'. ἄρσην Ionic ἔρσην 'masculine': cp. Skr. *r̥ṣā-bhā-* 'masculine, bull' Av. *aršan-* O.Pers. *-aršan-* 'man, male' or Skr. *vṛṣān-* 'masculine, bull'. κόρση-η 'head, temple': Skr. *śirṣ-ā-m* 'head', Indg. *kṛs-*, see § 306. Probably also with *λ*. τέλσ-ο-ν 'boundary', which either represents the weakest stem-form of τέλος (τέλεσ-) with *ο* extension or, what is more probable, belongs to Skr. *kārṣ-āmi* 'I furrow, plough' (rt. *qels-*, § 427 *b*) and was only popularly connected with τέλος. Hom. aor. ἔκελσα, to pres. κέλλω 'I move, drive'.

*ρρ* from *ρσ* in later Attic: θάρρος, ἄρσην, κόρση.

Rem. 2. Hom. ἔκερα, Att. ἔφθειρα ἔστειλα beside Hom. ἔκερσα ἔφθερσα ἔκελσα were new forms, made after the analogy of forms like ἐκτενα ἔνειμα (from nasal stems),

4. In the combination *ns̥i*, whence *σσ*. πτίσσω from \*πτινσ-ιω 'I bruise, pound': Lat. *p̄nsiō p̄nsō*, Skr. 3. pl. *ῥῖṣ-ánti* 'they pound' 1. sg. *ῥινáṣmi* (cp. p. 410. footnote 1). νίσσομαι from \*νι-νσ-λο-μαι 'I go away, return home' beside νόομαι from \*νεσ-ο-μαι: Skr. *nás-āmi* 'I approach some one, I unite myself to some one', OHG. *gi-nesan* 'to recover, remain alive'.

5. Finally. ἵππο-ς 'horse': Skr. *áśva-s*, Lat. *equo-s*. ἡδύ-ς 'sweet': Skr. *svādú-ṣ*. ἔφερε-ς 'thou didst bear': Skr. *ābhara-s*. Acc. pl. masc. Cret. τό-νς Att. τοίς 'the': Goth. *þa-ns*. Nom. *κύκλ-ων* 'round-eyed', like Lat. *vōx* Av. *vāxš* 'voice'. Nom. νεό-της 'youth': Lat. *novi-tās*, Indg. \**-tāt-s*.

6. In the initial combination *sm*. σμερδαλί-ος 'terrible': OHG. *smerto* 'pain' Mid. Engl. *smerte* 'sharp, bitter'. Beside these also the assimilation of the *σ* to *μ*, as in μειδῆσαι 'to

smile' φιλο-μμειδής, to Skr. *smāy-a-tē* 'he smiles'; μία 'una' from \*σμη-ια fem., to ἔν neut. from \*sem; which is to be explained from the different conditions of sandhi (cp. § 589, 3).

§ 7. It is not quite certain that initial *sm* became *σσ*, *σ*. The following comparisons have been made ἴσσο-ς ἴσο-ς Cret. *ἴσσο-ς* 'equal' with Skr. *viṣu* 'in both directions' *viṣuva-m* 'aequinoctium' <sup>1)</sup> and Arcad. ἡμι-σσο-ς 'half' with Av. *ḥri-šva-* 'third part' (on ἡμισυ-ς see Osthoff Morph. Unt. IV 187).

Rem. 3. Imper. φέρο φέρον not = Skr. *bhāra-sva*, but = Av. *bara-waha* Indg. \**bhēre-so*. ἰό-ς 'arrow' to Skr. *iṣu-ṣ* 'arrow', but it did not arise from \*ἰσφο-ς, but either *o-* and *u-*stem existed side by side from the beginning, or ἰό-ς had been carried over into the *o-*declension from \*ἰν-ς, cp. *νό-ς*: Lat. *nuru-s*, *νι-ς* beside *νί-ς*.

If the above comparisons are right, it would then be possible to explain the initial *σ* = *sm-* instead of *f-* *h-* (§§ 166. 564) in certain words, e. g. in *σάλος* 'groundswell, fluctuation': OHG. *swellan* 'to swell'; *στίνομαι* 'I rob': OHG. *swīnan* 'to disappear'; *σιγή* 'silence': OHG. *swīgēn* 'to keep silent' (rt. *smā<sup>x</sup>ik-* *smā<sup>x</sup>īg-*). The *σ* would have its regular position only medially (in the inner part of the sentence), cp. *κοι-σσαλος*, *ὁ σάλος*, *ἐκ σάλου*, *ἐσάλενον*, *ἐστινόμην*. Cp. Osthoff Morph. Unt. IV 359.

Rem. 4. We thus arrive at an explanation of *σῦ-ς* beside *ῥ*: 'pig'. Corresponding to *σάλο-ς* 'fat hog' from \**σF-ιαλο-ς* (cp. Goth. *sv-ein* 'pig', O.Bulg. *su-inŭ* 'suillus') there existed once the form \**σF-ος* beside *ῥ-ός* (cp. Goth. *sv-ein* as opposed to Lat. *su-inu-s*, like Ved. *dvā* beside *dvā* 'two'), the *σ* of which was retained in the inner part of the sentence and then was transferred to *ῥς ῥός*. Cp. Osthoff loc. cit.

§ 564. *s* became *h* in prim. Greek initially before sonants and between sonants, and then in the latter case disappeared altogether.

ὁ 'the': Skr. *sá* Goth. *sa*. ἱμάς 'strap, rein': Skr. *sī-mán-* 'parting, boundary', OS. *sī-mo* 'cord, rope', O.Bulg. *si-lo* 'cord

1) Bechtel (Philol. Anz. 1886 p. 15) puts \**Fid-σφο-ς* down as the prim. form, which he connects with *εἰδομαί τινι* 'I resemble some one'. This would do very well as regards meaning, but the assumed suffix formation is not justifiable.

rope'. ἵς 'pig' : Lat. *sū-s*, OHG. *sū* 'sow' (on *σῦ-ς* see § 563 rem. 4). ἰμό-θεν 'from some place or other' : Goth. *sums* 'anyone', cpf. \**smm-ó-*.

Hom. ἦα (Att. ἦ) 'I was' : Skr. *ās-am*, Indg. \**és-η*. γένε-ος γένους 'generis' : Skr. *jānas-as* Lat. *generis*. 2. sg. mid. φέρε-αι φέρον (φέρω 'I bear') : Skr. *bhāra-sē*. ἤδε-α 'I knew' : Skr. *āvēdi-ṣ-am*.

Rem. 1. Sometimes *σ* seems to have remained unaffected between vowels, as in *τιθε-σαι* beside *φέρε-αι*, aor. Att. *ἐποίησα* beside El. *ἐποίηα*. On this point see the accidence.

Initial *h* passed into the spiritus lenis in prim. Greek, if an aspirated tenuis or *h* = *s* stood in the next syllable or the next but one. ἔχω 'I hold, have' fr. \**éχω* (cp. *ἔξω*, *ἔσχω-ο-ν*) : Skr. *sāhē* 'overpower', Indg. act. \**séghō*; ἔσχω from \**íσχω-ω*. ἔδεθλο-ν 'seat' beside ἔδος 'seat' : Skr. *sādas-* 'seat, a sitting'. ἄ-λοχο-ς 'consors tori' beside ἄ-παξ 'once', ἄ- = Skr. *sa-* 'with', Indg. \**sm-*. ἄνω 'I dry, wither' from \**av'hw*, older \**av'hw* (cp. fut. *av'σω*) : Lith. *saus-a-s* 'dry', OHG. *sōrēn* 'to wither, dry up', rt. *sams-*. ἔχω : ἔξω and ἄνω : ἄv'σω = *τριχός* : *θρίξ*.

Rem. 2. *av'ω* beside *av'ω* and Att. (inscript.) *éχω* beside *éχω* were formed after *av'σω*, *ἔξω*. Conversely *av'σω* for *av'σω*, *πενύσομαι* for \**φρευσομαι* (§ 496). In like manner each of the two forms *á-* and *á-* 'with' went beyond its original sphere, e. g. *á-θρόο-ς* after *á-πας* etc., conversely *á-πε-δο-ς* after *á-λοχο-ς* *á-δελφό-ς* etc. Cp. rem. 3.

Initial *sm-* became voiceless *F-*, and this became *h-*. *Foi* *Fé*, *oi* *é* 'sibi, se' : Skr. *svá-*. Cp. § 563, 7 on *σάλος* etc.

Initial *sḡ-* became *h-*. *ύ-μῖν* 'thin skin, sinew' : Skr. *syū-man-* 'string, strap'. Medial *sḡ* became *ι*, which disappeared after Homer. Hom. *τοῖο* Att. *τοῦ* 'of the' from \**το-σχο* : Skr. *tá-sya*. See § 131.

Prim. Gr. *h-* (= Indg. *s-*, *sm-*, *sḡ-* and *ḡ-*, § 129) was lost in Lesbian according to the testimony of the old grammarians: *ó* = *ó* etc. (Meister Griech. Dial. I 100 ff.). *h-* seems to have been reduced in Ionic-Attic at an early period. It disappeared altogether in the christian era.

Rem. 3. Besides the forms quoted in rem. 2 there are still many others with *h-* where the spiritus asper might be expected. In some cases it

seems to be merely a question of inexactness in the representation of the sound. In other cases it is more or less clear that they have been formed by analogy. Thus Att. *ἀλκωνόν* 'kingfisher' beside *ἀλκωνών* (Lat. *alcēdō*), after *άλς* from \**ααλς* (de Saussure's comparison of *ἀλκωνών* with OHG. *swalawa*, *Mém. de la soc. de lingu.* VI 75, does not convince me); Dor. *ἀμές* Att. *ἡμεῖς* (Skr. *asma-*) after *ὄμές ὄμεις* from \**λυομε-* (to Skr. *γυῖμα-*. § 129); *ἦσται* 'sits' (Skr. *āstē*) after forms from *ἔδ-* 'sit' Indg. *sed-*; Heracl. *ὀκτώ* 'eight' (Lat. *octō*) after *ἑπτά* 'septem'. Further *εἰπόμην* for \**εἰπόμην* (from \**ε(h)επομην*) after *ἐπόμην ἔπομαι*, and many others.

§ 565. Initial *s* before *n* became assimilated to this in prim. Greek, e. g. *νίφ-α* acc. 'snow': Lith. *snēga-s* etc., see § 555. The fuller initial was still preserved in *ἀγά-ννιφο-ς* 'deeply covered with snow' *ξ-ννη* 'nebat' (O.Ir. *snā-the* 'filum', OHG. *snuor* 'thread, string') (§ 654, 4).

*s*, between a sonant and following nasal or between a nasal and following sonant, became assimilated to the nasal in prim. Greek. The stage of assimilation remained in Lesbian and North Thessalian, whilst in the other dialects a reduction of the nasal, partly with 'compensation lengthening' (cp. § 618), took place. \**φαφεισ-νο-ς* 'shining', to *φάος*: Lesb. *φάεινο-ς*, Ion. *φαινώ-ς*, Dor. *Φαινώ-ς*. \**ἔσ-μι* 'I am' (Skr. *ásmi*): Lesb. *ἔμμι*, Att. *εἰμί*, Dor. *ἦμί*. *ζῶμα* 'girdle' from \**ζωσ-μα*: Lith. *jūs-mū* 'girdle', rt. *jōs-*. Aor. \**ἔμμεν-σα* 'I remained' \**ἐνεμ-σα* 'I allotted': Lesb. *ἔμμενα ἐνεμμα*, Att. *ἔμμενα ἐνεμμα*, Dor. *ἐμμενα ἐνεμμα*. Gen. \**μηνσ-ος* 'of the month' (O.Ir. *mīs*): Lesb. *μῆνν-ος* (Thess. *ύστερο-μεινν-ιά*), Att. Dor. *μην-ός*.

*σ* frequently came to stand before *μ* and *ν* again by form-association. Thus were formed *ἔσμεν* 'sumus' beside regular *εἰμεν* after *ἔστὲ ἔσσι*, *ἡμυρί-εσμαι* 'I am dressed' (rt. *ves-*) beside regular *εἶμαι* after *ἡμυρί-εσται* etc. This *σμι* as well as that which arose from *tsm* (as in *ἄσμενο-ς* 'rejoicing' from \**σφατ-σ-μενο-ς*, to *ἡδομαι*, see § 566; *ὄσμή* 'smell' = \**otsmā*, that is, \**ὀδ+σμη*, beside *ὀδ-μή*) passed into *σμ*; which is shown by the spelling *ζμ* and Cret. *κόρμο-ς* = *κόσμο-ς*, the *ρ* of which in the first instance arose from *z* (cp. *Θεοργότειο-ς*, § 593). On the other hand the new *σν* became *νν*. Thus in Att. \**ἔσνυμι* took the place of the regular (Ion.) *εἴνυμι* 'I dress' after the forms *ἔσ-θηναί* etc., and this became



ἔννυμι probably at the same time when Πελοπόννησος arose from \*Πελοπόδνησος. In like manner Att. ζώννυμι from \*ζωσ-νῦ-μι, a new formation for regular \*ζωνῦμι, cp. ζώνη 'belt' from \*ζωσ-νᾶ, rt. *jōs-*, and others of the same kind.

*sr* became voiceless ρρ in prim. Greek, which underwent simplification initially. Hom. ἔ-ρρεε ῥέε 'flowed': Skr. *á-srav-a-t sráv-a-t*. Cp. § 266. It is doubtful whether such ρρ was anywhere medially reduced to ρ with 'compensation lengthening'.

*sl* became λλ, initially λ, at the same period. ἄ-λληκτο-ς μετα-λλήξαντα (Il. I 157), λήγω 'I cease': OHG. *slach* O.Icel *slakr* 'slack, lazy', rt. *slēg-*. Lesb. χέλλιοι, Ion. Att. χέλιοι (beside χίλιοι, the *ī* of which has not yet been satisfactorily explained), Dor. χήλιοι 'thousand', from \*χεσλ-ιο-: Skr. *sa-hásra- sa-hasríya-*, Indg. \**gheslo- \*ghesl-īō-*.

§ 566. Transposition of σ seldom took place, as in ξίφος Lesb. σίφος 'sword', Syrac. ψέ Ion. σφέ 'se'.

Assimilation of *s* to following explosives or spirants, whereby the *st*, which had arisen from *tʰt* (§ 490), stood equal to original *st*. Lac. ἄ-ττᾶσι· ἀνά-σθηθι Hesych., ἀκκόρ = ἀκόρος 'leather bag'. Cret. Gortyn μέττες 'up to' from \*μεστες, which may be regarded as μεστε-ς (cp. μέχοι-ς ἀνευ-ς etc.) or as μεστ' ἐς (cp. μέστε, μέστα). Bœot. ἔττε = ἔστε 'till', that is, ἔς τε, ἔττω = ἔστω 'let him know'. Cret. θθ from σθ, as διδόθθω = διδόσθω, πρόθθα = πρόσθθα, Bœot. τθ, as ὀπιθοτίλᾶ 'cuttle fish'. These θθ and τθ are probably both to be read *þþ*; *sþ* became *þþ*. Cret. ἰθθᾶντι (ἰθθᾶντι?) = Att. ἰσῑᾶσι shows the development *st þt þþ*.

Disappearance of σ in combinations of three consonants. πτέρνα 'heel, foot': Skr. *páṛṣṇi-ṣ* OHG. OS. *fersna* 'heel'. πτύω 'I spit' from \*(σ)πιῦ-ω (§ 131 p. 119), in case the dropping of the σ does not come under § 589, 3 (cp. O.Bulg. *plju-ja* 'I spit'). πτάροννιμι 'I sneeze' from \*πσταρ-, rt. *pster-*, Lat. *sternuō*. 3. sg. of the σ-aorist πύλτο (act. ἔπηλα 'I swung'), λέκτο (act. ἔλεξα 'I read') from \*γαλ-σ-το, \*λεκ-σ-το, formed like ἄσμενο-ς 'rejoicing' from \*σφατ-σ-μενο-ς (§ 565); cp. the accidence. Cp. also ἐκαίδεκα, ἔκμηνο-ς etc., with ἕξ 'six'.

## Italic.

§ 567. Some of the changes, which *s* underwent within Italic itself, belong to the development of the separate dialects, as is shown either by Latin or the Umbr.-Samn. dialects, e. g. Lat. *aēnu-s* from prim. Lat. \**a(̄)es-no-s*, cp. Umbr. *ahesnes* 'aēnis'.

In other cases the agreement of the Ital. languages, as evinced by their monuments, justifies our ascribing the change to the period of the Ital. prim. community, e. g. *z* from *s* between vowels may be regarded as prim. Italic.

There are other affections where we are unable to say how old they are, because the material is too limited, e. g. Lat. *-br-* from *-sr-*.

§ 568. *s* was retained in all dialects:

1. Initially before vowels (including *y*). Lat. *s-unt*, Umbr. *s-ent* Osc. *s-et* 'sunt': Skr. *s-ānti* Goth. *s-ind*, rt. *es-* 'be'. Lat. *sē*, *sovo-s suo-s*, Umbr. *seso* 'sibi' *svesu* 'suum' Osc. *sífeí* 'sibi' *súvad* abl. 'sua': Skr. *svá-* 'own'. Lat. *suāvi-s*: Skr. *svādú-ṣ* Gr. ἡδύ-ς OHG. *swuazi* Indg. \**syād-u-* 'sweet, lovely'. Lat. *soror* from \**syēsōr*: Skr. *svásā* etc., see § 560.

2. In combination with explosives and *s*. Lat. *spectō*, Umbr. *speture* 'spectori': Skr. *spáś-* 'spy, watchman', rt. *spáś-*. Lat. *stō*, Umbr. *stahitoto* 'stanto', Osc. *stahínt* 'stant': Gr. *στάσις* etc., see § 555. Lat. *est estōd*, Umbr. *est* Osc. *íst estud*: Gr. *ἔστυ ἔστω*, rt. *es-* 'be'. Lat. *pistu-m pistor*, Umbr. *pistu* 'pistum': Skr. *pištá-* 'rubbed, ground'. Lat. *scabō*: Goth. *skaba* 'I scrape', Lith. *skabėti* 'to cut', cp. § 346. Lat. *gnō-scō nō-scō*: Gr. *γν-γνώ-σκω* 'I get to know'. Lat. *serpsī*: Skr. *á-sārps-am* and *á-srāps-am* (pres. *sārpāmi* 'I creep, crawl'), Gr. *εἶρφα* (*ἔρπω* 'I creep, go'). Preposition prim. Ital. \**ops*: Lat. *obs-trūdō* read *opstrūdō*, *os-tendō*, Umbr. *os-tendu* 'ostendito'. Initial *ps-* seems to have become *s-*: Lat. *sabulu-m* according to Osthoff from \**psaflo-m*: Gr. *ψάμμο-ς* 'sand' from \**ψαφ-μο-ς*, to *ψήφο-ς* 'small stone'<sup>1)</sup>. Lat. *con-cussī* from \**cutsī*, to *con-cutiō*, see § 501.

1) It is not probable that *ps-* has become *p-* in *palpāre* and others (Stolz Lat. Gr. § 63, 2).

Lat. *dīxī* : Skr. mid. *ádīkṣi* (*diśāmi* 'I direct, show'), Gr. *ῥδείξα* (*δείκνυμι*). Nom. Lat. *vōx* : Av. *vāxš*, Indg. *\*uōqs* 'voice, word'; Osc. meddīss 'meddix'. Initial *ks-* has perhaps been simplified to *s-* in Lat. *su-b s-uper*, Umbr. *s-omo* 'summun', to Gr. *ἔξ-ίπερθε* (for other quite as uncertain or still more uncertain examples see Osthoff Morph. Unt. IV 266, Zur Gesch. d. Perf. 612). Lat. *ges-sī* beside *ges-tu-s*, *hausī* beside *haus-tu-s*. From prim. Ital. *\*is-so* *\*is-sā* or *\*es-so* *\*es-sā* 'iste, ista'<sup>2)</sup> comes the Umbr. Osc. stem *is(s)o-* *es(s)o-*, as in Umbr. *isso-c eso-c* 'sic' *essu esu* abl. 'hoc' *esa* 'hac', Osc. *esci* loc. 'in eo'.

3. In *-ns-*. Lat. *mēns-i-s*, Umbr. *menzne* 'mense' (-n z- from *-ns-*, see § 209) : Gr. Lesb. *μῆνν-ος* (§ 565). Lat. *cēns-eō*, Osc. *censamur* 'censetor' : Skr. *śas-āmi* 'I pronounce solemnly, recite'. Lat. *anser* : Skr. *hṛsā-s* OHG. *gans* Lith. *žąsī-s* 'goose'. Lat. *pīns-ō pīns-iō* : Skr. 3. pl. *piṣ-ānti* (§ 556).

So also original *s* after original *m*. Lat. *sūmpsī* with excrecent *p* (§ 228). Umbr. *uze onse* loc. 'in umero' : Goth. *ams* 'shoulder'.

Rem. It is however questionable whether orig. *-ms-* had not become *-ns-* in prim. Italic, just as *-mt-* became *-nt-* (§ 207), so that these examples would not come into consideration for the prim. Indg. combination *-ms-*. Lat. *sūmpsī* may have been a new formation like *sūmptu-s*. Lat. *umeru-s* can scarcely come from a prim. Ital. *\*omso-*. The pre-Italic form seems to be *\*omeso-* and the Umbr. word may have arisen from this by syncope (§ 633). The same relation would follow for Osc. *Niumsieis* 'Numerii' beside Lat. *numerus*. Cp. §§ 209. 269 rem. and § 570 rem. 2 on *tenebrae*.

4. Often finally (cp. § 655, 9). Nom. sg. Lat. *hortu-s*, Umbr. *pihaz pihos* 'piatus' Osc. *hūrz* 'hortus' : cp. Gr. *λόχο-ς*, Gen. sg. Lat. *familiās*, Osc. *moltas* 'multae' : cp. Gr. *χώρα-ς*.

§ 569. *s* between sonantal vowels became *r* in Latin at the beginning of the historical period; *s* is still found in the

2) Neut. nom. acc. *\*is-tod* or *\*es-tod*, masc. acc. *\*is-tom* or *\*es-tom*. The first part of the compound was related to the *s-* in Pruss. *s-tesse* etc. *t* was carried over to the nom. sg. masc. fem. in Lat., *iste, ista*, conversely in the other dialects *s* was carried over from these cases into the others. Cp. Danielsson Pauli's Altital. Stud. III 158 ff. and the accidence.

oldest period. In Umbr. *s* and *r*, in Osc. *s* and *z* (= French, Slav. *z*). *r* arose everywhere first of all from *z* (cp. Lat. *mergu-s* from pre-Ital. \**mezgo-s*. § 594), and *s* in the old Ital. monuments is an inexact expression for *z*. The change to *z* was probably completed in the prim. Italic period.

Lat. *erō* O Lat. *esō* conj. (fut.) to *sum*: Skr. *ásāni*, Gr. ἔω *ō*. Acc. *mūr-em* (nom. *mūs*): Skr. *mūṣ-* OHG. *mūs* 'mouse'. *aur-ōr-a*: Skr. *uṣ-ās-* Gr. Lesb. *αῦ-ωγ* 'dawn'. Gen. *gener-is*: Skr. *jānas-as*, Gr. *γένε-ος γένους*. *vīder-a-m*: cp. Skr. *á-vēdiṣ-am* Gr. ἦδε-α. With *s*, inscript. *Lases* beside *Lares*, in grammarians besides *esō* also *āsa*: *āra*, *arbosem*: *arborem* etc. Cp. further *ūr-ō*: *us-tu-s*; *quer-or*: *ques-tu-s*; *quaer-ō*: *quaes-tor quaesō* (from \**quaes-sō*); *honōr-is*: *honōs hones-tu-s*; *dir-imō*: *dis-tineō dis-siliō*.

Rem. 1. The process of rhotacism was at an end at the time of Appius Claudius (Censor 442 U. C.). From the report that he removed from the alphabet the letter *Z* we may conclude that *z* was also written in Lat., as in Osc. for the voiced sibilant.

Umbr. *r* and *s*. *eru erom* 'esse', rt. *es-*. *fu-r-ent* 'erunt', cp. *fu-s-t* 'erit'. *hapinaru* gen. pl. fem. 'ovium': Skr. *tāsām* 'harum'. *asa asa* abl. 'ara'. The spelling of the latter word with *s* was a graphic archaism, or it was borrowed from another dialect without rhotacism. On the change between *s* and *r* finally see § 655, 9.

Osc. *z* and *s*. *ezum* 'esse', Umbr. *erom*. *censa-zet* 'censebunt' *trībarakattu-set* 'acdicaverint', cp. Umbr. *fu-r-ent*. *egmazum* 'rerum', cp. Umbr. *hapinaru*. *Fluusaí* dat. 'Florae'. *aasas* pl. 'arae'. To which Pelign. *coisatens* 'curaverunt', Lat. *coirāre coerāre cūrāre*, perhaps to Gr. *τετηγ-μένο-ς* 'sorrowful, troubled', *τι(σ)-* from \**qis-* (§ 427, b).

In Lat. *r* = *s* also before *u*. *Minerva* from \**Menes-uā*, cp. Skr. *mānas-* Gr. *μείνεσ-* 'sense, mind'. *furvo-s* beside *fuscu-s*, in case the latter has not arisen from \**fursco-s*. *lārva* (*lārva*) possibly connected with *Larēs* (*Lases*).

Rem. 2. In Lat. *r* = *s* often came through analogy into positions, especially finally in which it could not have arisen regularly. *honor* beside *honōs*, *arbor* beside *arbōs*, *mājor* for \**mājōs*, after *honōr-is* etc. Cp. also

*veternu-s* *veterrimu-s*, to *vetus -eris* = Gr. ἔτος -εος, through association with *hibernu-s* *acerrimu-s* etc. with old *r*. *pūbertās* to *pūbēs -eris*, after *ūbertās* with old *r*.

Rem. 3. After the conclusion of the process of rhotacism *s* often came to stand again between vowels and now remained unaffected, e. g. *quaesō* from *\*quaes-sō*, *hausī* from *\*haus-sī*. The assumption is unsatisfactory that *nāsu-s* (cp. *nār-ēs nārium*, *nās-turtiu-m*, Skr. *nas-* OHG. *nasa* 'nose', Ags. *næs-āyrla* 'nostrils', Lith. *nósi-s* 'nose') was formed anew from a nom. sg. *\*nās* (cp. *aurōr-a* etc.); the *s* in Slav. *nosū* is also strange (§ 588, 2); did *s* arise in both languages from a form with *-s-s-* (stem *\*nās(e)s-*, cp. Skr. *vats-á*)?

### § 570. *s* before nasals and liquids.

*sn.* *s* disappeared in Lat., but was retained in Umbrian. Lat. *nāre*, Umbr. *snata* 'umecta': Skr. *snā-mi* 'I bathe, wash, water', O.Ir. *snām* 'a swimming'. Lat. *ninguit nix*: Lith. *snėga-s* 'snow'; if Umbr. *ninctu* is really related to *ninguitō*, we have here a different treatment of initial *sn-* which may possibly depend on different conditions of sandhi. Lat. *nuru-s*: Skr. *snuśā* OHG. *snura* 'daughter-in-law'. *aēnu-s* *aēneu-s*, Umbr. *ahesnes* 'aēnis', to *aes aeris*, Skr. *āyas-* neut. 'metal, iron'. Lat. *pēni-s* from *\*pes-ni-s*: Skr. *pās-as* neut. Gr. πέος neut. 'penis'. Lat. *dē-gūnō* beside *dē-gus-tō*, rt. *geys-*. *dī-numerō* from *\*dis-n*. In *satin potin* from *satis-ne potis-ne*, *viden abin* from *vidēs-ne abīs-ne* the long vowel was shortened after the dropping of the *s* and the final *-e*.

*zn, tsn.* *lūna*, O.Lat. inscript. *losna*, from *\*louc-snā*: Av. *raoxšna-* 'shining'. *sēnī* from *\*sex-nī*. *ēnūntiō* from *\*ex-n*. *penna*, O.Lat. *pesna*, from *\*pet-snā*, rt. *pet-* 'fly'.

*sm.* *s* disappeared in Lat., but was retained medially in Umbr.-Samn. Lat. *merda* 'dirt': Lith. *smirdėti* 'to stink'. *mī-ru-s* 'wonderful': Skr. *smāy-a-tē* 'smiles'. *prīmu-s*, Pelign. *prismu* 'primo' or 'primum'. Lat. *dī-moveō* from *\*dis-m*. Umbr. *pusme* 'cui': Skr. *kā-smāi* 'to whom?'; do the Lat. adverbs *quom cum* and *quam* also belong here? Osc. *posmo-m* 'postremum', cp. Lat. *pōne* from *\*pos-ne*.

Rem. 1. It is uncertain whether *Casmēna* = *Camēna* and *dusmō* = *dūmō* (*dusmo in loco*) in Paul. Fest. are examples of the retention in Lat. tself of *s* in this combination *sm*. Corssen Krit. Beitr. 431 regards

*cosmittere* = *committere* in the same source as containing — but hardly rightly — a *cons-*, formed like *abs o(b)s-*, Osc. *az* etc. Cp. also Bücheler Rhein. Mus. XXXVI 241 f.

*xm.* *sub-tēmen* from \**-texmen*. *sē-mēnstri-s* from *sex-m.*  
*ēmergō* from \**ex-m.*

*sl.* *s* was lost in Lat. *lanqueō*: OHG. *sluch* 'slack, lazy', rt. *slēg-* (§ 565). *lūbricu-s*: Goth. *sliupan* 'to slip'. *dī-luō* from \**dis-l.* *pīlu-m* 'pestle' from \**pīns-lo-m*, *ālu-m* from \**anslo-m*, see § 208.

*xl, tsl.* *āla* from \**axlā*, to *axilla*, OHG. *ahsla* 'axle'.  
*vēlu-m* from \**vexlo-m*, to *vexillu-m.* *ēligō* from \**ex-l.* *scāla*  
from \**scant-slā*, to *scandō*.

According to some scholars (see Kuhn's *Ztschr.* XXVII 328. XXVIII 270) *s* disappeared in Lat. before nasals and before *l* without compensation lengthening (or with later shortening of the lengthened vowel), if the vowel was unaccented. The least doubtful examples are *Camēna* (rem. 1), *o-mittō* from \**o(p)s-mittō*, *corpulēntu-s* from \**corpos-lēnto-s*, *colīna culīna* from \**co(c)-sl-īnā*. It is here a question of later Lat. accentuation (§ 681), and on account of *o-mittō* it would have to be assumed that a short vowel had regularly arisen in *dī-nūmerō ē-mérgō* etc., quoted above, and that the long vowel was due to the analogy of forms with *dī- ē-*.

Initial *s* also disappeared in cases where it came to stand before *l* after the dropping of *t*, but not until a later period. *stlīs, slīs, līs.* *stlocus, locus.* Cp. also *lien*: Gr. *σπλήν* 'spleen'. See § 503. L. Havet, *Mém. de la soc. de lingu.* V 229 f., derives *īlicō* from \**in slocō*, like *pīlu-m* from \**pīnslo-m* § 208, 2.

*sr* became *pr*, further *fr*, whence medially Lat. *br*. Examples only in Latin. *frīgus*: Gr. *ψῖγος* 'frost', cpf. \**srīgos.* *frāgu-m*: Gr. *ῥάξ -γός* 'berry'. *sobrīnu-s* from \**syēs-ino-s*, to *soror*: Skr. *svasar- svasr-*, Indg. \**syésor- syēs-*. *cerebru-m* from \**ceres-ro-m*, to Skr. *śīras-* 'head'. *fūnebri-s* from \**fūnes-ri-s*, to *fūnus-eris, fūnes-tu-s.* *crābrō* from \**crās-rō*: Lith. *szīrsz-ū* etc., see §§ 303. 306. *membru-m* from \**mēms-ro-*: O.Ir. *mūr* 'a piece of flesh' (§ 574); \**mēms-ro-* became in Ital. first of all \**mens-ro-* (§§ 207.

612), hence \**menpro-* \**memfro-* *membro-*. *tenebrae*: Skr. *támisrā-tamisra-m* 'dark, dark night'.

Rem. 2. The *n* for *m* in the last word is best explained by assuming an orig. double from \**tensrā*, whence \**tensrā-* (ep. OHG. *dinstar* 'dark' from prim. Germ. \**pims(t)ra-* and Lith. *l̃msra-s* 'like a sorrel-horse'), and \**temsrā-*. The *n* in the first form was transferred to the latter.

Rem. 3. *dī-ruō* was formed after *dī-luō dī-moveō* etc. or arose regularly through *-sr-* (*-zr-*) being treated differently at a later period than in the eases mentioned above. In the latter manner the difficult form *vēr vērīs* (to Gr. *ῥαῖ* Lith. *vašarà* etc.) might also be explained by assuming, along with L. Havet (Mém. de la soc. de lingu. V 447), that a stem-form \**uefr-* \**uebr-* = Indg. \**ues-r-* was transformed to \**uesr-* (\**uezr-*) after the analogy of the nom. acc. \**ueser* (\**uezer*) and that from this arose *vēr-*, which, being carried over from the oblique eases, gave rise to the nom. aee *vēr*. Or does *vēr* belong to O.Icel. *vār* 'spring'?

§ 571. *rs*, *ls*. In Lat. *s* became, if it was not protected by a following consonant (*tostu-s* from \**tors-tu-s*), assimilated to the liquid, probably after it had first become *z*. *rs* was preserved in Umbr.

*rs*. Lat. *terreō*, Umbr. *tursitu* 'terreto': Skr. *trāsāmi* 'I tremble at', Gr. *τρέω* (aor. Hom. *τρέσ-σαι*) 'I tremble, flee' *ἔτρεσεν* *ἔφρόβησεν* Hesych., O.Ir. *tarr-ach* 'timid' (?); the root form *ters-* instead of *tres-* seems to be a secondary formation after the analogy of the form *tys-* (Umbr. *turs-*). Lat. *fār farris*, *farreu-m*, Umbr. *farsio* 'farrea'; stem *far-s-* to Germ. \**bar-iz-* 'barley' (O.Icel. *barr* neut., Goth. *bariz-eins*). Lat. *errō*: Goth. *airzeis* OHG. *irri* 'astray'. *verrēs*: Lith. *veřszis* 'calf', Skr. *vřša-s* 'bull', rt. *yers-*. Lat. *verrō* O.Lat. *vorrō*: O.Bulg. *vřcha* 'I thresh', rt. *yers-*. Lat. *ferre* from \**fer-se*, ep. *es-se*. *torreō* beside *tostu-s*: Gr. *τέρομαι* 'I become dry'.

Rem. Observe that *rs* = *ri<sup>s</sup>i*, *ris*, *rks* remained in Lat. *vorsu-s*: Skr. *vřtā-s*, Indg. \**uřitō-s*. *arsi* to *ardeō*. *ursu-s*: Skr. *řkřša-s* (ep. however § 554). Cp. Umbr. *trah-ocrři* 'transverse' (§§ 209. 501).

*ls*. Lat. *collu-m* 'neck': *hals* (stem *halsa-*) 'neck'. *velle* from \**vel-se*, ep. *es-se*.

Lat. *rn ln* from *rsn lsn*. *cernuo-s* from \**cers-nuo-s*, to *cerebru-m* (§ 570). *alnu-s* from \**als-no-s*, probably to Lith. *ēļks-nis* m. 'alder' (with excrescent *k*), further OHG. *elira* Ags. *alor* (*r* from *z*) O.Bulg. *jeļčha* 'alder'.

§ 572. *-ss-* = Indg. *-ss-* remained after short syllables, but, like *ss* = *t<sup>s</sup>t ts* (§ 501), became *s* after long syllables, e. g. *haesī* from *\*haes-sī* (*haereō*) beside *ges-sī* (*gerō*).

*differō* from *\*dis-ferō*.

### Old Irish.

§ 573. Initial *s* was retained before sonantal vowels; as so, too, in Gallic, while in Britann. — first probably only after final vowels — it became *h*. *su- so-* 'bene', e. g. *su-thain* 'perpetuus' (*tan* 'time'), Gall. *Su-caru-s* (prop. name) Cymr. *hy-gar* Bret. *he-gar* 'comis, benignus, amicus': Skr. *su-*. *sēt* 'way', Cymr. *hynt* Bret. *hent*: Goth. *sinþs* 'way, course, time'. *samail* 'resemblance', Cymr. *hafal* 'similar' (§ 243, 4): Skr. *samā-* 'even, equal', Gr. *óμοῦ* 'together' *ἅμ-α* 'at once', Lat. *simili-s*, Goth. *sama* 'the same', O.Bulg. *sq-* 'with' *samŭ* 'self'.

*su* appears initially as *s*, as *siur* 'sister': Cymr. *chwaer*, Skr. *svásar-*, medially as *f* (*b*), as perf. 3. sg. *do-sefainn* 'I hunted, drove', rt. *syend-*. See § 175 p. 154.

§ 574. *sn- sm- sr- sl-* were retained initially. *snāim* 'I swim': Skr. *snā-mi*. *snechta* 'snow': Goth. *snāivs*, rt. *sneigh-*. *smir* 'marrow': Goth. *smairþr* 'fat, fatness' OHG. *smero* (gen. *smerwes*) 'fat, grease'. *smech* 'chin': Lith. *smakrà* 'chin' (§ 557). *sruth* 'stream': Skr. *srāv-a-ti* 'flows' etc., see § 555. *ro slecht* 'destructus est', ep. perf. *ro se[s]lach* 'I struck down': Goth. *slaha* 'I strike' (§ 576 p. 431).

Medial *-sm-* became *-mm-*. 1. pl. *ammi* 'sumus', ep. Gr. *εἰμὲν* Skr. *smás*; 1. sg. *im am* 'sum': Skr. *ásmi* (ep. Zimmer Kelt. Stud. II, 133).

*m̄r* 'a piece of flesh', according to Thurneysen from prim. Kelt. *\*mēnsr-*, to Lat. *membra-m*, Skr. *māśá-* etc., see §§ 570. 585 rem. 3.

*s* remained, except when originally final (§ 576), after nasals which themselves disappeared (§ 212). *gēis* (gen. du. Mid. Ir. *gēsi*) 'swan': Skr. *hasá-s* OHG. *gans* 'goose'. Gen. sg. *m̄is* (nom. *m̄i*) 'of a month': Lat. *mēns-is*.



s became assimilated to a preceding r. *err* (gen. *erre*) 'tail': OHG. *ars* 'rump', Gr. ὄρρο-ς 'tail, rump'. Cp. also *orr* from \**or(c)*-s § 518.

§ 575. s in combination with explosives and s.

It disappeared initially before t. *tiagaim* 'I stride, go': Skr. *stighnutē* 'leaps upon, climbs up' (not found), Gr. *στειχῶ* 'I stride, go', Goth. *steiga* 'I climb', Lith. *staiųyti-s* 'to hasten'. -*tau* 'I am': Lat. *stō* etc., see § 555. Cp. on the other hand O.Bret. *strouis* 'stravi': Goth. *stráuja* 'I strew, spread out'; Bret. *sterenn* 'stella' Corn. *steyr* 'stellae'. Skr. *stṛ-* 'star' etc., see § 559.

Medial *st* and *ts* became *ss* (s). *ro closs* 'I was heard' fr. \**klus-to-* s-fut. *ro fessur* 'I shall know' fr. \**uit-s-*, rt. *ueid-*. See § 516.

*sc. scaraim* 'I separate, sever': Lith. *skiriù* 'I separate, sever'. *ro se-scaind* 'he leapt': Skr. *ca-skánda*. *cum-masc* 'a mixing, mixing oneself' *con-mescatar* 'miscetur': Lat. *miscēō*, OHG. *misken* 'to mix'.

*ks* became *ss* (prim. Kelt. probably *χs*). *dess* 'on the right hand': Goth. *taihsva* Gr. δεξιό-ς. s-fut. 1. pl. *for-tiasam* 'shall help', to *tiagaim*, cp. Gr. *στειξῶ*. See § 517.

*ss. -accastar*, that is, \**ád-ces-s-a-thar* 3. sg. of the pass. s-conjunctive of *ad-ciu* 'I see'; cp. *ad-chess* 'visum est', the *ss* of which arose from *st*.

§ 576. s was dropped between sonantal vowels, the intermediate stage was *h*. This phenomenon occurs also in Britannic. *siur* 'sister', Cymr. *chwaer*, prim. f. \**suesōr*. O.Ir. *iarn*, O.Cymr. *hearn* (the *h* prefixed from the inner part of the word — \**iharn* \**eharn* — ?) 'iron', prim. Kelt. \**isarno-* in the place name *Isarnodori* i. e. 'ferrei ostii': Goth. *eisarn* 'iron' a Keltic loan-word. *ro cloathar* 'audiat', to *ro closs*, Skr. *śruṣ-ṭi-ṣ* etc., see §§ 516. 576. *au* *ō* 'ear': Lat. *auri-s* Goth. *áusō* neut. Lith. *ausi-s* O.Bulg. *ucho* 'ear'. 2. sg. *beri* 'fers' fr. Indg. \**bhèresi*, Skr. *bhárasi*.

s was treated in the same manner after vowels before liquids and nasals. Perf. *ro selaig* 'he struck down' i. e. *sešlaig*, see § 574. *senaich* 'stillavit' i. e. *sešnaich*, to *snigid* 'it drops'.

Every final *s* was dropped, both orig. postvocalic *s* and the *s* which arose from *-ks*, *-ts*, *-ns*. This dropping of *s* was late, since the Ogam inscriptions still have final *s*, as this also is still found in Gall. O.Ir. *Luigdech* = Ogam inscript. *Lugudeccas*, gen. sg. to nom. sg. *Lugaid* = \**Lugudex* (*c*-stem); O.Ir. *tarb* 'bullock' = Gall. *tarvo-s*. *bō* 'cow': Skr. *gāū-ṣ* Gr. *βού-ς* 'bullock'. *rī* (gen. *rīg*) 'king' Gall. *Dubno-rīx*: Lat. *rēx*. *se* 'six' = Lat. *sex*, beside *sessel* 'sextus'. *ocn-tu* (dat. *oentid*) 'unitas' from \**-tūt-s*: cp. Lat. *servītūs* (gen. *-tūt-is*). *mī* (gen. *mīs*) 'month' from \**mēns*: Gr. *μῆς* from \**μηρς* (§ 611). Acc. pl. *fīru* 'viros' (nom. sg. *fer*): Goth. *vaira-ns*. This loss of final *s* was later than the change of initial explosives to spirants which was caused by a preceding vowel; for the latter change does not show itself in cases where *s* was final (§ 658, 1).

#### Germanic.

§ 577. *s* was generally still intact in prim. Germanic. The only changes, which it underwent in this period, are the change of it to *z* by Verner's law and the assimilation of *sm* to *mm*.

#### § 578. Initial *s*.

*s* before sonantal vowels. Goth. *sunu-s* OHG. *sunu sun* OS. Ags. *sunu* O.Icel. *sunr* 'son': Skr. *sūnú-ṣ* Gr. *υῖό-ς* 'son', O.Ir. *su-th* 'birth, fruit', Lith. *sūnù-s* O.Bulg. *synū* 'son'. Goth. *saian* OHG. *sāan* 'to sow': Gr. *ῥῆμα* 'a throw', Lat. *sēmen*, O.Ir. *sūl* 'seed', Lith. *sėjū* O.Bulg. *sēja* 'I sow', rt. *sē*.

*sī*, *sy*. Goth. *siujan* OHG. *siuwan* 'to sew': Skr. *syū-tá-s* Lith. *siū-ta-s* 'sewn', Indg. \**sīū-*, cp. § 143. Goth. *svistar* OHG. *swester* 'sister': Skr. *svásā*. OHG. *sweiz* 'perspiration, sweat': Skr. *svēda-s* 'sweat'.

*sn*, *sm*, *sl*, *sr*. Goth. *snáivs* OHG. *snēo* 'snow': Lith. *snėga-s* 'snow', cpf. \**snōiġho-s*. Goth. *snō-rjō* 'wicker-work, basket' OHG. *snuo-r* 'string, cord': O.Ir. *snā-the* 'filum'. Goth. *smair-pr* 'fat' OHG. *smero* 'fat, grease': O.Ir. *smir* 'marrow'. MHG. *smiegen* 'to ply, bend' OHG. *smoccho* 'underdress, shirt': Lith. *smūkti* (indic. *smunkū*) 'to slide' O.Bulg. *smykati* *s* 'to creep, slip'.

Goth. *slēpan* 'to sleep' OHG. *slaf* 'slack' *slāfan* 'to sleep': O.Bulg. *slabŭ* 'slack'. OHG. *slingan* 'to wind to and fro' *slango* 'snake': Lith. *slenkù* 'I crawl' O.Bulg. *slakŭ* 'bent'. *sr-* became, as medially (§ 580), *str-*. OHG. *strom* O.Icel. *straumr* 'stream': Skr. *srāv-a-ti* 'flows'.

*sp, st, sk.* Goth. *speivan* OHG. *spīwan* 'to spit, vomit': Lith. *spiáu-ju* 'I spit'. OHG. *spuon* 'to succeed, have success': Skr. *spháyāmi* 'I swell, thrive', O.Bulg. *spēja* 'I succeed'. Goth. *stiks* 'point of time' OHG. *stih* 'point': Gr. *στίζω* 'I prick', Lat. *in-stigare*. Goth. *us-skáus* 'provident, sober' OHG. *scouwōn* 'to look, view': Gr. *θνο-σκόο-ς* 'sacrificing priest'. Goth. *skei-nan* OHG. *sci-nan* 'to shine': Gr. *σκά* 'shadow'.

§ 579. *s* in combination with Indg. voiceless explosives medially and finally.

OHG. *aspa* 'aspen-tree': Lett. *apse* Pruss. *abse* O.Bulg. *osina* (from *\*opsmā*, § 545); it is uncertain whether the original order was *sp* or *ps*. OHG. *wafsa* 'wasp': Lith. *vapsà* 'gad-fly'. OHG. *refsen* 'to chastise, blame, punish' prim. Germ. 1. sg. pres. *\*rafsið*: Skr. *rāpas-* neut. 'bodily injury'.

Goth. OHG. *ist* 'is': Gr. *ἔσ-τι*. Goth. *bat-ists* OHG. *bezz-ist* 'best': cp. Gr. *μέγ-ιστο-ς*. Prim. Germ. *ss, s* from *ts*. OHG. *zan* 'tooth' from prim. Germ. *\*tans* Indg. *\*dont-s*. See § 527 p. 382.

Goth. *fisks* OHG. *fisc* 'fish': Lat. *pisci-s* O.Ir. *iasc* 'fish'. OHG. *forscōn* 'to ask': Lat. *poscō*. Goth. *aihsa* OHG. *ohso* 'ox': Skr. *ukṣā* 'ox'. Goth. *saihs* OHG. *sehs* 'six': Gr. *ἕξ* Lat. *sex*.

So also *s* in combination with Indg. *s* probably remained unchanged in prim. Germanic.

Rem. I do not know any sure examples. Goth. *is* 'thou art' may represent either *\*iss(i)* (Gr. Hom. *ἴσσι* Armen. *es*) or *\*is(i)* (Skr. *ási* Gr. *ἴ*). Does the genitive *-s* of *a*-stems (Goth. *vulfis* OHG. *wolfes* O.Icel. *ulfs* 'wolf's', Norse run. *godagas* proper name) go back to *-ss-?*

§ 580. Medial *sr*, like initial *sr* (§ 578), probably became *str* before Verner's law came into operation (see § 581). Goth. stem-form *svistr-* O.Icel. *syst-* 'sister' (gen. *svistrs* etc.) = Skr. *svasr-* Lat. *sobr-* (§ 570) O.Bulg. *sestr-* (§ 585, 2), Indg. *\*suesr-*;

from here *t* was carried over into the forms, in which *s* and *r* were not in direct combination, hence e. g. nom. sg. Goth. *svistar* O.Icel. *syster systir* OHG. OS. *swestar*. OHG. *dinstar* Mid. Du. *deemster* 'dark': Skr. *tamisra-m* 'darkness', Lat. *tenebrae*, see § 570.

§ 581. In prim. Germ. *s* became *z* except in combination with voiceless explosives and spirants, if the sonant, directly preceding it, did not bear the principal accent of the word. This process of changing voiceless into voiced sounds concerned at the same time the spirants *f*, *þ*, *χ*, see § 530. *z* remained in Goth. but in the other dialects mostly became *r*.

Rem. Thus Indg. *s* partly fell together with Indg. *z*. See § 596.

First the *s* which remained unchanged. Goth. *kiusa* OHG. *chiusu* 'I test' prim. Germ. *\*kēysō*: Skr. *jōṣāmi* 'I taste, enjoy', Indg. *\*gēysō*. OHG. *mūs*, pl. *mūsi*, 'mouse': Skr. *mūṣ-* pl. *mūṣ-as*.

*z*. Compar. in *-iz-ō*, Goth. *jūhiza* O.Icel. *öre* OHG. *jungiro* 'younger', prim. Germ. *\*jū(ʰ)χ-iz-ō* (s. § 530 p. 387): cp. Skr. *-iṣ-* Gr. *-ισ-* in the superlative. Goth. 2. sg. indic. pres. pass. *baíraza* (*baíran* 'to bear'): cp. Skr. *bhárasē*. Goth. *riqiz-a-* (nom. acc. *riqis*) O.Icel. *rökkr* neut. 'darkness': Skr. *rájas*, Gr. *ἔρεβος*. Goth. *áiz-a-* OHG. *ēr* 'ore, metal' O.Icel. *eir* 'copper' prim. Germ. *\*aiz-a-* from *\*aǰ-iz-a-* (§ 635): Skr. *áyas-* Lat. *aes aeris*.

Gothic, by levelling out, mostly gave up again the grammatical change *s* : *z* (*r*) in the verb. To Skr. *jōṣāmi* 1. sg. pres., *jujōṣā* pf. indic. 3. sg. *jujuṣimá* 1. pl., *jujuṣāná-* partic. corresponded in prim. Germ. *\*kēysō*, *\*káysi*, *\*kuzumí*, *\*kuzaná-*. Hence regularly OHG. *chiusu*, *chōs*, *churum*, *choran*, O.Icel. *kiys*, *kaus*, *kørom*, *kørenn*. On the other hand Goth. *kiusa káus*, *kusum*, *kusans* with *s* in stead of *z* in the two last forms, an innovation, which at a later period also made its appearance in the other dialects. Correspondingly Goth. *nasjan* 'to rescue' with *s* for *z* after *nisan* as opposed to OHG. Ags. *nerian*, prim. Germ. 1. sg. *\*noziǰō*.

The contrast, between Goth. *áusō* 'ear' MHG. *æse* 'ear' and OHG. *ōra* 'ear', and between OHG. *haso* and Ags. *hara* 'hare' etc., was also caused by an old difference of accentuation.

Goth. *z* regularly passed into *s*, if it came to stand finally,

cp. § 531. 2. sg. *bairis* from \**bairiz(i)* = Skr. *bhāraṣi*, cp. O.Icel. *ber-r*. Nom. *riqis* from \**riqiz(-a-n)* beside gen. *riqiz-is* (the spelling *riqiz* is inexact, just as Mod.HG. *raub* instead of *raup*, after *raubes* etc., Lat. *urbs* instead of *urps*, after *urbis* etc.). Adv. *áiris* 'earlier' beside nom. sg. *áiriz-a*.

§ 582. The change of *s*, mentioned in § 581, can also be traced in the combinations *rs*, *ls*, *sl*, *sn*, *ms*. The differences, which had regularly arisen in prim. Germ., were obliterated here also partly by levelling out and partly by processes of assimilation.

*rs* and *rz* (West Germ. *rr*). OHG. O.Icel *ars* 'buttock' prim. Germ. \**ársa-z* = Gr. Att. ὄροο-ς from \*ὄροο-ς. Goth. *vairsiza* Ags. *wiersa wyrsa* from \**wiers-(r)a* 'peior', prim. Germ. \**úirs-iz-ō*. O.Icel. *hjarse hjarsi* m. 'giddiness' prim. Germ. \**χérs-ē* from Indg. \**kérs-en-* (cp. also Lat. *cernuo-s* from \**cers-n-*, § 571) beside \**křs-én-* (see below), to a neuter \**kéres-*, represented in Lat. *cerebru-m* (\**ceres-ro-*, § 570). Goth. *ga-þairsa* 'I am withered, gape from dryness': Gr. τέροουα (the accent of which does not come into consideration here). OHG. *fersana* OS. *fersna* 'heel' prim. Germ. \**férsnō*, Ags. *fyrns* 'heel' prim. Germ. \**férsni-z*:Skr. *pārṣṇi-ṣ* 'heel' Gr. πτέρονα 'heel, foot'; the *z* in Goth. *fatrzna* is strange. Goth. *airzjan* OS. *irrian* OHG. *irren* 'to mislead' prim. Germ. 1. sg. \**irziō*, Goth. *airzeis* OHG. *irri* 'astray' prim. Germ. \**irziā-*: Lat. *errāre* from \**ers-āre*. Goth. *marzjan* 'to vex' OS. *merrian* OHG. *merren* 'to delay, hinder, disturb' originally 'to make one unmindful' seems to have been an old causat. verb, related to Skr. *mṣṣ-yāmi* (perf. *ma-mārṣ-a*) 'I forget, neglect' *mṣṣā* adv. 'in vain, fruitlessly, erroneously'. OHG. *hirni* neut. 'brain' from \**χirz-n-ūā-* 'belonging to the head' (cp. O.Icel. *hjarse* above). OHG. *hornaz* 'hornet' prim. Germ. \**χurz-n-āta-z* from a \**křs-en- křs-n-* = Lith. *szirsz-ū -eñs* O.Bulg. *srěš-en-ī* 'hornet, gad-fly'; beside Mod.HG. *horsel* Dutch *horzel*: Lith. *szirszly-s*; cp. also Lat. *crabrō* (§§ 303. 306. 570).

Rem. 1. Goth. 1. pl. *ga-daúrsum* 'we dare' for \**daúrzum* (= OHG. *gi-turrun*, Skr. *dadhṛṣimā*) after sg. *ga-dars* (Skr. *dadhārṣa*), like *kusum* for \**kuzum* (§ 581). Goth. *þaúrsum* 'parched, dry' for \**þaúrzu-s* after

*ga-þairsan* etc., cp. O.Icel. *þurr* O.Swed. *þörr* OHG. *durri* 'withered, dry', Skr. *tṛṣ-ú-ṣ* 'greedy, gaping with thirst'.

*ls* and *lz* (West Germ. *ll*). Goth. *hals*, gen. *halsis*, OHG. *hals* 'neck' prim. Germ. \**hálssa-*: Lat. *collu-m* from \**colso-m*. Goth. *ga-talzjan* 'to teach, instruct', to *un-tala-* (nom. *untals*) 'disobedient'; *talz-* may represent a nominal *-es*-stem. OHG. *bellan* 'to bark' Ags. *bellan* 'to bark, scream, howl' Low German *bulle* 'bull' point to a prim. Germ. pres. \**bélsō* pret. pl. \**bǫzumí*: Lith. *baĩsa-s* 'voice, sound', Skr. *bháṣāmi* 'I bark' (cp. § 259), Indg. \**bhélso*; the *ll* = *lz* in *bullun* 'barked' etc. had crushed out the regular *ls* of the pres. and sg. pret.

*sl* and *zl* (*ll*). I do not know an example for *sl*<sup>1)</sup>. *zl* in MHG. *krol*, gen. *krolles*, 'curled, curled in locks' *krolle* 'curl, lock' Mid. English *crullen* 'to curl', prim. Germ. \**kruaz-lá-*, to MHG. *krūs* 'crisp, curled' Mid. English *crūs* 'crisp, angry'. Cp. also O.Icel. *hrolla* 'to tremble, quake' beside *hrjōsa* 'to shudder', to Gr. *κρῠόεις* 'awful, causing shudder' *κρῠο-ταίνω* 'I make to freeze'.

*sn* and *zn* (OHG. *rn*). Goth. *asneis* OHG. *esni* Ags. *esne* 'day-labourer' prim. Germ. \**ás-niǰa-*, as opposed to OHG. *arn* (gen. *arni*) 'harvest' O.Icel. *qnn* 'season for working in the field' from prim. Germ. forms with unaccented root-syllable; cp. Goth. *asans* 'harvest, summer'. Goth. *razn* O.Icel. *rann* Ags. *ærn* (from \**ærzn*, and this from \**ræzn*) 'house' prim. Germ. \**raz-ná-*, to OHG. *ras-ta* 'rest, repose, a certain distance' Goth. *ras-ta* 'a certain distance'. OHG. *lirnēn lernēn* Ags. *leornian* OS. *linōn* (cp. OS. *mēda* § 596) 'to learn', would have been in Goth. \**liznan* pret. \**liznōda*, to Goth. *láis* 'I know' OHG. *lēren* 'to teach', rt. *leǰs-*.

*ms* and *mz*. Goth. *ams* (st. *amsa-*) m. 'shoulder': Skr. *áśa-* 'shoulder'. Goth. *mimza-* 'flesh': Skr. *māśá-m* Pruss. *mensā menso* O.Bulg. *męso* 'flesh'.

Rem. 2. Did the *s* in *ns* once become *z*? For *nz* I do not know any other examples besides Goth. acc. pl. *hvanz-uh* 'all' *þanz-ei* 'which',

1) The nominal suffix *-sla-* must be left out of the question, since this probably represents an Indg. *-t+tlō-*. See Kluge's *Nominale Stammbildungslehre* p. 64.

but *nz* cannot have been prim. Germ. in this case (§ 583.) In numerous cases *ns* appears on all sides where *nz* or its further development might be expected, e. g. OHG. part. *dunsan* 'swollen' (*dinsan* Goth. *þinsan* 'to draw, pull': Skr. *ṭṣḍyāmi* 'I pull to and fro, shake', Lith. *ṭṣiù* 'I stretch by pulling', rt. *tens-*). I conjecture that *ns* had been developed to *nts* (as in Umr., in Lith. dialects and elsewhere) at the time when Verner's law operated. *s* could not become voiced with this articulation.

Owing to Goth. *þamma* 'to the', beside Skr. *tásmād tásmāi* Pruss. *stesmu* etc. Umr. *p us me* 'cui', and Goth. *im* O.Icel. *em* 'I am', beside Skr. *ásmi*, it may be assumed that *sm* became *mm* in prim. Germ., *im* first of all from *\*imm*. Otherwise, but not convincing to me, Osthoff *Zur Gesch. d. Perf.* 428.

§ 583. Final *s* (Indg. *-s* and *-z* — see § 645 finals 3 — may at that time partly or entirely have been levelled out to *-s*) was also subject to Verner's law. This law thus gave rise e. g. in the nom. pl. of Germ. *a-* and *ō-*stems to *-ōz* beside *-ós* (Skr. *-ās*), and in the gen. sg. of *i-*stems to *-aiz* beside *-áiz* (Skr. *-ēṣ*). Such doublets were then treated differently in the separate dialects.

In Gothic, *-z* became *s* (*\*wulfōz* 'wolves' *\*ga-qumþáiz* gen. 'of a meeting, synagogue' *\*bairáiz* opt. 'feras' became *wulfōs ga-qumþáis bairáis*) either at the same time with the *z* which became final at a later period (e. g. *\*bairiz(i)* 'thou bearest', § 581 p. 534 f.) and thus fell together again with the *s* which had remained unchanged (*mundōs* nom. 'existimatae' = Skr. *matás*, Indg. *\*mytás*). Or else, before the dropping of the final short vowels (§ 660, 1), a generalisation of the *-z* first took place, as in Norse, so that e. g. *\*mundōz* was also spoken instead of regular *\*mundōs*, and then later *-z* everywhere became *-s*. I am in favour of the latter assumption. For thus can be best explained why *z* regularly appears for original final *s*, when a particle is attached to it (e. g. *is* 'he': *iz-ei*; *weis* 'we': *veiz-uh*; *hvas* 'who?': *hwaz-uh*; *vileis* 'velis': *vileiz-u*), whilst *s* appears in *vas-uh* beside *vas* 'he was', where *s* had only become final at a later period (*\*yasi*, prim. form *\*ye-yós-e*).

*-z*, as absolute final, was dropped in West Germanic, whilst *-s* was retained. *-z* had frequently been extended beyond its original sphere and had supplanted *-s*. Nom. pl. OHG. *geba* OS. *geba* Ags. *zifa* 'gifts' = Goth. *gibōs*. Nom. sg. OHG. OS.

Ags. *sunu* 'son' = Goth. *sunu-s*. In OHG. the *z*-form was generalised in the nom. pl. of *a*-stems, *taga*, in OS. and Ags. the *s*-form, OS. *dagos* Ags. *dagas*. Likewise the *-s* in the OS. gen. sg. *burgas nahtes kustes* etc. is probably to be regarded as Indg. final *-s*. OHG. nom. *sū* 'sow' from \**sūz* for older \**sū-s*. Where *r* = *z* occurs in West Germ., as OHG. *ir er* (Goth. *is*), *wir* (Goth. *veis*), *zar-zer-zir-* (Goth. *tuz-*), this mode of treating the *z* was occasioned by the close connexion with following words and by the different stress which the pronouns and particles had in the sentence and in compounds. Cp. Paul in Paul-Braune's *Beitr.* VI 550 ff.

Prim. Germ. *-z* was generalised in Norse, whence *-r*, e. g. *sýr* 'sow' (dat. acc. *sū*), *ulfar* 'wolves', *gjafar* 'gifts'.

Nothing prevents our assuming that *-z* became generalised in the nom. sg. in the prim. Germ. period.

#### Baltic-Slavonic.

§ 584. Indg. *s* remained generally intact in the period of the Balt.-Slav. primitive community.

The changes in this period were:

*ks* became *šš*, whence Lith. *sz*, O.Bulg. *s*. Lith. *asžis* O.Bulg. *osž* 'axle': Lat. *axi-s*, cp. \**akši-*. See § 414. 544 p. 398.

Primitive Balt.-Slav. *šš* = Indg. *sk* is less certain, as Lith. *maisžyti* O.Bulg. *měsiti* 'to mingle, mix'. See § 414 rem.

§ 585. *s* remained unchanged in Balt. and Slav. in the following positions:

1. Initially before sonants and consonants (except *sz*). Lith. *septyni* O.Bulg. *sedmŭ* 'seven': Skr. *saptá*. Lith. *sūni-s* O.Bulg. *synŭ* 'son': Skr. *sūni-š*. Pruss. *swai-s* 'his' O.Bulg. *svatŭ* 'relation' *svojŭ* 'own': Skr. *svá-*. Lith. *sesŭ* O.Bulg. *sestr-a* 'sister': Skr. *svásar-*. Lith. *snėga-s* O.Bulg. *snėgŭ* 'snow': Av. *snaežaiti* 'it snows', rt. *sneigh-*. Lett. *smėi-ju* 'I laugh' *smai-da* 'a smiling' O.Bulg. *smě-ja se* 'I laugh': Skr. *smáy-a-tē* 'he smiles'. Lith. *smūkti* 'to slide' O.Bulg. *smykati se* 'to creep, slip': MHG. *smiegen* 'to wind, bend'. Lith. *srav-à* 'a flowing, bleeding' O.Bulg. *stru-ja* 'a flowing' (with excrescent *t*, cp. 2.): Skr. *sráv-a-ti* 'flows'. Lith.



*slenkù* 'I creep' O.Bulg. *slakù* 'crooked': OHG. *slingan* 'to wind to and fro' *slango* 'snake'. Lith. *spėjù* 'I have time, leisure' O.Bulg. *spējà* 'I have success': Skr. *sphāyami* 'I swell, thrive'. Lith. *staigyti-s* 'to hasten' O.Bulg. *stignati* 'to come somewhere': Gr. *στειχω* 'I stride, go'. Lith. *skabėti* 'to cut' O.Bulg. *skoblǐ* 'radula': Lat. *scabō*.

2. Medially in the combinations *sy*, *sm*, *sn*, *sr*, *sl*, *st*.

*sy*. Lith. *ès-va* O.Bulg. *jes-vě* 1. du. 'we two are': cp. Skr. *s-vás*.

*sm*. *es-mì* O.Bulg. *jes-mǐ* 'I am': Skr. *ás-mi*. Lith. *jūs-mi* 'I gird' *jūs-mū* 'girdle': cp. Gr. ζῶμα from \*ζωσ-μα (§ 565), rt. *jōs-*. Lith. *ges-mě* 'a low glimmering fire', to *gèsti* (pret. *gesaũ*) 'to expire, go out'. O.Bulg. *kosmū* 'hair' beside *kosa* 'hair' (cp. § 588 rem. 4): OHG. *hār* 'hair' from prim. Germ. \*χεζά-?

Rem. 1. The datives Lith. *támu* *tám* and O.Bulg. *tomū* 'to the' beside Pruss. *s-tesmu* Skr. *tásmāi* have not lost their *s* regularly, but are new formations after the analogy of other cases with *m*-suffixes without *s*. See the accidence.

*sn*. Lith. *prus-nà* 'mouth' (*praus-iù* 'I wash my face') O.Bulg. *prys-na* 'spargo': Skr. *pruṣ-nu-té* 'squirts, trickles, wets'. Lith. *pa-klus-nù-s* 'obedient' (cp. Pruss. *po-klus-ma-n* acc. 'obedient'), to *klausà* 'obedience': O.Bulg. *sluchū* 'a hearing, obedience', Indg. *kleys-*; on the initial Lith. *k* cp. § 467, 2. Lett. *saus-ni-s* 'a dried up tree', to Lith. *saũsa-s* 'dry', rt. *says-*. O.Bulg. *ves-na* 'spring' beside Lith. *vasarà* 'summer', Skr. *vas-antás* 'spring'. O.Bulg. *gasna* 'I expire' beside Lith. *gesaũ* 'I extinguish; to which Skr. *ghas-* 'consume'? O.Bulg. *po-jas-nǐ* 'girdle': cp. Gr. ζώνη 'girdle' from \*ζωσ-νᾱ (§ 565), rt. *jōs-*.

Rem. 2. Slav. *-chn-* in *düchnati* etc. has arisen by analogy. See § 588 rem. 2.

*sr* became *str* (cp. *str* from *kr* § 545) in Slavonic universally, in Lithuanian only partially. O.Bulg. *sestr-a* 'sister' from \**sesr-ā*: Skr. *svasr-*. Lith. *tĩmsra-s* 'sorrel': Skr. *tamisra-m* 'darkness' etc., see §§ 570. 580. Lith. *nas-raĩ* *nastraĩ* pl. 'throat', to *nósi-s* 'nose'. Correspondingly *srově* and *strově* 'a flowing' (cp. 1.) etc. It is not clear in what parts of Lith. and to what extent the excremental consonant made its appearance.

Rem. 3. O.Bulg. *nozđri* pl. 'nostrils, nose' has been directly connected with Lith. *nasraĩ*, as if *zđr* had arisen from *sr*. It is probably better to divide the word into *noz-đri* and to regard the second part as a noun belonging to the root *der-*, cp. O.Bulg. *đira đera* 'slit', Skr. *dāra-* 'slit, hole'. Also *męzdra* 'fine skin on a fresh wound, the fleshy part on a thing', which has been connected with Lat. *membre-m membrāna* (-*br-* from *-sr-*, § 570) and O.Ir. *mīr* 'piece of flesh' (§ 570), and regarded as a further formation of *męso* 'flesh' (Skr. *māśa-* Goth. *mimza-*) may be compounded of *\*mems+đrā-* (from the same root *der-*; with *\*mems-* cp. the Skr. stem *māś-* instr. sg. *māś-ā* compound *māś-pācana-* 'serving for the cooking of the flesh') and have originally signified 'a skinning of the flesh'.

*sl.* Lith. *veislė* 'brood' *veislūs* 'fertile', to *veisiù* 'I propagate'. Lett. *trusls trausls* 'fragile', to *trusu* 'I become bristly', Lith. *triūsai* pl. 'the long feathers in the tail of a cock'. O.Bulg. *tręslū* part. pret. to *tręsq* 'I shake'.

Rem. 4. Slav. *-chl-* in *u-süchlū* etc. has arisen by analogy. See § 588 rem. 2.

*st.* Lith. *ės-ti* O.Bulg. *jes-tī* 'is': Skr. *ís-ti*. Lith. *jū's-ta-s* 'girded': Av. *yās-ta-* Gr. ζωσ-τό-ς 'girded'. O.Bulg. 2. pl. of the *s*-aorist *dě-s-te*, to *dě-ti* 'to put, place': Skr. *dhā-s-ta*.

3. In the medial combinations *ms*, *ns*, *ls*, *ts*, *ss*.

*ms.* Pruss. *mensā menso* O.Bulg. *męso* 'flesh': Goth. *mimza-* Skr. *māśa-* 'flesh'. Lith. fut. *iñsiu*, to *imù* 'I take', O.Bulg. aor. *jęsū*, to *imq* 'I take': cp. Gr. *ἐνεμα* from *\*ἐ-νεμ-σα* (§ 565):

*ns.* Lith. fut. *pįsiu*, to *pinù* 'I plait, twist', O.Bulg. aor. *pešū*, to *pīnaq* 'I strain, hang'. Lith. *žqsi-s* 'goose': OHG. *gans*. Lith. *tešiù* 'I stretch' *tašù-s* 'extensible': Goth. *at-pinsan* 'to draw towards'. O.Bulg. *tręsq* 'I shake' from *tres-* (Gr. Hom. *τρέσ-σαι*) with 'nasal infix' or from *\*trem-s-* (cp. Lat. *tremō*)? Old Czech loc. pl. *Polás* (proper name, see Miklosich Vergl. Gramm. III 16), to nom. pl. O.Bulg. *poljan-e* 'field inhabitants', according to Leskien for prim. Slav. *\*polja-sū* (*\*poljan-sū*) after the analogy of *polja-mi -mū* (with regular loss of the *n* before *m*, § 219); in other cases, after vowels, Slav. *-chū* = Skr. *-su*, § 588, 2.

Rem. 5. Forms like *pechū*, beside *pešū*, were new formations. See § 588 rem. 2.

*ls*. Lith. *bařsa-s* 'voice, tone': OHG. *bellan* 'to bark', Skr. *bhāřami*, see § 582 p. 436. Lith. *skelsiù* 'I drive away, reach out'; *delsiù* 'I tarry, delay'. Lith. fut. *kelsiu*, to *kelù* 'I raise'. O.Bulg. *glasù* 'tone, note, voice' from prim. Slav. \**golsù*, to O.Icel. *kalla* (*ll* from *lz*? § 582) 'to name, call'.

*ts* became *s* through the intermediate stage *ss* in both language divisions. Lith. *ęsiu* 'I shall eat', O.Bulg. *jasi* 'thou eatest' aor. *jasù*: cp. Skr. fut. *atsyāmi* 2. sg. pres. *ātsi*, rt. *ed-*. See § 544.

Rem. 6. Forms like *jachù*, beside *jasù*, were new formations. See § 588 rem. 2.

*ss* became *s* in both language divisions. Lith. fut. *lęsiu*, to *lesù* 'I pick up', Goth. *lisa* 'I gather together'. Lith. fut. *jūřsiu*, to *jūřs-mi* 'I gird', cp. Gr. aor. *ἔζωσα* from \**ē-ζωσ-σα*, rt. *jōs-*. O.Bulg. *s*-aorist *otù-tręsù*, to *otù-tręsa* 'I shake off'. O.Bulg. *jesi* 'thou art': cp. Gr. Hom. *ἔσσι*. *nasù* (gen. loc. pl. to *my* 'we') from \**nās-sù*, cp. the possessive pronoun *naři* from \**nās-ři* (§ 588. 2. 3).

§ 586. Besides the cases mentioned in § 585 Indg. *s* also regularly remained in Lithuanian in the following cases:

1. After vowels and diphthongs before sonantal vowels. Lith. *lesù* 'I pick up': Goth. *lisa*. *saūsa-s* 'dry': Skr. *řōřa-s* 'drying up, parching' (§ 557, 4), rt. *saūs-*. Part. perf. act. fem. *āgu-us-i*, to *āgu* 'I grow': cp. Skr. *vid-úř-ř* (indic. *vęda* 'I know').

Rem. 1. *sz* frequently appears where we should expect *s*. Concerning *maiszyti* etc. see § 414 remark. *māisza-s* 'large sack, hay net', which has been regarded as a genuine Lith. word and brought together with Pruss. *moasis* 'bellows' O.Bulg. *męchù* 'hide, leather bag', might have been borrowed from German (OHG. *meisa* 'a frame for carrying on the back', O.Icel. *meiss* 'food basket'), with the same substitution of *sz* for Germ. *s* as in *āszila-s* beside *āřila-s* 'ass' from Germ. (Goth.) *asilu-s*. Cp. further § 587 rem. 2.

2. In *sę*. *siāvù* 'I sew' *siūla-s* 'thread': Skr. *syū-tā-s* 'sewn'. Fut. *dūř-siu* 'I shall give': Skr. *dā-syāmi*, Indg. \**dō-sęō*.

3. in *qs*. Fut. *ūksiu* 'I shall leave': cp. Skr. *řękřyāmi*.

Rem. 2. Such futures with *ks* are not quite reliable examples, since *s* may have been introduced by analogy just as in *gęrsiu* (§ 587 rem. 1). \**ūksziu* can hardly be regarded as the regular form, even if

*áukszta-s* 'high' is related to Gr. *αἰξω* Lat. *auxiliu-m* O.Ir. *ōs uas* Cymr. *uch* (§ 434).

4. Finally. Nom. sg. *vilka-s* 'wolf' : Skr. *vfka-s*. Nom. pl. *dūkter-s* 'daughters' : Gr. *θυγατέρ-ες*.

§ 587. Changes of *s* in Lithuanian.

1. *rs* became *rsz*. *maršza-s* 'a forgetting' *mirszau* 'I forgot' : Skr. *marša-s* 'a patient enduring' *mřšyāmi* 'I forget, bear patiently'. *veřzi-s* m. 'calf' : Lat. *verrēs* from \**versēs* (§ 571), Skr. *vfša-s* 'bullock'. *virszū-s* 'top, point' : Skr. *vārřiyas-* 'higher', perhaps also Lat. *verruca* 'lump, wart'.

Rem. 1. Fut. *gėrsiu* had been formed after the analogy of *kėlsiu* *dūrsiu* etc. Leskien (Der Ablaut der Wurzelsilben im Lit. 65) explains *gařsu-s* 'noise' as coming from \**gard+sa-s*, to *girdėti* 'to hear'. *varšd* 'flake' is a borrowed word, see Brückner Litu-Slav. Stud. I 151.

2. *sz* for *s* through assimilation to the *sz* of a neighbouring syllable. *szeszura-s* 'father-in-law' from \**seszura-s* : Gr. *ἐνυρό-ς*, Indg. \**syékura-s*. *szą-szłavýna-s* beside *sq-szł*. 'heap of sweepings' : O.Bulg. *sq-* Skr. *sam-* 'with'. Assimilation in the opposite direction probably in *szšza-s* 'scurf' : O.Bulg. *socha* 'piece of wood' *o-sošiti* 'abscindere', Skr. *śásami* 'I cut, slaughter'. Cp. the analogous assimilation in Skr. § 557, 4.

3. *scz(i)* from *stš* became *szcz(i)* in East Lithuanian dialects. Opt. *kląuszcziau* (*kląuszczze*) from *kląuscziu*, to indic. *kląusiu* 'I ask'. Cp. *pěszczia-s* from *pěszczia-s* i. e. \**pėd+tią-s*, § 544 p. 397 f. *sz* is pronounced softened (*sz'*), the course of development was *stsz'* — *št'sz'* — *sz'tsz*.

4. *kląuzdama-s* beside *kląusdamas* (part. of *kląusiu* 'I ask'), just as *mėzdama-s* beside *mėsdama-s*. See § 544 p. 398.

Rem. 2. Has *sk* become *szk* in pure Lith. words? *jėszkóti* 'to seek' (O.Bulg. *iskati* 'to seek' OHG. *eiscōn* 'to seek') and the suffix *-iszka-s* e. g. *tėv-iszka-s* 'fatherly' (O.Bulg. *žen-řskū* 'womanish', Goth. *barn-řks* 'childish') have the suspicion of being borrowed from Germanic. Cp. § 414 rem.

§ 588. Prim. Balt. Slav. *s* did not remain unchanged in Slavonic in any of the positions, in which it was preserved in Lith. (§ 586), nor in those in which it underwent a change in Lith. (§ 587), the case in § 587, 2 excepted.

1. *ch* (*χ*) from *s* after *k* (Indg. *g*) and *r*.

*ks* became *chch*, further *ch*. Aor. *těchŭ* 'I ran' prim. f. *\*tēq-s-o-m*, to pres. *tekq*. See § 462.

*rch*. *vračŭ* 'a threshing' from *\*uorchŭ*, *vřičq* 'I thresh' from *\*uřčq*: Lat. *verrō vorrō*, rt. *uērs-*. *vřichŭ* 'top': Lith. *virszù-s* Skr. *vārṣīyas-*, see § 587, 1. *s*-aorist *trīchŭ*, to *tīraq* 'I rub'.

This *ch* became *š* and *s* under the same conditions as those by which *k* passed into *č* and *c*, see §§ 461. 462. *vřīšetŭ* 3. sg. to *vřičq*. *srīš-en-ŭ* 'hornet, horse-fly' from *\*sīrch-en-*: Lith. *szirsz-ŭ*, prim. f. *\*h̄rs-en-* (§ 582). *vřīsi* nom. pl. to *vřichŭ* 'top' (stem *vřicho-*). *vřīšete* 2. pl. opt. to *vřičq*.

Rem. 1. The inf. *vřēsti* 'to thresh' must be explained from *\*uerchtŭ*, more precisely *\*uerχ'tŭ*, see § 462 rem. Cp. with it however *trīste* from *\*tīrste* 2. pl. to *trīchŭ*. Which of the two forms represents the regular treatment of *rst*?

2. Further *ch* (*š*, *s*) for Indg. *s* between vowels; numerous sure examples for *ch* especially after *u-* and *i-*vowels. *snŭcha* 'daughter-in-law' *snŭšinŭ* 'like a daughter-in-law': Skr. *snusā*, Indg. *\*snusā-*. *mŭchŭ* 'moss': Lith. pl. *musai* 'mould', OHG. *mos* 'moss'. *myšŭ* 'mouse': Lat. *mūs* OHG. *mūs*. *jucha* 'soup': Pruss. *juse* 'broth', Skr. *yāṣa-* 'sauce', Lat. *jūs*. *duchŭ* (voc. sg. *duše* nom. pl. *dusi*) 'breath', *duša* 'soul' from *\*dāchŭā*: Lith. *daūsos* pl. 'upper air'. Part. pret. fem. nom. sg. *pek-ŭši* (*pekaq* 'I cook') from *\*-ŭchŭ*, acc. sg. *-ŭšq* from *\*-ŭchŭq*: Skr. *-uṣ-ŭ-uṣ-yā-*. *pīchati* 'to push, stamp, strike', indic. pres. *pīšq* from *\*pīchŭq*: Lith. *pēs-tà* 'stamping vessel' *paisŭti* 'to strike the awns off barley': Lat. *pīns-ō*. *lēcha* 'beet root' prim. f. *\*lois-ā*: Lith. *lŭsė* 'beet', Lat. *lŭra*, MHG. *leis leise* 'trace, track'. *socha* 'piece of wood' *o-sošiti* 'abscondere': Skr. *śāsāmi* 'I cut, slaughter'. Aorist ending 1. sg. *-chŭ* 3. pl. *-šē* (cp. Skr. *-s-am-*): *da-chŭ* to *da-ti* 'to give', *dē-chŭ* to *dē-ti* 'to place', *by-chŭ* to *by-ti* 'to be', *plu-chŭ* to *plu-ti* 'to sail', *vi-chŭ* to *viti* 'to wind'. Suffix of the loc. pl. *-chŭ* = Skr. *-su*: *žena-chŭ* to *žena* 'woman', *vľučč-chŭ* to *vľūkŭ* 'wolf', *paťi-chŭ* to *paťi* 'way'. Gen. pl. *těchŭ* to *tŭ* 'the': Skr. *tē-šām* O.Icel. *pei-ra* (Goth. *pi-zē blindái-zē*). Ending of the 2. sg. *-ši* from *\*-chŭ* (not = mid. Skr. *-sē* Gr. *-(o)ai*; for prim. Slav. *\*-choj*

would have become *\*-si*): *bere-si* to *bera*; cp. beside this *jasi* 'thou eatest' from *\*žtsi*, *jesi* 'thou art' from *\*essī* § 585, 3.

Rem. 2. Through new formation *ch* frequently came into positions where it could not have arisen regularly. *chn*: *dūchnaŋti* 'to breathe', *sūchnaŋti* 'to become dry'. *chl*: *u-sūchlū* 'dry' *sūchlī* f. 'dry wood'. *ch* after nasal vowels: aor *pečhū* beside *pešū*; *ačhati* 'to smell' instead of *\*ašati* (*\*an-s-*, to *v-on-ja* 'smell' cp. Lat. *ālu-m* (*h*)*ālāre* from *\*anslo-* §§ 208. 570) through association with *ja-chati* 'vehi' (Skr. *yā-mi* 'I drive' Lith. *jó-ju* 'I ride') *ma-chati* 'agitare, ventilare' (beside *ma-ja* 'vibro'). *ch* for *s* = *ts*: aor. *jachū* beside *jasū* 'I ate' (§ 543). Cp. § 585 with rem. 2. 4. 5. 6.

Rem. 3. *ch* appears often initially before vowels and *r*, *l*, *v*. Most of the words are unfortunately not etymologically clear. Some are undoubtedly borrowed words and the *ch* in them has nothing to do with *s*, as *chladū* 'coolness, dew' from Germ. (Goth.) *kalds* 'cold'.

*chodū* 'incessus, iter' has been regarded as a pure Slav. word and connected with Gr. *δδó-ς* Skr. *ā-sad-* 'reach, attain', so, also, *chromū* 'lame' to Skr. *srāmá-s* 'lame'. I know nothing which helps to explain their *ch*.

*s* often appears where, from what has been said above, we should expect *ch* (or *š*). Examples: *nosū* 'nose': OHG. *nasa*. *bosū* 'bare footed': Lith. *bāsas* OHG. *bar*. *po-jasū* 'girdle'. *gasiti* 'to extinguish': Lith. *gesyti*. *bēsū* 'demon': Lith. *baisà* 'fright'. *rosa* 'dew': Lith. *rasà* 'dew', Skr. *rasà* 'that which is wet, fluid', Lat. *rōs rōris*. *kosa* 'hair': OHG. *hār*? Gen. *sloves-e* (nom. *slovo* 'word'): Skr. *śrávas-as* Gr. *κλέ(φ)ε-ος*. I cannot find any special reason (vicinity of sounds etc.) which should have prevented *s* from passing into *ch* in these examples. I conjecture that none of these words had an *s* at the time *s* became *ch*.

Rem. 4. For some cases a plausible explanation lies close at hand. *po-jasū* after *po-jasnē*, *gasiti* after *gasnaŋti*, *kosa* after *kosmū* or similar forms, in which *s* regularly remained. *sloves-e* *sloves-i* etc. may be explained, if we take into account that for *sloves-imī -imi -imū -īma* there once existed *\*sloves-mī -mi* etc. and for *sloves-ichū* *\*sloves(s)ū* (cp. *polja-mi* from *\*poljān-mi* etc. § 585, 3); *\*sloves* could also have formed a factor, if *-s* had not already been dropped at that time (7). On *nosū* op. § 569 rem. 3. The whole question requires a thorough investigation.

3. Prim. Slav. *š* = Indg. *s̥* had, as we saw under 2., passed through the stage *ch̥i*, in *duša p̥iša* etc. On the other hand *š* is to be traced directly back to *s̥* in *šiti* 'to sew' from *\*s̥iti* *\*s̥ij-ti* = Lith. *siū-ti* and in such cases as *gaša* 'I ex-

tinguish' beside 2. sg. *gasiši* etc. (2.). This latter, younger change took place at the same time with the transition of *sĭ* = Indg. *ĭi* into *š*, as in *noša* 'I carry' from root *nek-*, *piša* 'I write' from root *pejĭ-* (§ 147). *gaša* : *gasiši* = *noša* : *nosiši*.

4. *sti*, *stri*, *ski*, *slĭ*, *snĭ* became O.Bulg. *št*, *štrj*, *št*, *šlj*, *šnj*. *gošta* 'I take as guest' from \**gostiĭa*, inf. *gostiti*, to *gostĭ* 'guest': Lat. *hosti-s*, Goth. *gasts*. *tüšti* 'empty' from \**tüskĭ*: Skr. *tuchyá-* 'empty'. See § 147.

5. If *s* came to stand before mediae, it passed into *z*. *zborŭ* fr. *s(ü)-borŭ* 'a bringing together, a uniting'. *zdelati* fr. *s(ü)-delati* 'to carry out, complete'. *zdravŭ* fr. *s(ü)-dravŭ* 'healthy'. Here eventually also *nozdrĭ*, see § 585 rem. 3.

6. *rsn* became *rn* in prim. Slav. *čřnŭ* 'black' fr. \**čřrsno-*, Pruss. *kirsna-* Skr. *kršná-* 'black', Indg. \**qrsno-*. Cp. § 302 rem. 1.

7. Final *s* was dropped. *nebo* 'sky': Skr. *nábhas*, Gr. *νέφος*. Other examples in § 665,4.

### Primitive Indg. changes of *s*.

§ 589. The following modifications of *s* may be regarded as prim. Indg.

1. *s* became *z* before voiced explosives and spirants, e. g. \**z-dhí* 'be' imper. from rt. *es-*, \**menez-bhi(s)* instr. from *ménes-* 'sense'. See § 590. Cp. Indg. *-bd-* from *-pd-* etc. § 469, 2.

2. *ssk* became *šk*. \**iskó* i. e. \**is+škó* pres. from rt. *ais-* 'seek': Skr. *ichámi* 'I seek, wish', cp. OHG. *eiscōn* 'to seek'.

Rem. 1. There is little foundation for the assumption that intervocalic *ss* has also become *s* in secondary accented syllables, as \**esi* 'thou art' (Skr. *ási* Gr. *ei*) from \**es-si* (Osthoff Z. Gesch. d. Perf. 18), and that *ss* has become *ts* under certain conditions (J. Schmidt Kuhn's Ztschr. XXVI 343 ff. XXVII 330 ff.).

3. Initial *s* was dropped under certain conditions before consonants, possibly e. g. after *s* at the end of words, so that this reduction would be identical with the one mentioned under 2. (Cp. Skr. *dušṭuti-š* 'bad song of praise' = *duš+ṣṭuti-š*, Gr. *δύστηνος* = *δυσ+στηνος*, Gortyn inscript. *ταιστεγαις* = *ταῖς*

στέγαις). Hence it often happens that several languages concurrently show loss of *s*- without a sufficient reason for its loss being discoverable by the sound-laws of the separate languages. Thus e. g. *steg-* and *teg-* 'cover': Skr. *sthágāmi* 'I conceal, hide', Gr. *στέγος* 'roof', Lith. *stóga-s* 'roof' O.Bulg. *o-stegŭ* 'toga' + Gr. *τέγος* 'roof', Lat. *tegō*, O.Icel. *þak* OHG. *dah* 'roof'. Goth. *stáutan* OHG. *stōzan* 'to push' + Skr. *tudāmi* 'I push', Lat. *tundō*. Skr. *spás-* 'spy, watchman', Lat. *-spiciō*, OHG. *spehōn* 'to spy' O.Icel. *spakr* 'sensible' + Skr. *pásyāmi* 'I see', O.Bulg. *paziti se* 'caveré', rt. *spek- speg-* (§ 469, 7). Gr. *θυοσόος* 'sacrificing priest', (Goth. *us-skáu-s* 'provident, prudent' + Skr. *ā-kvatē* 'he intends' *kavi-š* 'seer, prophet', Gr. *κοίω* 'I observe', Lat. *caveō*. Skr. *smárāmi* 'I intend, bear in mind' + Lat. *me-mor*, O.Ir. *maraim* 'maneo' (cp. Lat. *mora*). Perhaps here belong also Armen. *veç* 'six', Pruss. *wuschts uschts* 'sextus' (to which also Lith. *úszės* beside *szėsziós* pl. 'childbed') as opposed to Gr. *ἕξ* from \**σFεξ* Lat. *sex* etc. Cp. further Gr. *σάζω* 'I limp' + OHG. *hinchān* 'to limp'; Gr. *ἔννη* 'nebat', O.Ir. *sn̄im* 'a spinning' (*ē* = Indg. *ē*) *sn̄athe* 'filum' (*ā* = Indg. *ō*) OHG. *snuor* 'cord, string' + Goth. *nēþla* OHG. *nādelā* 'needle'.

It is certain that *s*- often first disappeared in the separate developments of the Indg. languages, as in Skr. *utthātum* inf. 'to rise' from \**ut-sthātum* (§ 557), Lat. *nāre* from \**snāre* (§ 570), O.Ir. *-tau* 'am' from \**stā-īō* (§ 575), and it is not possible everywhere to separate this loss from that in the parent Indg.

4. It is probable that the combinations *bh*, *dh*, *gh*, *gh+s*, which are etymologically to be presupposed for words like Skr. *dīpsati*, had experienced a change of articulation in the prim. Indg. period. But it is not yet determined what this change was. *bzh*, *dzh* etc. are to be assumed for prim. Aryan. See §§ 469, 6. 470. 482. 552.

Rem. 2. That *s* was dropped between explosives already in prim. Indg., is an uncertain conjecture. This theory is based on OHG. *sehto* O.Icel. *sētte sētti* Gr. *ἕκτος* 'sextus'. I grant an Indg. \**syekto-s*. But it is however quite possible that this form had never had the final *-s* of \**syekts*. For the present it seems to me wisest to regard the loss of *s* between explosives as a process carried out in the separate languages.



Indg. *z*.

§ 590. Primitive Indg. period. So far as can be seen *z* occurred only in combination with following mediae or mediae aspiratae.

Before mediae. \**ni-zd-o-* 'place of rest' (*ni-* 'down', rt. *sed-* 'sit'): Skr. *nīdá-s* 'place of rest, nest', Armen. *nist* 'seat, possession' Lat. *nīdu-s*, O.Ir. *net* 'nest', OHG. *nest* 'nest'. \**ozdo-s* 'branch, twig': Armen. *ost*, Gr. ὄζο-ς, Goth. *asts*. Rt. *mezg-* 'tie knots': OHG. *masca* 'mesh, loop', O.Icel. *mǫskve mǫskvi* 'loop', Lith. *mezgù* 'I tie in knots, knit' *māzga-s* 'knot'.

Before mediae aspiratae. \**z-dhí* 'be' imper. from rt. *es-* 'be': Av. Gāp. *zdī*, Gr. ἴσθι. Instr. in *-z-bhi(s)* from *s*-stems: Skr. *uṣád̥bhiṣ* from *uṣás-* 'dawn of day', Gr. ἐρεβέσφι from ἐρεβέσ- 'darkness'.

Root forms *mezg-* and *mezgh-* 'duck, sink down' (cp. *stemb-* and *stembh-* etc. § 469, 8): Skr. *māj̄jāmi* 'I duck under' *madgū-ṣ* a water fowl *māj̄ján-* 'marrow' (*g*) Av. *mazga-* 'marrow' (*g* or *gh*), Lat. *mergō merg-us* (*g*), Gallo-Lat. *mesga* 'whey' (*g* or *gh*, cp. § 521), OHG. OS. *marg* 'marrow' (*gh*), Lith. *mazgóti* 'to wash' O.Bulg. *mozgǔ* 'marrow' (*g* or *gh*).

*z* probably occurred finally before voiced explosives, but we are no longer able to follow it in detail (§ 645, 3).

§ 591. Aryan. Indg. *zd(h)* fell together with Indg. *d̥d(h)* in prim. Aryan, see § 476. At the same time Indg. *z* became *ž* under the same conditions as *s* became *š*, and then *ž* became *ǰ* in Skr., as *š* became *ṣ*, see § 556, 1. In consequence of this change to *ǰ*, Indg. *zd(h)*, *zbh* fell together with *gdh*, *gbh*, see §§ 404. 482.

Prim. Ar. *azd(h)* *azd(h)* = Skr. *ēd(h)* *ād(h)*, Iran. *azd* *āzd*. Reduplic. stem Skr. *sēd-* Av. *hazd-* from rt. *sed-* 'sit', 3. sg. opt. perf. *sēd-yā-t*, *hazd-yā-p*, Skr. *sēd-ī-ṣ* 'a weakening': Lat. *sēd-imus sēd-ēs sēd-āre*, Indg. \**se-zd-*. Skr. *nēd-īyas-* Av. *nazd-yah-* 'nearer' from prim. Ar. \**na-zd-* from the same root *sed-*, properly ἔφιζων, προσήμενο-ς. Skr. *ēdhí* 'be' imper. from prim. Ar. \**az-dhi* beside Av. Gāp. *z-dī*, cp. § 313 p. 252. Skr.

*médas-* 'fat': OHG. *mast* 'feeding' (v. Bradke Kuhn's Ztschr. XXVIII 300). 2. pl. of the *s*-aorist Skr. *trādhvam* Av. Gāp. *prā-z-dām* from Ar. *trā-* 'protect'; in like manner Skr. *á-rādhvam* beside 3. pl. *á-rā-s-ata* from Aryan *rā-* 'present, grant'. Skr. 2. pl. *ádhvē* 'ye sit' beside 3. sg. *ás-tē*: Gr. ἤσ-θεις ἤσ-ται. *ādagnhá-* from \**áz-d* 'reaching up to the mouth' (*ás-*). Cp. Skr. *dēhi* Av. *dazdi* imper. 'give' from Indg. \**de-d<sup>h</sup>-dhí*, § 476.

Prim. Ar. *žd(h)*, e. g. *ižd(h)* = Skr. *īd(h)*, Iran. *ižd*. Skr. *nīdá-s* from \**nīžda-s* prim. Ar. \**nīžda-s* Indg. \**ni-zd-o-s*, see § 590. Skr. *pīdáyāmi* 'I press' from \**pi-zd-* ('sit up'): cp. Gr. πιέζω 'I press' from \**ni-σεδ-ιω* or \**ni-σε-σδ-ω*. Av. Gāp. *cīždī* from *caēš-* 'make known'. Skr. *dū-dás-* 'impious' *dū-dhī-* 'having an evil disposition' Av. *duš-dāh-* 'acting badly, villain', cp. Skr. *duš-* Gr. δυς-. Skr. 2. pl. mid. of the *s*-aorist *ástōdhvam* from \**a-stō-ž-dhvam*: 3. sg. *á-stō-š-ṭa*, pres. 1. sg. *stāu-mi* 'I praise, value'. Cp. Skr. *liḍhá-s* 'licked' from prim. Ar. \**liždha-* i. e. \**liğdha-*, § 404.

Rem. 1. 2. sg. imper. *dviđđhi* (to indic. *dvēš-mi* 'I hate') instead of \**dviđhi* was a new formation of the same kind as *didiđđhi* (to *didešmi* 'I show'). See § 404 rem. 2.

Prim. Ar. *zbh* = Skr. *dbh* (Iran. *zb*, not found). Skr. instr. pl. *ušádbhiš*, *vidvádbhiš*, *mādbhiš* from *ušás-* 'dawn, day-break', *vidvás-* 'knowing', *más-* 'moon, month'.

Rem. 2. The endings of the instr. pl. of stems in *-as* Skr. *-ō-bhiš* Av. *-ē-biš* O.Pers. *-a-biš* were new formations. See the accidence.

Prim. Ar. *žbh*, e. g. *ižbh* = Skr. *īdbh* Av. *ižb*. Skr. instr. pl. *dviđbhiš* from *dviš-* 'hating'. Skr. *vi-prúđbhiš* from *vi-prúš-* 'crumb, small spot'. Av. dat. du. *snaiṗižbya* from *snaiṗiš-* n. 'sword'. Av. instr. pl. *da-d-ūš-biš* from *da-d-ūš-* part. perf. act. from *dā-* 'give, place'. Cp. Skr. *viđbhiš* Av. Gāp. *vīžbīš* from Skr. *viš-* Av. *vīs-* 'clan, village community', orig. \**uiğbhis* § 404, 3.

Rem. 3. The Skr. endings of the instr. pl. of stems in *-iš-* and *-uš-ir-bhiš* and *-ur-bhiš* were new formations. See the accidence.

Prim. Ar. *azg* = Skr. *adg* Av. *azg*. Skr. *madgú-š*, a water fowl, Av. *mazga-* 'marrow', rt. *mezg-*, see § 590. But

prim. Ar. *azj* passed through *adi* into *ajj* in Skr. (cp. *újjiti-š* 'victory' from \**ud-jiti-š*, § 355). *májjāmi* 'I duck' *majján-* 'marrow' from the same root *mezg-*. *sajjatē* 'clings to something' from \**sa-zj-a-* redupl. (cp. *sa-šc-a-ti* 'follows' from *sac-*): cp. Lith. *segù* 'I fasten'.

*z* was dropped between explosives and spirants (cp. § 557, 3). Skr. *ámugdhvam* i. e. \**amugzdhvam* 2. pl. mid. of the *s*-aorist (3. pl. *ámukšata*) from *muc-* 'loosen'. In *sá-gdhi-š* 'a common meal' i. e. \**sa-gzdhi-* *gzdh* was = *ghst* (*ghas-* 'eat'), and in the 3. du. *babdhām* from \**ba-bzdham* *zdh* was = *bhst* (3. sg. indic. pres. *bá-bhas-ti* 'chews'), cp. § 589, 4. From the fact that we have here *gdh*, not *gđh*, it cannot without further consideration be concluded that the dropping of the sibilant was older than the prim. Ar. transition of *z* to *ž*. *gždh* may have existed in prim. Ar. and have become *gdh* in the Skr. separate development, before prim. Ar. and prim. Skr. *ž* and *š* acquired the cerebral articulation (*ž*, *š*).

§ 592. Armenian. The only sure examples seem to be *nist* 'a lying, nest' and *ost* 'branch', see § 590. On the sound-shifting cp. §§ 361. 484.

§ 593. Greek. *z* was retained in combination with mediae; in writing it was not sufficiently distinguished from *s*.

*σβέννῳμι* 'I quench, put out' aor. *ἔσβην*, probably from a weak-grade root form *zq-*, of which the strong-grade *seg-* exists in Lat. *sēgni-s*. *πρέσ-βυ-ς* *πρέσ-γυ-ς* 'old', the origin of which is not quite clear (cp. § 428 *c*). The voiced pronunciation of the *σ* is vouched for in these words by the appearance of *ζ* (*ζβέννῳμι* *πρεζβετης*), which came into use during the Hellenic period.

*zd* appears as *ζ*, Lesb. *σδ*. *ὄζο-ς* Lesb. *ῥοδο-ς* 'branch': Goth. *asts*, see § 590. *ἵζω* 'I set' Lesb. *παρ-ῖσδω*: Lat. *sīdō*, Indg. \**si-zd-ō*, fr. root *sed-*; for Skr. *sīdāmi*, which cannot be separated from these presents, we should expect \**sīdāmi*; this verb probably had *d* for *đ* through association with *sādāmi* *sasāda* etc. It remains doubtful whether *ἕζομαι* arose from \**σε-σδ-ο-μαι* or \**σεδ-λο-μαι*. Cp. further *Διόςδοτο-ς* *Διόζοτο-ς* 'god given'

(*Διοσ-* gen. sg.) and Ἀθήναζε 'to Athens' = Ἀθήνας-δε. Ion. Att. ζ was probably only the graphic representative of *zd*, cp. § 493 rem.

*z* before mediae became dialectically *ρ*, as Thess. Θεορ-δῶτειο-ς beside Ion. etc., Θεόςδοτο-ς (new formation after Διόςδοτο-ς); cp. Eretr. ὀμυνούρας § 489, Cret. κόρομο-ς § 565, El. τίρ § 653, 6.

*z* before mediae asp. became along with these voiceless in prim. Greek (§ 495). ἐρῆβισ-φι, prim. f. \**regez-bhi*, § 590. Aor. ἔ-σχε-ο-ν 'I got, had', prim. f. \**e-zgh-o-m*, rt. *segh-*. ἴσθι 'be' prim. Gr. \**izdhi* with vowel prothesis, caused by *z* (§ 626): Av. *zdī*, § 590. Cp. ἴσθι imper. 'know' from Indg. \**uid<sup>h</sup>dhi*, rt. *ueid-*, § 494.

§ 594. Italic. Sure examples are found in Latin only.

*zg* became *rg* (cp. 569). *mergu-s* from rt. *mezg-*, see § 590.

*z* was dropped before *d*, with 'compensation lengthening' after short vowels. *nīdu-s* fr. Indg. \**nī-zd-o-s*, see § 590. *pēdō pōdex* from \**pezdō \*pozdex*: Gr. βδέω 'I break wind' from \**βzd-ίω* (cp. § 334), Sloven. *pezdēti* 'to break wind'. With *sīdō* (see § 593) Bucheler connects Umbr. *sistu*, as being *sīditō*; but this explanation of the form is very doubtful. Cp. further *trēdecim* fr. \**trēz-decim*, *jūdex* fr. \**jouz-dex*, *quīdam* fr. \**quizdam*, *īdem* fr. \**iz-dem*: the *s* in *cūjusdam ejusdem eīsdem* etc. and doubtless also the *s* in *īsdem* = *īdem* had been introduced by analogy, just as *m* for *n* before *d*, see § 207.

*rzd* became *rd* in *hordeum*, prim. f. \**ghrzdejo-m*: OHG. *gersta* 'barley' (Gr. κριθή is to be separated from it), and in *turdu-s turdēla*: O.Icel. *þrǫstr* MHG. *drostel* Lith. *strāzda-s* 'thrush'. We are not, however, certain whether we have Indg. *zd* or *d<sup>h</sup>d* in these words.

Lat. *sp*, *st*, *sc* are to be expected as the regular representatives of original *zhh*, *zdh*, *zgh*, cp. *st* from *d<sup>h</sup>dh* § 507. Perhaps here belong also *hasta* (see § 507) and *fastīgū-m* (see § 595).

*nōbīs vōbīs* from \**nozbīs \*vozbīs* or \**nōzbīs \*vōzbīs* with Indg.

*bh*-suffix (see page 123 foot note), cp. *nos-ter*, *vos-ter* and O.Bulg. gen. loc. *nasŭ* from \**nās-sŭ*; but these forms with *zb* were not the regular continuation of the Indg. original forms, cp. *crēdō*, which had probably taken the place of regular \**crestō* (§ 507 rem.).

§ 595. Old Irish. *z* before mediae became *đ* in Irish and Britannic. Gallo-Lat. *mesga* 'whey', which is to be read *mezga*, became first of all in those branches \**međga*, thence O.Ir. *međg* Mod.Ir. *meidhg*, Cymr. *maidd* (from \**međja*). \**nizdo-s* (§ 590) became Ir. Brit. \**neđdo-s*, thence O.Ir. *net* Cymr. *nyth* (from \**nyđđ*) Bret. *neiz*. Cp. § 521.

In like manner O.Ir. *brot* 'sting, prick' from prim. Kelt. \**brozdo-s*, \**borzdo-s* (cp. *frass* § 274). The root is *bha<sup>r</sup>rs-* (Skr. *bhṛṣ-ti-ṣ* 'point, prong'), and OHG. *brort* 'edge' Ags. *brord* 'sting, prick' O.Icel. *broddr* 'point' and O.Bulg. *brazda* 'furrow' show that the Indg. form contained *zdh*. With these is also related Lat. *fastīgiu-m* from \**farst-*; it cannot however be determined, whether its *st* was Indg. *zdh* or Indg. *st* (cp. Skr. *bhṛṣ-ti-ṣ*).

§ 596. Germanic. *z* + media became *s* + tenuis in prim. Germ. (§ 541, 6). OHG. *masca* 'mesh' OHG. *nest* Goth. *asts* (§ 590), OHG. *mast* 'a feeding' (§ 591), OHG. *gersta* MHG. *drostel* (§ 594) have already been mentioned. In addition to these possibly OHG. *nestilo* 'loop of riband' to Lat. *nōdu-s*; OHG. *geist* 'spirit' to Skr. *hēda-s* 'anger' *hīd-* 'be angry' (3. sg. perf. mid. *ji-hīd-ē*), to which perhaps also Av. *zōiždišta-* superlative with the meaning 'very bad' (v. Bradke Kuhn's *Ztschr.* XXVIII 295 ff.); OHG. *mast* 'ship's mast' to Lat. *mālu-s*, if this arose from \**mādo-s* (§ 369).

*z* + media asp. became *z* + voiced spirant in prim. Germ., further *z* + media (§ 541, 7). The transition of *z* to *r* in West Germ. and Norse was mentioned already under the prim. Germ. *z* which arose from Indg. *s* (§ 581). OHG. OS. *marg* Ags. *mearǵ* O.Icel. *mergr* 'medulla', Goth. \**mazga-* : O.Bulg. *mozgŭ* etc., see § 590. OHG. *brort* 'edge' etc. : O.Bulg. *brazda*, see § 595. Goth. *razda* 'pronunciation, language' OHG. *rarta* Ags. *reord* O.Icel. *rǫdd* 'voice, language' from original \**raz-dh-*, to rt. *rā<sup>r</sup>s-* :

Skr. *rásatē rásati* 'sounds, screams'. Ags. *heord* O.Icel. *haddr* 'hair' beside O.Bulg. *kosa* 'hair' Lith. *kasà* 'braid of hair'. Goth. *mizdō* f. 'pay, reward' OHG. *mēta miata* (cp. § 75 rem. 2) OS. *mēda* Ags. *mēd* and *meord* 'pay, rent': Skr. *mīdhā-* 'prize of battle, combat' Av. *mīžda-* 'reward', Gr. *μισθός* O.Bulg. *mīzda* 'pay'; with compensation lengthening in West Germ. comes OS. *līnon* beside OHG. *lirnēn* (§ 582 p. 436 § 621).

§ 597. Baltic-Slavonic. *z* + media and *z* + media asp. must have fallen together, as in Iran. and Keltic.

Lith. *rezgù* 'I knit': Skr. *rájju-š* 'string, rope'. Lith. *mezgù* 'I knot, knit': OHG. *masca*, see § 590. Sloven. *pezdēti* Little Russ. *pezdity bzdity* Czech *bzdíti* 'to break wind': Lat. *pēdō*, see § 594. It is doubtful whether Lith. *strāzda-s* 'thrush' belongs here, see § 594. Cp. further O.Bulg. *noz-dri* 'nostrils' and *mez-dra* 'fine skin', § 585 rem. 3.

O.Bulg. *mīzda* 'pay': Goth. *mizdō*, see § 596.

It is doubtful whether O.Bulg. *mozgū* 'marrow' contains Indg. *zq* or *zqh*, see § 590.

### Indg. *j*.

§ 598. This spirant can be established as Indg. with most certainty initially before vowels.

Rt. *jeug-* 'yoke': Skr. *yugá-m* Gr. *ζυγός* Lat. *jugu-m* Goth. *juk* Lith. *jūnga-s* O.Bulg. *igo* (from \**īgo*, § 145) 'yoke'. Rt. *jōs-* 'gird': Av. *yās-ta-* Gr. *ζωστός* Lith. *jū's-ta-s* 'girded', O.Bulg. *po-jas-nī* 'girdle'. Rt. *jes-*: Skr. *yás-āmi* 'I bubble', Gr. *ζέω* 'I seethe, bubble', OHG. *jesan* 'to ferment, foam'. Skr. *yáva-s* 'corn, barley', Gr. *ζεαί* 'spelt', Lith. *javaĩ* pl. 'corn'. Skr. *yūṣa-* 'sauce, broth', Gr. *ζύμη* 'leaven', Lat. *jūs jūsculum* *jūreu-s*, O.Bulg. *jucha* 'sauce, soup'.

Greek alone kept initial *j-* and *ī-* apart, the former being represented by *ζ*, the latter by the spiritus asper (§ 129). *j-* fell together with Indg. *dī-* in prim. Greek, hence *ζυγός* like *Ζεύς*, *δυγός* like *Δεύς*, *τῶνᾱ* (*ζάωνη*) like *Τῆρα* (*Ζῆρα*), see § 493. In the other Indg. languages the two sounds fell together in *ī*. But here, too, the original difference can still be

recognised, in so far as an old inherited weak-grade form with *i* or *ī* (as representative of *j* + *a*-vowel) is wanting in roots beginning with *j*-. Cp. e. g. Skr. perf. mid. *yēṣ-ē* from \**je-js-*, part. pass. *yas-tá-* from *yas-* = Indg. *jes-* 'bubble' (Gr. ζέω) as contrasted with *īj-ē iṣ-ṭá-* from *yaj-* = Indg. *iag-* 'respect, honour' (Gr. ἄγιο-ς).

It is less certain that *j* stood beside *i* medially also in the period of the prim. Indg. community. The assumption of a rt. *kej-* 'lie' for Skr. *śē-tē* (part. perf. *śa-śay-āná-s*) Gr. κεί-ται and of a rt. *tjeg-* 'leave, withdraw' for Skr. *tyaktá-s* Gr. σεντό-ς (on *σ-* see § 489) is nevertheless not improbable. Cp. § 117.

## OTHER COMBINATORY SOUND-CHANGES.

§ 599. In the first Section (§§ 28—598) we considered the history of sounds by taking each of the prim. Indg. sounds, so far as was possible by itself, and following its development through the separate languages. There thus remains a number of change-processes which could hardly be fully and sufficiently discussed, because in these either a great number of different sounds would be concerned in quite the same manner, or because there are more complicated changes which a rather large series of elements underwent at the same time within a phonetic unity (word-unity or sentence-unity).

These processes are as follow:

### CONTRACTION (HIATUS, ELISION).

§ 600. By contraction we understand the uniting together under one syllabic accent, of two vowels or sonants generally, which come directly together and are pronounced with a separate expiratory impulse. In this way arise either simple long vowels (Gr. ᾄθλον from ἄεθλον) or diphthongs (Gr. παῖς from πάις).

We saw in §§ 111—116 that contractions took place even in the period of the prim. Indg. community.

There is sufficient reason for assuming that all cases of hiatus, caused by the addition of stem-forming or flexional elements, were removed already in the Indg. prim. period, so that every historic word-form containing one root only, which exhibits medial hiatus, did not assume this state until the period of the separate developments. Cp. § 111 rem.

Rem. No hiatus existed from the very first in the sonantal combinations *ia*, *ua*, *ya*, *ra* in the interior of such unitary word forms. *i*, *u*, *y*, *r* were here pronounced as glides from the prim. Indg. period onward, e. g. \**pātr-iā-s* = Skr. *pātr-iyā-s* Gr. *πάτρ-ιω-ς* Lat. *patr-ius*, \**iš-yrō-s* = Skr. *iš-irā-s* Gr. Coreyr. *ι-αρό-ς*. See § 117.

On the other hand hiatus might still have occurred at the point of junction in compounds at the period of the dissolution of the prim. Indg. community, e. g. \**juqto-ekyo-* (\**juqto-* 'yoked', \**ekyo-* 'horse'). In Vedic we have *yuktaaśva-*, in Av. *yuxtaaspa-*, in O.Bulg. *dobrookū* 'beautiful-eyed' etc., and though it may be in itself highly possible that all such compound forms with hiatus are due to composition in the individual languages, yet the fact, that the pure compounds in the separate languages go hand in hand with the generally later *juxtaposita* as regards the treatment of the junction, speaks strongly in favour of the assumption of an open \**juqtoekyo-* directly inherited from the Indg. primitive language. In Sanskrit contraction took place: class. Skr. *yuktāśva-s* see above, *prārtha-* 'implements' from *pra+artha-*, *apāṅga-* 'outer corner of the eye' from *apa+āṅga-*, *sūktā-* 'beautifully spoken' (Ved. *su-uktā-*). Elision in Greek: *ἰπ'αγωγός* 'carrying horses', *ἀπ'άγω* 'I lead away'; beside these *προαγωγός* *προάγω*. Elision in Latin also: *mul'angulu-s*, *ap'eriō* (§ 499), *ab'igō*. Hiatus in O.Bulg.: *dobrookū* see above, *poorati* 'to plough'.

Opportunity for contractions in the individual developments was given

1. through two originally independent words, the first originally ending in and the second originally beginning with a sonant, entering into a fixed combination;

2. through forms with hiatus having been newly made



after the type of forms without old inherited hiatus (e. g. Hom. *στῆόμεν δώομεν*);

3. through a consonant or combination of consonants disappearing between sonants in the body of a simple word or in the junction of two words drawn near together.

§ 601. Aryan. Contraction seems not to have taken place in the old Aryan dialects when a consonant was dropped in the body of a word.

Rem. On O.Pers. 3. sg. pres. *pātiy* beside 3. sg. pret. *apaha* see § 558 rem. 1 and on O.Pers. *māhyā* Bartholomae Bezzenb. Beitr. IX 309 f.

Contraction however was frequent through the fusion of two stems of a compound or of two words. But, on the one hand, it is difficult here to separate that which has arisen phonetically from that which is merely due to the imitation of older type-forms on the other hand; it can hardly be determined how far the natural language was ruled by the constraint of metre and by grammatical reflexion. In Vedic and Avestic the contracted and uncontracted forms, the latter recognisable as such through the metre, existed side by side without any perceptible differences. In classical Sanskrit the contracted forms with few exceptions became the rule.

Examples. Skr. *yuktāśva-* beside *yuktaaśva-*, Av. *yuxtāspa-* beside *yuxtaaspa-*, see § 600. Skr. *upāiti* Av. *upāiti* 'draws near', prim. Ar. *\*upa+aīti* (simple form Skr. *ēti* Av. *aēiti*). Skr. *avāhanam* O.Pers. *avājanam* 'I slew, killed', prim. Ar. *\*ava+ajhanam*. Skr. *ēhi* imper. 'come near' = *ā+ihi*. O.Pers. *paraidāy* imper. 'go to' = *para+idīy*, Skr. *parēhi*. Skr. *maharṣi-ṣ* 'great wise man' from *\*mahā+rṣi-ṣ*. Skr. *sūktā-* (Ved. *suuktā-*) Av. *hūxta-* 'well spoken'. Skr. *adhīśa-s* 'supreme lord' from *\*adhi+iśa-s*.

§ 602. Armenian. Contraction after the loss of *s* in *koir* 'sister' pl. *kor-k*, see § 561; after loss of *t* in *hair* 'father' pl. *har-k*, see § 483; after loss of *u* in *kea-n-k* 'life', *kea-* (monosyllabic) from *\*kiua-* = *\*gīyo-* *\*gīyā-*, see §§ 421, etc.

§ 603. Greek. Very many contractions in consequence of the dropping of intersonantal *i*, *u* (*f*), *s* (§§ 130. 165. 564).

Examples: Att. *φορῶ* 'I carry' from *φορέω*, older \**φορεῖω*; *παῖς* 'boy' from *πάις*, older \**παφις*; *γένους* 'genetis' from *γένεος*, older \**γενεος*; *ἵππου* 'equi' from *ἵππου*, older \**ἕππο-σιμ*. Since the loss of consonants took place at different times — partly in prim. Greek (*s*, *z*), partly in the course of the individual dialects (*u* and *i* as remnant of *sz*, cp. § 639) —, the contractions took place at various periods. Most of them did not happen until after the dialectical variation was already considerably developed. The uncontracted forms were most completely put aside in Attic, while Ionic preserved the full forms to the greatest extent.

When the components of contraction were qualitatively equal, simple long vowels uniformly arose, e. g. Att. *Ἀθηνᾶ* from *Ἀθηνᾶ*, *βασιλῆς* 'kings' from *βασιλῆες* Cyp. *βασιλῆες*, El. and elsewhere *Αἴ* from (Att.) *Αἴ*, older *Αἴφι*. *εε* and *οο* gave in Ion.-Attic., partly in the Dor. dialects as also in North West Greek, close *ē* (written *ει*) and close *ō*, which was further weakened to *ū* (written *ου*), e. g. *τρεῖς* 'tres' from \**τρεε-ες* Skr. *tráy-as*, gen. Hom. *ῆοῦς* from \**ῆοο-ος* cp. Skr. gen. *uśás-as* Lat. *aurōr-a*. These were no more real diphthongs than the *ει* and *ου* (§ 618) which had arisen by compensation lengthening.

If a monophthong arose from two vowels having a different quality, the levelling was sometimes progressive, e. g. Att. *ἄκων* 'unwilling' from *ἀέκων*, older \**ἀ-φεκων*, Dor. gen. sg. *Ἀτρείδα* from (Hom.) *Ἀτρείδαο*, gen. pl. fem. *τᾶν* 'of the' from (Hom.) *τᾶων* (Skr. *tásām*, Lat. *istārum*), Att. *Διομήδη* from (Hom.) *Διομήδεα*, older \*-*εσ-α*, Att. *ἐλάττους* Dor. *ἐλάσσως* pl. 'smaller' from *-ο(σ)-ες*, cp. Lat. pl. *mā-jōr-ēs* (*οε* after complete assimilation of the *ε* to *ο* was treated like original *οο*); sometimes regressive, e. g. Att. gen. pl. fem. *τᾶν* = Dor. *τᾶν*, gen. sg. *γένους* from *γένεος*, \*-*εσ-ος* (*ε* became *ο* by attraction to the *ο* which was pronounced close, and this gave rise to *ū*).

So-called diphthongs arose if the second element was *ι* or *υ*, and the first an *a*-, *e*- or *o*-vowel, as *παῖς* from *πά(φ)ις*, *οἷς* 'sheep' from *ὄ(φ)ις*, *εἶ* 'thou art' from \**ε(σ)ι*, *δαυλό-ς* 'thick, shaggy' from \**δα(σ)υλο-ς* cp. *δυσύ-ς* 'densus'. Furthermore *ευ* from *εο*

in Lesb., Ion., Rhod., as *φορεῦνται* from *φορίζονται*, gen. *βέλεως* 'of an arrow, dart' from *βέλεος*, and *-αν* (*ἄν*?) from *-ᾶο* in Arcad.-Cypri., as gen. *Ἀπολλωνίδαν*.

If the first of the vowels in the contraction was long, it was frequently shortened before the proper contraction, see § 611.

Hiatus rarely arose through new formation in non-compounded words. The treatment was the same as the hiatus which was produced through the loss of consonants. Conj. Hom. *στήομεν*, *δῶομεν*, Att. *στῶμεν δῶμεν*; *στήομεν* stands in contrast with Arcad. *ἴστᾶτοι*, notwithstanding the clearer development of the original elements of the formation, just as later new formations like e. g. Lat. *coagitō* as opposed to *cōgitō* (§ 604). Hom. *ζῶός* was a new formation for older *ζῶς*. Such new creations did not come into existence until after hiatus had arisen in many cases in the body of a word through loss of *ι* etc.

Compounds with old inherited hiatus and the union of two words, the one beginning and the other ending in a vowel. Elision is seen e. g. in *ἵππ'αγωγός*, *ἀπ'άγω*, *ἐμ'αυτόν*. Hiatus remained in *προ-άγω προ-αγωγός*. It cannot be decided whether in forms like *πολύανδρο-ς βωτιάνειρα περίεμι* there was spoken in prim. Greek and later in the commissure *-υᾶ- ιᾶ-* (hiatus) or *-υια- -ἴια-<sup>1)</sup>*. Prim. Greek contraction e. g. in *ταῦτα* from *\*τα υ̇ τα*, *οὔ[-τος]* from *\*ό υ̇ = Skr. sá u*; *υ̇ = Skr. ú* is a particle. In individual dialects e. g. in Att. *τᾶλλα = τὰ ἄλλα*.

§ 604. Italic. Most contractions after the loss of medial *ι* (see § 134). A part of them may be prim. Italic. Lat. *trēs* from *\*tre(ι)-es*, Umbr. *puntes* (*ē*) 'pontes' from *\*ponte(ι)-es*, cp. Skr. *tráy-as*. Lat. *monēte* from *\*mone(ι)e-te*, cp. Skr. *mānáyata*. Lat. *stō* from *\*stā-īō*, *amō* from *\*amā-īō*, Umbr. *suboco* 'adoro' (cp. perf. *subocanu*). Lat. *stat* from *\*stā-īe-t*, Pelign. *incubat* 'incubat'. Lat. *amēs* from *\*amā-īēs* (Indg. *\*-īōīs*), cp. *cap-īēs*.

The combinations *eō*, *eǎ*, *aē* remained uncontracted in Latin. *moneō*: Skr. *mānáyāmi*. *eam* 'her': Goth. *ija*. *aēnu-s*: Umbr. *aehesnes* 'aēnis', cp. Skr. *áyas-*; on the other hand *aer-is =*

1) Osthoff's remarks (Morph. Unt. IV 383) on forms of this kind, are quite uncertain.

Skr. *áyas-as*<sup>1)</sup>, after which the nom. acc. *aes* was formed anew (\**a(i)os* would have become \**ōs* or \**ās*). Cp. also Umbr. *eam* 'eam', Osc. *í o-k 'ea'*.

Vowel contraction after the loss of *h*. Lat. *nēmō* from \**ne-hemō*, *bīmu-s* from \**bi-hīmu-s*, *praebeō* beside *prae-hibeō* Umbr. *pre-habia* 'praebat'. See § 510. Cp. Umbr. *mes-tru* 'maior', Osc. *mais* 'magis': Lat. *magis mājor*.

Old inherited hiatus and hiatus which had arisen anew through new compounds. Elision: e. g. *mult'angulu-s*, for which *multiangulu-s* came into existence at a later period after the analogy of *multi-foru-s* etc.; *noenum* (*nōn*) from *ne+oenom* 'not one'; *nūllu-s* from *ne+ūllu-s*. Contraction: *dēgō* from \**dē-agō*, *cōgō* from \**co-agō*, *cōpula* from \**co-apula*, *prōmō* from \**pro-emō*, *cōpia* from \**co-opia*. Such contraction did not take place however if the second vowel was long and had the principal accentu: *co-āctu-s*, *cō-ēgī*, *co-āgulu-m*, thus the same case as *aēnus* beside *aer-is*.

Rem. 1. The exception *coepī* beside *coēpī* (Lucretius) I explain with Osthoff (Zur Gesch. d. Perf. 158) by assuming that contraction took place regularly in *co-ēpīstī* *co-ēperāmus* etc. and that this form of the stem became generalised. That in the form-system *coēpī* forms like \**coepīstī* had to give way, was due to the uncompounded form *ēgī*.

Forms like *co-agitō* *co-alēscō* were created at a later period and remained uncontracted; cp. older *cōgō* *cōgitō*.

Rem. 2. I do not venture an opinion on the relation of the dissyllabic *neuter* to the trisyllabic *ne-uter* and of both to *n'ūllu-s* etc. A plausible explanation must first be given for the initial sound in *uter* etc., of which we have already spoken in § 431 rem. 3.

§ 605. Old Irish. Very many contractions in consequence of the disappearance of intersonantal *p* (§ 339, the loss belongs to the prim. Kelt. period), *ǵ* (§ 138), *u* (§ 174) and *s* (§ 576). *tē* (pl. *tēit*) 'hot' from \**te(p)ent*. *-tau -tō* 'am' from \**stā-(ǵ)ō*, rt.

1) The contraction of \**a(i)er-* to *aer-* did not occur until after the later Lat. accentuation came into being (§ 681). For if it had already taken place in the period of the older, \**āēsno-s* would in all probability have become \**āēsno-s*. The accentuation \**āēsno-s* preserved this form from contraction.

*stā* 'stand'. *biid* and later *bīd*, gen. of *biad* 'nourishment' (prim. Kelt. *\*biuoto-n*), Gr. *βίωτο-ς*. *ō* from prim. Ir. *ou* underwent fusion with the following vowel, *ōac*, later *ōc* 'youth': Cymr. *ieuanc* (§§ 212. 243); gen. pl. *bō n-* 'boum': Gr. *βο(F)-ῶν*. *beri* 'fers' from prim. Kelt. *\*bere(s)i*.

Contraction takes place after the loss of *f*: *tōr- tuar-* from *to-for*, *tō- tū* from *to-fo-*. The same phenomenon also frequently appears where words meet together having prefixes beginning with or ending in a vowel, e. g. *forōcrad* 'indicatus est' = *\*fo-ro-od-garad*. In this case elision also appears elsewhere, as e. g. *tar-* from *to-ar-*, *tess-* from *to-ess-*, *tind-* from *to-ind-*.

§ 606. Germanic. Processes of contraction from prim. Germanic, Gothic and OHG. are unknown to me.

Rem. In Goth. *salbōm* OHG. *salbōmēs* 'we anoint' there is no contraction of *-ō(i)a-* to *-ō-*, see the accident. Goth. *bairdu* (1. sg. opt. to *baira* 'fero') hardly from *\*bera(i)u(n)*, see § 142. Phenomena like prim. Germ. *\*ai̯z-a-* 'ore, metal' from *\*ai̯iz-a-*, OHG. *eidehsa* 'lizard' from *egidehsa* are rather to be regarded as examples of syncope than of contraction, see § 635.

Hiatus, which had arisen in word-forms through new formations made by analogy and at the point of junction in compounds was partly permitted and partly removed by elision.

Goth. *ai̯auk* sg. pret. of *aukan* 'to increase'; *saisōum* (trisyllabic) pl. pret. of *saian* 'to sow'. *ga-arman* 'to pity', *fra-itan* 'to consume', *ga-unlēdjan* 'to make poor', *sa-ei* relat. 'qui'. On the other hand *nist* 'is not' from *n(i)-ist*, *sei* 'quae' from *s(i)-ei*, *karist* 'it troubles' from *kar(a)-ist*, *ḡammuh* 'to this' from *ḡam-m(a)-uh*.

OHG. *ka-augan ke-auckan gi-ougen* 'to bring before one's eyes, show' *be-unwerdēn* 'to appear despicable', MHG. *misse-ah̄ten* 'to despise'. On the other hand *galtiro* (beside *gialtiro*) 'contemporary', *nein* 'no' from *n(i)-ein*, MHG. *binnen* 'within' from *b(i)-innan*.

That hiatus remained at one time, and that at another elision took place, is due to the various influences of sentence accentuation. That elision occurred already in prim. Germ., is

rendered probable by Goth. *frēt* OHG. *frāz* 'ate' (of lower animals); prim. Germ. 3. sg. *\*frēti* from *\*fra-ēti*. With this cp. OHG. *fr-avili* 'outrageous' to OHG. *avālon* 'to trouble oneself' O.Icel. *afl* n. 'power, strength'.

§ 607. Baltic-Slavonic. The commissure of compounds only comes under consideration.

In Lithuanian hiatus is generally permitted or there is elision *pri-iṁti* 'to accept' (*priūiṁti* is also heard). *pā-ausi-s* 'the part about the ears'. *pa-eiti* 'to go away'. *be-aūsi-s* 'one without ears'. *be-urėdi-s* 'one without office'. On the other hand *tateit* 'he may come' from *te-at-eit*. *timē* 'he may take' from *te-imē*. *natiṁk* 'do not take away' from *ne-at-iṁk*. *neik* 'do not go' from *ne-eik*. *pasīṁti* 'to take up' from *pa-si-iṁti*. Differences of sentence accentuation have been at work also here (cp. § 606).

Older East Lithuanian shows a real contraction, as there *ne* 'not' along with the *a-* of some prepositions appears as *no-*, e. g. *notamenu* 'I do not remember' = *ne ata-menu*. In the first instance *ne-* had probably become *na-* by assimilation. See Garbe Lit. und Lett. Drucke des 16. und 17. Jahrh., B. IV. p. XXV.

In Old Bulgarian partly hiatus, partly contraction. *dobro-okŭ* 'εὐόφθαλμος'. *golo-qsŭ* 'beardless' (*golo-* 'naked, bare'). *mŭnogo-učēnŭ* 'πολυμαθής'. *po-orati* 'to plough'. *pro-iti* 'to go through'. *pri-iti* 'to go to'. *pra-otŭcŭ* 'grandfather'. Imperf. *želēachŭ* to *želējŭ* 'I wish', *dēlaachŭ* to *dēlajŭ* 'I do'; the second member is *\*ēchŭ* *\*jachŭ* 'eram', see the accident. Forms of the compounded adjectival inflexion: gen. sg. *novaaگو* from *nova jego*, loc. sg. *nověēmŭ* from *nově+jemŭ*, dat. sg. *novuumu* from *novu+jemu* (*novŭ* 'new'. stem *novo-*); beside this loc. sg. *dobliimŭ* from *dobli+jemŭ* (*dobli* 'brave', stem *doblje-*, cp. § 84). Beside these also contracted forms already in the oldest monuments: *priiti*, *želēchŭ*, *dēlachŭ*, *novago*, *novēmŭ*, *novumu*, *doblinŭ*. Similarly instr. sg. *novymŭ* from *novy-(j)imŭ*.

A very old contraction seems to occur in *nēmŭ* 'am not' *nēsŭ* 'art not' etc. = *\*ne-esmŭ* *\*ne-esi* etc., dating back to the period when initial *e-* had not yet become *je-* (*jesmŭ*), see § 666, 1.

SHORTENING OF LONG VOWELS.

§ 608. Simple long vowels may be shortened under very different relations and from very different causes. We treat here only the most important phenomena of vowel shortening.

Shortenings happened already in the period of the Indg. prim. community under the influence of the chief accent on the following syllable, as *\*stató-s* (Skr. *sthitá-s* Gr. *στατό-ς*) from *\*stā-tó-s*. See §§ 310. 316.

§ 609. Aryan. Shortening in Avestic in final syllables, as *brāta* 'brother' = Skr. *bhrātā*, see § 649, 1.

§ 610. Armenian. The long vowels had undergone shortening in most cases (if not in all) in prehistoric times. This can be controlled with the greatest certainty in original final syllables and in those syllables which preceded the penultimate syllable. For the dropping of vowels, which happened here, concerned the original long vowels as much as the short. Thus the former must have been shortened, e. g. *dustr* 'daughter' from *\*dustir*, older *\*dustēr* : Gr. *θυγάτηρ*; *l-nu-m* 'I fill' from *\*li-nu-m* older *\*(p)lē-* : Lat. *ex-plē-nunt*, O.Ir. *lī-naim* 'I fill'. Cp. §§ 632. 651, 1. 675.

§ 611. Greek. Shortening before *μ*, *ι*, nasal, liquid + explosive or spirant in prim. Greek. *Ζεύς* from *\*diēu-s* : Skr. *dyāu-ṣ* 'sky'. *βούς* 'bullock' from *\*gōu-s* : Skr. *gāu-ṣ*. *πλεῖστο-ς* 'plurimus' from *\*plēis-* i. e. *\*plē-* + comparative suffix *-is-*, cp. O.Icel. *flestr* from *\*fleistr* and compar. *fleire* § 614; the same *\*plēis-* also in Hom. *πλέες πλέας* Cret. *πλιες πλιας*; *\*πλεισ-ες -ας* became *\*πλεκ-ες -ας*, and then *πλέες πλέυς*. Instr. pl. *ἵπποις* (*ἵππο-ς* 'horse') from *\*-ōis* : Skr. *áśvāiṣ* (§ 115). Part. *άεντ-* 'blowing' (indic. *άημι*) from *\*άφηντ-* : Skr. *vánt-*; 3. pl. aor. *έμιγεν* (1. sg. *έμιγη-ν* 'I mixed myself') from *\*έμιγη-ντ*. *στόρνυμι* 'I spread' from *\*στωρ-νυμι* beside *στω-τό-ς*, from *stj-* (rt. *ster-*); Lesb. *βόλλομαι* 'I am willing', older *\*βολνομαι*, from *\*βωλ-νο-μαι*, from *\*gǫ-* (rt. *gel-*), see §§ 306. 312. Perhaps also here belong *s*-aorists like *έψενσα έτεισα έκρησα*, cp. Skr. *ábhāutsam* etc., see § 314 p. 253.

The operation of this law of shortening was later than the transition of *-ns-* to *-nn-*. This is shown by *μῆνυ-ός* Lesb. *μῆνυ-ος* from \**μηνσ-ος* gen. = O.Ir. *mīs* Lat. *mēnsi-s* (§ 565); cp. beside this the nom. sg. *μείζ* from \**μενς* with regular shortening. But it was older than the dropping of final *τ* (§ 652, 5). This is shown by *ἔμιγεν* from \**ἐμιγγη-ντ*.

Rem. Certain exceptions to this sound-law were caused by new formations, e. g. Ion. *νῆς* 'ship' formed after *νη(φ)-ός* etc. beside regular Att. *νῆς*; 3. pl. conj. act. *φέρωντι* (Dor.), *φέρωνται* for \**φεροντι*, \**φερονται* after *φέρωμεν* etc. (in order to distinguish the conj. from the indic.).

Long vowels remained, if the same sound-combination arose in a later period through regular transformation, e. g. *ἔξιστο-ς* (*ε* = *ᾱ*) from *ἔξιστο-ς* 'easiest', *ὀρῶντες* 'videntes' from *ὀράοντες*.

Shortening of long vowels before vowels. Hom. *ἦρως* = *ἦρωος* 'of the hero', *βέβλεαι* = *βέβληαι* 'art hit', Herod. *νέες* from *νῆ(φ)-ες* 'naves', *ζόη* = *ζωή* 'life', Att. *νεῶν* from *νη(φ)-ῶν* 'navium'. In such cases it is probably a question to some extent of medium long vowels, which could not be represented as such.

The so-called quantitative metathesis in Ionic and Attic is connected with this latter reduction of quantity, e. g. Ion. part. perf. *ἑστειῶτες* 'stantes' from *ἑστη(φ)ότ-ες*, *τεθνεῶτες* 'mortui' from *τεθνη(φ)ότ-ες*, Att. gen. *στέᾱτ-ος* 'of standing fat' from \**στη(φ)ατ-ος* (§ 165), Att. gen. *ἰππέως* acc. *ἰππεᾶ* (*ἰππεύς* 'horseman') from *ἰππη(φ)-ος* *ἰππη(φ)-α*. This phenomenon sometimes formed the stage previous to contraction, as Ion. gen. *Πακτύω* beside *Φιλοστίδew* cp. Hom. *Ἀτρεϊδᾶω*; Att. gen. *Πειραιῶς* acc. *Πειραιᾶ* from *-έως* *-εᾶ*.

§ 612. Italic. In Latin (it cannot be determined whether also in the other dialects) shortening before *i*, *u*, nasal, liquid + explosive or sonant. *oloes illis* from \**-ōis*, see § 81 p. 74, § 115; cp. Pelign. *cnatois* 'gnatis, filiis'. *nav-fragu-s* from \**nāu-fr.* or \**nāu(-i)-fr.*; *claudō* from \**clāu(i)dō*, to *clāvi-s* Gr. *κλη(φ)ίς*; *gaudeō* beside *gāvīsu-s*, Gr. *γηθείω* from \**γαῖφ-εθew*, cp. § 633. *ventu-s* from \**uē-nt-o-s*, cp. Gr. *ἄεντ-* § 611. *membru-m* from \**mēms-ro-*, see § 570. In *mēnsi-s* (Gr. Lesb. gen. *μῆνυ-ος*, O.Ir. gen. *mīs*) *ē* may have been shortened and then lengthened



again in accordance with § 619. Lat. *ars artis* from \**ārti-*, prim. fr. \**f-ti-*, see § 306.

Rem. 1. The nom. *bōs* must be left out of the question, since it is probably not a pure Latin word (§ 432 rem. 1).

Shortening of long vowels before vowels in Latin. *neō* from \**nē(i)ō* : OHG. *nāan* 'to sew'. *reī*, *fidēi* from *rēi*, *fidēi*, cp. also *diēi*. *illius* from *illius*. Shortening of *dē-*, *sē-* in *deorsu-m seorsu-m* etc. The forms with shortening got more and more the upper hand in the poets. We do not know in detail by what laws shortening took place and did not take place in the naive common language.

Long vowels in final syllables were shortened to a great extent in Latin, e. g. *equam* = Skr. *áśvām*, see § 655, 4.

In the same language shortening frequently took place under the influence of the sharply cut tone, in this case the quantity, taken from the vowel, was transferred to the following consonant; hence this was also written double. *cuppa* (and *cupa*) : Skr. *kūpa-s* 'hole, hollow'. *Juppiter* (and *Jupiter*) voc., = Gr. *Zeῦ πάτερ* (L. Havet *Mém. de la soc. de lingu.* V 230 f.). *mittō* from \**mītō* : OHG. *mīdan* 'to let go, avoid'. *littera* (and *litera*, inscrip. also *leitera*). *muccu-s* (and *mucu-s*) : Gr. *ἀπο-μύσω* 'I blow my nose' from \**-μυκ-ιω* (§ 489). *allūcinārī* (and *alūcinārī*) : Gr. *ἀλώω* 'I am troubled, ill at ease' *ἠλέος* 'bewildered'. *narrāre* from \**gnārāre*. *parricīda* (and *paricīda*). There are about 12 more cases which may be regarded as certain or probable. The fluctuation of the orthography in most of the examples met with, seems to be not so much due to a retention of old literary forms after completion of the process, as to the fact that a difference in pronunciation existed between these geminated consonants and other double consonants (cp. e. g. *cuppa* with *suppetō*).

Rem. 2. Analogous cases in other languages. Pāli *khiddā* beside *kīlā* = Skr. *krīḍā* 'game', Prākr. *pēmna* = Skr. *prēman-* 'love' *ēva* = Skr. *ēva* 'straight, even'. Mod.HG. *mutter* = MHG. *muoter*, *jammer* = MHG. *jāmer*. French (16. Cent.) *complete*, now written *complète*, = Lat. *complēta*.

§ 613. Old Irish. Shortening took place in all except chief accented syllables, e. g. the form of the feminine suffix *-ā-* in pl. nom. *tíatha* dat. *tíathaib* i. e. *tíath<sup>a</sup>ib* by § 640 (nom. sg. *tuath* 'folk') and in pl. nom. *mná* dat. *mnáib* (nom. sg. *ben* 'woman'); nom. *béo-thu* 'life' gen. *bé-thath*, from *\*-tū(t)s* *\*-tūt-os* (Cymr. *-tit*, as *duiutit* 'deitas', Zeuss-Ebel G. C. 844) : Lat. *-tūt-i-*, Goth. *-dūþ-i-* (Lat. *vir-tūs*, Goth. *gamáin-dūþs* 'community'). These reduced vowels remained, if the syllable in question was the last of the word, as in the examples given above. They generally disappeared altogether, if one or more syllables still followed. See § 634.

It is not clear to me how far vowel shortening had happened either in chief accented syllables both before the appearance of the above named reductions or in the other syllables. That no vowel shortening took place before *-ns-*, is shown by *mī mīs* 'month', which can only be explained from *\*mēns-*, not from *\*mens-*, and *mīr* 'piece of flesh', only from *\*mēnsr-*, not from *\*mensr-*.

§ 614. Germanic. Vowels seem to have been shortened in prim. Germanic before *n*+explosive or spirant. Goth. *vinds* OHG. *wint* : Lat. *ventu-s*, Skr. *vánt-*, see §§ 611. 612. Less certain are Goth. *mims* (stem *mimza-*) 'flesh' : Skr. *māśá-* (cp. O.Bulg. *měso*, § 615), and Goth. *juggs* OHG. *jung* O.Icel. *ungr* 'young' from *\*jūwaga-z*, older *\*jūwaga-z* (§ 179); whether the latter word belongs here, is uncertain, because we do not the quantity of the Goth. *u*. The same reduction before *ǰ*+explosive or spirant is seen in O.Icel. *fleire fleiri* (compar. to *margr* 'many a') from prim. Germ. *\*flaiǰz-ē* from *\*pleiǰs-*, cp. Gr. *πλεῖστος* § 611. Cp. also Goth. *gibái* from *\*zebōǰ* and other examples in § 659, 3.

Vowel shortening took place in Goth. and OHG. in final syllables only, as Goth. *baira* OHG. *biru* 'fero' from prim. Germ. *\*berō*, see §§ 660. 661. But towards the end of the OHG. period the shortening of vowels in syllables without the chief accent began and this became characteristic for MHG. and Mod.HG. This shortening gradually spread more and more and in the Mod.HG.

period brought about relations which, in some respects, resemble Irish: e. g. OHG. *salbōn*, MHG. *salben*, Mod.HG. *salben salben*; OHG. *friuntlīch*, MHG. *vriuntlīch*, Mod.HG. *freundlich*.

§ 615. Baltic-Slavonic.

Shortening before *ĭ* or Nasal + explosive or spirant. Lith. instr. pl. *vilkaĩs* 'with the wolves' from \**-ōĩs*: Skr. *vykaiṣ*, see § 115. Gerundive *jėszkant* from \**-ōnt*, cp. 2. pl. indic. *jėszko-te* 'ye seek'. Acc. pl. fem. O.Lith. *rankans* 'hands' (the older form for *rankās*) from \**-ōns*, cp. instr. pl. *rañko-mis* (cp. also Pruss. *gennans* 'feminas'). Correspondingly O.Bulg. *raky*, which in the first instance is derived from \**ronkons* (§ 219 p. 187), may also be traced back to an older \**ronkāns*, see the accident. Here perhaps also belongs O.Bulg. *męso* 'flesh': Skr. *māśa-* (cp. Goth. *mims* § 614).

The quantity of the vowels in the O.Bulg. period is not determined. *ě*, *a*, *i*, *y* must once have been long in the prim. Slav. period, since they with Lith. *ė*, *ō* *ũ*, *y*, *ū* represent the continuation of Indg. *ē*, *ā* *ō*, *ī*, *ū* (*i* also = Indg. *eī*), so too *u*, since it took the place of older *ou* (Lith. *au*). In the modern Slav. developments where we are able to control the relations of quantity, these vowels often appear as short and conversely O.Bulg. *e*, *o* = Indg. *e*, *a* *o* and the representatives of O.Bulg. *ī*, *ū* = Indg. *i*, *u* as long. These changes were undoubtedly due in a great measure to the relations of accentuation. It has not yet been settled how far the shortenings of the modern dialects had already taken place in the O.Bulg. period or in the period of the Slav. prim. community.

In Lith. the long vowels frequently suffered reduction in the final syllables, e. g. nom. *algà* 'reward' = Gr. *ἀλγή*. See § 664, 3.

LENTHENING OF SHORT VOWELS.

§ 616. Aryan. In Skr. 'compensation lengthening' exists in *lādhá-* 'licked' from prim. Ar. \**liždha-* etc. See §§ 404. 591.

Rem. On Av. Gāp. *astī* 'is' = Skr. *ásti*, O.Pers. *akūtā* 'he made himself' = Skr. *ākṛta* etc., see § 649, 1.

§ 617. Armenian. 'Compensation lengthening' had in all probability once taken place in the forms in which *m* and *n* disappeared after short vowels before *s*, as *us* 'shoulder' (Goth. *ams*), acc. pl. *eris* 'three' (Goth. *þrins*). Cp. §§ 202. 610.

§ 618. Greek. 'Compensation lengthening' is here a very frequent phenomenon. Att. *κτείνω* 'I kill' = Lesb. *κτείννω* prim. Gr. \**κτενω*, Att. *φθείρω* 'I destroy' = Lesb. *φθέρρω* prim. Gr. \**φθερω*, see § 131 p. 119. Ion. *γοῦνα* 'knee' = Lesb. *γόοννα* prim. Greek \**γονφα*, Ion. *πέρατα* 'ends' = Lesb. *πέρρατα* prim. Gr. \**περφατα*, Hom. *ὄλος*-ς 'whole, all' prim. Gr. \**όλφο*-ς, see § 166. Att. *βούλεται* 'he wishes, is willing' = Lesb. *βόλλεται* prim. Gr. \**βολνεται*, see § 204. Att. *τούς* acc. pl. masc. 'the' = Cret. prim. Gr. *τόνς*, see §§ 205 and 204 rem. 2. Ion. *ἄσσον* 'nearer' : *ἄγχι*, see §§ 489. 497. Late Att. Dor. *γίνομαι* 'I become' from *γίθνομαι*, see § 492. Ion. Att. *εἰμι* 'am' = Lesb. *εῖμι* prim. Gr. \**έσιμι*, Ion. Att. *χέλιοι* 'thousand' = Lesb. *χέλλιοι* prim. Gr. \**χεσλιοι*, see § 565.

It may be remarked once more here (§ 205 rem. 3) that the *ει* and *ου*, which arose by 'compensation lengthening', were not diphthongs any more than the *ει* and *ου* which had arisen by contraction from *ιε* and *οο* (§ 603).

§ 619. Italic. Every vowel was pronounced long before *ns*, *nf*, *gn*, *gm* in the Latin classical period, hence vowel lengthening must be assumed for forms like *pīnsō cōnsul*, *infēlix*, *dīgnus benīgnus*, *āgmen*, see §§ 208. 500. 506. A similar lengthening and at the same time suppression of consonantal elements had taken place in an older period of the Lat. language in *equōs* fr. \**equo*-ns, *pīlum* fr. \**pīnslo*-m, *scāla* fr. \**scantslā* etc., see § 208; *aēnu*-s fr. \**aēs*-no-s, *dīmoveō* fr. \**dis*-moveō, *sēnī* fr. \**seznī*, *subtēmen* fr. \**texmen*, *dīluō* fr. \**dis*-luō, *āla* fr. \**axlā* etc., see § 570; *nīdus* fr. \**nīzdo*-s etc., see § 594.

Rem. 1. In many cases, where vowel lengthening was formerly assumed in Latin, they are much rather pre-Italic long vowels, or diphthongs. e. g. *ēsus* fr. \**ēssō*-s i. e. \**ēd+to*- (§ 501), *rēctus*, *ēemptus* etc. It is immaterial here whether the long vowels in the cases in question had been handed down from the Indg. prim. period or whether they had arisen by new formation.

Rem. 2. The long vowels in *quīnque quīntu-s*, *ōrdō* etc. are not clear to me.

§ 620. Old Irish. 'Compensation lengthening' exists in *sēt* 'way' = Cymr. *hynt* Bret. *hent*, *cenēl* 'race' = O.Cymr. *cenell*, *dēr* 'tear' = O.Bret. *dacr*, *ām* 'manus hostium' fr. \**agmen* etc. See §§ 212. 518. 523. 526. The name-forms in *-agni* (*Dalagni*, *Corbagni*) on the Irish Ogam inscriptions, as the predecessors of the later in *-āin* (*Ultāin*, gen. of *Ultān*).

§ 621. Germanic. 'Compensation lengthening' exists in prim. Germ. before *æχ*, e. g. \**fāχō* 'I seize, catch' (Goth. *fāha*) fr. \**fææχō*, see § 214.

Such lengthenings did not take place in Gothic.

In West Germ. OHG. *mēta* OS. *mēda* 'hire': Goth. *mizdō*; OS. *līnon* 'to learn': OHG. *līrnēn*. See § 538 p. 394. § 582. p. 436 § 596.

Many lengthenings in High German in the later phases of the language, as Alemanic *sāft* 'soft', *ūsir* 'our'.

Cp. further O.Icel. *gās* Ags. *zōs* = OHG. *gans* 'goose', O.Icel. *hūsl* Ags. *hūsl* = Goth. *hunsl* 'offering', Ags. *fīf* 'five' = Goth. *fimf*, Ags. *ōðer* 'other' = Goth. *anþar*, O.Icel. *tār* 'tear' from \**tahr-* (OHG. *zahar* Goth. *tagr*), Ags. *rīnan* 'to rain' = Goth. *rignjan*.

§ 622. Baltic-Slavonic.

In Lithuanian 'compensation lengthening' exists in *žāsì-s* (written *žąsì-s*) 'goose' = OHG. *gans* etc., see § 219.

*a* and *e*, too, were often lengthened elsewhere in this language, but it remains to be determined by what laws.

*dēga* 'burns' beside inf. *dēkti*, cp. Skr. *dāhāmi*. *āria āre* 'he ploughs', 1. sg. *ariū* = O.Bulg. *orja* (cp. § 147). *tāka-s* 'footpath' = O.Bulg. *tokū* 'course, river'. *māra-s* 'pest' = O.Bulg. *morū* 'death'. Pl. *sēsers* 'sisters'; cp. O.Bulg. *sestra* 'sister'. *kālma-s* 'mountain': Lat. *colli-s* fr. \**colni-s* (§ 208). *āugu* 'I grow' = Goth. *auka*. *mēlžu* 'I milk' = Gr. ἀμέλω. *vēida-s* 'face', cp. Gr. εἶδος.

Rem. According to Baranowski and H. Weber Ostlit. Texte I p. XXIII sqq. it is here everywhere a question not of real long, but only of medium

long vowels. In *dě-ga ā-ria* the second mora of the medium long vowel has the accent, in *kāl-nas āy-gu* the first. Cp. § 691 rem.

*in, un* became *ī, ū* (O.Bulg. *i, y*) before explosives and spirants in Slavonic in the period of the prim. community, e. g. O.Bulg. acc. *gosti* 'guests' = Goth. *gasti-ns, syny* 'sons' cp. Goth. *sunu-ns*, see § 219.

O.Bulg. *vlěka* 'I draw' from *\*uelka, vlakū* 'draught' from *\*uolkū* etc., show another kind of origin of long vowels.

Vowel lengthening in O.Bulg. through following *i* in *ij* from *īj, yj* from *ūj*, see §§ 36. 84.

Lengthenings (date still unknown) through the influence of accentual relations can be proved in the modern phases of the language, concerning which see § 615.

### ANAPTYXIS FROM CONSONANTS.

§ 623. It is here a question of the development of a short or reduced vowel from a voiced consonant, namely medially before or after another consonant, initially (prothetic anaptyxis, prothesis) and finally.

If anaptyxis takes places medially after a consonant preceded by a sonant, the syllable must be pronounced with a double pointed accent. This prepares the way for the development of two syllables from one, e. g. OHG. *berac* 'mountain' from *beřc*. If the vowel is developed from the second consonant, the latter becomes sonantal in the first instance, e. g. French *canif* from Low Germ. *knīf* through the intermediate stage *\*cʰ(n)īf* (*-(n)-* represents the consonantal glide).

How far the development of vowels initially and finally (in the latter case exceedingly rare) was caused by the relations of word-position in the sentence (sandhi), is left out of question here.

Rem. 1. The transition of *\*cʰ(n)īf* to *canif* is the same process as that by which Indg. *\*tynú-* became Skr. *tanú-* Gr. *τανύ-* etc. and Indg. *\*ggrú-* became Skr. *gurú-* Gr. *βαρύ-* etc. (§§ 227. 287). The latter cases do not however belong here, because it cannot be proved that these Indg. forms originally had a shape, shorter by one syllable, corresponding to *knīf*, cp. §§ 312. 313.

For comparison may also be mentioned here the case where a vowel is developed from a sonant liquid or nasal between consonants or finally after a consonant, thus e. g. Gr. *δαρδός* *δαρτός* 'skinned' from Indg. \**d̥rto-s*, *οὐθαρά* 'udder' from Indg. \**oudh̥r*, Lat. *tentu-s* fr. Indg. \**tyto-s*, *decem* fr. Indg. \**dēkm̥* (§§ 223. 224. 284. 285). \**agros* 'field' became in prim. Ital. \**agrs*, thence \**agers* \**ager* : Lat. *ager* Umbr. *ager* Osc. *Frunter* (cp. §§ 633. 655. 9). Nom. sg. \**brē-trā* f. 'word' (gen. *brēihre*) became \**brēt̥r̥* in Irish, thence *briathar*, cp. also *criathar* 'sieve'; here belong also *omun* 'fear' *ess-amin* 'fearless' : Gall. *Exobnu-s*; *fu-domain* 'deep' (compar. *fu-dumnu*) : Cymr. *dwfn* 'deep', Lith. *dubū-s* 'deep', both with *-mn-* from *-bn-* (§ 520). Cp. § 634. Lastly OHG. *acchar* 'field', *fogal* 'fowl', *eban* 'even' (Goth. *akrs*, *fugls*, *ibns*), concerning which see §§ 215. 277. 660, 1. 661, 2.

Rem. 2. One speaks also of anaptyctic prothesis before voiceless consonants, e. g. Gr. *ἰκτίς* beside *κτίς* 'weasel', *ἀσπάλω* beside *σπάλω* 'I struggle convulsively', Late Lat. *ispiritu-s* *istatua*, Prākṛ. *itthi-* (Gāṇ. *istrī-*) = Skr. *strī-* 'wife'. So far as it is here really a question of a pure phonetic product — in many of the cases brought under this head the vowel has an etymological value (remnant of a prefix etc.) —, it is always a process of sandhi. The vowel was developed from the close of preceding words.

### § 624. Aryan.

Sanskrit. Medial anaptyxis made its appearance first in the Prākṛit dialects, e. g. *harisa-* = Skr. *harṣa-* 'joy', *paduma-* = Skr. *pādma-* 'water-rose', *sumarāmi* = Skr. *smārāmi* 'I think of', *sinēha-* = Skr. *snēha-* 'attachment', while prothesis appears already in Vedic in *irajyati* 'puts in order', *iradhatē* 'seeks to win', *ilaya-* 'resting' (beside *laya-* 'rest'), *ulōkā-* (beside *lokā-*) 'free space, world'. These forms were possibly taken from some vulgar dialect.

Anaptyctic vowels were very frequent in Avestic. The orthography fluctuated considerably, and these vowels are almost without exception of no importance for the metre. It is thus not a question of a full vowel. The development of a vowel takes place most frequently before and after *r*, uniformly before initial *r̥*, *rā*, *rv* and after final *r*. It is generally represented by *e*, sometimes by *a*, *ē*, *ō* and *i*, *u*, the latter especially initially. Examples for anaptyxis from *r*, as *dādar<sup>e</sup>sa* *irista-* *antar<sup>e</sup>*, see §§ 157. 260. From other voiced consonants : *γ<sup>e</sup>na-* 'murder' : Skr. *ghná-*; Gāṇ. *dad<sup>e</sup>mahi* 'we give' : Skr. *dadmāsi*; Gāṇ. *d<sup>a</sup>bitya-* 'the second' : Skr. *dvitīya-*.

Only *u*, between *d-r* and *g-d*, can be established with certainty as anaptyxis in Old Persian. The following or preceding syllable contains an *u*-sound in all the examples met with. *dūrūjīyāmīy* 'mentior': Skr. part. *drūhyant-* 'injuring in a cunning manner'. *sugūda-suguda-* Sogdiana: Av. *suγāda-*. *ū* is to be read as *u*, see p. 25.

§ 625. Armenian. Prothesis before initial liquids, e. g. *erek* 'evening': Skr. *rājas-*. See § 263.

§ 626. Greek. A vowel between consonants is regarded as anaptyctic in many words (see among others Curtius Grundz. <sup>5</sup> 727 ff., G. Meyer Gr. Gr. 95 ff., 2. edition p. 109 ff.), but only few cases are certain, <sup>1)</sup> as e. g. Lesb. *μέτεροο-ς* from \**μετεροο-ς* = Att. *μέτροο-ς* 'within measure' from *μέτρο-ν* 'measure' (§ 131 p. 119).

On the other hand prothesis is certain in many cases. Most frequently before liquids, as *ἐρυθρός* 'red' = Lat. *ruber*, *ἐλαφρός* 'nimble' = OHG. *lungar*, see § 266. Before *f* in Ionic: Hom. *ἔ(f)έρση* Cret. *ἄρσά* 'dew' beside *ἔρση ἔρση*: Skr. *varṣá-s* 'rain'; Hom. *ἔ(f)είκοσι* beside *(f)είκοσι* 'twenty' Lac. *βείκατι* Bæot. *φίκατι*, Lat. *vīgintī*. Before nasals probably e. g. in *ἀμέλγω* 'I milk': Lith. *mélžu*; *ὀμίχλη* 'fog' (Att. *ὀμίχλη* through association with *ὄμο-?*, cp. § 564 rem. 3) *ὀμίχίω* 'I make water', inf. aor. *ἀμῖζω* in Hesych.: Lith. *minglā* 'fog', Lat. *mingō*; *ἀνεψιός* 'first cousin': O.Bulg. *netijŭ*.

That prothesis sometimes appears, and sometimes not (cp. *ἐρύομαι* and *ρύομαι*, *ἀλείφω* and *λίπα*, *ὀμόρογνυμι* and *μόρογνυμι*, *ἀνεψιός* and *νέποδες*) seems partly to be due to difference of dialect, and partly to be explained from various kinds of sandhi-relations.

The development of the *ι-* in *ἴσθι* 'be' imper. = Av. *Gāp. zdī*, Indg. \**z-dhí*, see §§ 590. 593, is older than the development of the ten. asp. from med. asp. (§ 495). Prothesis perhaps also in *ἰχθύ-ς* 'fish' and *ἐχθίς* 'yesterday'.

1) Curtius and Meyer use the term anaptyxis in a wider sense, according to which it includes the phenomena discussed in § 623 rem. 1. Many of the forms, brought forward by both these scholars, certainly contain no development of a vowel either in the stricter or wider sense, e. g. *ἔρ-ε-τμός* in Curtius, *ὠλ-έ-νη κολ-ω-νός* in Meyer.



## § 627. Italic.

Medial anaptyxis in Latin with liquids and nasals, the vowel thus developed usually taking the timbre of the vowel in the following syllable. *pō-colo-m* *pō-culu-m* from *pō-clu-m*, *sta-bulu-m* from *\*sta-blo-m*, *sta-bili-s* from *\*sta-bli-s*, *singulu-s* from *\*sem-clo-s*, see § 269. Acc. *famulu-m* probably from *\*famlo-m*, *familia* from *\*fam-liā*.

Rem. 1. In the forms with *-l-* the frequent fluctuation in the orthography (cp. also *saeculum* beside *saeculum*, *populus* beside *populus*, *disciplīna* beside *discipulīna* etc.) probably points partly to different influence of the accent in the various cases, and partly to the fact that at first only *l̥(l)* or *ʎ* (say *disciplīna* or *discip̥līna*) was spoken beside *l* and that this sound was written sometimes *l*, sometimes *ul*, the latter at least in the oldest period of historic Latinity. Cp. rem. 3.

Inscript. (ca. 218 B. C.) *Terebonio* = *Trebōniō*. Late Lat. acc. *magistarātu-m* = *magistrātu-m*, *carābrō* = *crābrō* (Italian *calabrone*) etc.

Anaptyxis with nasals can be established with the greatest certainty in loan-words, as *Tecumēssa*, *drachuma*, *mina*, *techina*.

Rem. 2. *sumus*, *humus*, *homō*, *hemō*, *umerus* and *numerus* hardly belong here, see § 269 rem. 568 rem. I come to no decision with regard to *terminus* and similar forms, see § 241.

Anaptyxis seems to have been foreign to Umbrian. We find it all the more frequently in Oscan. Examples for the development of a vowel from liquids as *aragetud* 'argento' see § 271. From nasals: *akenei* from *\*aknei* 'in fundo' or 'in agone'; *Patanaí* dat. sg. from *\*Patnai*; *Líganak-díkei* dat. sg. from *\*Lígnak-d*.

From the material brought forward by Thurneysen Kuhn's *Ztschr.* XXVII 181 f., it is probable that anaptyxis only took place regularly in the combinations *tr*, *kr*, *tl*, *kl*, *tn*, *kn*, if the preceding syllable was short. Cp. e. g. *maatreis* 'matris' *Fuutrei* 'Genetrici' with *paterei* 'patri'; *sakarāklúm* 'sacrum' with *Pukalatúí* (to *pūklo-*).

Rem. 3. The Osc. leaden tablet (published by F. Bücheler, Frankf. a. M. 1877) does not contain these inserted vowels, e. g. *sakrim* 'sacrum' against *σακροσ* 'sacrum' *sakarater* 'sacratu' elsewhere. Hence it is probable that at first only the weak glide vowel was spoken or after consonants at first only sonant liquids and nasals, thus *ar<sup>o</sup>getud*, *ak<sup>o</sup>nei* or *ak<sup>o</sup>nei*. Cp. rem. 1.

Anaptyxis also in Pelign., as in *Alafis* 'Alfius', see § 271.

§ 628. Germanic. Goth. *mīluks* OHG. *mīluh* Ags. *meoloc* O.Icel. *mjolk* (fr. \**meluk* by so-called 'fracture'), connected with OHG. *melchan* Lith. *mėlžu* etc., seem to be an example of primitive Germanic anaptyxis. If it be maintained along with Paul that liquid + explosive in final syllables gave rise to anaptyxis in prim. Germ., then OHG. *hiruz* beside *hirz* might also be understood (cp. § 533). Both words must have been consonantal stems.

Goth. Anaptyxis perhaps in *filigrja-* (Luke XIX, 46 *filegrja-*) n. 'a hiding, hole', to *filhan* 'to hide'. Here comes into consideration the inconvenience of the combination *lgrj*, but at the same time also the possibility of a popular association with *ligrs* 'couch'.

Frequent anaptyxis in West Germ., especially in OHG. With *r+i*, e. g. *herige* 'to the army': Goth. *harja* § 143 p. 129. With cons. + *u*, e. g. *zesawēr zesewēr* 'dexter': Goth. *taihsva*, see § 180 p. 157. With cons. + nas., e. g. *wahsamo* m. 'growth' beside *wahsmo*, see § 215. With liqu. + *h* and other letters, e. g. *ferah* 'soul, life': Goth. *fairhvu-s* 'world', see § 277.

### § 629. Baltic-Slavonic.

In Lithuanian appear frequent attempts at anaptyxis, which may be represented somewhat in this way: *gīr̃sz̃sti* 'to return' *k̃r̃uma-s* 'shrub', *suk̃nė* 'dress', *žar̃st̃yti* 'to scrape', *mar̃gėlė* (*mergėlė*) 'girl', *bat̃dōti* 'to knock', *nėñdrė* 'reed'. In the case of vowel development from liquids and nasals after consonants it is mostly merely a question of the consonants becoming sonants. Observe that the phenomenon has nothing to do with the contrast between slurred and broken accentuation (*nėñdrė*). Cp. Bezzeberger *Z. Gesch. d. lit. Spr.* 67 f., Brückner *Litu-slav. Stud.* I 49, Leskien-Brugmann *Lit. Volksl. u. Märch.* 290.

In Slavonic, anaptyxis was connected with the process of transformation of prim. Slav. *or*, *ol*, *er*, *el*, before consonants, cp. Russ. *porosjá* 'sucking-pig': Lith. *pařsza-s* etc., see § 281.

## VOWEL ABSORPTION.

§ 630. Vowel absorption often happens in languages with predominantly expiratory accentuation. The stronger the chief accent of the word, the more easily loss of vowel takes place in syllables which have not the chief accent.

If the absorption happens between consonants in such a way that the word loses one of its syllables, the loss of vowel is called syncope, e. g. Lat. *caldu-s* fr. *calidu-s*. We have besides loss initially before consonants (aphaeresis) and finally after consonants (apocope); in the latter cases it is often difficult to say whether the changes were caused by the relations of accentuation only of the word in question, or whether they were due to relations of sandhi.

If the absorption happens in such a manner that the syllable retains its value as a syllable, which is only possible, if another sound is able to undertake the part as bearer of the syllabic accent, we call the process samprasāraṇa (after the Indian grammarians).

Vowel absorption took place already in prim. Indg. under the influence of the chief accent of following syllables. Syncope : stem *\*pt-é-* from *\*pet-é-*, Gr. *πτ-έ-σθαι* 'to fly'. Aphaeresis : *\*s-té* from *\*es-té* 'ye are', Skr. *sthá*. Samprasāraṇa : stem *\*dyk-é-* from *\*derk-é-*, Skr. *drś-á-t á-drś-a-t* 'he saw'. Cp. § 307 ff.

§ 631. Aryan. Samprasāraṇa in Av. acc. sg. *ainim* = Skr. *anyá-m* 'alium', *pouru-m* = Skr. *pūrvá-m* 'primum' etc. Cp. § 125 p. 115, § 159 p. 143.

§ 632. Armenian. *i* and *u* only remained in final syllables between consonants, in other syllables they were dropped. *gtanem* 'I find' from *\*git-ane-m* : aor. *e-git*. Gen. *dster* 'of a daughter' from *\*duster* : nom. *dustr*. See §§ 31. 47.

§ 633. Italic. Syncope frequently occurred in all dialects, and it may be conjectured that it was partly completed during the period of the Ital. prim. community, just as the samprasāraṇa (§§ 33. 623 rem. 1) in the transition of *\*ágro-s* 'field' to *\*agrs*

(hist. Lat. *ager*), of \**ágro-lo-s* (cp. *porculu-s*, *filiolu-s*) to \**agvlo-s* (hist. Lat. *agellu-s*), of \**sácro-dō(t)s* to \**sacrdō(t)s* (hist. Lat. *sacerdōs*), of \**sé-crinō* to \**sēcrynō* (hist. Lat. *sēcernō*) etc.

Syncope shows itself in Latin in the syllable immediately following the one which had the chief accent (according to prim. Lat. accentuation, see § 680), if one or more syllables followed this. *reppulī*, *rettulī*, *reccidī* from \**ré-pepulī*, \**ré-tetulī*, \**ré-ccidī*. Correspondingly *dēcidī*, *attigī*, *incurrī* from \**dē-ccidī*, \**át-tetigī*, \**in-ccurrī*. *cette* from \**cé-dite*, *mattu-s* from \**máddito-s*, see § 501 rem. 2. *hospes* from \**hostpes* \**hosti-pes* (§ 81 p. 73). *claudō* from \**clávidō*, cp. § 612. *ūndecim* from \**únu(s)decim*, *quīndecim* from \**quīnquedecim*. *prīnceps*, *manceps*, *vīndēmia* from \**prīmi-ceps* etc. *surgō* from \**súb-regō*, *surpuī* from \**súb-rapuī*. *caldu-s*, *soldu-s*, *valdē* beside *calidu-s*, *solidu-s*, *validu-s*. *ardu-s* (Lucil.), *ardē* beside *aridu-s*. It is questionable whether the spelling should be trusted in the case of certain examples of syncope which are found on inscriptions only, as *decmus*, *vicesma* (acc. sg. fem.), *viglias*.

Syncopation, so far as we know it, was comparatively more frequent in Umbr.-Samn. than in Latin. Umbr. *co-vertu* 'convertito', *an-dendu* 'intendito' (§ 499), *sestu sistu* 'sistito', *untu* 'unguito' fr. \**umptōd* \**umbetōd* (§ 502 rem.), *sumtu* 'sumito'; Osc. *factud* 'facito' = Umbr. *feitu* (§ 502), *actud* 'agito'. Umbr. *osatu* 'operato', Osc. *úpsannam* 'operandam'. Umbr. *ambr*-Osc. *amfr*- (Lat. *amb*-) fr. \**amfer*-, a transformation of \**amfi* after *ander* 'inter' etc.; on the Umbr. form cp. also § 209. Osc. *vincter* 'convincitur', *úittiuf* 'usio, usus' (§ 501 rem. 2), *minstreis* 'minoris' (cp. Lat. *minister*). Pelign. *af-dēd* fr. \**af-dēd* 'abdidit'.

Short vowels were also syncopated in final syllables in this Ital. branch (except some cases, where syncopation was prevented by double consonants, as 3. pl. *furent* 'erunt' cp. Lat. *fuertint*). Nom. sg. Umbr. *pihaz* 'piatus' *fratreks* 'fratricus', Osc. *húrz* 'hortus' *túvtíks* 'tuticus, publicus'. Umbr. Osc. *fust* 'erit' cp. Lat. *fuertit*. Cp. § 655, 5.

§ 634. Old Irish. The syllable, immediately following the one with the chief accent, was the least accented in the

word (as in Ital.), and its vowel became reduced and disappeared, if one or more syllables followed, thus having either syncope or samprasāraṇa. On the retention of the vowel in final syllables see § 613.

Syncope. From the stem \**fóllessu-* 'clear, manifest' was formed nom. pl. *fóilsí* with the derivatives fem. *fóilse* 'clearness' and the verb *fóilsigim* 'I show'; the middle syllable of the stem \**fóllessu-* had experienced syncope here, while the nom. sg. *fóllus* retained the same syllable, as a syllable, which had become final after the loss of the end syllable. From \**béromi*, older \**béro-me(s)-i* (1. pl. indic. pres. from *ber-* = Indg. *bher-* 'ferre'), arose *bérme* (-*e* was caused by the *o* which was dropped; beside this 3. pl. *bérit* from \**béront(i)*. *menme*, dat. *menmain*, 'sense' from prim. f. \**men-ə-men-*, see § 110 p. 104. From the stem \**cárēt-* 'friend' (from \**cárŕt-*, see § 212 and cp. Gall. *Carantonus Carantillus*, Cymr. pl. *ceraint*) pl. dat. *cáirtib* acc. *cáirtea*, but sg. nom. *cáre cára* gen. *cárat* dat. *cárit*. Instructive for this process are also the Lat. loan-words, e. g. *péccad* 'peccatum' gen. *pécctho*, *ídal* 'ídolum' dat. pl. *ídlaib*.

Samprasāraṇa. Beside nom. sg. *só-nirt só-nairt* 'strong, brave (*nert* 'strength') stood dat. pl. *só-nartaib* compar. *só-nortu* 'stronger' and the derived substantive *só-nirte só-nairte* 'strength, firmness'. In the latter forms the syllable -*nert-* had become -*nŕt-*, the timbre of *ŕt* was conditioned by the vowel in the following syllable; *ŕ* then generated a reduced vowel. So also *du-fú-tharcair* 'voluit' goes back in the first place to \**du-fú-thŕcair*, this to -*thracair* (cf. *dú-thracht* 'will'). Cp. §§ 66. 298. Here belong also cases like *bria-thar*: the course of development was -*trā*, -*trŕ* (*ŕ* with *a*-timbre), -*tar*, cp. § 623 rem. 1.

Rem. On the *ai* in *só-nairt*, *só-nairte* cp. § 640.

### § 635. Germanic.

Prim. Germanic syncope. \**áiz-a-* 'ore, metal' (Goth. *áiza-*, OHG. *ēr*) from \**áiz-a-*, cp. Skr. *áyas-*. So probably also \**máiz-ō* 'maior' (Goth. *máiza* OHG. *mēro*) in the first instance from \**máizō*. Further \**ármēiz(i)* 'he has compassion on' (Goth. *armáif*

OHG. *armēt*) fr. \**armē-īi-đi* and \**frijōđ(i)* 'he treats lovingly' (Goth. *frijōþ*) fr. \**frijō-īi-đi*, see § 142. This syncopation, which did not take place if an *i* directly preceded the *īi*, belongs to the later prim. Germ. changes. For it presupposes the new Germanic accentuation (§ 687).

Syncopation in Gothic in final syllables, e. g. *vulfs* 'wolf' fr. prim. Goth. \**vulfa-z*. See § 660, 1. Whether forms like *ibns* 'even' *akrs* 'acre' were pronounced as monosyllables or dissyllables (*ibys akrs*), is not clear, cp. §§ 215. 277 (p. 221 foot-note 1). 660, 1. Here may also be placed the transition of *īi* to *ī* after consonants, as in *satja* 'I set' from prim. Germ. \**satiō*, *hairdjōs* nom. pl. 'shepherds' from prim. Germ. \**xirdīōz* (nom. sg. *hairdeis* from \**xirdīi-z*).

Rem. Some regard this latter process as prim. Germanic. But then the 2. sg. imper. *satei* (Indg. \**sodēie*) could not well be explained. For \**satiī* would certainly also have become \**sati* in prim. Germ., and this would have led to \**sati*.

In West Germanic a law of syncope operated which Paul (Paul-Braune's Beitr. VI 144) has formulated in the following manner: — Short vowels were dropped in open syllables 1. after chief accented syllables, if these were long, 2. after a secondary accented syllable following the one with the chief accent, whether this was long or short. The operations of this law are in many cases not evident and clear, because the secondary tone and the deep tone also changed their position in the same word according to logical principles and many levellings took place by analogy. OHG. *hōrta* 'I heard' for \**hōrita* = Goth. *hāusida*, *branta* 'I burnt' for \**brannita* = Goth. *brannida*. OHG. OS. *hērro* 'master', compar. of *hēr* 'high, sublime', from \**hēriro* (Goth. \**hāiriza*), OHG. OS. *jungro* 'younger' from \**jūngiro*, cp. Goth. *jūhiza*. OHG. *andres* gen. of *ander* 'alius', *unsres* gen. of *unser* 'our'. OHG. *sēula* OS. *sēola* 'soul' = \**sēwla*: Goth. *sáivala*. OHG. *īsnīn* 'iron' adj. from *īsan* 'iron'. OS. *mahtigro* from \**máhtigiro* gen. dat. sg. fem. and gen. pl. of *mahtig* 'mighty', cp. Goth. gen. *þizōs*. Forms like OHG. *zimbarta* 'built' (§ 310 rem.) *acchar* 'field' *fogal* 'bird' *eban* 'even' had experienced samprasāraṇa, see §§ 215. 277. 623 rem. 1.

For the activity of the West Germ. law of syncope in final syllables, see § 661, 2.

§ 636. Baltic-Slavonic. *i* experienced syncope in unaccented syllables in Lithuanian. I am not in a position to say how far the phenomenon, which can only be proved for a comparatively small number of words, is dialectical and how far it was dependent on various grades of accent-stress or similar factors. Examples: *szulnỹs* beside *szulinỹs* 'well, spring'. *mótna* beside *mótina* 'mother' (also *mótyna*); fut. 2. pl. *árste* beside *ársite*, 1. du. *ársva* beside *ársiva*, from *ariù* 'I plough'.

Vowels were dropped in final syllables by syncope, e. g. pl. *dùkters* 'daughters' fr. *\*dùkter-es* (Gr. *θυγατέρις*), gen. sg. *dukteřs* fr. *\*dukter-ès* (O.Bulg. *dùšter-e*). Cp. § 664.

*ĩ* and *ũ*, which were reduced vowels already in the prim. Slav. period, disappeared in Slavonic medially in open syllables. In the O.Bulg. monuments e. g. *vsì* beside *vĩsì* gen. of *vĩšĩ* 'vicus', *rekšu* beside *rekũšu* dat. sg. of the part. perf. of *reka* 'I say'. See §§ 36. 52.

#### PALATALISATION AND LABIALISATION WITH EPENTHESIS.

§ 637. Consonants are often palatalised by sonant and consonant *i*- and *e*-sounds following them, through the mouth-articulation anticipating the *i* or *e*. In like manner *u*- and *o*-sounds cause labialisation.

If any other vowel but an *i* or *u* precedes a consonant or group of consonants thus palatalised or labialised, this often becomes an *i*-, or *u*-diphthong, e. g. *aił'ĩ*- from *al'ĩ*- (where ' indicates the palatalisation of the *l*). The *i*- or *u*-articulation thus extends still further than the specific articulation of the consonants. This phenomenon is called epenthesis. It occurs in the older phases of the Indg. languages only in the case where postconsonantal *i* or *u* was consonantal. This *ĩ* and *ũ* then disappeared in the preceding consonant, a result of the intensity of the process of palatalisation or labialisation.

Rem. The phenomena, which are denoted as umlaut, fracture, vowel-harmony etc., do not differ materially from epenthesis, e. g. OHG. *nerian* = Goth. *nasjan* § 83, O.Ir. *fer* 'man' fr. \**uīro-s* § 34, O.Bulg. *toboja* instr. beside *tebe* gen., *tebè* dat. loc. of *ty* 'thou'.

§ 638. Aryan. Simple consonants and *nt* appear palatalised in Avestic before *i*, *ī*, *y*, *ē*, *ñh* (from Ar. *sī*, § 558, 3 p. 415) after *a*, *ā*, *u*, *ū*, *ē*, *o*, *e*, *aē*, *ao*; the palatalisation was indicated by an *i* written before the consonant. *aipi* 'up, on, in' = O.Pers. *apiy* Skr. *āpi*. *barainti* 'they bear' = O.Pers. *bara(n)tiy* Skr. *bhāranti*. *per<sup>e</sup>sāiti* 3. sg. conj. of *per<sup>e</sup>sāmi* 'I ask' = O.Pers. *parsātiy* Skr. *pr̥chāti*. *stūdi* 2. sg. imper. of *staomi* 'I praise': Skr. *stu-hi*. *ker<sup>e</sup>naoiti* 'he makes' = Skr. *kr̥-ṇō-ti*. *ber<sup>e</sup>zaitm*, acc. sg. fem. of *ber<sup>e</sup>zant-* 'great, high', = Skr. *bṛhatm*. *aēibiš* instr. pl., *aēibyō* dat. pl. to *aēm* 'this', = Skr. *ēbhīṣ*, *ēbhīās*. *daē-maēdē*, 1. pl. mid. to *daēqmi* 'I place', = Skr. *dādḥ-mahē*. *ber<sup>e</sup>zaitē*, dat. sg. masc. of *ber<sup>e</sup>zant-*, = Skr. *bṛhatē*. *aiñhā*, gen. sg. fem. to *aēm*, = Skr. *asyās*.

*r* appears labialised before *u*, *ū*, *v* after *a*, *ā*, *o*; an *u* written before the *r* marked the labialisation. *auruša-* 'white, glittering' = Skr. *aruṣā-*. *dāuru* 'wood, spear' = Skr. *dāru*. *pouru* (also written *paouru*). 'much' = O.Pers. *paru-* Skr. *purú-* (§ 290). *aurvant-* 'quick, strong' = Skr. *ārvant-*.

Rem. The metre proves that diphthongs were not spoken in forms like *aipi pouru*. This mode of writing is to be explained from the fact that the transition from the *a*, *ā* etc. to the *i*- or *u*-position of the palatalised or labialised consonant gave the impression as if an *i* or *u* was heard before the consonant.

Hence it is quite out of the question to speak of a triphthong in forms like *aēibiš* etc.

Cp. the similar mode of writing in Irish, § 640.

In Bartholomae's Handb. d. ir. dial. this *i* and *u*, just as the anaptyctic vowels (§ 624), are placed above the other letters in small type, e. g. *a<sup>i</sup>pi aē<sup>i</sup>byō*, *a<sup>u</sup>ruša-*.

§ 639. Greek. Epenthesis of *i* and probably also of *u* took place in the period of the primitive community.

Epenthesis of *i*. The palatalised consonant was single or double: *ν*, *κν*, *πν*, *φν*, *τν*, *δν*, *χμ*, *ρ*, *σ*, *φ*. *φαίνω* 'I show' from \**φαν-λω*. *κοινός* 'common' fr. \**κον-λο-ς* (§ 204). *τεκταίνω* 'I make, fabricate' fr. \**τεκταν-λω*, older \**τεκτεῖν-λω* (§§ 130. 234).



*αἰκνο-ν* · *δεῖπνον* (Hesych.) fr. \**ἀκνιο-ν*, to Skr. *aś-nā-ti* 'eats'.  
*δεῖπνο-ν* 'meal' fr. \**δεπνιο-ν*, rt. *deq-* (§ 444 c). *ἐξ-αίφνης* 'suddenly'  
fr. \**-αφνιᾶς*, cp. *ἄφνω* · *ἐξαίφνης* (Hesych.). *τ* and *δ* disappeared  
by assimilation before *ν*: *δέσποινα* 'mistress of the house' fr.  
\**-ποτνιᾶ*, *ράινω* 'I besprinkle' fr. \**ῥαδνιω*, see §§ 488. 492. *αἰχμή*  
'point of a spear' fr. \**ἄχμιᾶ*, probably related to *ἔγχος*, *ἄχ-* =  
\**ῥχ-*. *μάκαιρα* fr. \**μακαρ-ια*, fem. to *μάκαρ* 'blessed'. *σπαιrow* 'I  
struggle convulsively' fr. \**σπαρ-ιω*, original form \**σπρ-ῖδ* (§§ 129.  
293). Hom. *τοῖο* 'of the' Att. *τοῦ* Dor. *τῶ* fr. \**τοισο*, the latter  
fr. \**το-σιro*; Hom. *κλαίω* 'I weep' fr. \**κλαιF-ιω*, this fr. \**κλαF-ιω*,  
see § 131.

Rem. Epenthesis of *i* has been wrongly assumed in *κρείττων* 'stronger'  
beside Ion. *κρέσσων*, prim. Gr. \**κρετ-ων*, and in *μεζων* 'greater' beside Ion.  
*μεζων*, prim. Gr. \**μεγ-ων*. *ει* had taken the place of *ε* here through ana-  
logical association with *χέριων* 'inferior in strength etc.' *ἀμείνων* 'better'  
*ὀλειζων* 'smaller'. Epenthesis of *i* has also been wrongly sought in *κτείνω* 'I  
kill', *ἀμείνων*, Hom. *εἴν* 'in', *φθείρω* 'I destroy', *χέριων*, Hom. *ὑπερ* 'over'. In  
the first instance assimilation took place in these cases (cp. *-ελλ-* from *-ελλ-*  
in *στέλλω*), then 'compensation lengthening'. See §§ 131. 618.

Cypr. *αἴλο-ς* beside Arcad. Att. *ἄλλο-ς* 'alius' is very strange.  
It stands too isolated to be able to establish with certainty a  
process of epenthesis for the period of the separate dialects.  
Cp. Spitzer Lautl. des Arcad. Dial. 34.

Epenthesis of *u* in Greek is entirely denied by some  
scholars, and it is clear that most of the examples brought for-  
ward are certainly or probably false. The following are less  
doubtful: *ταῦρο-ς* 'bull' beside Gall. *tarvo-s* and *Κένταυρο-ς* =  
Skr. *gandharvā-s* (*Κένταυρος* for \**Κενθauρο-ς*, which is to be  
presupposed by § 496, through popular association with *ταῦρο-ς*,  
or *κιντέω*, or both at the same time).

In the transformation, which guttural and dental explosives  
experienced through a following *ξ* or *i* in prim. Greek or in  
the period of the separate dialects, as *-σσ-* fr. *-kξ-* *-tξ-*, *-σι-* fr.  
*-τι-* (§§ 131. 489. 493), it was in all cases a question of pala-  
talisation.

§ 640. Old Irish. Palatalisation and labialisation took  
place extensively. At the end of chief accented syllables, in

which the original vowel-differences were kept apart, the palatal timbre of the consonant was denoted by placing an *i* before it, and in like manner the labial by an *u* or *o*. We have thus no more to do with proper diphthongs or triphthongs here than in Avestic (§ 683). The vowels following the chief accented syllable, which had imparted their timbre to the preceding consonants, were mostly dropped according to the laws for unaccented syllables, so that no trace of their existence was left except in the colouring of the preceding consonants. In Keltic grammars this process is called infection.

For the sake of clearness we give here in small type the vowels which serve only to indicate the timbre of the consonant (cp. § 24 p. 27).

Palatalisation. Gen. *e'ch* 'of a horse' fr. prim. Kelt. \**eky̅i̅*, to nom. *ech*. *su'ide* 'seat' fr. \**sod̅i̅o-m*, rt. *sed-*. Gen. *ma'icc* 'of a son' fr. *maqi* (Ir. Ogam inscript.), to nom. sg. *macc*. *a'ile* 'alius', stem \**al̅i̅o-*. *fā'th* 'poet' fr. \**uāti(s)*: Lat. *vātēs*. Acc. *rū'n* 'secret' fr. \**rūnin*, to nom. *rūn* fr. \**rūnā*. *for-tē's* 'thou wilt help' fr. \**tēssi(s)* with *ē* = Indg. *e̅i̅*. Cp. §§ 58. 66. 82. 98. 106.

Labialisation. Dat. *ne'rt* fr. \**nertu* \**nertō*, stem *nerto* 'strength'. Dat. *e'chu* fr. \**echu* \**eky̅ō*, st. *echo-* 'horse'. *ad-ga'r* 'I prohibit' fr. \**garu* \**garō*. Cp. § 66. 98.

If the vowel of the syllable which had not the chief accent was still present only as an irrational vowel, its colouring was dependent on the timbre of the following consonant, e. g. (*ni*) *épur* (fr. \**éd-bur*) beside *at-bi'r* 'dico', both from the same original form, but with different accentuation according to the connexion, so, too, nom. *biad* gen. *biid* ('victus') fr. \**biyot(o-m)* \**biyot(i̅)*. See §§ 66. 82. In like manner the irrational vowel, which was developed in Keltic itself from sonant liquid, assumed the quality of the following consonants, e. g. *só-nirte* beside *nért* 'strength'. See § 634.

Where a diphthong is written in unaccented syllables, the second vowel was properly the syllabic vowel and the first really only shows the timbre of the preceding consonant. Hence

we may write *epiur*, which occurs beside *epur*, as *ép'ur*. Correspondingly *só-n<sup>a</sup>irte* beside *só-nirte*, *rér<sup>a</sup>ig* 'direxit', dat. *túath<sup>a</sup>ib* beside *túathib* 'populis' (cp. *mnā<sup>b</sup>* from *ben* 'woman'), 1. sg. *cár<sup>a</sup>im* beside *cárim* 'I love'. In general this colouring of the consonant is the quality of the vowel which originally followed the consonant, cp. e. g. *ép'ur* with *at-bi<sup>r</sup>* and 3. sg. *ad-cón-d<sup>a</sup>irc* (Gr. *δέδορκε*) with 1. sg. *ad-cón-darc* (Gr. *δέδορκα*).

Rem. If two consonants with different timbre came together through loss of vowel, the second became assimilated (with certain exceptions) to the first, e. g. in \**fé'dligetho* 'of persistence' (nom. *fé'dligud*, to *fé'dligim* 'I continue, hold out') a palatal *g* and a dark *th* came together after the loss of the *e* in the last syllable but one. The latter then also became palatal, hence the form *fé'dligth<sup>o</sup>*. The timbre of the preceding consonants had influence upon final vowels partly even in O.Irish, but especially in Mid.Irish. E. g. *sú'digth<sup>o</sup>* 'of setting' became *sú'digthe*; nom. pl. *gní<sup>m</sup>i* 'deeds' (also written *gními* without indication of the timbre of the *m*, nom. sg. *gním*) became *gníma* or *gnímæ gníme* (all these spellings exist side by side of each other). — According to Thurneysen. Cp. also § 657 rem.

§ 641. Germanic. Until recently a prim. Germ. epenthesis of *i* was universally assumed in a series of words, as Goth. *háils* OHG. *heil* 'whole', which is said to be related to Skr. *kalya-s* 'healthy, pleasant'; Goth. *hráiva-* (in *hráiva dābō*) OHG. *hrēo* (gen. *hrēwes*) 'corpse', said to be connected with Skr. *krávyā-m* 'raw flesh'. See Scherer Z. Gesch. d. deutsch. Spr.<sup>2</sup> 74, J. Schmidt Vocal. II 474 ff., Osthoff Kuhn's Ztschr. XXIII 427 f. I am by no means convinced of the correctness of this assumption; on *háils* cp. § 439.

§ 642. Baltic-Slavonic. Palatalisation exists largely.

On the palatalisation of consonants in Lithuanian see §§ 26. 147. 280.

Original *rĭ*, *lĭ*, *nĭ* appear in O.Bulg. as palatalised *r*, *l*, *n*; *ĭ* had been absorbed in the preceding consonant. Palatalisation was also the first stage in the development of *kĭ ke* to *č če*, of *chĭ che* to *š še* etc. See § 147.

#### LOSS OF SYLLABLE BY DISSIMILATION.

§ 643. When two medial syllables with the same or similar initial sound follow each other, one of the two is often

lost. When a person reproduces sounds from impressions on the memory and repeats their order in speaking, the syllables with the same initial sounds run into one another, and thus after the production of the initial sound of the first syllable he at once passes over to the production of the sounds following the second, e. g. Gr. *τέτραρχμον* 'four drachmae' = *τετρ[άδρ]αρχμον*. Such hurrying over one part of the sounds of the body of a word does not always become chronic and universal, hence the frequent co-existence of the full and the shortened form in languages closely related together.

In languages with preponderating expiratory accentuation it was probably always syllables which had not the chief accent which were affected by this act of dissimilation.

Aryan. Vedic *irádhyāi* inf. 'to try to gain' = *\*iradh[a-dh]-yāi*, cp. 3. pl. mid. *iradhanta*. Avestic. *dūraōša-* 'shining far' = *\*dūr[a-r]aoša-*. *amer<sup>e</sup>tāt-* beside *amer<sup>e</sup>ta-tāt-* 'immortality'. *maidīyāiryā-*, name of a feast, fr. *\*maidīy[a-y]āiryā-* (*maidīya-* 'medius', *yār<sup>e</sup>* 'year').

Greek. *ἀμφορεύς* beside *ἀμφι-φορεύς* 'jar with two handles'. *ἡμέδιμνο-ν* beside *ἡμι-μέδιμνον* 'half a bushel'. *κωμωφιδιάσκαλος* beside *κωμωδο-διδάσκαλος* 'comic poet'. *λιπυρίᾱ* 'intermittant fever' = *\*λιπ[ο-π]υριᾱ*. *στόμαργο-ς* 'talkative' = *\*στομ[ο-μ]αργο-ς* or *\*στομ[α-μ]αργο-ς*. *ὀπισθέναρ* 'back of the hand' = *\*ὀπισθ[ο-θ]-εναρ*. *κέντωρ* 'goader' = *\*κεντ[η-τ]ωρ* from *κεντέω*. *θάρσυνος* 'confident' fr. *\*θαρσ[ο-σ]υνο-ς*.

Italic. Latin. *sēmōdiu-s* beside *sēmi-modiū-s*. *sēmēstri-s* 'semi-monthly' = *\*sēm[i-m]ēstris*. *trucidāre* fr. *\*truc[i-c]idāre*. *antestārī* = *\*ant[e-t]estārī*. *lūculentātem* acc. beside *lūculenti-tātem*. *dēbilitāre* = *dēbili-t[at]-āre*. *hērēditāriū-s* = *\*hērēdi-t[at]-āriū-s*. *calamitōsu-s* = *\*calami-t[at]-ōsus*. *dentiō* = *\*dent[ī-t]iō*. *nūtrīx* = *\*nūtr[ī-tr]īx*. Umbrian *suront* beside *sururont* 'item'.

Rem. 1. From what has been said above it is probable that forms like *dēbilitāmus dēbilitāvīssē*, *nūtrīcis nūtrīcāmus*, *dentiōnis* were already created in Latin at the time *\*dēbilitātō* (1. sg.), *\*nūtrītrīx*, *\*dēntītiō* were still spoken. The shortening of the latter forms was due to the analogy of the first through a *dēbilitō* being created to *dēbilitāmus* etc.

Rem. 2. The later stages of development of Latin also show many phenomena which belong here, as Italian *avamo* fr. *avevamo*, *cavalleggieri* fr. *cavalli leggieri*, French *neté* fr. *netteté*. See Car. Michaëlis Stud. zur roman. Wortschöpfung 18.

Keltic. I do not know anything belonging here from Irish<sup>1)</sup>. In Gallic *Leucamulus* = \**Leuc[o-c]amulu-s* (cp. *Leucimāra* etc. and *Camulus*), *Clutamus* = \**Clut[o-t]amus* from *Cluto*- and the not unfrequent element *-tamu-s*. See Esser Beitr. zur gallo-kelt. Namenkunde I p. 46.

Germanic. Goth. *avistr* n., OHG. *ewist* m. *awista* f. 'sheep fold' = \**av[i-v]istr*, \**ew[i-w]ist* \**aw[i-w]ista*, the second part to OHG. *wist* 'stay, dwelling place'. In like manner \**navistr* = \**nav[i-v]istr* 'abode of the dead' which is to be deduced from Goth. *ga-navistrōn* 'bury'.

Possibly also Goth. *áinōhun* 'ullum' = \**áin[an]ō-hun*. The spelling *dinnō-hun* is due to an attempt of the writer to take a middle course between the form actually spoken by him and the form dictated to him by his grammatical feeling.

Baltic-Slavonic. Lith. *akū'ta-s* beside *akūtū'ta-s* 'awny' (from *akū'ta-s* 'awn'). Loc. sg. fem. *gerōjoje* = \**geroj[e-j]oje*, to nom. *geró-ji*, definite form of *gerà* 'bona'. O.Bulg. fem. gen. *dobryje* = \**dobry-j[ej]e*, dat. *dobrěji* = \**dobrě-j[ej]i*, instr. *dobroja* = \**dobroj[a-j]a* and this = \**dobroja-j[ej]a*, to nom. *dobra-ja*, definite form of *dobra* 'bona'. With the last named double shortening cp. Lat. *voluntāriu-s* = \**volunt[at]āriu-s* and this = \**volunt[i-t]āt-āriu-s*.

### SANDHI (SATZPHONETIK).

§ 644. Words, united together so as to form a single thought, are mostly also spoken in a connected manner, so that the whole sentence, or at least a member of it consisting of several words, forms a complete phonetic unity. The sounds of the

1) The first consonant was dropped in Irish in such cases, and the vowels, thus brought together, were contracted: e. g. \**arob-ró-nenasc* became *arob-róinasc* 'I have betrothed you' (*nascim* 'I bind'), where *oi* is to be read as a pure diphthong (Thurneysen Rev. Celt. VI 323 f.).

word are dependent on the varying position of the word in the sentence. It makes a difference whether a word with this or that set of sounds precedes or follows another, whether the word begins or ends the sentence, whether it has the chief accent of the sentence or not. As a word has generally life in connected speech only, it develops itself phonetically also in connexion, and those variations of position are often at the same time the active cause which produces the change. Thus e. g. in Skr. *tát phálam* 'this fruit' and *tád dātrám* 'this gift' the difference of the final sound of the first word was caused by the difference of the initial sound of the second word, in *śúcīṣ tvám* 'splendidus tu' and *śubhrás tvám* 'nitidus tu' the difference of the initial sound of the second word was occasioned by that of the final sound of the preceding word. The shortening of prim. Balt. *-ā* in the Lith. nom. sg. fem. *gerà* 'bona' was brought about by the position at the end of a sentence (absolute finality, position in pause), and the reduction of *ϱϱ-* = Indg. *sr-* to *ϱ-* in Gr. *ῥεῖ* 'flows' (Skr. *srávati*, cp. *ῥρεει* 'flowed' Skr. *ásravat*) by the position at the beginning of the sentence (absolute initiality). OHG. *mo* 'to him' *nan* 'him' beside *imo inan* arose from the fact that they were used unaccented (enclitically) in the sentence as a whole; when preceded by the chief accent they became subject to the law of syncope (§ 635).

Those changes, which absolutely initial and final sounds underwent and which were caused by such positions of the word, may generally be separated as forming a special category of phonology.

But the sound-affections, which a word suffered through its connexion with a preceding or following word, are not to be separated from those, which were caused through the connexion of the sounds and syllables of the same word as a whole. In many cases no one even thinks of making such a separation. Thus no one treats under the laws of sandhi the Att. *η* = prim. Gr. *ā* in *τιμή* or in *ἦγον*, which is of the same nature as that in *μητέρες*. But e. g. in the acc. pl. like *νύμφας*, *νόμος* (in several dialects equal to Att. *νύμφας*, *νόμους*), in

Att. *κάπι* Dor. *κήπι* = *καὶ ἐπι*, in *τὸλ λόγον* = *τὸν λόγον*, *ἐρ* *Ῥόδῳ* = *ἐν Ῥόδῳ*, *κὰν νόμον* = *κατ νόμον*, in Hom. *ὄττι* (Att. *ὄτι*) = \**ὄδ τι* (§ 363) etc. we can also only speak of such laws as generally held good for the sound-combinations in question. *νύμφᾱς* arose from *νύμφᾱνς* in combinations like *νύμφανςκαλάνς* according to the same law as that by which \**κειστός* became *κιστός* (§ 204 p. 171). *κάπι κήπι* from \**κα(ι)πι* like *τῆμᾱτε τῆμητε* from \**τιμα(ι)ετε* (§ 603). As regards *τὸλ λόγον* etc. and *ὄττι*, such assimilations, it is true, did not take place at the same time in the body of a word — we take the term word here in its narrowest sense, thus we do not regard compounds like *πάλλενκο-ς παρησιᾶ* as one word —, but it was only because the sound-groups in question did not occur in the body of the word at the time when the change took place<sup>1</sup>). The latter is just as much a secondary consideration for the sound-change itself, as it is immaterial for the changes which take place in a word when isolated, if the sound-group in question at the time of the change occurred in the isolated word only as e. g. in the transition of *-κ-* to *-σσ-* or of *-γκ-* to *-ζ-* in Greek.

The following circumstance also does not occasion an exceptional condition for the laws of sandhi in question. After the ending of a word has assumed a different shape caused by the varying nature of the following initial sound and the activity of the respective sound-law or of the respective sound-laws has become extinct, the different forms are often used promiscuously, irrespective of the conditions by which the difference was brought about, or at least one of the different forms goes beyond its original sphere. Thus in Greek *νύμφᾱς* came to be used also before vowels while *νύμφᾱς*, which had arisen in combinations like *νύμφανςαὐτάνς* (cp. *πᾶσα* from *πάνσα*) and when absolutely final, appeared before consonants<sup>2</sup>. The same holds good with regard

1) On account of *κὰν νόμον* observe that the syllabic division *κατ|νόμον* was in opposition e. g. to *φά|ττη*.

2) On the newly found inscription of Gortyn the old phonetic division still shows itself in preferring especially the article form *τόνς* before vowels and the sister form *τός* before consonants.

to initial sounds. Double forms like Gr. *στέγος* : *τέγος* 'roof' were originally dependent on the varying form of the end of the preceding word (§ 589, 3). But both forms then became generalised in use. Now this fluctuation did not for the most part stop here. One of the different forms gained the mastery and entirely suppressed the other or the others. Thus in the Attic dialect the accusative forms *νύμφᾱς*, *τάς*, *νόμους*, *τούς* came to be the only forms in use, *νύμφᾱς*, *τάς*, *νόμος*, *τός* became extinct<sup>1)</sup>; in Latin *steg-* entirely gave way to *teg-* (*tegō toga*). It is here everywhere merely a question of the effects of analogy, which followed after the regular change had taken place, and the case is essentially the same as if e. g. in OHG. *jungro* had arisen by syncopation beside *bezziro* etc. and *jungiro* had then been formed after the latter and similar forms (§ 635). The latter new formation is parallel to the younger *τόνς παιδάς* (*τόνς παιδάς*) instead of the regular *τός παιδάς*.

If, in sandhi-changes, transformations of finals through the following initials are much more frequent than transformations of initials through the preceding finals, it fully corresponds also to what we may observe with regard to the changes in the body of a word, namely that transforming operations are far more frequent in a regressive direction (anticipations) than those in a progressive direction.

In the so-called laws of finals and initials it is not merely a question of the last or the first sound in the body of the word, but often also of the medial sounds. The important part is that the cause of transformation lay outside the body of the word, in the first case in the following, in the second case in the preceding word. The most striking examples

1) The existence side by side of *εῖς* and *ἔς* (older *ἐνς* and *ἔς*, originally *ἐνς* only) is the same as *τάς* and *τάς*, *τούς* and *τός*. If in Attic the fluctuation between *εῖς* and *ἔς* continued long after the victory of *τάς* *τούς* was decided (see the author *Ber. d. sächs. Ges. der Wiss.* 1883 p. 186 f.), this is to be explained from the fact that the accusatives with compensation lengthening were the regular, often used pause-forms, while the preposition was generally pronounced only in close connexion with following words and *εῖς* only occurred rarely as pause-form.



are the Skr. combinations like *prá hanyatē*, *agnēr ávena*, where *ṛ* took the place of *n* through the influence of the *r* in the preceding word (§ 648, 3). The expressions laws of finals and initials are thus too limited. We retain them however in default of a more appropriate short name. —

On the basis of the above explanation we ought, in the discussion of sound change, to separate from all other changes, those which happened in the beginning and end of a sentence and were caused by this position of the sounds. With the present state of our science, this is unfortunately impossible in an exposition of the history of sounds, which everywhere starts from the prim. Indg. sounds: the cases are too numerous, in which we do not know whether the word has obtained its present form when absolutely initial or final respectively or conditionally so i. e. in the juxta-position with the sounds of other words. Every thing, which preceded in the prehistoric periods of the separate developments, is known to us by induction only. But processes certainly happened even then, quite as complicated as those we can so often observe in the later phases of language: conflict of the pause-forms and the forms at the beginning of the sentence with the medial forms and of the latter with one another, utter loss, without leaving any trace, of one or several of the different forms which had arisen phonetically, etc. We are mostly not in a position to reconstruct these prehistoric processes in their course with any certainty. And even where we work on the basis of historic records we are often badly off from the fact that the written exposition, as regards the formation of the final and initial parts of words, is generally still less a faithful picture of the living speech than as regards the medial syllables, since they had arisen by sound-laws which operated independently of the connexion in the sentence. In writing one generally recalled to mind the isolated word as an independent whole and either overlooked the sandhi-operations altogether or only imperfectly paid regard to them. In this point, it is true, the exposition of the Sanskrit forms a brilliant exception. But what in the

other languages is too little, is too much here. The sandhi-system of the Hindoos is not free from various pedantic niceties and exaggerated generalisations; it is quite inconceivable that the naive speech, uninfluenced by grammatical theorising should always have moved in the track, which the grammarians prescribe, and which became the normal for the written exposition of the language. The fettered language of the Vedas already furnishes the proof that the sandhi-system of the classical Sanskrit is not a thing of natural growth. —

In face of the overwhelming difficulties we shall therefore not undertake the theoretical division mentioned above. But it seemed to me necessary to point out here at least the aim which a more searching investigation of details should have specially in view in the future even more than hitherto.

Rem. Cp. among others Schuchardt Romania III 1 ff., Sweet Transact. of the Philolog. soc., London 1875—76 p. 470 ff., Curtius Stud. X 205 ff., Sievers Paul-Braune's Beitr. V 61 ff. Phonet. 3 205 ff., Paul Princip, der Sprachgesch. p. 100 ff. and elsewhere, Neumann Ztschr. f. roman. Phil. VIII 243 ff., Holthausen Die Soester Mundart, 1886, § 44 f. §§ 204—222.

### Prim. Indg. period.

§ 645. Only a few changes can be established with probability in conditionally final and initial sounds.

Finally.

1.  $-ōu$  became  $-ō$  before certain consonants in the nom. acc. du. of  $o$ -stems, say  $*d̥uō s̥unū$  'two sons' beside  $*d̥uōu ēkuōu$  'two horses'. This is shown by the fact that the Vedic has mostly  $-ā$ , rarely  $-āu$ , before consonants, and  $-āu$  rather more frequently than  $-ā$  before vowels.

In classical Sanskrit the forms in  $-āu$  came to be the only ones in use. Conversely in the European languages the forms in  $-ō$  almost entirely supplanted those in  $-ōu$ : Gr.  $δῶ-δεκα$ ,  $ἑπτα$ , Lat.  $duo$ , O.Ir.  $dā$ , Lith.  $dū$  from  $*d̥uū$ ,  $gerū$  from  $*gerū$  (§§ 184. 664, 3), O.Bulg.  $dva$ ,  $vlūka$ .  $-ōu$  was retained in O.Ir.  $dau dō$  (older  $dāu$ ) 'two' and Goth.  $ahtāu$  'eight' (§ 85). Cp. Meringer Kuhn's Ztschr. XXVIII 217 ff.

From this it may be assumed that  $-\bar{o}u$  once interchanged with  $-\bar{o}$  in the loc. sg. in  $-\bar{o}u$  also as  $*sūnóu =$  Skr.  $sūndāu$  etc. (§ 85).

Compare Indg.  $*gōm$  acc. sg. 'bullock', which probably arose from  $*gōu-m$ , § 188.

It is more doubtful whether  $-\bar{e}i$  interchanged with  $-\bar{e}$  in a similar manner. Vedic loc. sg.  $agnā$  of  $agni-ṣ$  'fire' suggests the conjecture that there existed in prim. Indg. a loc. sg. in  $-\bar{e}$ , which had arisen from  $-\bar{e}i$ . The latter form is said to be represented by Goth.  $anstái$  (stem  $ansti-$ ). Cp. the accidence.

Compare the hypothesis according to which Indg.  $*rēs$  'res' arose from  $*rēi-s$ , § 150.

Rem. 1. That nominatives like Gr.  $Πυθώ$  and Skr.  $sákhā$  (pl.  $sákhāy-as$ ) represent an Indg.  $-\bar{o}$  from  $-\bar{o}i$ , as has been maintained, seems to me very doubtful.

2.  $-i$  and  $-u$  were pronounced as consonants before sonants. E. g.  $*próti$  beside  $*próti$  'against' (Skr.  $práty$  and  $práti$ , Gr.  $πρός$  and  $προτι$ , cp.  $πρόσω$  from  $*προτιω$ ), the former e. g. in Skr.  $praty-abharam =$  Gr.  $προς-επιρον$ .  $*upéri$  beside  $*upéri$  'over' (Skr.  $upáry$  and  $upári$ , Gr. Hom.  $ὑπειρ$  and  $*ὑπέρι$ , cp. Hom.  $εἰν$  and  $ἐνι$ , § 131 p. 119).  $*médhū$  and  $*médhū$  'honey', the latter e. g. in Skr.  $mádhv asti$  'mel est'. Cp. §§ 122. 156.

In like manner  $-ŋ$  and  $-m$  probably interchanged, e. g. acc. sg.  $*bhrátor-ŋ$  (Gr.  $φράτορα$ ) and  $*bhrátor-m$  (Goth.  $brōþar$ ). Cp. § 192. 231 rem.

Rem. 2. On the accusative forms like  $*diém$  (Skr.  $dyám$ ) see § 188. If the conjecture given there is right, there existed between  $*diém$  and  $*náŋŋ$  (Hom.  $νῆα$  Lat.  $nāvem$ ) the same relation as between  $*bhrátor-m$  and  $*bhrátor-ŋ$ .

3. Voiceless explosives and spirants became voiced before voiced explosives and spirant, say  $*édōdbhrátraḥ = *édōt+bhrátraḥ$  'he gave to the brother' (Skr.  $ádād bhrátrē$ );  $*tāzgiās = *tās+giās$  'these sinews' (cp. Skr.  $tā jyāh$ ). Cp.  $*-bd-$  from  $*-pd-$ ,  $*dṇdbhis = *dṇt+bhis$  § 469, 2,  $*zdi = *s+dhi$  § 589, 1. Conversely voiced explosives and spirants became voiceless before voiceless explosives and spirants, say  $*uit<sup>s</sup>tōtplū = *uit<sup>s</sup>tōd+plū$  'know thou (let him know) much' (Skr.  $vittāt purú$ ),

\**tótsiĕt* = \**tód*+*siĕt* 'that may be' (Skr. *tát siyāt*). Cp. \**juqtó-* = \**jug*+*tó-*, \**petsú* = \**ped*+*sú*, § 469, 1.

Sanskrit and Greek especially point to such assimilations.

4. Bremer (Paul-Braune's Beitr. XI 38 f.) assigns it to this also, that the nom. endings sg. masc. fem. of *n-* and *r-* stems sometimes have *-n* and *-r*, sometimes not, e. g. Gr. *ἄκμων*, *πατήρ*, but Skr. *áśmā*, *pitā* (see § 92). The duality was formerly frequently explained by assuming that the forms without *-n* and *-r* were once the only ones in use and that the final consonant was transferred from the other cases. In the *n-*stems one might also imagine that the forms with *-ōn-* without gradation like Gr. *ὄφρατιων*- Goth. *raþjōn-* O.Bulg. *poljan-* (§§ 219 extr. 311. 585, 3) had originally the nominative with *-n*, the others without *-n* and that then intermixture took place. The uncertainty however prevents anything being here definitely arrived at.

Initially.

1. *s-* disappeared before consonants after *-s*, perhaps' also after other consonants, hence the double forms like *steg-* and *teg-* 'cover'. See § 589, 3.

3. Double forms like \**siĕm* and \**siĕm* 'sim' \**duō* and \**duuō* \**mriĕtai* and \**mriĕtai* 'moritur' were due to a varying construction of the preceding syllable. See § 120 p. 112 § 153 p. 138 f.

3. Indg. \**toĭ* from \**tuoi*? See § 187.

Aryan.

§ 646. Prim. Aryan.

Finally. 1. Nasals adjusted themselves to the organ of the following consonants, so that e. g. *-n* and *-m* became *-ŋ* before *k-*, and *-ñ* before *c-*.

2. The ending *-am* attained complete supremacy in the acc. sg. of most consonant stems, the origin of which must apparently be explained from sandhi relations. Analogously *-am* in preterites like *ás-am* 'eram'. See §§ 231 rem. 645 p. 489.

3. The explosives and spirants, which had become voiced before initial voiced explosives and spirants, remained voiced;

correspondingly those, which had become voiceless before initial voiceless sounds, remained voiceless (§ 645 finals 3). *t* and *d* occurred most frequently finally. The aspirates, from of old rare finally, may have then lost the aspiration in this position. *-z* stood beside *-s*, *-ž* beside *-š*; *-ž* and *-š* = Indg. *-g̃* and *-k̃* were rare (§ 396).

*-as* and *-ās*, when absolutely final, passed into *-ah* and *-āh* (Skr.) or groups similar to these, and it seems that these forms, introduced also into the position before voiced explosives and spirants and before vowels, became here *-ō* and *-ā* already in prim. Aryan. See § 556, 3.

Initially. 1. *kt-* became (when absolutely initial?) *t-*: Skr. *tūrya-* Av. *tūrya-* 'quartus' from *\*ktur-*, cp. Av. *ā-xtūrya-* 'four times repeated'. See § 471.

2. *s-* became *š-* after *-i*, *-u* etc. (§ 556, 1), whence Skr. *š-*. Hence such combinations as *hī śāh*, *hī śma*, *divī śtha*, *nū śphirām*.

Rem. Since we are not justified in assuming that the transition of *s* to *š* (*ś*) was still active in the Sanskrit separate development, this phenomenon of sandhi must be referred back to the prim. Aryan period. It is immaterial whether in individual cases we have to deal with a prim. Ar. word-combination or with one which had first come into being in Sanskrit itself. In the latter case it is a question of imitation of older models.

### § 647. Sanskrit. Finals.

1. The *-ē*, which arose from prim. Ar. *-a<sub>i</sub>* when absolutely final and before consonants, was also introduced if the next word began with a sonant, e. g. *-ē a-* for regular *-ay a-*, cp. Av. *zastay-ā* O.Pers. *dastay-ā* 'into the hand', loc. sg. + *ā* 'towards a thing'. Before *a-*, which for its part disappeared, *-ē* remained, before other sonants it was shortened to *-a*. *vānē 'smīn* from *vānē asmīn* loc. 'in this forest'. *vāna āsīt* from *vānē āsīt* 'he was in the forest'. This loss of *a-* was in its first beginnings in the Vedic period.

The *-ō* which had taken the place of *-as* (§ 646) was treated in like manner. *anyō 'nyām* 'one to the other'. *rāmā uvāca* 'Rama spoke'.

-āy became -ā before sonants. *striyā adadāt* 'he gave to the woman'.

2. The assimilation of the nasals to following consonants (§ 646), remained e. g. *tān kavīm* 'this sage', *tān dēvām* 'this god'. -m passed into the so-called 'Anusvāra' before sibilants, *h* and *r*, e. g. *tā sīhām* 'this lion' (cp. § 199 rem. 1).

3. -r became -h when absolutely final. Voc. *mātah* 'mother' = Av. *mātar*<sup>e</sup> Gr. *μητρ*. 3. pl. perf. *ās-ūh* = Av. *ānsh-ar*<sup>e</sup> from Ar. *as-* 'be' (§ 290).

The *r*, which had first become final in Sanskrit (by 7), also underwent this change. *ākah* = *ākar* 'thou madest, he made', when 2. sg. arose from \**a-kar-š*, when 3. sg. from \**a-kar-t*.

4. Absolutely final explosives and spirants were pronounced voiceless only, hence here e. g. *tāt* 'this' from \**ta-d*, Indg. \**tó-d*.

The law, inherited from the pre-Aryan period, that explosives and spirants were pronounced voiced before voiced and voiceless before voiceless explosives and spirants (§ 645 finals 3), was followed by an analogical innovation. They said *tāt phālam* 'this fruit', *tād dātrām* 'this gift' (prim. f. \**tód*) and *ābharat phālam*, *ābharad dātrām* (prim. f. \**ēbheret* 'he brought'), but *tād ānnam* ('food'), *tād vāstram* ('dress'), *tād mādhu* ('honey') opposed to \**ābharat ānnam*, — *vāstram*, — *mādhu*. The latter state was levelled out and *ābharad ānnam* etc. introduced.

*ābharad ānnam* for regular \**ābharat ānnam* after *ābharad dātrām* and *tād ānnam* may be compared with *śagmā-* 'powerful, helpful', for regular \**śakmā-* after *śagdhi* and *tigmā-*, see § 472 rem.

-t remained in the old combination *bhārat-u* 'let him bring' (injunctive *bhārat* + particle *u*), because it was felt as a single word. See Osthoff *Z. Gesch. des Perf.* 42.

5. -t c- became -cc-, as *ādācca* 'dabatque', -t ś- became -ch- (-cch-), as *ādāchatām* 'dabat centum'. Cp. §§ 352. 355. Cp. also § 557, 2 on *tānchātrūn* acc. 'these enemies'.

6. The endings -as and -ās have been treated in § 556, 3. 646. 647, 1.

-*h* appears in pausa for the *ś* which arose from Indg. *s* prim. Ar. *ś* after *i*- and *u*-vowels (§ 556, 1), e. g. *ávih* 'sheep', *sūnūh* 'son'. It is uncertain whether the transition to *h* was phonetically developed or whether it is a question of analogy after *áśvah* = *áśvas* etc. -*ś* was retained in Vedic before *p*- and *k*-, e. g. *dyāuś pitā* (= Ζεύς πατήρ), but the pause-form in -*h* forced its way in also before these initial sounds, just as there still appears the older ending -*as* (e. g. *yás pátih* 'qui dominus') in Vedic before *p*- and *k*-, but beside this already also -*ah*. -*ś* too is still Vedic before *t*-, where *t*- was pronounced cerebral (§ 352), e. g. *śúciś tvám* 'splendidus tu'. But beside this also *śúcis tvám*, a new formation after the analogy of -*as t*-.

-*h* for -*s* and -*ś* also where these did not become final until after the loss of a following consonant (7.), e. g. *áh* 'he was' = *\*ás(t)*, *ájāih* 'he overcame' = *\*ajāiś(t)*; cp. *ákah* = *\*akart* above 3. Also -*t* = -*śt*, e. g. 3. sg. injunct. aor. *nát* = *\*naś-t* from *naś-* 'to attain' (cp. 3. sg. *váśti* 'he is willing' from *vaś-*, § 399).

Original -*is*, -*us* had become -*iž*, -*už* in prim. Aryan before voiced explosives and spirants, e. g. *\*patiž dadāti* 'the master gives'. -*ž* (= Skr. -*ḷ*) already at an early period, perhaps in the Aryan prim. community (cp. Av. *duž-ita-* 'difficult of access' *duž-vacah-* 'speaking badly'), came to stand also before vowels, liquids and nasals through generalisation by analogy and here passed into -*r* in Sanskrit, e. g. *śrír iyám* 'this splendour' from *\*śrīž*. This -*r* then came to be used by analogy also before voiced explosives and spirants, e. g. *pátir dadāti* 'the master gives', *sūnúr dadāti* 'the son gives', *pátir bharati* 'the master brings': the regular forms had been *\*pátī dadāti*, *\*sūnū dadāti* (cp. *dū-dāś-* 'impious', § 591) and *\*pátīḍ bharati* (cp. *dviḍbhīḥ* *ibid.*). *r* was even also transferred to the ending -*as* in Vedic, as *áśvar* 'horse' *śrutár* 'renowned'.

7. Of two or more final consonants (except *ḷ* and *ṣ* as the second components of diphthongs before consonants) the first only was preserved. *ábharan* 'they brought' from *\*a-bhara-nt*. *ákar* 'he made' from *\*a-kar-t*: Av. *cor<sup>o</sup>ḥ* (prim. Ar. *\*car-t*, Indg.

\**ger-t*). *ás* 'he was' from \**ás-t*. *á-jāiṣ* 'he overcame' from \**a-jāi-ṣ-ṭ* : Av. *cōišt* 'he made known' from *caēš-*. *āp* 'water' from \**āp-s* : Av. *āfš*. *dēvā-tāt* 'divine service' from \**-tāt-s* : Av. *amer<sup>e</sup>ta-tās* 'immortality'. *dīk* 'region of the sky' from \**dīkṣ*, prim. f. \**dīk-s* (§ 401 rem. 2). *vāk* 'speech' from \**vākṣ* : Av. *vāxš* Lat. *vōx*, Indg. \**uōq-s* (§ 556, 1).

*ābhār* 'he brought' from \**a-bhār-ṣ-ṭ* (*s*-aorist). Nom. sg. *prāṇ* 'turned forwards' from \**prāṇk-ṣ*. Nom. sg. *tudán* 'tundens' from \**tudánt-s*.

-*nn* appears instead of -*n* after short vowels, as *ābharann*, *tudánn*.

The simplification of final consonant groups was older than the origin of short nasal vowels from short vowel + nasal before *s*. This is shown by the gen. sg. *dán* (*dánn*) from \**dáns*, 2. sg. *ágan* (*ágann*) from \**a-gans*. See § 199.

If a long vowel preceded the nasal + *s*, -*n* stood in only absolute finality, in conditioned finality a long nasal vowel was pronounced and -*s* had the same form as after non-nasalised long vowels. *áśvān* 'equos' in pausa, but *áśvās t-*, *áśvāṣ c-*, *áśvāḥ p-*, *áśvā a-*. *sūnūn* 'filios' in pausa, but *sūnūḥ p-*, *sūnūr a-*. *vidvān* 'knowing' in pause, but *vidvās t-* etc. *átān* 'he stretched' (*s*-aorist, from \**a-tān-s(-t)*), 1. sg. *átās-am*) in pausa, but *átā a-*.

Rem. From this it seems to follow that *n*, after long vowels before -*s* not ending the sentence, had become with the preceding vowel a nasal vowel earlier than elsewhere. Of course in this question there comes into consideration the fact that the long vowels in the accusative endings -*ān -ūn -īn* have not yet been satisfactorily explained (the last attempt at an explanation by Hanssen in Kuhn's *Ztschr.* XXVII 615), and that the nom. *vidvān* was a new formation for \**vidvās* (cp. Av. *vidvā*, Gr. *εἰδώς*). Thus the ending long vowel + *n* + *s* is not proved as old inherited in any of the cases here.

### § 648. Sanskrit. Initials.

1. On the loss of -*a* after -*ē*, -*ō*, see § 647, 1.
2. -*ch-* (-*cch-*) fr. -*t ś-*, see § 647, 5.
3. *r* also caused cerebralisation of a following *n*, if the two sounds belonged to different words. In Vedic *pári nas*,



*vār ṅāma, prā hanyatē, īndra ēnam, agnēr āveṇa.* Cp. *bhāra-māṇa-s* in § 199 and the phonetic explanation of its origin given there.

4. -ṣ changed *t-* into *ṭ-*, as *śúciṣ ṭvām.* Cp. §§ 352. 647, 6.

Rem. On *hí śáh* etc. see § 646 initials 2.

§ 649. Iranian. Finals.

1. In late Avestic final *-ā, -ē, -ū* were shortened in polysyllabic words. Nom. sg. *haēna* 'army': Skr. *sēnā.* Nom. sg. *brāta* 'brother': Skr. *bhrātā.* Nom. du. *pupra* 'the two sons': Skr. *putrā.* Nom. sg. *ber<sup>e</sup>zaiti* 'alta': Skr. *bṛhatī.* Nom. du. *paiti* 'the two masters': Skr. *pātī.* *mainyu* 'the two spirits': Skr. *manyū.* On the other hand e. g. *z<sup>e</sup>mā* instr. to *zā* 'earth': Skr. *jmā.*

All final vowels are written as long in Gāpā, not only *haēnā mainyū,* but also e. g. *barā* 2. sg. imper. = Skr. *bhāra* Gr. *φῆρε, ásti* 3. sg. indic. = Skr. *ásti* Gr. *ἔσσι.* It is probably rightly assumed that these longs are due to a later transformation on the part of redactors and that they were pronounced short — perhaps with a few exceptions — in the same manner as elsewhere, at the time of the origin of the hymns. See Bartholomae *Die Gāpā's* p. 67 ff., *Handbuch* p. 3.

In Old Persian the deviations from the quantity, which is to be expected by the prim. Ar. sound-laws, are likewise only of a graphic nature, e. g. 3. sg. *akūta* 'he made himself': Skr. *ákṛta; abara(n)tā*: Skr. *ābharanta* Gr. *ἐπέροντο; amīy* 'I am': Skr. *ásmi* Gr. *εἰμι; pātūv* 'let him protect': Skr. *pātu.* Cp. § 21.

2. Late Av. *-e* fr. *-ia -iā,* as *ye-he* = Skr. *yá-sya.* See § 125 p. 115.

Av. *-ē* from *-ai,* as *aspē* = Skr. *ásvē.* See §§ 62 rem. 78. 94.

3. Av. *-ā* (written *-a, -an, -am*) from *-ām -ān,* as *ḫwaḡam* = Skr. *tvām.* See § 200.

4. Av. *-r<sup>e</sup>* fr. *-r,* as *antar<sup>e</sup>* = O.Pers. *a(n)tar* Skr. *antár.* See §§ 260. 624. The anaptyctic vowel arose before initial consonants, at the same time perhaps in absolute finality.

5. Final combinations of consonants were mostly permitted. Cp. the Av. forms *cor<sup>o</sup>ḥ*, *cōišť*, *āfš*, *vāxš* in § 647, 7. Exceptions under 6.

6. Prim. Ar. *-t* and *-d* after vowels (also anaptyctic) fell together in Av. in *-ḥ*. This sound or a similar one, in any case a consonantal element, was also spoken in O.Pers., since *-a* appears for prim. Ar. *-at* and *-ad*. If the sound *-a* had ended the word, this vocalic finality would have been expressed by the addition of the *a*-sign (in the transcription *-ā*). See § 21 rem. 3. sg. Av. *abaraḥ* O.Pers. *abara* 'he brought': Skr. *ābharat*. Av. *ciḥ* O.Pers. *ciy*, indefinite particle: Skr. *cid*, Lat. *quid*.

*-t* appears unchanged in Av. in *-st* = prim. Ar. *-tst* prim. Indg. *-t<sup>s</sup>t*, as *hīšast*, and in *-št* = prim. Ar. *-št* prim. Indg. *-st*, as *cōišť*. On the other hand *-s* from prim. Ar. prim. Indg. *-st*, as *ās*. See § 474 rem. 2.

*-t* was dropped after *n* in prim. Iran.: 3. pl. Av. *abaren* O.Pers. *abara*: Skr. *ābharan ābharann*, Indg. *\*ēbheront*, rt. *bher*-bear'.

7. On Av. *-as* *-ō* O.Pers. *-a* = prim. Ar. *-as* see §§ 556, 3. 558, 4. 646 finals 3.

Ar. *-ās* appears in Av. as *-ā*: nom. pl. fem. *yā* 'quae' = Skr. *yās*, 2. sg. conj. *barā* 'feras' = Skr. *bhārās*. Beside this *-a* (from older *-ā*, see 1): nom. pl. *aspa* 'equi' = Skr. *āśvās*. *-ā* probably corresponds to Skr. *-āḥ*, and *-a* to Skr. *-ā*. The ending *-ās-ca* (*ca* 'and'), as in *yās-ca*, seems to be a transformation of regular *\*-ās-ca* after *-ā*. Only *-ā* occurs in O.Pers., e. g. nom. pl. *martiyā* 'men', which may also correspond to Av. *-ā* and *-a*. Cp. § 556, 3.

Opposed to Skr. acc. pl. *tān* (§ 647, 7) and Gr. *τόνς* Goth. *ḥans* stands in Av. *tā* (also written *taṇ*, *taṃ*).

Prim. Ar. *-š* = Indg. *-s* (§ 556, 1) was, as it seems, the rule in every connexion in both Iranian languages. Av. *aži-š* 'dragon': Skr. *āhi-š*; *mainyu-š* 'spirit': Skr. *manyú-š*. O.Pers. *fravarti-š* Phraortes, *kūrū-š* Cyrus. Sanskrit relations of sandhi (see 647, 6), which certainly partly represent prim. Ar. differences

of finals, show that the Iran. *-š* did not stand regularly in all word-combinations.

§ 650. Iranian. Initials.

1. The development of anaptyctic vowels in Av., as *<sup>i</sup>rista-*, and the metathesis of *vr-*, connected with it, as *<sup>u</sup>rvāta-*, may regularly have taken place partly in absolute initiality and partly after certain consonants. See §§ 157. 260. 624.

2. So also the transition of prim. Ar. *sm-* (through the intermediate stage *hm-*) to *m-*, in Av. *mahi* 'sumus' = Skr. *smāsi* etc. See § 558, 3.

Armenian.

§ 651. Finals.

1. The vowels in the originally final syllables of polysyllabic words disappeared, whether they themselves, or consonants following them, ended the word. *em* 'I am': Skr. *ásmi*. *mardoy* 'of man': Skr. *mṛtāsya*. Nom. *dustr* 'daughter' fr. *\*dustir*, older *\*dustēr*: Gr. *θυγάτηρ*. *astl* 'star': Gr. *ἀστήρ*. Nom. acc. *mard* 'man': Skr. *mṛtá-s*, *mṛtá-m*. Nom. *akn* 'eye' (gen. *akan*): cp. Gr. *τέκτων*. *haur* 'of a father': Gr. *πατρός*. *dster* 'of a daughter': Gr. *θυγατέρος*. Acc. *marts* (*mards*) 'men' from *\*mardo-ns*: Gr. Cret. *νόμο-νς*.

Monosyllables retained the vowel. *mi* 'lest': Gr. *μή*. Nom. *šun* 'dog' from *\*šmōn* (§ 87), but *akn* (see above). Acc. *eris* 'three' from *\*ris*, *\*trins* = Goth. *þrins*, but *sirts* from *\*sirtins* from stem *sirti-* 'heart'.

2. *-m* disappeared: acc. *mard* = Skr. *mṛtá-m* (§ 202). *-n* remained: nom. *šun*, *akn*.

Rem. Therefore *tasn* 'ten' cannot be derived regularly from Indg. *\*dek̑m* (Skr. *dāśa* Lat. *decem*). We must start, as in the case of Goth. *taihun*, from *\*dek̑mt*: the labial nasal became dental before *-t*, *\*tasant* became *tasn*. Or did the word receive its *-n* from *inn* 'nine' = *\*en̑n̑*, as Lat. *novem* conversely took the place of *\*noven* after *decem*?

3. *-s* disappeared after vowels: nom. *mard* = Skr. *mṛtá-s*; gen. *haur* = Gr. *πατρός*. It remained, if a nasal preceded it: acc. *marts* (*mards*) = Indg. *\*mṛto-ns* (cp. § 202).

Initials. *e*, *o* or *a* was prefixed to an initial liquid, as *erek* 'evening' = Skr. *rājas*. See §§ 263. 625.

### Greek.

#### § 652. Prim. Greek finals.

1. Short vowels often suffered elision before vowels. The elision, e. g., in *ἀπ'αὐτοῦ*, *οἱ δ'ἄλλοι* etc. may be regarded as prim. Greek. See § 603 p. 457.

2. The contrast between *προσι* and *\*προσι* (*πρός*), *ἐνι* and *\*ἐνι* (*ἐν*) was inherited from the pre-Greek period. See § 645 final 2.

If a word ended in an *ι*-diphthong and the following word began with a sonant, *ι* was dropped as elsewhere (§ 130), e. g. *κα(ι) ἐπι*, *κα(ι) ἀγαθός* = Att. *καῖπι*, *καῖγαθός*.

3. *-m* became *-n*, as *τό-ν* = Skr. *tá-m*. See § 204 p. 171 f. This occurred in absolute finality and also before dentals. Cp. § 653 rem. 2.

4. *-γ* became *-αφ* in absolute finality, as *οὐ̄θαφ* 'udder' from *\*οὐ̄δῆφ*. See § 285.

5. All explosives were dropped. 3. sg. *ἔφερε*: Skr. *ābharat*. 3. pl. *ἔγνον* from *\*ἔγνων-ντ* (cp. § 611): cp. Lat. *era-nt*. Dor. *ἦς* 'erat': Skr. Ved. *ás*, Indg. *\*ēs-t*. *τό*: Skr. *tá-d*. *τί*: Lat. *quī-d*. Voc. *γύναι* from *\*γύναικ*, cp. acc. *γυνναῖκ-α*. 3. sg. *ῆ* 'spoke' from *\*ῆκ-τ* (to Skr. perf. *āh-a*), with which goes the new formation 1. sg. *ῆν*.

The exceptions as Hom. *ὄττι* from *\*σφόδ τι*, *ὄππως* from *\*σφόδ πως*, *ἐκ*, where the consonant remained on account of the close connexion, show that this change belonged entirely or especially to the absolute finality.

6. *-s* and *-z* (e. g. *\*τιζ δὲ* 'but who') had come over from the pre-Greek period. See § 645. final 3.

*-ss* became *-s* before consonants and when absolutely final. *μῦς* 'mouse' *μῆς* 'month' from *\*mūs-s* *\*mēns-s*. Dor. *πός* 'foot' Att. *νεότης* 'youth' from *\*pōss* *\*neuo-tāss*, older *\*pōts* *\*tāts* (§ 490).

§ 653. Finals in the separate dialects.

1. The prim. Gr. elision (§ 652, 1) was extended further.

With this went contraction (crasis), as Att. *τάλλα* from *τὰ ἄλλα*, to which was joined aphaeresis, a phenomenon differing from the former rather in the written representation than in reality, as Att. *ἐμοῦ 'πάκουσον*.

The tendency to remove hiatus, was intentional in the literary language and in some works it is avoided altogether.

Rem. 1. The so-called *ν ἐφεκυστικόν* has not arisen from an attempt to get rid of hiatus. Its use in antiquity was not at all regulated according to the theory of later grammarians. The consonant rather had an original etymological value in some forms and then became further extended by analogy. See the author's Gr. Gr. § 64 rem. and the literature quoted there and G. Meyer Gr. Gr. <sup>2</sup> 297 ff.

The contractions in cases like Att. *καὶ ἐπὶ* Dor. *κηπί* from *καὶ ἐπὶ* belonged to the period of the separate dialects (§ 652, 2).

2. The loss of the *-ι* in *-ημ -οι -ᾶ (-η -ω -α)* as in Att. *τιθῆ τιμῆ ἴππου χόρα* was effected in the same manner as medially. See § 132.

3. *-ν* (= Indg. *-n* and *-m*) was assimilated to following guttural and labial sounds, e. g. Att. *γῆγ καὶ, τῆμ πόλιν, μισθούντωμ μὲν*. The omission of the nasal in writing in Cyp., e. g. *να-ο-το-τε* = *ναὸ(ν) τό(ν)δε*, permits our assuming that here, as medially, a nasal vowel only was spoken. Cp. § 205.

Rem. 2. *χθών* and *χίων*, already discussed in § 204 p. 172, show that Indg. final *-m* was not retained in *τόμ, τῆμ* (cp. Skr. *tá-m, tã-m*) before labials. If Indg. *-m* had been preserved before labials to any extent in prim. Greek, *χθονός χίωνος* would not then have taken the place of *\*χθου-ος \*χιου-ος*. *-ν* = Indg. *-m* had been once generalised in prim. Greek.

4. *-ρ* became assimilated to *δ-* in Cret. (Gortyn), as *ἀνῆδ δῖω* = *ἀνῆρ δῖω*.

5. The tendency, inherited from the pre-Greek period, to level explosives with different form of articulation (tenuis and media) operated further. *ἐγ Βυζαντίου* Att., *ἐγ Βαυχιδᾶν* Corinth. *ἐγβάλλω* Paros, *ἐγ δίκης* Att., *ἐγ δακτύλων* Att. (*ἔγ* = *ἐξ*, cp. *ἐκ ποδῶν* Att.), *ἐγδικάζω* Chios, *καδ δέ* Hom., *κάβαλον* Hom.

Assimilation of the position of articulation: Hom. *καπ πεδιόν* from *κατ π.*, *κάππεσον* from *\*κάτ-πεσον* Thess. *ἄτ τᾶς* from *ἄπ τᾶς*, Hom. *κάββαλον* from *\*κάδ-βαλον*, Cret. *ἐδδίηται* from *\*ἐγδίηται*.

6. -s and -z (§ 652, 6) became assimilated in Cret. (Gortyn) to θ, δ-, λ-, as *τᾶθ θυγατέρας* (cp. *πρόθθα* from *πρόσθα*, § 566), *δίεδ δέ, πατρὸδ δόντος* (cp. the verbal ending *-άδδω* from *\*-αζδω?* § 493 rem.), *τοῖλ λείονσι*.

-z passed into -ρ in El., e. g. *τίρ = τίς, τᾶρ = τᾶς, πεπολι-τευκῶρ = πεπολιτευκῶς*. -s beside this existed in the older periods. But the old regular spheres of use of -ρ and -ς were even then no longer kept apart (e. g. *γᾶρ τᾶρ . . .* instead of *γᾶς τᾶρ . . .*) and the forms in -ς were gradually driven out by those in -ρ.

-ρ from -z also in the dialects of Laconia and Thera.

Cp. Thess. *Θεορδότειος* beside Ion. etc. *Θεόδοτος* i. e. *Θεόζδοτος* and *Διόζοτος*, § 593.

§ 654. Initials in prim. Greek and later.

1. It was remarked in § 626 that doublets like *ὀμόργνυμι* and *μόργνυμι* (Skr. *marj-*) arose from differences of sandhi.

2, *γ-, γ̄-, ῖ* always appear as *ἀρ-, ὀρ-* (before consonants), *ὀλ-* (before consonants), as *ἄρκτο-ς* 'bear', *ὀρθό-ς* 'upright'. This is undoubtedly the form for absolute initials. On the other hand the particle *ῥὰ = Lith. ḡr* Indg. *\*γ* arose after consonants. Cp. §§ 292. 306.

3. On differences like *στέγος* and *τέγος* 'roof' from rt. *steg-*, *σμερδαλίω-ς* 'terrible' (OHG. *smertzo*) and *μειδῆσαι* 'to smile' (Skr. *smáyati*), which mostly seem to go back to the pre-Greek period, see §§ 563, 6. 589, 3.

4. Where double consonants had arisen by assimilation, they were simplified when absolutely initial, and probably also after consonants. *ῥεῖ = srávati*, beside *ἔρρει* (§ 565). *νίφα* beside *ἀγά-ννιφο-ς* from rt. *sneigh-* (§ 565). *μειδῆσαι* beside *φιλο-μμειδῆς* (see 3). *σεῦε* beside *ἔ-σσευε* : Skr. *cyav-* (§ 489). The geminated consonants still appear in : Hom. *τε ρρήξιεν* *M.* 198, as *ἔ-ρρεξα*; *ὄτε σεύαίτο* *P* 463, as *ἔ-σσευε ἔ-σσυτο*; Ionic *ὀποῖά σσα*, Att.

ὀποῖά ττα, πηρίκα ττα from \**q̄ia*, cp. Megar. σά 'quae?' (§ 489). Cp. also Thess. inscript. οἱ τολῖαρχοι from οἱ πτ. (as ἀρχι-τολῖαρχέντος, Λεττίναιος, see § 333).

Rem. In ὀποῖά ττα, σμικρά ττα etc. was developed the feeling for a causal dependence of the ττα on preceding -α, so that these combinations were felt as ὀποῖ' ἄττα, σμικρ' ἄττα. The result was that ἄττα came to be used independently also. Thus in Plato τέτταρα ἐν αὐτοῖς ἄττα. In like manner arose the postposition οὐνεκα = ἐνεκα 'on account of' in combinations like ἐκεῖνούνεκα, where ἐνεκα had been fused by crasis with final -ου. See Wackernagel in Kuhn's Ztschr. XXVIII 109 ff.

5. τραπέζα '(four legged) table' in absolute initiality from \**πτραπεζα*, Indg. \**qtur-*. See § 490.

### Italic.

§ 655. Finals. Owing to the scantiness of the Umbrian-Samnitic materials, handed down to us, it remains doubtful at what period certain processes of sandhi took place in Latin.

1. Prim. Ital. -i became in Lat. partly -e, and was partly dropped. The former: *mare*, *animāle*, *sedīle*, *ante*, loc. *rūre* see § 33. The latter: *aut* : Osc. *avti avt* Umbr. *ute ote* 'aut'. *tot* : cp. *toti-dem. et* : Gr. ἔτι 'still', again', *per-* (*per-idōneu-s*, *per-māgnu-s*) : Gr. πέρι. *animal*, *exemplar*, etc. It is I believe no mere accident that the latter form of the final occurs especially in such words as seldom or never ended the sentence.

Prim. Ital. -e was in Latin partly retained and partly dropped. The former: *eque*, *legite*, *quīnque*, *neque*, *neve*. The latter: *neq̄*, *neu*, *quī-n*, *sati-n*, *dīc dūc* beside older *dīce dūce*. Umbr. *pum-pe* 'quomque' and *nei-p ne-p* 'neque, neve, non' voc. *Tefre*. Osc. *nei-p ne-p* 'neque, neve'.

Prim. Italic. -o and -a became -e in Latin. *sequere* : Gr. ἔπειο (§ 81). *pede* instr. : Gr. πεδά (§ 97 p. 91). Loss of -o : Lat. *ap-erīō* (§ 499) and so *ab eō* etc., Pelign. *af-āed* 'abdidit' : Gr. ἄπο; -o was retained in Lat. *po-situs*, where the already prim. Indg. loss of the initial *a-* preserved the -o from disappearing.

Prim. Italic -i, -e, -o, -a had thus fallen together in -e in Latin. This was connected with the position in unaccented

syllables. Loss of the vowel occurred regularly before vowels, partly perhaps also by syncope (before consonants), see §§ 633. 679.

Rem. 1. It is doubtful whether the elision of vowels, which became the rule in Lat. verse (e. g. Lucret. I 234 *átque ante ácta*, four syllables), is directly connected historically with the loss before vowels. In any case however the custom of the poets, which extended itself to long final vowels also (e. g. *spatio átque* in the same verse, four syllables), was founded on a stopping of hiatus in the ordinary language of the people.

2. The Romans began to shorten *-ō -ā* already in the pre-literary period. First of all in iambic words. The rest followed gradually, for the most part probably by form-transference. *duo* : Gr. *δύω*. *ego* : Gr. *ἐγώ*. *modo* instr. sg. : cp. Lith. *gerù*, *gerù-ju*. *fero* : *φέρω*. *homo* : cp. Skr. *ásmā*. *equa* : Skr. *áśvā*. *juga* : Skr. Ved. *yugā*. In the poets the forms with long vowel still occur beside those with the shortened, and it is pretty easy to follow in them the course of development, which the shortening took; e. g. *ambō* beside *ambō* came into existence later than *duō*. Cp. Stadelmann *De quantitate vocalium Latinas voces terminantium*, Lucerne 1884<sup>1)</sup>. Especially instructive are the numerals as *trīgintā septuāgintā*, old nom. acc. pl. neut. *-ā* remained here, because these words were early isolated from the connexion in thought with *juga bona* etc. (cp. *trīgintā virī*). They prove that the shortening of neuters with non-iambic ending, *armenta* etc., was due to the analogy of *juga* etc.

Contemporaneous shortening of *-ē* in locatives from *i*-stems as *peregre*, if it is true that these with Skr. loc. as *agnā* go back to Indg. *-ē*. See p. 489 and the accidentence.

*-ā -ē*, which arose by contraction, also underwent shortening in iambic word-forms. In the dramatic poets imper. *roga puta mone habe* etc., originally *\*-ā-īe \*-ē-īe \*-ē-īe*. But no generalisation took place here (not imper. *plantā* etc.). In the classical period it was again (with few exceptions) *rogā* etc.; the long

1) With reference to this treatise and other expositions of the vowel shortening in question, it does not seem superfluous to point out that *equā* cannot be the old vocative form (cp. Gr. *νύμφα*) nor *duō* identical with Gr. *δύο*. By 1. we should expect *\*eque* and *\*due*, like *pede* and *sequere*.



vowels were thus restored again after the analogy of non-iambic forms like *plantā*.

The relations of quantity cannot for the most part be controlled in Umbrian-Samnitic. We saw in § 105 that *-ā* in the nom. sg. fem. and nom. acc. pl. neut. had become an *o*-vowel in Umbr. and Oscan. Since this cannot be separated from the *o* in Umbr. *pihos* 'piatus', and this *o* was certainly long, it must be assumed that the final vowel was still long *-a* at the time the weakening took place.

3. From *-ōi*, *-āi* Lat. *-ō*, *-ā*, e. g. dat. *equō*, *Mātūtā*. See § 136.

Lat. loc. *ūsū*, Umbr. *manuv-e* 'in manu' contained Indg. *-ōu*, if they were locatives like Skr. *sūnāú*. See § 85.

4. Long vowels were shortened in Latin before *-t*, *-m*, *-r*, *-l*. This change belongs to the archaic period, in which poets still often have long vowels. *siet siem* beside *siēs*. *amet amem amer* beside *amēs amēris*. *pater* : Gr. *πατήρ*. *erat eram* beside *erūs*. *loquar* beside *loquātur*. *equam* : Skr. *áśvām*. *exemplar animal* beside *exemplāre animāle* (cp. 1.). *clāmor* beside *clāmōris*. *vīderim vīderit*, *sim sit* beside *vīderīmus, sīmus*. The long vowels remained in monosyllabic words in *-r*, *-l* : *fūr sōl*.

Osc. *paam* acc. sg. 'quam'.

5. In Umbr.-Samn. short vowels were syncopeated in final syllables ending in a consonant, as Umbr. *pihaz* 'piatus', Osc. *húrzh hortus*'. See § 633. The contrast between Umbr. *Ikuvins* 'Iguvinus' Osc. *Púmpaiians* 'Pompeianus' on the one hand and Umbr. *abrof* 'apros' Osc. *fcíhúss* 'fines', whose endings arose from *\*-ons* (9.), on the other, proves that the former syncope was late; the *-ns* in the nom. sg. must have been restored again through the influence of form-system.

On the samprasāraṇa in Lat. Umbr. *ager* from prim. Ital. *\*agrs* see 9 p. 506.

6. Final *-m* and *-n* may have been assimilated even in prim. Ital. to succeeding consonants produced by different organs e. g. *\*k<sup>h</sup>om k<sup>h</sup>e* from *\*k<sup>h</sup>om k<sup>h</sup>e* (Lat. *quonque*, Umbr. *pumpe*). See § 207. On *-m* in Lat. see § 208 p. 176. *-n*

was assimilated in the same language, as inscript. *im bello* etc. shows. On *-m* and *-n* in Umbr.-Samn. see § 209.

On Umbr. *-r* see § 270.

7. *-t*, so far as it was not dropped, appears in Italic as *-t* and *-d*. Lat. *siet sient, erat erant*; on archaic inscriptions *feced fecid* etc. Osc. *fusíd* 'esset' (cf. Lat. conj. perf. *fuertit*), *pútiád* 'possit'. I am not satisfied with any of the various explanations of this duality (Bugge Kuhn's *Ztschr.* XXII 385 f., Osthoff *Rhein. Mus.* XXXVI 487 f., Stadelmann *De quantitate* etc. p. 64 sq., Danielsson in Pauli's *Altit. Stud.* III 148).

*-t* disappeared in Latin after *c, s, r*. *lac* fr. *\*lact*; the form *lact* in Varro was formed anew after the analogy of the other cases. *os* fr. *\*ost*, cp. Av. gen. sg. *ast-ō* 'of a bone'. *sem-per tantis-per* etc. : Osc. *petiro-pert* 'quater', Gr. Pamphyl. *περι-ἰδωκε*; was the cpf. *\*perti*?

8. *-d* remained in Lat. after short vowels : *id, quid, quod, illúd, ad*. It disappeared after long vowels in the archaic period, from which many forms with *-d* are handed down to us : abl. *equō(d) equā(d) mē(d) tē(d)*, imper. *estō(d)*.

Umbr. *asam-a asam-ař* 'ad aram' (*ř* from *d*, § 369 p. 280). It was dropped everywhere after long vowels : abl. *pihaclu* 'piaculo', imper. *sumtu* 'sumito'.

Osc. *píd* Pelign. *pid* 'quid', Osc. *púd pod* 'quod', abl. *dolud* 'dolo' *tovtad* 'civitate' *akrid* 'acri', imper. *estud* 'esto' *actud* 'agito'.

*-d* disappeared in Lat. or in prim. Italic after *r* : Lat. *cor* fr. *\*cord*, cp. *cord-is*.

9. *-s* after explosives remained in absolute finality in all dialects. Lat. *ex, vōx, au-spex, pēs novitās* from *\*pēs \*novitās*, *agēns* from *\*agents*, *con-cors* from *\*-corts*, *puls* from *\*pults*, *nox* from *\*noctis*, *abs* i. e. *aps*. Umbr. *fratreks fratrexs* 'fratricus', *pihaz* 'piatus'. Osc. *meddiss meddis* 'meddix' from *\*-dikis*, *húrz* 'hortus', *az* 'ad' i. e. *ad+s*.

*-nts* in Umbr. forms an exception : *zeřef* 'sedens', like *abrof* 'apros' (see below).

For conditional finality ep. Lat. *ē* Umbr. *eh* (i. e. *ē*) from *eks*, § 570.

-*s* after vowels. Lat. *equo-s*, *genus*. Umbr. *puntes* 'pontes'. Osc. *scriptas* pl. femin. 'scriptae', Lúvkanateís gen. 'Lucanatis'.

-*s* is often wanting on Lat. archaic inscriptions, e. g. *Cornelio* = *Cornélius*, *locu* = *locus*, *mino* = *minus*. The archaic poets (as also Cicero in his juvenile poems) allowed the sound sometimes to make strong position, sometimes not, e. g. in dactylic hexameters *imāgini(s) fórmam*, *flúctibu(s) mándet*. The writers of the classical period restored -*s* in all cases. It is frequently left out again on the inscriptions of the later imperial period. The conclusion drawn from these facts, that -*s* after vowels had throughout a weak articulation already several centuries B. C. which was retained in the vulgar language, while the full articulation was restored in the classical period in the language of cultured persons is unsatisfactory from the very fact that the sound has remained in some Romance developments down to modern times. It ought rather to be assumed that just as *s* (like *z*) disappeared medially before nasals, *l* and *d* (§§ 570, 594), it was also dropped before these consonants at the end of words; they said e. g. nom. *manu laeva* gen. *manū laevae* (like *corpulentu-s* from \**corpozlento-s*) beside *manus parva* etc.; the different forms were then used promiscuously, especially by the poets, to whom these sentence-doublets, in the case of final syllables with short vowel, afforded considerable ease; grammatical reflexion, regard for clearness of word-form, and regard to Greek (*equos*: ἵππος, *genus*: γένος etc.) procured complete supremacy for the forms in -*s* in the literary language of the classical period.

Just as *s* had become *z* medially between vowels (§ 569), -*z* may also have arisen regularly finally before vowels. The -*r*, which is to be expected as its continuation, exists only in *dir-imo* and similar words.

In Umbr. nom. pl. *Ikuvinus* *Ikuvinu* and *Iiovinur* 'Iguvini', Indg. -*ōs*; the last form presupposes -*z*. What the sandhi processes were which gave rise to these differences remains

undetermined; it must be taken into account that *s* beside the voiceless sound perhaps represented the voiced sound also.

Rem. 2. The question of postvocalic *-s* in the Italic languages requires a thorough investigation, in which the next following initial sound in the texts handed down to us must carefully be taken into account. Our exposition given above is especially intended to suggest such an investigation.

*-s* after liquids had disappeared throughout the Italic branch. Cp. the nom. sg. Lat. *par*, *fār*, *sōl*, *ager* (st. *agro-*), *ācer* (st. *ācri-*), *famul* (st. *famulo-*), Umbr. *ager* 'ager' (gen. *agre*), katel 'catulus' (acc. *katlu*), Osc. *Frunter* 'Frunter', *famel*, *Mutīl* 'Mutilus'. We may assume that the changes \**agros* \**agrs* \**agers* *ager* and \**ākris* \**ākrs* \**akers* *aker* were effected in the period of the prim. Ital. community. Cp. Lat. *sacerdōs* from \**sācro-dōts* and *sēcernō* from \**sēcrinō*. See § 33. 623 rem. 1. 633.

*-s* after nasals. Lat. *aprōs* Umbr. *abrof* fr. prim. Ital. \**apro-ns* (cp. Goth. *vulfa-ns* 'wolves'), Osc. *feihūss* 'fines'. See §§ 208. 209.

#### § 656. Initials.

1. In the vowel elision mentioned in § 655, 1, the *e-* was lost in *est*, which was attached enclitically: *itast*, *sitast* = *ita est*, *sita est*. These forms being felt as *ita'st*, *sita'st*, there were formed after them also *autemst*, *situst*, *situmst*, etc.

2. *q̄-*, *ḡ-* appear in Latin as *an-*, *ar-*, as *antae*, *arduos*. See §§ 253. 306. They were the forms of absolute initiality.

3. *f* = Indg. *bh dh gh* maintained itself in Lat. only initially, as *ferō fūmu-s formu-s*. See § 509. It was the form of absolute initiality.

4. Lat. *stlīs slīs līs* etc., see §§ 503. 570.

#### Old Irish.<sup>1</sup>

#### § 657. Finals.

1. Final short vowels were dropped in polysyllabic words,

1) With my insufficient knowledge of the sound-laws of the Britannic dialects I am not in a position everywhere to keep apart properly what

except when *i* preceded. This loss was not effected until after the vowels had imparted their timbre (palatal, labial) to the preceding consonants (§ 640), and thus the quality of the dropped vowels is mostly still recognisable.

Voc. *ā maicc* 'son' from \**makye*: cp. Gr. ἄδελφε. Imper. sg. *beir* 'bear' from \**bere*: Gr. φέρε. Imper. *berid* 'bear ye' from \**berete*: Gr. φέρετε. *ad-cón-dairc* 'conspexit' from \*(de-)dorce: Gr. δέδορκε. *berid* 'he bears' from \**bereti*: O.Bulg. *bereti*. *is* 'is' from \**esti*: Gr. ἔστι. *berit* 'they bear' from \**beronti* (cp. § 212): Gr. Dor. φέροντι. Dat. (loc.) *athir* 'patri' from \*(p)ater-*i* or \*(p)atr-*i* (cp. *briathar* from \**brētrā*, § 623 rem. 1): Gr. πατέρι πατρι. Cp. also *imb-* 'around, about': Gall. *ambi-* Gr. ἀμφί.

Pres. secund. 3. sg. *no-bered no-berad* 'ferebat, ferret' from \**bereto*: Gr. φέρετο Skr. *bhárata*. Also the 3. pl. pres. *do-berat*, which cannot be explained from \**beronti*, may be middle: Gr. φέροντο; for another explanation see § 82 p. 76. Loss of Indg. -*a* in the voc. *ā thuath* 'folk'? cp. Gr. νόμφα. *suth* n. 'fetus' fr. \**sutu*: Gr. cp. μέθυ.

2. Similarly long vowels disappeared, except when *i* preceded.

Nom. acc. du. *sūil* 'eyes' from \**sūli*: cp. Skr. *pātī* 'masters'. Nom. sg. fem. *Brigit* from \**brigentī*: Skr. *bḡhatī* femin. 'high'.

*as-biur* 'I bring forward, say' from \**-berō*: Gr. φέρω. Dat. (instr.) sg. *fiur* (to nom. *fer* 'man') from \**uirō*: Lith. *gerù gerùl'-ju*. Nom. *tuath* 'folk' from \**tōtā*, \**teytā*: Goth. *þiuda*. Nom. acc. pl. neut. *trī chēt* 'three hundreds' from \**centā*: Skr. Ved. *trī śatā*.

Nom. sg. fem. \**brētrā* 'word' became \**brēt̃y*, then *briathar*. Gen. \**cētlī*, dat. \**cētlō* (stem *cētlo-* 'song' from \**can-tlo-*, pl. nom. *cētla* dat. *cētlaib*) became *cētil*, *cētul* through an intermediate stage with *l*, which in the former case had an *i-* and in the latter an *u-*timbre. See §§ 623 rem. 1. 634.

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is to be ascribed to the special Gaelic and what to the prim. Keltic period of development.

3. After  $\dot{i}$  ( $i\dot{i}$ ) short vowels united with this and formed sonantal vowels (cp. pp. 124. 125) and long vowels were shortened.

Voc.  $\bar{a}$  *chéli* (st. *céliio-* 'companion') beside  $\bar{a}$  *maicc*.

*no raídiu* 'I speak' beside *as-biur*. Dat. instr. *aíliu*, *céliu* beside *fiur*. *air-mítiu* 'honour': Lat. *mentiō*.

Rem.  $-iu$  further became  $-i$ . Hence e. g. dat. *duini* beside *duiniu* 'homini'. This phenomenon is parallel with the transition of *gním<sup>a</sup>* to *gníma* (§ 640 rem.).

4.  $\dot{i}$ -diphthongs became monophthongic and were then treated like long vowels. Nom. pl. *eich* 'equi' from *\*ekui* *\*ekuo<sub>i</sub>*, see § 82. Nom. acc. du. fem. *tuaith* from *\*tōti* *\*teutai<sub>i</sub>*, see § 98; cp. *dī* 'two' = Skr. *dvē*. Dat. sg. *tuaith* from *\*tōti* and older probably *\*teutā<sub>i</sub>*: Gr.  $-a^1$ ).

5. If a consonant followed a short final vowel in polysyllabic words, the vowel disappeared, where it was not preceded by  $\dot{i}$  and had not become long by 'compensation lengthening'.

*fer* 'man' from *\*uīro-s*. Nom. acc. neutr. *tech* 'house' fr. *\*tegos*: Gr. *στέγος*. Gen. *bethad* 'of life' from *\*biyo-tūt-os*: cp. Gr. *ποδ-ός*. *athir* 'fathers' from *\*(p)ater-es*: Gr. *πατέρ-ες*. *fāith* 'poet' from *\*uāti-s*: cp. Lat. *hosti-s*. *fid* 'tree' from *\*uīdu-s*: OHG. *witu*.

*fer n-(aile)* 'virum (alium)' from *\*uīron*: Lat. *viru-m*. *sūil n-(aile)* 'oculum (alium)' \*from *\*sūlin*: cp. Lat. *siti-m*. *fid n-(aile)* 'arborem (aliam)' from *\*uīdu-n*: cp. Lat. *fructu-m*. *deich m-(baí)* 'ten (cows)' from *\*decen*, Indg. *\*dekn̥*. *ainn n-(abstíl)* 'nomen (apostoli)' from *\*an-men*, Indg. *\*m̥n̥*.

*no beir* 'fert' from *\*beret*: Gr. *φέρει* Skr. *bhárat*.

In *eter etir* 'between' = Lat. *inter* *\*-ter* had in the first instance become *\*-ty*. Cp. *eriathar* under 2.

A short vowel combined with preceding  $\dot{i}$  ( $i\dot{i}$ ) and formed a sonantal vowel (cp. 3.). Nom. *aile cēle* acc. *aile n- cēle n-* beside nom. *fer* acc. *fer n-*.

1) If this explanation of the dat. sg. *tuaith* be right, the dat. *fiur céliu*, which we brought under 2. and 3. as instr. in original  $-ō$ , cannot at the same time be, as has been believed, the Indg. dat. form in  $-ō\dot{i}$  (Gr.  $-φ$ ). For it is not probable that  $-ō\dot{i}$  should have become  $-ō$ , while  $-ā\dot{i}$  became  $-a\dot{i}$   $-ī$ .

6. If a consonant (except *-m*, see 7.) still followed an original long final vowel, the vowel was shortened. So, too, were long vowels which had arisen by 'compensation lengthening'.

*athir* 'father': Gr. πατήρ. *siur* 'sister' from \**svi(s)ur*: Lat. *soror*, older *sorōr*.

Nom. *tuatha* 'peoples' from \**tōtās* \**teutās*: Goth. *þiudōs*, Osc. *scriptas*; cp. *mnā* 'women' = Skr. Ved. *gnās*. Voc. *ā firu* 'viri' from \**uirōs*: Goth. *vairōs*, Osc. Núvlanús. Compar. *laigiú* 'smaller' from \**lag-īōs*, see § 139.

Conj. *-air-ema* 'suscepiat' from \**emāt*: Lat. *emat*. Indic. *no chara* 'he loves' from \**carāt*, originally \**-a-īe-t*; conj. *ro-chara* from \**carāt*, orig. \**-a-īā-t*.

Long vowels by compensation lengthening. Acc. pl. *firu* 'men' *fāthi* 'poets' *cruthu* 'forms, shapes' from \**-ōs* \**-īs* \**-ūs*, orig. \**-o-ns* \**-i-ns* \**-u-ns*. Nom. *care cara* 'friend' (gen. *carat* dat. *carit*) from \**carant-s*. *fiche* 'twenty' (gen. *fichet* dat. *fichit*) from \**uicent-s*, orig. stem-form \**uiknt-* or \**uiknt-*. *tricha* 'thirty' (gen. *trichat* dat. *trichait* *trichit*) from \**tricont-s*. Cp. § 212.

7. Long vowels seem to have been early shortened before nasals (cp. Latin § 655, 4) and then to have been treated by 5. Conj. *do-ber* 'afferam, dem' from \**berām*: Lat. *feram* O.Bulg. *bera*, cpf. \**bherā-m*. Gen. *ech n-(aile)* 'equorum (aliorum)' from \**ekyōn* (Gr. ἑκων) or from \**ekyon* (cp. O.Bulg. *vǔkǔ*)? cp. the accidence. —

All the vowel shortenings and loss of vowels discussed in 1.—7., were caused by the development of the strongly expiratory accent at the beginning of words. Cp. 634. 684. 685.

8. *-m* became *-n* in prim. Keltic. This was often retained at the beginning of the following word, before vowel or media. Examples under 5. and 7. and in § 211.

9. *-t* was dropped. *no beir* from \**beret*. *for-tē s-fut* 'he will help' (1. pl. *for-tiasam*) from \**-stēkst* i. e. \**steigh+s+t*. Did the dental in original *-nt* remain? See § 76.

10. *-s* was dropped everywhere.

Vowel + *s*. *fer* 'man' from \**uiro-s* (5.). *tuatha* 'peoples' from \**tōtās*, *mnā* 'women' from \**bnās* (6.).

-ns. *fíru* 'viros' from \**uiron-s* (6.). *mí* 'month' (gen. *mís*) from \**mēns* : Gr. *μῆς*.

-ts -nts. *beothu* 'life' (gen. *bethad*) from \**-tūt-s*, *care cara* 'friend' from \**carents* (6.).

-ks. *rī* 'king' (gen. *rīg*) from \**rīss* \**rīks* : Gall. *-rīx*, Lat. *rēx*. *ail* 'rock, stone' (gen. *ailech* dat. *ailig*) from \**aileks*.

### § 658. Initials.

1. Just as *t* and *c* became *p̄* (written *th*) and *χ* (*ch*) in the body of a word after vowels (§ 514), spirants also arose initially after words ending in a vowel. This affection took place, before the final consonants had been dropped (§ 657). For no spirants show themselves where a final consonant did not originally stand. Thus we arrive at the following important conclusion for the investigation of the history of sounds : word-forms, after which spirants generally make their appearance, originally ended in vowels, and those, after which the tenues remained, originally ended in consonants. To these were added various innovations by transference of forms, and the law can still be observed with any consistency in our monuments only in groups of words which are syntactically closely connected. *ā thuath* 'O folk', *ā chara* 'O friend' : Gr. *ᾠ* Lat. *ō*. *dā charit* 'two friends', *dī thuath* 'two peoples' : Skr. *dvā*, *dvē*. *ro charus* s-pret. 'amavi', *ro* = Gr. *ῥο*. Cp. the list of the forms, behind which spirants appear for the tenues, in Windisch's Ir. Gram. § 92. Compare also the initial sound after the members of compounds : *oenchossid* 'one legged' from \**oino-* c., *so-thenga* 'eloquent' from \**su-t*.

*t* became *d* in pre-accentual syllables, when absolutely initial, e. g. *do-gáir* 'he calls', but *tó-gairm* 'a call'; *do-máthir* 'thy mother', but *co-t-máthir* 'with thy mother' *t-és-ēрге* 'thy resurrection', cp. Skr. *táva* Gr. *τῶς*). So also Mid. Cymr. *dy wlat* 'thy land' (*gwlat*), but *yth wlat* 'in thy land'.

In the same positions where the tenues became spirants, *s-* passed into *ś-* (*h-*) and *f-* was dropped (the muteness of the *f* is represented by *f̄*). *no śessam* 'or standing' : cp. Lat. *sistō*. *ā fír* 'O man'. Compare the transition of medial *s* to *h*, see § 576, and the loss of medial *u*, see § 174.



We saw in § 522 that *b*, *d*, *g* had become *b̄*, *d̄*, *ḡ* after vowels, while the letters *b*, *d*, *g* were retained in Old Irish writings. That this change was also effected in conditional initiality, that e. g. *ā dē* 'O god' was pronounced *ā d̄ē*, may be concluded from the modern orthography which also puts *bh*, *dh*, *gh* initially.

A similar relation existed between *siur* and *fuir* 'sister' from *\*sue(s)ōr* as between *s-* and *s̄-*. The form with *f-* stands regularly after words ending in a vowel. Cp. § 175.

2. We saw in §§ 212. 513 that *-nt-* and *-nc-* became *-nd-* and *-ng-* and the nasal disappeared, e. g. *cēt* pronounced *cēd* (Mod.Ir. *ceud*) 'hundred' = Cymr. *cant* Lat. *centum*; *ēc* pronounced *ēg* (Mod.Ir. *eug*) 'death' = Bret. *ancou*. Further by § 520, that *-mb-* and *-nd-* became *-mm-* and *-nn-* in O.Irish, e. g. *camm* 'crooked' = Gall. *cambo-*. Both previous stages occur also in the junction of connected words.

From gen. pl. *\*inna n-cert* 'of the rights', *\*inna n-tuath* 'of the peoples' (cp. *inna n-anmann* 'of the names' etc. §§ 211. 657, 5. 7. 8) arose *inna gert*, *inna duath*, generally written *inna cert*, *inna tuath* (like *ēc*, *cēt* instead of *ēg*, *cēd*); it was only in few cases in the O.Ir. period that account was taken of the change which had taken place, by the writing of the media. In Mod.Ir. orthography they write *gc-*, *dt-*, e. g. *na gceart* = O.Ir. (*in*)*na cert*. This phenomenon is called *eclipsis destituens* in Keltic grammar.

Gen. pl. *inna m-bō* 'of the cows' became *innu mmō*, *inna mō*, *inna n-dath* 'of the colours' became *inna nnath*, *inna nath*. The old spelling was however retained, and the spelling *-mb-* and *-nd-* also existed medially in the O.Ir. period beside the phonetic spelling. Cp. also *athconnarc* beside *athcondarc* 'I looked' (to Gr. *δέδορα*). This phenomenon is called *eclipsis nasalis* in Keltic grammar.

Gen. pl. *inna sūle* 'of the eyes' from *\*inna n-sūle*, just as medial *n* disappeared before *s*, e. g. in *gēis* 'swan', see § 212.

3. *s-* disappeared before *t*, e. g. *tiagaim* 'I stride, go': Gr. *στειχω*. See § 575.

## Germanic.

## § 659. Finals in Prim. Germanic.

1. Final long and short vowels underwent no reduction at this period.

\**fexu* n. 'cattle' Goth. *faihu*: Skr. *páśu*. \**berizi* 'thou bearest' \**beridi* 'he bears' Goth. *bairis bairip*: Skr. *bhárasi bhárati*. \**uhsin-i* loc. sg. of the st. \**uhsen-* 'ox' Goth. *auhsin*: cp. Skr. *ukśán-i*. \**uaiti*, older \**uaitē* 'he knows' Goth. *vait*: Gr. *οἶδε*. \**ulfi*, older \**ulfē* voc. 'wolf' Goth. *vulf*: Gr. *λύκε*. \**aba* 'of, from' Goth. *af* (*ab-u*): Gr. *ἀπο*.

Rem. Some assume that all short vowels except *-u* were already dropped in prim. Germ. in unaccented syllables. But then \**berizi beridi* must necessarily appear in Goth. as \**bairs bairp* and the 2. sg. imper. \**vardi* = Skr. *varáyā* Indg. \**mortē* as \**vardi* (whereas it is *fra-vardei* 'destroy').

\**frijōndi* fem. 'friend' Goth. *frijōndi*: cp. Skr. part. fem. *tudatī* 'tundens'. \**zumō* 'homo' Goth. *guma*: Lat. *homō*. Nom. acc. pl. neut. \**iukō* 'yokes', Goth. *juka* beside *pō*: cp. Lat. *oppida oppida*, Skr. Ved. *yugá*. Nom. sg. fem. \**ainō* 'una' Goth. *aina* beside *ainō-hun sō*: Gr. *οὐνή* 'the ace on dice'.

2. In like manner *-ai* = Indg. *-oi* and *-ai* suffered no change. Nom. pl. \**blindai* 'blind' Goth. *blindái* OHG. *blinte*: cp. Gr. *καλοί*. Loc. sg. \**ulfaiz* (\**ulfa-* 'wolf'), OHG. *wolfe* O.Icel. *ulfe ulfi*: cp. Gr. *οἴκου* 'at home'.

3. *-ōz*, *-ōz* became *-ai*, *-au*. Dat. sg. fem. \**zēbōz* 'to the gift' became \**zēbāz* Goth. *gibái*: cp. Gr. *χώρα* (cp. also dat. sg. Goth. *þizái* and Skr. *tásyāi*). OHG. *wolfe* (2) was also probably a dat. form, which arose from \**ulfōz*: Gr. *λύκω*. \**axtōz* 'eight' became \**axtau* Goth. *ahtáu* OHG. *ahto*. Loc. sg. \**sunōz* (*sunu-* 'son') became \**sunau* Goth. *sunáu*. It is more uncertain whether Goth. *anstái* (st. *ansti-* f. 'favour') came from \**anstēz* (§ 645 finals 1.)

These shortenings were carried out in absolute finality and before initial consonants. Cp. \**flaizē* (O.Icel. *fleire*) fr. \**flēzē* § 614.

4. Vowels remained unshortened before nasals, liquids, ex-

plosives and spirants, e. g. nom. sg. \**uulfaz* nom. pl. \**uulfōz* : Skr. *vfkas vfkās*.

5. *-m* became *-n* and thus fell together with Indg. *-n*. Acc. sg. \**uulfa-n* \**sunu-n* Goth. *vulf sunu*, cp. Goth. *þan-a* 'the' : Skr. *vfka-m sūnū-m tā-m*. Gen. pl. \**zēbōn* Goth. *gibō* : cp. Av. *vanam* 'of trees'. Indg. *-n* e. g. in nom. sg. \**raþiōn* 'account' Goth. *raþjō* : cp. Gr. *μήκων* 'poppy'. Later *-n* dropped out after short vowels, whereas it was only reduced in some way or other after long vowels. \**uulfa-n* \**sunu-n* became \**uulfa* \**sunu*, but \**zēbōn* \**raþiōn* became \**zēbō* \**raþiō*. Cp. § 214 p. 182.

*-rm* (through the intermediate stage *-rn*) probably became *-r* in prim. Germ. For Goth. acc. *brōþar* 'fratrem' probably arose from \**bhrátorm*. See § 645, finals 2.

6. Explosives dropped out. It cannot be determined whether they had previously undergone all the stages of sound-shifting (§ 527 ff). If we assume that they disappeared after undergoing complete sound-shifting, the prim. Germ. changes are to be exhibited as follow: — 3. sg. opt. pres. \**bérai(ð)* 'he may bear' Goth. *bairái* : Skr. *bhárēt* Indg. \**bhéroi*t. 3. sg. opt. pf. \**béri(þ)* Goth. *bēri* : cp. Lat. *velit*; the ending *-i-t* was a new formation for Indg. *-iē-t*, see the accident. 3. sg. \**iē(ð)* 'went', Goth. *iddja* : Skr. *á-yāt*. 3. pl. opt. pres. \**béraiñ(d)*, probably a Germ. new formation, Goth. *bairáin-a* (the particle *-ō* may have been first added after the dropping of the dental) : cp. Gr. *φέρων* subsidiary form of *φέρουεν*. 3. pl. opt. pf. \**bériñ(þ)*, certainly a Germ. new formation (see the accident), Goth. *bēreïn-a*. 3. pl. indic. pf. \**bériñ(þ)*, Goth. *bērun*; *-un(þ)* = Indg. *-ñt*, § 226. \**téxun(ð)* 'ten', Goth. *taihun* : cp. Lith. st. *dēszimt-*; the same ending in Goth. *niun* 'nine', but this is probably a Germ. new formation after the word for ten, since judging from the other Indg. languages we should rather expect \**niu* (= \**neun*) in Goth. (§ 179).

Goth. *þamma* 'to the' may have been ablative, prim. f. \**tosmēd* (cp. *hvammē-h*), in which case OHG. *demu* would be fr. \**tesmōd* : Skr. *tásmāt*; but the prim. Germ. ending *-ē -ō*

might equally have been an instrumental ending, Indg.  $-ē -ō$  (Goth. instr.  $þē$ ). The same doubt exists in the case of Goth. *vulfa*, which can be traced back to Indg.  $*ulqēd -ōd$  abl. and to  $*ulqē -ō$  instr. and possibly was a continuation of both Indg. cases at the same time. Cp. the accidence.

7. Indg.  $-s$  and  $-z$  may for the most part have been levelled to  $-s$ , when Verner's law began to operate. By this law, the double endings like  $-ōz$  and  $-ōs$  in the nom. pl. of Indg.  $o-$  and  $a-$ stems then arose. See § 583. Was  $-z$  in the nom. sg. already at that period generalised?

$-ts$  became  $-ss -s$ ,  $-ks$  became  $-χs$  according to § 527. One said e. g.  $*fōss$   $*fōs$  'foot' (Gr. Dor.  $πῶς$ , Indg.  $*pōts$ , stem  $ped-$ , cp. 311 p. 249) and  $*meluxs$  'milk' fr.  $*melχs$  (§ 628); Goth. *fōtus* and *mīluks* were new formations.

#### § 660. Finals in Gothic.

1. With the exception of  $u$  all other prim. Indg. final short vowels, or short vowels which became final in prim. Germ. were dropped and also in the final syllables of polysyllabic words when followed by a single consonant other than  $i, u$  (§ 659, 1. 4. 5. 7).

2. sg. *bairis* fr.  $*birizi$ . 3. sg. *vāit* fr.  $*vaīti$ . Voc. *vulf* fr.  $*ulfi$ . 2. sg. imper. *fra-vardei* fr.  $*wardi(i)$ . *af* fr.  $*aba$ . But *faihu*: § 659, 1.

Acc. *vulf* fr.  $*ulfa$ . Acc. *gast* 'guest' fr.  $*gasti$ . But *sunu*. § 659, 5.

For the different treatment of the  $u$  in *triu* 'stick, prop' fr.  $*triu(a-n)$  and *lēv* 'opportunity', fr.  $*lēu(a-n)$  cp. § 179 p. 156.

Nom. sg. *vulfs* fr.  $*ulfa-z$ . Nom. sg. *gasts* fr.  $*gasti-z$ . Nom. pl. *gumans* 'homines' fr.  $*zuman-iz$ : cp. Gr.  $τέκτων-εσ$ . Nom. pl. *sunjus* fr.  $*suniu-(i)z$  (cp. § 179 p. 156). Nom. pl. *gasteis* fr.  $*gasti(i)z$ . Adv. *mins* 'less' fr.  $*minns$ , further  $*minniz$ , cp. adj. *minniz-a* gen. *minniz-ins*. But with  $u$  nom. sg. *sunu-s*, 3. pl. *bērun*; with double final consonants acc. pl. *vulfa-ns*, *gasti-ns*.

Rem. 1. The acc. *brōþar* would also form an exception, if  $-n$  was dropped already in prim. Germ. See § 659, 5.

Rem. 2. So far as the vowels in final syllables are concerned the language on Norse runic inscriptions is more archaic than Goth. Acc. sg. Neut. *horna* 'horn' = Goth. *haur̥n*. Nom. sg. *dagar* 'day' = Goth. *days*. Nom. sg. *gastir* 'guest' = Goth. *gasts*. Nom. pl. *dohtr-ir* 'daughters'.

When Consonant + nas., liquid, *ǰ* or *ȝ* preceded the vowel, the nas., liquid, *ǰ*, *ȝ* became sonantal (Samprasāraṇa):

Nom. \**ēbna-z* acc. \**ēbna(-n)* 'even', nom. \**maiþma-z* acc. \**maiþma(-n)* 'present', nom. \**akra-z* acc. \**akra(-n)* 'acre', nom. \**fuzla-z* acc. \**fuzla(-n)* 'bird', respectively became *ibȝs ibȝ*, *máiþm̥s máiþm̥*, *akȝs akr*, *fugȝs fugȝ*, in like manner gen. \**faðraz* 'father's, loc. *faðri* (= Gr. *πατρός πατρι*) became *faðȝs faðȝ*. We do not know however whether these forms remained disyllabic in Goth. or whether they had become monosyllabic by further reduction (*ibns ibn* etc.). Cp. §§ 215. 277. 635.

2. sg. imper. *hiri* 'come hither' fr. \**hir-ǰi*, older *-ǰe* (2. pl. *hirǰiþ*): Gr. *κλαῖε* fr. \**κλαF-ε*. Acc. sg. masc. *hari* 'army' fr. \**χar-ǰa(-n)*. Nom. acc. sg. neut. *kuni* 'race, sex' fr. \**kun-ǰa(-n)*. Nom. *skadu-s* acc. *skadu* 'shadow' fr. \**skadȝa-z -ȝa(-n)*, as is to be concluded from the derivatives *ufar-skadȝjan* 'to overshadow' and from OHG. *scato* gen. *scatawes*.

Rem. 3. Nom. like *harȝis* 'army', *alȝis* 'alius' present difficulties. Forms in *-ǰo-s* and *-ǰi-s* had descended from pre-Germanic times, cp. Lith. *naũ-ja-s* 'new' and *mėdīs* 'tree' (fr. \**mėd-ǰi-s* § 147 p. 131). See § 84 rem. 1. I believe that both categories first of all regularly fell together: \**alȝa-z* (Lat. *aliu-s*) became \**aliz* and \**alȝi-z* (O.Lat. *alis*) became \**aliz* (with the latter compare \**þwag-* fr. \**þwag-* § 180 p. 158). Goth. then re-introduced the *ǰ* (*alȝis*) after the gen. *alȝis* on the analogy of the (regular) formal equality of the nom. *vilȝeis* ('wild') and gen. *vilȝeis* etc. Did *nȝuȝis* 'new' appear for \**nivis*?

2. Prim. Indg. long final vowels, or those which became final in prim. Germ., were shortened in the final syllables of polysyllabic words (§ 659, 1. 6).

Nom. *friȝondi* fr. \**friȝōndē*. *guma* fr. \**ȝumō*. *baira* 'I bear' fr. \**berō*; Gr. *φέρω*. *áina* fr. \**aĩnō*. Acc. *hvan-a* 'whom?' fr. \**χuan-ō*, cp. *hvan-ō-h*; *-ō* particle. *hwamma* fr. \**χwammē*, cp. *hwammē-h*. *bēri* fr. \**bērī*.

3. Prim. Germ. *-aǰ* = Indg. *-oǰ -āǰ -ēǰ* (?) *-oǰt* (§ 659, 2. 3. 6) and prim. Germ. *-aȝ* = Indg. *-ōȝ* (659, 3) remained unchanged: *blindái*, *gibái*, *anstái* (?), *bairái*, *ahtáu*.

4. The reduced nasal (§ 659, 5) disappeared after long vowels, but the long vowel remained unchanged. Nom. sg. fem. *raþjō* fr. \**raþjō̃*. Gen. pl. *gibō* fr. \**ʒebō̃*. Nom. acc. sg. neut. *hairtō* 'heart' fr. \**χertō̃*, cp. nom. acc. pl. *hairtōn-a*. Gen. pl. *vulfē* fr. \**uulfē̃*. Nom. sg. fem. *managei* 'multitude' fr. \**manazj̃*, cp. gen. sg. *managein-s*.

Rem. 4. Acc. sg. *giba* was the nom. form which supplanted \**gibō* (cp. Skr. *āśvā-m*). 1. sg. *tavida* 'did' was the form of the 3. sg. = prim. Germ. \**-dēd*, which was supplanted by *-dō* fr. \**-dō-m* (Norse run. *tavido*), in like manner also in Norse the real old 1. sg. in *-dā* later gave way to the form of the 3. sg. in *-de di* (Noreen Aisl. and Anorw. Gramm. § 449).

5. *-b̃, -d̃, -ʒ, -z* became voiceless (for *-rz* see 6.). *af* 'of, from' fr. \**ab(a)*. *bairiþ* 'bears' from \**birid(i)*. Acc. sg. *vig* 'way', read *viχ*, fr. \**uiz(a-n)*. Nom. sg. *vulfs* fr. \**uulfa-z*, pl. *vulfōs* fr. \**uulfōz*. *bairis* 'bearest' fr. \**biriz(i)*. This change regularly took place partly in absolute finality, and partly before voiceless spirants (cp. nomin. sing. *liufs* 'dear' from \**liuþs*). See §§ 531. 539. 583.

We conjectured in these passages that in like manner the voiced explosives became voiceless, even though the writing does not exhibit them as voiceless sounds, e. g. *band* 'he bound'.

6. *-rz* became *-rr -r*. Nom. *vair* 'man' fr. \**uir(a)-z* (gen. *vairis*), correspondingly *bair* 'son' *stiur* 'bull', *kāisar* 'emperor', *anþar* 'second', *unsar* 'our'. Exceptions are adjectives like *hōrs* 'adulterous' (Eph. V. 5) *skeirs* 'clear' in which the *-s* was restored to distinguish them from the neuter. Cp. footnote on p. 221.

Rem. 5. Compare on the other hand the adv. *vairs* 'worse' fr. \**uirsiz* (adj. *vairsiz-a*).

§ 661. Finals in West Germ. especially in OHG.

1. Final long vowels, inherited from prim. Germ., were shortened in prim. West Germ. (§ 659, 1. 6). OHG. *biru* 'I bear' fr. prim. Germ. \**berō*. OHG. instr. sg. *tagu* fr. prim. Germ. \**daʒō*, st. \**daʒa-*. Ags. nom. sg. fem. *ʒiefu* 'gift' fr. prim. Germ. \**ʒebō* (OHG. *geba* is the acc. form). OS. nom. acc. pl. neut. *fatu* 'vats, vessels' fr. prim. Germ. \**fatō*. Ags. *ðon-e* OS. *than-a* 'the' (acc.) fr. prim. Germ. \**þan-ō*. Ags. nom. sg. fem. *hæð* 'field, heath', older \**haiþi* (2.), fr. prim. Germ. \**χaiþi* (Goth. *háiþi*). OHG. 3. sg.

opt. pf. *zigi* 'he may have accused' (1. sg. indic. pres. *zihu* 'I accuse') fr. prim. Germ. *\*tiz̄i(þ)* (Goth. *taihi*).

2. After the completion of this process the West Germ. law of syncope operated (§ 635) according to which final short vowels or short vowels followed by a single consonant disappeared in the final syllable of disyllabic words (with the accent on the first syllable), when the first syllable was long; they likewise disappeared in trisyllabic and polysyllabic forms when the penult had the secondary accent. The purely regular relation was often disturbed through new formations made by levelling.

OHG. *sumu* 'son' = Goth. *sumu-s*, *fihu* 'cattle' = Goth. *faihu*, but *fluot* 'tide' = Goth. *flōdu-s*; the forms *sun*, *lid* (Goth. *lihu-s* 'member') etc. were new formations after forms like *fluot*. OHG. *chumi* 'a coming' = Goth. *qums* prim. Germ. *\*kumi-z*, but *gast* 'guest' = Goth. *gasts* prim. Germ. *\*gasti-z*; *stat* 'place, stead' = Goth. *staps* prim. Germ. *\*staði-z* (OS. still *stedi*) etc. were new formations. Here are also to be compared the compounds like OHG. *situ-līh* 'moral' (*situ*, Goth. *sidu-s*) *witu-hopfo* 'hoop' i. e. 'wood-hopper' (*witu* 'wood') beside *lust-sam* 'pleasant' = Goth. *lustu-sams* 'wished for'; *steti-got* 'genius loci' *slegi-rind* 'a bullock to be killed' (OS. *slegi* 'a slaying') beside *gast-hūs* 'inn' (cp. Goth. *gasti-gōdei* 'hospitality').

OHG. *wolf* = Goth. *vulfs* prim. Germ. *\*wulfa-z*, *sceffin* 'sheriff', *drigil* 'servant-boy', *irdin* 'earthy' = Goth. *airþeins* prim. Germ. *\*irþina-z* etc. were regular, and after them were formed such as *tag* 'day', *weg* 'way'. In like manner also neut. *joh* 'yoke' (prim. Germ. *\*iuka(-n)*) after *wort* 'word' etc. Cp. *tago-līh taga-līh* 'daily' *wego-wīso wega-wīso* 'sign-post' with *wīn-garto* 'vineyard' *himil-rīhhi* 'kingdom of heaven'.

Prim. Germ. *\*gasti-i-z* 'guests' regularly became *\*gastiz*, through the intermediate stage *\*gastiiz*, (after this *\*þri-z* 'three') which gave OHG. *gesti* (5. 6.).

After *hilf* 2. sg. 'help' fr. *\*hilfi* were formed such as *bir* 'bear' for *\*biri* (Gr. *φῑρε*); prim. Germ. *\*nazi-i* 'make whole' (Goth. *nasei*) became *\*nazi*, thence (by 6.) *neri*. After *bant* 'he bound' (prim. Germ. *\*bandi*, Skr. *babāndha*) *chōs* 'he chose'

(prim. Germ. \**kausi*) etc. were formed such as *was* 'he was' *nam* 'he took'. 3. sg. indic. pres. *birit* fr. \**biridi* (Goth. *bairiþ*). Instr. pl. *blintēm* 'blind' fr. \**blindaj-mi* (Goth. *blinddim*). *aba* 'from': Gr. *ἀπο*.

1. sg. *biru* 'I bear'; forms like *hilfu* were either formed after *biru* or had regularly remained unshortened before enclitics and then came to be used in other cases (cp. Paul in Paul-Braune's Beitr. VI 160). Instr. *tagu*; after this and the trisyllabic forms, in which the case endings had a secondary accent and therefore remained (§ 689), arose forms like *sēwu* (nom. *sēo* 'sea'); in this the effort not to leave the form phonetically equal to that of the nom. and acc., might have formed a factor. Ags. preserved the regular double forms in the nom. sg. of the Germ. *ō*-stems: *ziefu* 'gift' (Goth. *giba*), but *sorz* 'sorrow' (Goth. *saurga*) *firen* 'sin' (Goth. *fairina* 'debt'); OHG. had the regular forms in *buoz* 'improvement' (Goth. *bōta* 'benefit') *kuningin* 'queen' adj. *blint* 'caeca' (Goth. *blinda*) etc.; the forms *buoza kuninginna geba* etc. beside these were accusatives. In the nom. acc. pl. neutr. the regular state shows itself in Ags. OS. *fatu* 'vats, vessels' against Ags.OS. *word* 'words' (Goth. *vairda*); on the other hand OHG. *faz* a new formation after *wort*. Ags. *ðon-e* OS. *than-a* 'the'. Ags. *hæð* 'heath' = Goth. *háiþi*, beside this OS. *thini* 'maid' = Goth. *þivi*. OHG. 3. sg. opt. *zigi*, but also *hulfi bāri* etc.; that the regular forms \**hulf* \**bār* were put aside, was due to the influence of the other persons of the same mood (cp. the 3. sg. opt. of the Alemanic weak preterites like *salbōti neriti mohtī*, where the influence of the other persons is still clearer, cp. 2. sg. *salbōtis* 1. pl. *-im(es)*).

In all the cases named it is a question of loss of a vowel by which the word lost one syllable. On the other hand forms like OHG. *eban* 'even' *acchar* 'acre, field' *fogal* 'bird' had experienced samprasāraṇa: the first form e. g. had passed through the stages \**ēbnaz* \**ēbŋz* \**ēbŋ* *eban*. See §§ 215. 277. 635. 660,1. Here perhaps also belong forms like nom. sg. masc. *gelo* 'yellow' (gen. *gelawes*) from \**zelya-z* (cp. Lat. *helvos*), nom. acc. sg. neut. *melo* 'meal' (gen. *melawes*) from \**melya(-n)*.



3. The  $-a\mu$ , which arose from  $-\delta\mu$  in prim. Germ. (659, 3), became  $-\delta$  in West Germ. at the same time with the other  $a\mu$  in unaccented inflexional syllables. Hence OHG. OS. *ahto* 'eight' = Goth. *ahtáu*. The shortening of the  $-\delta$  took place according to 6.

4. The weakened nasal of prim. Germ. forms as nom. sg. \**χanō<sub>n</sub>* 'cock' (beside \**χanō* = Goth. *hana*) gen. pl. \**đazō<sup>n</sup>* 'of days' (beside \**đazē<sup>n</sup>* = Goth. *dagē*) nom. sg. \**manazē<sup>n</sup>* 'multitude' (Goth. *managei*) was dropped in prim. West Germanic: OHG. *hano*, *tago*, *managi menigi*. The shortening according to 6.

5. Of the prim. Germ. postvocalic  $-s$  and  $-z$  the former remained in West Germ., e. g. OS. *dagos* = Goth. *dagōs*. The latter was preserved as  $-r$  when closely connected with a following word, as in OHG. *ir* = Goth. *is*, in other cases it was dropped, e. g. OHG. OS. nom. *sunu* = Goth. *sunus*. See § 583. On the shortening of the long vowels after the loss of the  $-z$  see 6.

Rem. The  $-s$  of the OHG. 2. sg. opt. *berēs* (prim. Germ. \**bēraiz*, Goth. *bairáis*) and of the 2. sg. indic. *biris* (prim. Germ. \**bērizi*, Goth. *bairis*) is due to the pronoun *du* prim. West Germ. \**pū* being frequently attached enclitically. The sibilant was pronounced voiceless before  $\bar{p}$ - and  $\bar{f}$ - became  $t$ - (cp. Goth. 2. sg. perf. *last* from \**laspa*, §§ 541, 1. 553, 1). Thus arose OHG. *berēstu*, *biristu*, correspondingly also opt. *bārīstu* and Indic. *neritōstu*. From these were then made by false etymological division *birist du (ēhu)* etc., in which process the 2. sg. *bist*, which had already previously come into existence for *bis* after the analogy of the preterite-present *kanst tarst*, helped to set the model.

But beside these still appear in OHG. *wili* = Goth. *vileis* (Lat. *velis*), *bāri* = Goth. *bēreis* etc., which represent the undisturbed development of the West Germanic ending  $-iz$  (cp. von Fierlinger Kuhn's Ztschr. XXVII 430 ff.).

6. Later than the shortening mentioned under 1. occurred the shortening which was experienced in polysyllabic words by the long vowel, after which  $-z$  (4.) or  $-z$  (5.) had been dropped, and by  $-\bar{e}$  and  $-\bar{o}$  (§ 83 p. 79) from  $-a\dot{\mu}$  and  $-a\mu$ , which were either already final in prim. Germ. or had become so after the loss of  $-z$  (5.), as well as by the  $-\bar{i}$  (2.) which had arisen from  $-i\dot{\mu}$ . This shortening also, as it seems, occurred already in the period of the West Germ. prim. community.

OHG. *hano* from \**hanō*(<sup>n</sup>). *tago* from \**dagō*(<sup>n</sup>). *managi menigi* from \**manazū*(<sup>n</sup>); the form *managī* existing beside this had its *-ī* after the analogy of the other cases (*managīn*).

OHG. 2. sg. *wīli* from \**wīlī*(*z*). *bāri* from \**bārī*(*z*). Nom. pl. *gesti* 'guests' from \**gasti*(*z*) prim. Germ. \**gastiiz* (Goth. *gasteis*); cp. beside this *drī* 'three' (Goth. *þreis*). Nom. pl. masc. *taga* 'days' = Goth. *dagōs*. Nom. pl. *geba* 'gifts' = Goth. *gibōs*; I leave it undecided whether the form *gebā* had its long vowel from other cases with long vowel or from once present secondary (originally oxytoned) forms in *-ōs* (§ 583).

OHG. nom. pl. masc. *blinte* 'blind' = Goth. *blindái*; beside this *dē* 'the' = Goth. *þái*; in *andrē*, which is met with twice, the *-ē* was transferred from *dē*. Loc. sg. *tage* from prim. Germ. \**ðazai* (cp. § 659, 2. 3). 3. sg. opt. *bere* 'he may bear' from prim. Germ. \**berai*(*ð*) = Goth. *bairái*. *ed-do* 'or' : Goth. *aiþ-þáu*. *ahto* 'eight' = Goth. *ahtáu* Skr. *aṣṭáu*. *suno* 'of the son' from prim. Germ. \**sunauz* = Goth. *sunáus*.

OHG. 2. sg. imper. *neri* 'make whole, heal' from \**nazī*, prim. Germ. \**naziī* Indg. \**noséje*.

### § 662. Initial sounds.

1. Prim. Germ. *χ* from *k* seems to have undergone the transition to *h* first initially before vowels, perhaps already in the prim. Germ. period. \**hunda-n* 'hundred' Goth. *hund* OHG. *hunt* etc. See § 529.

2. *wr-*, *wl-* became *r-*, *l-* and *hw-*, *hr-*, *hl-*, *hn-* became *w-*, *r-*, *l-*, *n-* in OHG., e. g. *riχ* 'stroke' = Goth. *vrits*; *waz* older *hwaz* 'what' = Goth. *hva*. See §§ 178. 529.

3. Notker's († 1022) law of initials, the so-called canon Notkerianus. For *d-*, *g-*, *b-* (= prim. Germ. *þ-*, *z-*, *ǃ-*), which remained after vowels, liquids and nasals, were put *t*, *k-* (*c-*), *p-* after tenues, after voiceless *-d*, *-g*, *-b* and after voiceless spirants as well as in absolute initiality. *eines tritten, dih tritten* beside *demo dritten*. *ih tih* beside *in dih*. *mag ter* beside *dū daz*. *gab cold, des coldes, daz cold* beside *demo golde*. *sīnes pruoder* beside *mīn bruoder*. *sālig pin, ih pin* beside *dū bist*. Since *d*, *g*, *b* were pronounced voiceless and *t*, *k*, *p* without aspi-

ration, it is here merely a question of the various grades of stress with which the sounds were produced<sup>1)</sup>.

I cannot feel convinced that Nother's law only exhibits an arbitrary orthographical adaptation of fluctuating spelling (cp. Steinmeyer Ztschr. f. deutsch. Altert. XVI 139, Scherer Z. Gesch. d. d. Spr.<sup>2</sup> 143), but believe that there existed a real observation of an actual difference.

### Baltic-Slavonic.

#### § 663. Finals in prim. Balt.-Slavonic.

The following changes seem to belong to this period.

1. *-ōm -ōn* became *-ūn* (cp. 2.), whence Lith. *-ū* O.Bulg. *-y*, e. g. Lith. gen. pl. *dėvū* (*dėvū*) 'deorum', O.Bulg. nom. sg. *kamy* 'stone'. See § 92.

2. *-m* became *-n*, e. g. Lith. acc. sg. *tā*, dialectically *tan* *tōn* 'the', Indg. *\*to-m*, O.Bulg. *sūn-ěsti* 'comedere', Indg. *\*som*. See §§ 217. 218. 219.

3. *-t* and *-d* were dropped. 3. sg. opt. Lith. *te-vežē* O.Bulg. *vezi* (Lith. *veži* O.Bulg. *veza* 'I drive, ride') = Skr. *vāhēt* Indg. *\*ueghoi-t*. O.Bulg. 3. sg. aor. *veze* = Skr. *vāhat* Indg. *\*ueghe-t*, 3. pl. aor. *veza* = Skr. *vāhan* Indg. *\*uegho-nt*. Lith. nom. acc. sg. neut. *vėžā* (see Kurschat Gramm. d. lit. Spr. § 1345) from *\*vežant*, cp. Gr. *φέρον* from *\*φεροντ*. O.Bulg. *to* 'the' = Skr. *tād* Indg. *\*tó-d*. It is less certain that the gen. sg. Lith. *viško* O.Bulg. *vlūka* 'of a wolf' corresponds to the abl. Skr. *vfkād* Lat. *lupō(d)*, see footnote to page 108.

Rem. The assumption of some scholars, that *-r* was dropped in the period of the Balt.-Slav. prim. community, is exceedingly uncertain. Lith. *motė* 'wife' O.Bulg. *mati* 'mother' and Lith. *sesė* 'sister': (Skr. *mātā*

1) With our sound-law is compared a law which obtains in the middle and south Italian dialects as also in Sardinian, according to which we have e. g. *sas cosas*, but *una gosa* (like *conosco: formiga*), *sos poveros*, but *su boveru* (like *ispingo: pobulu*), *sos tempos*, but *su dempu* (like *postu: istadu*) (Schuchardt Verhandl. der Leipz. Philolog.-Versamml. 1872 p. 208 and Romania III 1 ff.). Cp. also French *gras*, which had arisen from *crassus* after vowels (Neumann Ztschr. f. rom. Phil. VIII 255), and O.Ir. *inna gert*, *inna duath* (§ 658, 2).

*svásā*) prove nothing at all, cp. § 645, finals 4. That O.Bulg. nom. *voda* 'water' is identical in the ending with Gr. ὕδωρ and voc. *brate* 'brother' with the ending in Gr. σῶρες, and that the loss of *-r* in the former case caused the transition to the *ā*-declension (acc. *voda* etc.), and in the latter case to the *o*-declension (nom. acc. *bratū* etc.), are mere hypotheses.

§ 664. Finals in Baltic, especially in Lithuanian.

1. Final short vowels, except *-u*, were dropped under certain conditions which are not clear. Lith. 3. sg. *ėsti* and *ėst* 'is': O.Bulg. *jesti* Gr. ἔσσι. Instr. sg. *aki-mi* and *aki-m̃* (nom. *aki-s* 'eye'): cp. O.Bulg. *paŭ-mi* (*paŭ* 'way') Skr. *sānē-mi* 'from of old, olim'. *sukū-si* and *sukū-s* 'I turn myself'. 2. pl. *vėža-te* and *vėža-t* 'ye drive, ride': O.Bulg. *veze-te* Gr. φέρετε. Voc. sg. *mótyna* and *mótyn* (nom. *mótyna* 'mother'): O.Bulg. *ženo* 'O wife' Gr. νύμφη. From *pirmà* adv. 'before' arose the preposition *pirm̃* 'before'. The latter form shows that these shortenings took place in conditional finality.

*-u* suffered such a loss nowhere, as it seems. Neutr. *gražū* 'beautiful' (masc. *gražū-s*): cp. Gr. ἡδύ. O.Lith. loc. pl. *akisū* (*aki-s*): cp. O.Bulg. *paŭ-ch-ū* Skr. *āvi-ṣu* (*āvi-ṣ* 'ovis').

Thus disappeared dialectically also by 3. the *-i*, which had been shortened from *-ī*, in the feminine forms *tó-ji* 'the same' *áugusi* part. pret. (to *áugu* 'I grow'): *tój áugus*.

2. *e* was dropped in the ending *-es* in a prehistoric period of Lithuanian. Nom. pl. *ākmens* 'stones', *dūkters* 'daughters' *dėszimts* and *desziimts* 'decades': O.Bulg. *kamen-e* from *\*-es*, Gr. θωματέω-ες, O.Bulg. *deset-e*. Gen. sg. *akmeņs*, *dukteņs*: O.Bulg. *kamen-e* (§ 665, 4), O.Lat. *salūt-es* class. *salūt-is* (§ 81 rem. 1).

At a later period *a*, *i*, *u* also disappeared before *-s*.

*sēna-s* and *sēns* 'old' (on the accentuation cp. § 691 rem.), *dėva-s* and *dėvs* 'god': Skr. *sāna-s* *dėvā-s*. This shortening of the nom. sg. of Indg. *o*-stems is more frequent in some Lith. dialects than in others, but seems nowhere to be entirely wanting. I conjecture that it had its beginning in forms of three or more syllables like *óbūla-s* 'apple' *āvina-s* 'ram' and participles in *-dama-s*.

*-i* disappeared only in forms of three or more syllables. Instr. pl. *akiim̃s* beside *akim̃s*, *mergōms* beside *mergom̃s* (*mergā* 'girl'): cp. Skr. *-bhiṣ*.

So also *u*. Dat. pl. *vilkāms* from O.Lith. *vilkamus* (cp. § 691 rem.). The form may be identical with O.Bulg. *vľukomŭ*, see the accidence.

3. Long vowels and also *ĕ* and *ŭ* were shortened in final syllables, if they had the broken accent (§ 691); see Leskien Archiv. f. slav. Phil. V 188 ff. Since *a* appears for *ō*, it may be assumed that this shortening took place, when *ā* or at least very open *ō* was still pronounced for *ō* (cp. § 108).

Nom. sg. fem. *gerà* 'bona' from \**gerā*, cp. the compound form *geró-ji*, so too *tà* 'the' beside *tó-ji*: cp. Gr. *χώρα*. Instr. sg. fem. *gerà* beside *gerá-ja*, so too *tà* beside *tá* (the latter originally only proclitic); the ending *-ā* from \**-ām*. Acc. pl. fem. *geràs* beside *gerás-ias*, so too *tàs* beside *tás* (the latter to be judged like *tá*); *-ás* from \**-āns*. Nom. sg. fem. *patì* 'wife, spouse' from \**patī*: cp. Skr. *dēvī* 'goddess'. Nom. acc. du. *naktì* (*naktì-s* 'night') *žmogù* (*žmogù-s* 'man') from \**naktī* \**žmogū*: O.Bulg. *nošti* (*nošti* 'night') *syny* (*synŭ* 'son'). 3. sg. fut. *bùs rìs* beside 1. sg. *búsiu* 'I shall be' *rýsiu* 'I shall swallow'. Nom. pl. masc. *gerì* beside *gerĕ-ji* (beside this strangely *tĕ*): cp. Gr. *καλοί, τοί*. Nom. acc. du. fem. *gerì* beside *gerĕ-ji*, so also *dvì* 'two': Skr. *áśvĕ*, *dvé*, Indg. *-aĭ*. Instr. sg. masc. *gerù* beside *gerŭ-ju*: cp. Lat. *modo*, Indg. *-ō*. Nom. acc. du. masc. *gerù* beside *gerŭ-ju*, so also *dù* from \**dvŭ* (§ 184): cp. Gr. *ἴππω, δά-δεκα*. 1. sg. *sukù* 'I turn' beside the reflex. *sukù-si sukŭ-s* (1.).

Rem. Compare the retention of long vowels with slurred accent in gen. sg. *anō* 'illius', gen. pl. *mergŭ* 'puellarum' gen. sg. *mergōs* 'puellae', gen. sg. *naktĕs* etc.

Such shortening also before *u*, *ĭ*, *r*, *l+s*. It shows itself here by the broken accentuation passing into the slurred. Compar. *geriaūs* adv. 'better' beside *geriāusiai* 'best'. 3. sg. fut. *gaūs*, *kelaūs*, *pa-leīs*, *geŕs*, *keĭs* beside 1. sg. *gáusiu* 'I shall get', *keláusiu* 'I shall travel', *pa-léisiu* 'I shall let loose', *gérsiu* 'I shall drink', *keĭsiu* 'I shall raise'. Cp. the author Lit. Volksl. u. Märch. p. 315, Bezzenberger in his Beitr. X 202 ff., and § 691 rem. below.

4. Prim. Balt.  $-\bar{o}\bar{i}$   $-\bar{a}\bar{i}$  became  $-ui$   $-ai$ . Dat. sg. masc. *vil̃kui* : Gr.  $\lambda\acute{\upsilon}\kappa\omega$ . Dat. sg. fem. *rañkai* 'to a hand' *tai* 'to the' : Gr.  $\chi\acute{\omega}\rho\alpha$ ,  $\tau\eta$  (Dor.  $\tau\tilde{\eta}$ ). With this compare *vilkaĩs* § 148.

5. Assimilation of final nasals to explosives and spirants of different organs, as *iñ k̃ta* 'in alium' *im̃ p̃ona* 'in dominum'. The treatment of  $-n$  (= Indg.  $-n$   $-m$ ) in other respects has already been discussed in § 218.

6.  $-s$  became assimilated to following  $sz$ - and  $\check{s}$ -. *vėnaszovė* 'one shot' = *vėnas szovė*. *tókiožuvys* 'such fishes' = *tókios žuvys*. So also  $s$ - following  $-sz$ . *asiųsiu* 'I shall send' = *asz siųsiu*. *isvėto* 'out of the world' = *isz svėto*.

7. Of the numerous other final changes of the Lithuanian dialects, suffice it here to mention the shortening in certain districts of  $\bar{o}$ ,  $\acute{e}$ ,  $y$ ,  $\bar{u}$  to  $a$ ,  $e$ ,  $i$ ,  $u$ , which took place at the end of words and before final single consonants, if the syllable did not bear the chief accent. Gen. sg. *rañkas* 'of a hand' (standard Lith. *rañkos*) beside *mergōs* 'of a girl'. Nom. sg. *mergėle* 'girl' (stand. Lith. *mergėlė*) beside *srovė* 'a flowing'. Nom. pl. *pātis* 'ipsi' (stand. Lith. *pātys*), *sūnus* 'sons' (stand. Lith. *sūnūs*). This shortening was caused by the expiratory accentuation.

#### § 665. Finals in Slavonic, especially O.Bulg.

1. In prim. Slav.  $o$  became  $u$  before nasals in final syllables. *\*ṽlku-n* 'the wolf' (O.Bulg. *vlūkŭ*) from *\*ṽlgo-m* : Skr. *ṽlka-m* Gr.  $\lambda\acute{\upsilon}\kappa\omega$ -v. *\*nesu-n* 'I carried away' (O.Bulg. *nesŭ*) from *\*neko-m* : Skr. *ābhara-m* Gr.  $\acute{\epsilon}\phi\epsilon\rho\omega$ -v. *\*ṽlku-ns* acc. 'wolves', whence further by § 219 *\*ṽlkūs* (O.Bulg. *vlŭky*) : Gr. Cret.  $\lambda\acute{\upsilon}\kappa\omega$ -vς Goth. *vulfa-ns*.

2. Then the  $-n$  of the endings  $-un$ ,  $-in$ ,  $-ūn$  was dropped, and there arose  $-ŭ$ ,  $-ĭ$ ,  $-y$ , the historical endings of O.Bulg. Acc. *synŭ* 'son' : Skr. *sūnū-m*. Acc. *vlūkŭ* : Skr. *ṽlka-m* (1.). Acc. *gostŭ* 'guest' : cp. Skr. *āvi-m* 'ovem'. Nom. *kamy* 'stone' : cp. Gr.  $\acute{\alpha}\kappa\mu\omega$ n (§ 663, 1).

Rem. The ending of the gen. pl.  $-ŭ$ , e. g. *vlūkŭ* 'of wolves' *mater-ŭ* 'of mothers', must be explained from  $-om$ . See the accidence.

So also prim. Slav. *-en* and *-in* (the latter = Indg. *-n, -y*) lost the nasal and there arose *-e*. Nom. acc. sg. neutr. *polje* 'field' from *\*polje-n*, older *\*poljo-m*. Acc. sg. *mater-e* from *\*mater-in*. See § 219 p. 186 f.

On the other hand *-ān* and *-ēn* became nasal vowels. Acc. sg. fem. *ženā* 'wife': cp. Skr. *āśvā-m* Lat. *equa-m*. Nom. acc. sg. neutr. *ime* 'name' from *\*ī-mēn*. See § 219 p. 186 f.

3. Indg. prim. Balt.-Slav. *-āi* became *-ai* and fell together with Indg. *-ai -oi* and *-ē* in *-ē*. In historical times there appears partly *-i*, e. g. O.Bulg. nom. pl. masc. *ti* = Lith. *tē* Gr. *toi*, *mati* 'mother' = Lith. *motė*, partly *-ē*, e. g. dat. sg. fem. *račē* 'to a hand' = Lith. *rañkai* (§ 664, 4), loc. sg. masc. *vlūčē* (*vlūkū* 'wolf') = OHG. *wolfe* (§ 659, 2). To what this duality *-i* and *-ē* is due, remains undetermined. See §§ 76. 84.

Indg. prim. Balt.-Slav. *-ōu* became *-ou*, further *-ū*. Loc. sg. *synu*: Skr. *sānū* Goth. *sundū* (§ 659, 3).

4. Originally final *-s* and the *-s* which later became final, were dropped. Nom. sg. *synū*: Lith. *sūnū-s*. Nom. pl. *synov-e*: Skr. *sūnāv-as*. Gen. sg. *kamen-e*: Lith. *akmeñ-s* (§ 664, 2). Nom. acc. sg. neutr. *nebo* 'sky': Skr. *nābhas* Gr. *vépoç*. 2. sg. *veze* 'thou drovest': Skr. *vāha-s*. 2. sg. opt. *vezi*: Skr. *vāhē-ṣ*. Acc. pl. *syny* from *\*sūnūs*, older *\*sūnuns* (§ 219): cp. Goth. *sunu-ns*; *vlūkky* (1.): Goth. *vulfa-ns*; *krajē* (*krajī* 'edge') from *\*krāiens*, older *\*kājō-ns* (§§ 84. 219). 2. 3. sg. *da* (1. sg. *dachū* 'I gave', 2. pl. *daste*) from *\*dās*; prim. Balt.-Slav. 2. sg. *\*dōs-s* 3. sg. *\*dōs-t*. 2. 3. sg. *ja* (1. sg. *jasū* 'I ate' prim. f. *\*ēts-o-m* i. e. *\*ēd+s-o-m*, rt. *ed-* 'eat') from *\*ēs*; prim. Balt.-Slav. 2. sg. *\*ēts-s* 3. sg. *\*ēts-t*.

This loss of *-s* was probably brought about in absolute finality and before words beginning with a consonant. See § 281 rem. 3.

5. *-ī* and *-ū* disappeared in the O.Bulg. period, after imparting their timbre to the preceding consonants, e. g. *pātem(ī)*, *pātech(ū)*. See §§ 36. 52. The transition of *-ū* to *o* in combinations like *iz-bavito i (jī)* 'liberat eum' *iz-bavljeto i (jī)* 'liberant eum' etc. is to be explained from the fact that the

pronoun, which was attached enclitically, was still only spoken as *j*: from *-tū j(i)* arose *-to j(i)* like *domoch(ū)* from *domūch(ū)*, see § 52.

### § 666. Initials in Baltic-Slavonic.

1. *ĭ* and *u* frequently arose before initial vowels. The phonetic condition was that the preceding word ended in a vowel. *ĭ* and *u* represent the movement of transition.

Lith. *ĭ*. *j-iñti* 'to take'. *j-iñ* 'in'. *j-irkla-s* 'oar'. *j-yrà* 'is'. *j-ėszkóti* 'to seek': OHG. *eiscōn*. *pri-si-j-ėsti* 'to gorge oneself'. *su-j-ėsti* 'comedere'. *lėpė-j-ėiti* 'he bid go'. Also *j-añt* 'up', *j-àsz* 'I' etc. *j-* seems to have been entirely generalised only in *jėszkóti* and in *j-ùnkti* 'to become accustomed' (O.Bulg. *v-ykna* 'I learn' Goth. *bi-ūhts* 'accustomed'); association with *jùnkti* 'to yoke' (rt. *jeuq-*) formed a factor in the latter word.

Lith. *u*. *v-ugnù-s* 'fire'. *v-ùpė* 'river'. *v-oszkà* 'goat'. *v-ùšvė* 'mother-in-law'. So far as I know *v* became fixed nowhere before *u-* and *o-*, whilst in some dialects it became permanent before *ù-* and entirely supplanted the form with *ù-* (*ùšvė*). Here probably also belongs the *v-* in *v-ėna-s* 'unus', which must be very old, since it occurs permanently in Lettic (*w-ins*) and in the whole of Lithuanian.

Slav. *ĭ*. *j-ėsti* 'is': Lith. *ėsti*, cp. *nėsti* from *\*neesti* § 607. *j-eleni* 'stag': Gr. *ελαφο-ς*. *jastĭ* 'eats' from *\*j-ėsti* (§ 76): Lith. *ėsti*; but *iz-ėsti* 'consumes'. *ima* 'I seize' from *\*j-ĭma*, inf. *j-ėti*: Lith. *imù imti*, *j-imù j-iñti*; but *iz-ĭma iz-ėti* 'to take out'. *j-ėza* 'illness' from *\*inza*, prim. f. *\*ñghā*, from rt. *añgh-*. *j-ėzykù* 'tongue': Pruss. *insuwis*. *j-ablūko* and *ablūko* 'apple'. *j-aža* and *aža* 'cord'. *j-utro* and *utro* 'morning'.

Slav. *u*. *v-ykna* 'I learn' from *\*ùnkna* (§ 219 p. 187) beside *učiti* 'to teach': Lith. *j-ùnkstu* 'I become accustomed' (see above). *v-ydra* 'otter': Lith. *ùdra* (§ 257). *v-yme* 'udder' from *\*ùdmēn*: Skr. *údhār* (§ 547). *v-* was fixed in these words as well as in *v-onja* 'smell' beside *ačhati* 'to smell'. *v-ašū* beside *ašū* 'moustache'. *v-aža* beside *aža* and *j-aža* 'cord', to which also *v-ėzati* 'to bind' with permanent *v-*<sup>1</sup>).

1) Further examples for Slav. *j-* and *v-* in Miklosich's Vergl. Gramm. I<sup>2</sup> 198 f. 234 f.



Rem. 1. We must leave it for a more thorough investigation to determine, between what vowel qualities *j-* and *v-* were regularly developed in each single case and how far levelling out has taken place, further, whether anything prevents our assigning the beginning of the development of these glides to the Baltic-Slavonic primitive community (cp. Lith. *-j-ėsti* O.Bulg. *jasti* etc.).

2. *e-* uniformly became *a-* in certain Lith. districts, e. g. *asù* = *esù* 'I am', *ašiu* = *ėšiu* 'I shall go' (but *at-ėšiu*, *isz-ėšiu* etc.). If we remember that every consonant before *e* had a palatalised pronunciation in the dialects in question, this change is easily explained as an affection of absolute initiality.

3. In Slav. *ě-* (from older *oj-*) became *i-*. *inŭ* 'one' = Lat. *oino-s ūnu-s*. See § 84.

Rem. 2. We have probably no right to explain this change by assuming that *ĭ* was first developed before *oj-* as a glide and that *ioĭ-* then became *ieĭ- ĭ-* (cp. *jichŭ* § 84 p. 82). Such an *ĭ-* before *o* has not yet, so far as I know, been established.

## ACCENTUATION.

The nature of accentuation<sup>1)</sup> and the accentuation of the Indg. languages in general.

§ 667. 1. Accentuation of syllables, words and sentences.

By accentuation in the widest sense is understood the gradation of a sentence according to the stress and pitch of its members.

In every separate syllable, i. e. in every quantity of sound produced with a single independent expiratory impulse, there is always one element which with respect to accentuation has the precedence of the rest, e. g. *a* in English *man*; this element is called the sonant of the syllable. The form of the tone movement in the whole of the syllable, the relation, in which non-sonant members of the syllable stand in respect of accentuation to one another and to the sonant, may differ, e. g.

1) Cp. among others Sievers Grundzüge der Phonet. <sup>3</sup> 176 ff., Seelmann Die Ausspr. des Lat. 15 ff.

Lith. *vir-siu* 'I shall cook' and *vir̄-siu* 'I shall fall', Gr. *οἶ-νοι* loc. sg. and *οἶ-νοι* nom. pl.

In a polysyllabic word there is always one syllable which by its accentuation takes precedence of the rest. This syllable is generally called simply the accented syllable. Syllables which have not the high tone or principal accent can also display different degrees of accentuation, which characterise the word. E. g. in Mod. English *chérishing*, *for gétfulness* the final syllable is more strongly accented than the penultimate, in Mod.HG. *ábend-dámmerung* 'evening twilight' the antepenultimate more strongly than the other syllables which have not the principal accent and these latter again show gradations among themselves. Word-accent is thus the relative characteristic of all the syllables of a word.

The word seldom stands alone; generally it is the member of a sentence which in phonetic just as in syntactical relations forms a complete unity. Within this whole again there are words with higher, others with lower accent-points. Cp. e. g. the accentuation of the sentence *speák trúth and líe not*. To the accentuation of the sentence belongs thus everything, which bears upon the different accentuation of the words as members of a sentence.

2. Expiratory and musical (chromatic, tonic) accentuation.

If the preeminence of the sonantal element consists in the greater force, with which the breath-current is expelled (voice-stress), we have expiratory accent; if on the other hand in a raising of the voice above its ordinary level (voice-pitch) we have musical accent. The latter may be heard e. g. in the final syllable of our *really*, when spoken in a tone of surprised enquiry.

Rem. 1. For accentuation, particularly expiratory, quantity also requires attention. Languages with considerable differences of accent-stress, as German and English, have generally also more considerable differences in the duration of syllables than languages, which, like Romance, Slavonic and Mod.Gr., form their syllables with less varying stress. The treatment of syllables, which do not bear the principal accent in languages

where the accent is strongly expiratory, often shows very distinctly, how the different quantity of these syllables and the different grades of the secondary accent stand in mutual relation to one another.

None of the Indg. languages had and has exclusively expiratory and none exclusively musical accentuation. But one of the two methods of accentuation always appears in the stages of development accessible to our observation as dominant and typical for the history of sounds. Essentially expiratory accent appears in Old Armenian, in the Old Italic dialects, in Keltic, Germanic and Lithuanian, essentially musical in Sanskrit and Old Greek; we have no satisfactory information concerning the accentuation of the Old Iranian dialects and of the Old Bulgarian.

### 3. Three accent-grades.

Between the highest imaginable and the lowest imaginable grade of accentuation there are, strictly speaking, innumerable intermediate grades. For all practical purposes it is sufficient to distinguish three grades. The highest grade of the expiratory accent we designate the principal accent, that of the musical accent high tone, the lowest grade absence of accent (also loss of accent) and low tone. Between these lie secondary accent and medium tone.

Rem. 2. The grammatical terminology here roughly resembles that for the positions of articulation of the lingual palatals; here as there we have to deal with an unbroken graded series, and the ordinary division into dentals etc. leaves free scope, since such division fails to draw sharply defined limits.

### 4. The different forms of syllabic accent.

Expiratory accent. An expiration, simply allowed to die away, contains but one point of expiration. If on the other hand fluctuations in the expiratory impulse take place, still other points become perceptible alongside the principal point; these owing to their smaller force are felt as subordinate to the principal point. Where the accentuation has only one point, the sonant, the bearer of the syllabic accent, is separated from the following consonant simply by the change of position in the organs of articulation, it is cut off by the consonant, and such accent is called clear cut accent ('), e. g. English *hát*. Where

the accentuation has two (˘) the second point may still fall upon the sonant of the syllable, e. g. Mod.G. *sō* (in certain cases), or on the consonant immediately following, e. g. *mān* (Thuringian).

Musical accent. Whilst the sonant or the syllable lasts, the voice remains on the same level (level tone), or ascends from its level (rising tone), or descends (falling tone), or within the same syllable both rises and falls, or falls and rises (musical circumflex). The level tone also combines in different ways with the rising and falling tones, e. g. /—.

These differences of accentuation hold good for all syllables, not merely for principal accented and hightone syllables, in which alone according to the ordinary mode of marking accentuation they are usually indicated. This conclusion is established by the following considerations. In Lithuanian the nom. sg. *\*várnā* 'crow' became *várna*, just as *\*gerá* became *gerà*, and the gen. sg. *tīlto* 'of the bridge' retained the length of the *-ō* just like *anō* (§ 664, 3). The final syllables of *\*várnā* and *\*tīlta* (*tīlto*) had thus an accent of the same form as the final syllables of *\*gerá* and *\*anā* (*anō*)<sup>1</sup>. In Greek lowtone final *-oi* was counted long for the word-accentuation, in case the syllable, if bearing the accent, shows the circumflex, e. g. loc. sg. *οἴκοι* beside *Ἰσθμοῖ*, on the other hand it was treated as short where the syllable, if bearing the high tone, shows the acute, e. g. nom. pl. *οἴκοι* beside *καλοί*; the *-oi* of *οἴκοι* was thus circumflexed, but the *-oi* in *οἴκοι* had the acute.

§ 668. Our means for determining the accentuation in the older periods of the Indg. languages are the works of the native grammarians, metre, the accent marks of the texts handed down to us, the modifying influences, exercised by the accent on the sounds, and the accentuation in those living languages which form the continuation of these older stages of development.

1) Native Lithuanian scholars affirm that the differences of syllabic accent appear also in syllables which do not bear the principal accent, that e. g. in the instr. sg. *kirvīū* the same slurred ('geschliffen') accentuation is heard in the first syllable as in the nom. sg. *kirvīs* 'axe'.

Notices of grammarians we possess for Sanskrit and the classical languages. They are not precise enough to furnish us with a clear and complete picture of the accentuation.

Metre hardly requires consideration elsewhere than in HG.

For the same languages we have accented texts. The system of indicating accent is however very incomplete. The Hindoos marked with the udātta only the word-accent, without betokening the differences of accentuation between the syllables which had not the high tone and without taking account of the kind of emphasis, the quality of syllabic accentuation. Sentence accent was indicated only in so far, as under certain circumstances words with subordinate tone in the sentence as a whole, remained without mark of accent. In Greek the tone movement, which was worked out within the individual syllable, was expressed by the distinction of acute and circumflex, only however, if the syllable was the most prominent in the word. Both accents thus served at the same time to indicate the position of the high tone in the word. First attempts at indicating sentence-accent were the use of the grave (e. g. βασιλεύς ἐγένετο but ἐγένετο βασιλεύς, περὶ τούτου but τούτου πέρι) and the non-accentuation of words.

From sound-changes we may often gather what the accentuation was. Reduction and total loss of syllables point to a more strongly developed expiratory accentuation. If the accent-force of several syllables is concentrated upon one, those left without force lessen their duration and firmness. Thus the position of the principal tone is at once recognisable.

Conclusions, drawn from the younger periods of languages, are not to be applied to the older without great care. As the languages, whose course of development we can trace through considerable periods of time, show, the accentuation of a language may undergo complete modification in a comparatively short time. Only where on the whole a coincidence in the accentuation of earlier and later periods seems already probable on other grounds, ought the younger phases of language to be adduced, e. g. in HG., to clear up the phenomena of the older periods.

Primitive Indg. period <sup>1)</sup>.

§ 669. The position of the word-accent can be arrived at through comparison of Sanskrit, Greek and prim. Germanic

1) Of the older works on the accentuation of the Indg. languages in general or of single Indg. languages we may mention here: L. Benloew *De l'accentuation dans les langues indo-européennes*, 1847, F. Bopp *Vergleichendes Accentuationssystem*, 1854, C. Göttling *Allgem. Lehre vom Accent der griech. Sprache*, 1835, W. Corssen *Über Aussprache, Vokalismus und Betonung der lat. Sprache II* <sup>2</sup> (1870) p. 794 ff.; cp. the list of literature in F. Misteli's *Über griech. Betonung*, 1875, p. 3 ff.

Modern literature. General: L. Masing *Die Hauptformen des serbisch-chorwatischen Accents nebst einleitenden Bemerkungen zur Accentlehre insbesondere des Griechischen und des Sanskrit*, 1876. A. Hillebrandt *Zur Lehre von den starken und schwachen Casus*, *Bezenb. Beitr.* II 305 ff. (cp. also X 318 ff.). — Sanskrit: R. Garbe *Das Accentuationssystem des altind. Nominalcompositums*, *Kuhn's Ztschr.* XXIII 470 ff. W. D. Whitney *Sanskrit Grammar*, 1879 p. 29 ff. F. Knauer *Über die Betonung der Composita mit a priv. im Sanskrit*, *Kuhn's Ztschr.* XXVII 1 ff. — Greek: F. Misteli *Über griech. Betonung*, 1875, *Erläuter. zur allgem. Theorie der griech. Betonung*, 1877. J. Wackernagel *Der griech. Verbalaccent*, *Kuhn's Ztschr.* XXIII 457 ff. L. Schroeder *Die Accentgesetze der homer. Nominalcomposita, mit denen des Veda verglichen*, *ibid.* XXIV 101 ff. Th. Benfey *Die eigentliche Accentuation des ind. praes. von εἰς und φασ sowie einiger griech. Präpositionen*, in: *Vedica und Linguistica*, 1880. F. Blass *Über die Aussprache des Griech.*, 1882, p. 106 ff. M. Bloomfield *Historical and critical remarks, introductory to a comparative study of Greek accent*, *Americ. Journ. of Philol.* IV 21 ff. J. Kuhl *Die Bedeutung des Accents im Homer*, *Progr. von Jülich*, 1883. R. Meister *Bemerkungen zur dor. Accentuation*, in: *Zur griech. Dialektologie*, 1883. Brugmann *Griech. Gramm.* in I. Müller's *Handbuch d. klass. Altert.-Wiss.* II 48 ff. F. Hanssen *Der griech. Circumflex stammt aus der Ursprache*, *Kuhn's Ztschr.* XXVII 612 ff. B. J. Wheeler *Der griech. Nominalaccent*, 1885. — Latin: F. Schöll *De accentu linguae Latinae*, *Acta soc. phil. Lips.* VI 1 ff. R. Kühner *Ausführl. Gramm. der Lat. Sprache I* 145 ff. F. Hartmann *Ein merkwürdiger Fall von Verbalenklise im Lateinischen*, *Kuhn's Ztschr.* XXVII 549 ff. E. Seelmann *Die Ausspr. des Latein*, 1885, p. 15 ff. F. Stolz *Lat. Gramm.* in I. Müller's *Handb. d. klass. Altert.-Wiss.* II 192 ff., *Gibt es wirklich gar keine Spuren einer älteren Betonung des Lat.?*, in: *Wien. Stud.* VIII 149 ff. — Keltic: H. Zimmer *Über altir. Betonung und Verskunst = Kelt. Stud.* II, 1884. R. Thurneysen *L'accentuation de l'ancien verbe irlandais*, *Rev. Celt.* VI 129 ff., *Zur ir. Accent- und Verslehre*, *ibid.* VI 309 ff. — Germanic: K. Verner *Eine Ausnahme der ersten Lautverschiebung*, *Kuhn's Ztschr.* XXIII 97 ff. E. Sievers *Zur Accent- und Lautlehre der*

(Verner's law). The word-accent was free, that is, unrestricted either by number of syllables or by questions of quantity. E. g. \**pətē(r)* 'father': Skr. *pitā*, Gr. *πατήρ*, Goth. *fadar* O.Icel. *faðer* *faðir* prim. Germ. \**faðēr*. \**bhrātō(r)* 'brother': Skr. *bhrāta* Gr. *φράτωρ* Goth. *brōþar* prim. Germ. \**brōþōr*. \**oktō* 'eight': Skr. *aṣṭā*, Gr. *ὀκτώ*. \**dykōnt-es* nom. pl. part. act. from *derk-* 'see': Skr. *dyśānt-as* Gr. *δοκόντ-ες*. \**éi-mi* 'I go' \**i-més* 'we go': Skr. *émi imás*. \**lelip-ñmé* or \**lelip-əmé* 1. pl. indic. perf. act. from *leip-* 'smear, stick to': Skr. *lilipimá* Goth. *bi-libum* prim. Germ. \**libumí*. \**uortéjō* causat. from *uert-* 'turn': Skr. *vartáyami* Goth. *fra-wardja* prim. Germ. \**wardūjō*. Sanskrit preserved most accurately the word-tone, nevertheless we find even in this language also not a few instances of shifting, see § 672.

For the relation to one another of the syllables of a word which do not bear the high tone (§ 667, 3 p. 529) we have no certain information as regards the time immediately before the breaking up of the Indg. prim. community. From certain fluctuations perceptible in the historical periods and affecting the accentuation of certain classes of genuine nominal compounds, owing to which the accent rested sometimes on the first, sometimes on the second member of the compound, we may conclude that the less accented member had preserved as medium tone the high tone originally belonging to it as an independent word, just as the syllable *-zieh-* in Mod.HG.

germ. Sprachen, 1878. F. Kluge Das germ. Accentgesetz, in: Beitr. zur Gesch. der german. Conjug. p. 131 ff., Kuhn's Ztschr. XXVI 68 ff. W. Scherer Zur Gesch. d. deutsch. Sprache<sup>2</sup> p. 75 ff. H. Paul Zum Verner'schen Gesetz, Paul-Braune's Beitr. VI 538 ff. and elsewhere. — Lithuanian: F. Kurschat, Gramm. der littau. Sprache, 1876, p. 57 ff. A. Baranowski and H. Weber Ostlithauische Texte, 1882, p. XV sqq. A. Leskien Die Quantitätsverhältnisse im Auslaut des Litauischen, Arch. f. slav. Philol. V 188 ff. Bezenberger Zur lit. Accentuation, in his Beitr. X 202 ff. — Slavonic: L. Masing Die Hauptformen etc., see above. Nemanic Čakavisch-Kroatische Studien, 1. Accentlehre 1883—85, Sitzungsber. der Wiener Akad. B. 104. 105. 108. J. Hanusz Über die Betonung der Substantiva im Kleinrussischen, ein Beitrag zur vergleichen- den Accentlehre im Slav., 1883. A. Leskien Untersuchungen über Quantität und Betonung in den slav. Sprachen, I, 1885.

*wéchsel-beziehungen* still exhibits the word-accent of *beziehungen* or the syllable *-lai-* in Lith. *vaik-palaikis* ('ne'er-do-well') that of *palaikis* (§ 691 end). The misplacing of the high tone in the former case resembles that in the German *unbeschréiblich* beside *unbeschréiblich*, *ingeméin* beside *ingeméin* etc.

So far as sentence-accent is concerned, the enclitic use of certain words and categories of words in Sanskrit, Greek etc. was doubtless inherited from the period of the prim. community.

Thus enclitic were:

Certain particles, as \**qe* 'and': Skr. *ca* Gr. *τε* Lat. *que*; \**uě* 'or': Skr. *va vā* Gr. \**fe* in *ἦ-ε̃* from \**ḡ-fe* (§ 677) Lat. *ve*.

The interrogative pronouns (st. \**qo-* and \**qi-*: Skr. *ka-* and *ci-*, Gr. *πο-* and *τι-*, Lat. *quo-* and *qui-*), if they had an indefinite meaning, cp. e. g. Gr. *τις* 'who?' and *ἀνῆρ τις*.

The personal pronouns, if no contrast of meaning prevailed, as between *I* and *thou* etc., cp. e. g. the enclitic Skr. *mē* Gr. *μοι* O.Bulg. *mi* 'to me'<sup>1)</sup>.

Further, probably in many instances, the vocative, see § 672;

Lastly the finite verb also to a large extent, always if the temporal particle \**é*, the augment, immediately preceded it, e. g. \**é dyket* 'he looked': Skr. *ádṛśat* Gr. *ἔδρακε*; apparently already in the period of the Indg. prim. community an agglutination had taken place here which obliterated the feeling for *é* as an independent word. Further, the verb in the principal sentence was frequently appended with the low tone to those adverbs which appear in the separate languages as prepositions, as \**pró bherō* = Skr. *prá bhārāmi*<sup>2)</sup>; more rarely the verb was welded into a unity with living case-forms. But apart from such definite categories of words with which the verb showed a special pre-

1) It is assumed that this enclitic use had occasioned the weakening of a form \**tuoj* to \**toj* 'to thee' (Skr. *tē* Gr. *τοι*. O.Bulg. *ti*). Cp. § 187.

2) So also the passive participles and verbal abstracts with suffix *-ti-* had the tone on the prefix, e. g. \**próbhṛto-s* \**próbhṛti-s* (Skr. *prá-bhṛta-s* *prábhṛti-ṣ*) beside \**bhṛtó-s* \**bhṛtí-s* (Skr. *bhṛtá-s* *bhṛtí-ṣ*).



ference for enclitic connexion, the verb in principal sentences had the low tone. In these it preserved its accent in Sanskrit only when the first word of a sentence (§ 672).

§ 670. Did the expiratory or the musical accentuation preponderate at the time of the breaking up of the primitive community?

The reduction and rejection of vowels point to a more strongly developed expiratory accent. This method of accentuation therefore must be referred to that period of the Indg. primitive language in which the syllable preceding the principal tone underwent the weakenings, mentioned in § 310 ff., when e. g. \**pet-é-* and \**derk-é-* became \**pté-* and \**dyk-é-*. That between these processes and the close of the primitive language a certain time had elapsed, is shown by the fact that the state of the language, phonetically produced by those accentual influences, was altered by a series of new formations which with good reason are referred to prim. Indo-Germanic.

Rem. E. g. dat. sg. \**bhrātr-āi* 'to the brother' (Skr. *bhrātrē*) had come in either for older \**bhrātor-āi* after the analogy \**patr-āi* 'to the father' (Skr. *pitṛē*) or for older \**bhṛtr-āi* after the analogy of the stem-form of the strong cases \**bhrātor-* (e. g. acc. \**bhrātor-m*). Nom. pl. \**mātér-es* 'mothers' (Skr. *mātaras*) with strong grade radical vowel beside \**patér-es* must in like manner have been influenced by analogy. Prim. Indg. is also the levelling of \**dérko-m* \**dyk-és* \**dyk-t* \**dérko-men* \**dyk-te* \**dérko-nt* (rt. *derk-* 'see') on the one hand to \**dérko-m* \**dérke-s* \**dérke-t* etc. (Skr. *dárśa-m* *dárśa-s* etc.), on the other hand to \**dykó-m* \**dyk-és* etc. (Skr. *dyśá-m* *dyśá-s* etc.).

Towards the end then of the Indg. primitive community the expiratory character of the accent seems to have no longer preponderated. The fact that Sanskrit and Greek with preponderantly musical accent show as separate languages hardly any phonetic changes which could be ascribed to the effects of expiratory accent, points to this conclusion<sup>1</sup>). If at the time of the separation of the peoples and accordingly still in the oldest periods of their separate existence the accent had had

1) In Aryan the only difference to be considered is that of *a = ŷ* and *an = ȳ* (§§ 228. 230) and Skr. *yāt-ás* beside *yānt-am* (§ 198).

a strongly marked expiratory character, these two languages would doubtless not have preserved so faithfully and so unabreviated the old inherited condition of the sonants. I am of opinion therefore — without venturing to express a final decision on a question so difficult and still so much requiring a comprehensive and thorough investigation —, that Skr. and Greek accentuation on the whole represent in the point  $\frac{1}{n}$  question the method of accentuation which prevailed at the time of the separation. In the prim. Germanic development the Indg. accent again became more strongly expiratory; for it is to the strengthened breath-current of the syllable bearing the principal accent that we must ascribe the circumstance that the voiceless spirants (\**bróþar*- 'brother' \**kémsō* 'I test') remained voiceless (see §§ 530. 581).

§ 671. The contrast between circumflex and acute in Greek and that of the slurred (*geschliffen*) and broken (*gestossen*) accent in Lithuanian appear to correspond to one another and to stand in historical connexion. Gr. nom. sg. *τίμᾶ* nom. pl. *τίμαι* (orig. nom. du., see accidence) : gen. sg. *τίμας* = Lith. nom. sg. *geró-ji* nom. du. *geré-ji* : gen. sg. *gerōs-ios*. Nom. du. *καλώ* nom. pl. *καλοί* : gen. pl. *καλῶν* loc. sg. *Ἰσθμοῖ* = nom. du. *gerū-ju* nom. pl. *gerė-ji* : gen. pl. *gerū-jū* loc. sg. *namė* ('at home'). Cp. further 3. sg. opt. *λείποι* and *te-sukė* with reference to the remarks made on final -oi page 530.

Rem. 1. Hanssen's attempt (Kuhn's *Ztschr.* XXVII 612 ff.), to establish this difference of syllabic accent for Germanic also, has, in my opinion, not succeeded.

Further the difference of accentuation in Skr. nom. *dyāuṣ* and voc. *dyāuṣ* and Gr. nom. *Ζεύς* and voc. *Ζεῦ* points to an original qualitative difference in Indo-Germanic (§§ 673. 677).

Hence it may be conjectured that already in the time of the Indg. primitive community, there existed different forms of syllabic accent.

Rem. 2. Owing to the incompleteness of the present investigation, I have taken no account in writing the Indg. prim. forms in this work of these different accents. In every case the word-accent has been written with the acute (').

Rem. 3. In Italic, Keltic and Germanic, a stress accent was developed on the first syllable of the word, which drove out the Indg. free accent. Thurneysen (Revue Celt. VI 313) conjectures historical connexion here and sets up 'a general West European regulation of accent'. The assumption of such a connexion is bold. For since in the special Germanic development the prim. Indg. word-tone still acted as a stress accent (Verner's law), the new Germanic accentuation would be a borrowing from Keltic, the Germanic tribes would through contamination have given up their native accentuation in favour of the Keltic: should not then Keltic influence reveal itself in other directions too in a far larger extent than is actually provable? Moreover Lettic and Czech show by their accentuation on the first syllable that languages can pass through the same revolution in accent quite independently. To the assumption of a connexion between Keltic and Italic accentuation I am less opposed. No other branches show so many special coincidences as Italic and Keltic.

### Aryan.

§ 672. With Sanskrit accentuation alone have we a tolerably intimate acquaintance.

It has been already remarked in § 669 that the Hindoos preserved on the whole the prim. Indg. position of the word-accent. Changes were doubtless due only to analogy; in one set of instances however it is impossible to decide whether the variation belonged to the Sanskrit or the prim. Aryan period.

Examples. For \**ganvās* 1. du. 'we come' (from \**gṇ-ṽās*, § 229) came *gānvās* after the singular forms like *gānti*; the formal similarity with the forms, accented on the root, which had arisen phonetically, occasioned this innovation, cp. alongside these *ga-thās ga-tās* etc. Presents with original *á* in the root syllable, as *bhárāmi*, caused the accent in those verbs whose root syllable had unaccented *a* to pass over to the root syllable: *gáchāmi* 'I come' for \**gachāmi* from \**gṇ-skō* (cp. *ichāmi ṛchāmi* etc.), *dásāmi* 'I bite' for \**daśāmi* from \**dṛkō* (§ 224). The transition from *matī-ṣ* to *māti-ṣ* ('thought'), from *paktī-ṣ* to *pákti-ṣ* ('a cooking') etc. is connected with the circumstance that these nouns from the Indg. prim. period had a final and initial accentuation which varied in the different cases. The accentuation *pañcá* (Atharvaveda V 15, 5) for *pāñca* 'five' follows *saptá* 'seven'; cp. *pañcábhīṣ* : *saptábhīṣ*.

As regards sentence accent Sanskrit appears to have preserved the old position almost invariably. At least the enclitic use of the particles, like *ca vā u ha*, of the forms of the personal pronouns, as *mē mā*, of the vocative and of the verb must be regarded as Indg., as was already remarked p. 534. In independent sentences the verb had no accent unless at the beginning of a sentence, e. g. *agnīm iḍē purōhitam* 'I praise Agni, the house-priest' (beginning of the Rigveda). The vocative had from the beginning the high tone on the first syllable, e. g. *pītar* 'O father' *mātār* 'O mother' (Gr. *πάτερ, μήτηρ*). It had however its independent high tone only at the beginning of a sentence, otherwise it was unaccented, e. g. *idām indra śṛṇuhi* 'this, O Indra, hear'. Just as this use appears to be original, so also the law may be old which requires the vocative, if connected with a word which more nearly defines it, to form in respect of accent a unity with that word, e. g. *vāsō sakhē* or *sakhē vasō* 'O good friend', *sāhasaḥ sūnō* or *sūnō sahasaḥ* 'O son of strength'. I conjecture that this practice in Sanskrit as in other languages, if it did not occasion, at any rate helped the formation of improper compounds, cp. e. g. Skr. *jās-pati-ṣ* 'lord of the family', Gr. *δεσπότης*, voc. *δέσ-ποτα*, 'house master' (§ 204 p. 171)<sup>1</sup>), *Διός-χοροί* 'sons of Zeus', Lat. *Juppiter* (see § 612 p. 463), *Dies-piter*.

§ 673. According to the account of the native grammarians the Sanskrit accent was a musical one. It is obvious that there had also existed alongside that accent differences of voice stress. The expiratory accent cannot however have been very strong.

The high tone was called *udātta*, that is, 'raised' ('). Opposed to it was the *anudātta*, that is, 'unraised' (not-high tone).

The *udātta* was a simple rising tone. If the *udātta*-syllable was followed by two or more unaccented syllables, the first of these syllables had the so-called enclitic *svarita* ('): it was

1) The combination *\*dems-potis* probably dates from the Indg. primitive period; cp. Skr. *pātir dān* and *dāmpatiṣ*, the latter perhaps for *\*dās-pati-*, with substitution of the pause-form *dān*,

pronounced with falling tone, and its accent formed the natural transition from the high tone reached in the udātta-syllable to the low tone of the next syllable but one, e. g. *bhrātāras* 'fratres', *vidūṣṭārēbhyas* 'doctoribus'.

There was, besides, the so-called independent svarita (^). It arose, when a high accented vowel was joined in the same syllable with a low accented vowel, e. g. *divīva* from *divī iva*, *ēvāśnīyāt* from *ēvā aśnīyāt*, *sōbravīt* from *sō (a)bravīt*, *apsvantār* from *apsū antār*, *vyāptiṣ* from *vī-āpti-ṣ*. This accent is defined as a compound accent, as a combination of a higher and a lower tone within the limits of a single syllable. It was rising-falling, the combination of the udātta with the enclitic svarita. It may be, accordingly, compared with the Greek circumflex (e. g. *τοῦτις* from \**τοῦτις*).

The contrast in accentuation between nom. *dyāuṣ* and voc. *dyāuṣ* appears to have descended from the period of the Indg. primitive community, since it corresponds to the contrast between Greek *Ζεύς* and *Ζεῦ*. Cp. § 677.

Rem. Further peculiarities of Sanskrit accentuation in Whitney § 80 ff., L. Masing *Die Hauptformen* etc. p. 37 ff. 72 f. and elsewhere.

§ 674. As regards the accentuation of the Old Iranian dialects we have no information.

If the sound-law respecting the transition of *r* before *k*, *p*, *t* into a spirant which has been assumed by Bartholomae for Avestic and mentioned above in § 260, is correct, we must conclude that at the time when this sound-change took place, Avestic had in general the same word-accent as Sanskrit.

#### Armenian.

§ 675. That the accentuation of Old Armenian was once essentially expiratory, is shown by the numerous weakenings of syllables.

Since the vowels of the original final syllables in polysyllabic words disappeared (§ 651, 1), the accent must have been thrown back, cp. e. g. *mard* 'man' from Indg. \**mṛtá-s* (Skr. *mṛtá-s*). And since *i*, *u*, *ē*, *oi*, *ea* remained unchanged

only in the originally penultimate syllables, while in earlier syllables *i* and *u* were rejected and *ē*, *oi*, *ea* were reduced to *i*, *u*, *e* (§§ 31. 47. 63. 79. 632), the accent must have been concentrated on the originally penultimate syllables.

Further conclusions depend upon the answer to be given to the question of the chronological relationship between the weakening in originally final syllables and the weakening in syllables earlier than the original penultimate. I believe we must assume with Hübschmann that the first mentioned weakening was earlier in time. Consequently we must conclude that in the first place a withdrawal of the accent from the final syllables in general took place, but that at the period when gen. \**duster* became *dster*, accentuation of the final syllable was the regular principle.

The abandonment of the prim. Indg. word-accent presupposes the development of an expiratory secondary accent, limited by number of syllables. This gradually overpowered and drove out the original accent.

### Greek.

§ 676. The prim. Indg. freedom in the position of the word accent and the capability of the prim. language to use enclitically in the sentence words of any number of syllables whatever (particles, pronouns, forms of the finite verb), were materially limited in Greek through the development of a secondary accent, of the accent, which displays itself in the so-called law of three syllables. The chief points are as follow (cp. Wheeler's treatise, cited above p. 532.):

1. Dissyllabic words with a short final syllable were not subject to the action of the secondary accent but generally preserved the old inherited word-tone. πόδα πόδες, ποδός ποσί : Skr. *pādām pādas, padās patsú*. τρεῖς from \**τρι(ι)ες, τρισί* : *tráyas, triṣú*. πέντε δέκα, ἑπτὰ : *pāñca dáśa, saptá*. περί : *pári*. ἄρκτο-ς : *řkṣa-s*. γόμοφο-ς : *jámbha-s*. ἵππο-ς : *áśva-s*. ἀγό-ς : *ajá-s*. ὀρθό-ς : *ūrdhvá-s*. μισθό-ς : *mīdhá-m*. θυμό-ς : *dhūmá-s*. ἀγνό-ς : *yajñá-s*. κλυτό-ς : *śrutá-s*. γνωτό-ς : *jñātá-s*. βαρού-ς :

*gurú-ḡ. ἡδύ-ς : svādú-ḡ. μέθν : mádhu. νέφος : nábhās. ἄνθος : ándhas. εἶμα : vásma.* Here belong also word-combinations like ὄς τε : Skr. *yás ca*.

2. In disyllabic words with long final syllable and in all trisyllabic and polysyllabic words, as also in similar combinations under one accent, there was developed, in the period of the Greek primitive community, a secondary accent on the third mora from the end or, if the word ended in a trochee, on the fourth mora. Accordingly at the end of a word or combination of words not more than two, or in the case of a trochaic ending three morae could remain unaccented. In words with long final syllable the effect of the law was to permit only the acute and not the circumflex to stand on the penultimate. The secondary accent conquered the older accent, situated nearer to the beginning of the word.

Thus arose *ἡδίων* from *\*ἡδίων<sup>1)</sup>* : Skr. *svādīyān*. *φερόμενος* *φερομένοιο -ου* from *\*φέρομενος \*φερομενοιο* : *bhāramāhas bhāramāhasya*. *Ἀγάμεμνον* from *\*Ἀγαμεμνον* : cp. *ἄδελφε* beside *ἄδελφός* etc. *ἀπό-τισις* from *\*ἀπο-τισις* : Skr. *āra-citiḡ*. *ἀν-επι-θετος ἀν-επι-θέτοιο -ου* from *\*ἄν-επι-θετος \*ἄν-επι-θετοιο* : *án-ari-hitas án-ari-hitasya*. *ὀππότερος, αὐτὸς πότερον* (i. e. *\*αὐτός πότερον* 'ipse utrumvis') from *\*σφόδ ποτιρος* (cp. Goth. *sva*), *\*αὐτός ποτερον*. *ζυγὸν φεροίμεθα* (i. e. *\*ζυγὸν φεροίμεθα*) from *\*ζυγόν φεροίμεθα* : *yugām bhārēmahī*. *Ζεὺς ἡμῖν* (i. e. *\*Ζεὺς ἡμῖν*) from *\*Ζεὺς ἡμῖν*.

Rem. 1. Almost all the forms of the finite verb had the recessive tone, cp. e. g. *ἔμεν δέδοικε* with Skr. *imás dadárṡa*. This is probably not to be explained exclusively from the enclitic use in the principal sentence (§ 669 p. 534). Nothing prevents our assuming that the accentuation of the subordinate sentence was still in force at the time when the secondary accent was developed. Then many forms of the principal sentence necessarily acquired the same accent as the forms of the subordinate sentence. *\*ἔ φερομεν* of the principal sentence (Skr. *ἔ bhārāmas*) became *φέρομεν*, the form of the subordinate sentence (Skr. *bhārāmas*), *\*ἔ φεροίμεθα* of the principal sentence (Skr. *ἔ bhārēmahī*) and *\*φέροίμεθα* of the subordinate sentence (Skr. *bhārēmahī*) fell together in *φεροίμεθα*, etc. Such falling together of a part of the forms, led to considerable levellings, after the

1) We give the words as they exist in Ionic or Attic. Strictly speaking we ought to have given the prim. Greek forms.

analogy of the accentuation of the forms of the principal sentence, e. g. \*ἰδοῖμεν of the subordinate sentence (Skr. *vidēma*) gave way to ἰδομεν of the principal sentence.

The newly developed accent had not suppressed the old one in ἀνθρωπὸν τινα, ἄγγελός που, σῶμά μου from \*ἀνθρωπον τινα, \*ἄγγελος που, \*σῶμα μου. The accent, which the first word bore, if it was not burdened with any enclitic, was too strongly fixed in the mind, to have absolutely no value. We have thus to do with the operations of analogy. Such influence shows itself still more clearly in cases like σῶμά τε. If the development had not been disturbed we should have had σῶμα τε (cp. σῶμα : σώματος); the Greek left the circumflex on σῶμα and accented after the analogy of καλός τε etc.

Irregular, too, is ἄλγεά τινων for \*ἄλγεα τίνων (\*ἄλγεα-τίνων), cp. πατήρ ἡμῶν; the accentuation here followed the analogy of ἄλγεά τινος, τινι etc. Conversely ἄλγεα ἡμῶν for \*ἄλγεά ἡμῶν after ἄλγεα ἡμῶν.

3. No changes took place if the position of the original accent and that of the secondary accent coincided. Voc. θύγατερ : Skr. *dūhitar*. ὕστερο-ς : *ūtara-s*. Neut. ἡδίων : *svādīyas*. ὀκτώπους : *aṣṭā-pāṭi*. φίλος τις, Σωκράτης τις, πατήρ μου, ποταμοί τινες.

4. If the original accent stood nearer to the end of the word than the place of the secondary accent, the former partly remained and was partly thrown back.

The old tone had remained e. g. in γενετήρ : Skr. *janitā*; ἰαρό-ς ἰαρό-ς ἰερό-ς : *iṣṭrās*; παχυλό-ς : *bahulā-s*; περνώ-ς : *babhūwān*; πατέρες : *pitāras*; δρακόντες : *drśāntas*. Further in combination with enclitics : ἀγαθά τε, ἀγαθός τις, πατήρ γε.

If the accent was thrown back we have to distinguish two cases.

a. Oxytons ending in a dactyl became paroxyton independently of the secondary accent. ἀγκύλο-ς καμπύλο-ς from \*-υλό-ς : cp. παχυλό-ς. ἐρωμένος ἀκαχμένος λελεμμένος from \*-μενό-ς : cp. Φαμενό-ς Τεισαμενό-ς and Skr. *sasṛmāhā-s*; the accent of the forms of the perf. part. which ended in a dactyl was



generalised, hence *λελυμένοις* instead of \**λελυμένοις* etc. *τελεσφόροις* from \*-*φοροίς* : cp. *φοροίς* and *ψυχο-πομπόις* *πομπόις*; \* forms in  $\_ \cup \cup$  were followed by *δημο-βόροις* *αισχρο-λόγοις* etc. instead of \**δημο-βοροίς* etc.

Rem. 2. This law of accent seems to have been the model in the levelling of the accent in the case-forms of the consonantal declension. Following it also appeared e. g. *οφρῦς* *οφρούς* *οφρού* (Skr. *bhrūṣ* *bhruvās* \**bhruvi*) beside regular *ποῦς* *ποδός* *ποδί*, and such accentuation may in many cases have been the pattern for the polysyllabic stems.

For details see Wheeler loc. cit. pp. 60—104.

b. The secondary accent appears in place of the original. *πέλεκυις* : Skr. *paraśū-ṣ*. *ἔλυτρον* : *varátra-m*. *ἔκτοσι* : *ṣaṣṭhás*. Whether in such cases the secondary accent drove out the original in the same way as \**ἦδῶν* became *ἡδῶν* through \**ἦδίων*, or whether the throwing back of the accent was in the first instance quite independent of secondary accent and the latter afterwards defined how far the accent should be thrown back, is quite uncertain; we might assume, e. g. that the plural \**πέλεκεες* = Skr. *paraśáv-as* had first become \**πέλεκεες* from which arose afterwards *πέλέκεες* *πέλέκεις*. The second hypothesis seems to me the more probable.

Rem. 3. Some cases have been already mentioned in which the effect of analogy had caused a change of the old accent position. Such alterations of accent occurred frequently in other cases also. We may further mention *ἔκρυός* instead of \**ἐκρυός* (Skr. *śvāśūra-s*) after *ἐκρυά*; *χρυσούς* instead of \**χρύσους* (from *χρύσοις*) after *χρυσού* *χρυσῶ* (from *χρυσέου* *χρυσέω*); conversely *εὔνοῦ* instead of \**εὔνοῦ* (from \**εὔνόου*) after *εὔνοῦς* *εὔνοον* (from *εὔνοοις* *εὔνοο-ν*).

§ 677. The syllabic accentuation of Greek was down to the christian era essentially musical.

Rem. 1. Soon after the beginning of that period, as is shown by certain metrical peculiarities, the expiratory accent became stronger and in the Middle Ages the language had already the same essentially expiratory accentuation which it has at present.

The acute (´) was a rising tone. If the sonant element had two morae, the accent continued rising in the second mora. The circumflex (˘), produced by gradual rounding of (´), was a rising-falling tone. That this difference of accentuation existed also in syllables which had not the high tone, is demonstrated by direct proofs, as was shown in § 667, 4 (p. 529).

The acute on long vowels and diphthongs is parallel to the 'broken' tone in Lithuanian, nom. *τιμά*: Lith. *geró-jí*, see § 171. The circumflex corresponds to the 'slurred' tone in Lithuanian, e. g. gen. *τιμαῖς*: Lith. *gerós-ios*, loc. cit. The accent in voc. *Ζεῦ* corresponds to the Skr. independent svarita *dyāuṣ*: the whole rising movement fell to the first mora (cp. *πάτερ* beside *πατήρ*), and thus there remained for the second only the falling movement, see §§ 671. 673. The new circumflex which arose by vowel contraction (*τρεῖς* from *\*τρέες*, *οἶνοῦς* from *οἶνόεις*, *φοβοῦμεν* from *φοβέομεν*, *τιμῆντα* from *τιμήντα*) teaches us that the second of the sonants which have run together, had the same or a similar tone movement as the Sanskrit enclitic svarita. Thus the svarita in Skr. *div̄va* from *diví iṅa*, may be compared with this circumflex, see § 673.

Besides the acute and the circumflex the old grammarians ascribe to Greek the grave accent (*βαρεῖα προςωδία*), marked by ` . It is alleged for two essentially different cases.

Firstly, for the last syllable of proclitic words, e. g. *τινὰ γάρ*, *περὶ τούτου*, *ἀλλὰ ταῦτα*, *ἦὲ σύ*. The accent of these words, when not used proclitically, was *τίνα*, *πέρι*, *ἄλλα*, *\*ἦ̄-φε*; the last form is proved by the fact that *-φε* is the old Indg. enclitic *\*-me* (Lat. *-ve*), § 669 p. 534.

Rem. 2. That the Byzantines and we along with them write the proclitic *ἐν*, *ἐξ*, *ἐς*, *ὅ ἦ οἱ αἰ* without accent, but *πρός*, *περὶ*, *τό*, *τόν* with the grave, has a purely graphical reason. When in the case of initial vowels the signs for accent and breathing coincided in the same letter, the proclitic monosyllables were relieved of their accent-sign. See Wackernagel Kuhn's *Ztschr.* XXVIII 137.

Secondly, as substitute for a final acute, when the word did not close the sentence (*βασιλεὺς ἐποίησε*), with the exception of *τίς τί*, which always retained the acute (*τίς ἐποίησε*).

Whether in both cases there was precisely the same tone movement, is not clear. Equally obscure is the character of the modification undergone by the acute in *βασιλεὺς ἐποίησε*.

Rem. 3. If we speak of a 'weakened' or 'stified' acute, the matter is as obscure as before (see L. Masing's excellent remarks loc. cit. p. 19 ff.).

Only this much is certain, that the explanation of the phenomenon must start from the fact that the grave had its position where a syllable was spoken directly after in which the tension of the voice began to rise or reached a point. In cases like \**τρῆες* (*τρῆεις*), *ἄλλος*, *τά-δε*, *ὅς τις*, *καλοί τινες* the syllable following the acute had a falling movement, the tension of the voice began to relax in it, and after *ἐποίησε βασιλεύς* came complete absence of tension, the pause. On the other hand in \**βασιλεύς Σπάρτης* and in \**βασιλεύς ἐγένετο* a rising tone movement directly followed the rising acute. Compare with \**βασιλεύς Σπάρτης* the fact that, in the body of a word, two acutes are not tolerated in two successive morae, whence, e. g., there is no \**ἀγγέλος τις*, as might be expected (see Wheeler op. cit. pp. 126. 129). We may thus conjecture that the grave was not solely a rising tone.

§ 678. In matters of accentuation only trivial differences appear between the different Greek dialects.

The Lesbians alone instituted a more important innovation, by throwing back, as the grammarians tell us, the accent in every case according to the law of three syllables, e. g. *σόςφος*, *βασίλευς*, *Ἄτρεις*, *θῦμος*, *πόταμος*.

Rem. When it is said that prepositions and conjunctions as *ἀνά*, *διά*, *ἀλλά* retained their accent on the last in Lesbian too, it is simply a question of the proclitic grave (§ 677), which formed no opposition to baryton accentuation.

The Lesbian accentuation seems, in the main, to have arrived at this position through the great bulk of forms with baryton accent dating from the Greek prim. period having gradually drawn over the forms which were otherwise accented.

### Italic.

§ 679. While the native grammarians tell us something of the accentuation of Latin, in the investigation of the accentuation of the other Old Italic dialects we are thrown back on what their phonetic form teaches us when compared with that to be presupposed for the period of the Italic and Indg. primitive period.

There is nothing to contradict and much to support the assumption that the prim. Indg. accentuation had already, during the prim. Italic unity, undergone a complete revolution. In polysyllabic words the accent which was expiratory was borne by

the first syllable. Thus a secondary accent had developed on the first syllable and driven out the competing original accent.

Rem. The assumption of F. Stolz (Lat. Gramm. p. 148 and Wiener Stud. VIII 149 f.), that the Indg. final accent in \**aiuó-m* (*aeuom*), gen. \**nāu-ós* (*nāvis*) etc. still survived in the separate Lat. development, does not convince me in the slightest.

This accentuation also held good for the compound verb, and it was here certainly not merely caused by the mechanical principle of initial accentuation, but represents the prim. Indg. accentuation of the principal sentence. Such compounds with accentuation of the preposition in the Italic prim. period are e. g. Lat. *prae-hibeō praebeō* Umbr. pre-habia 'praehibeat', Lit. *pro-hibeō* Osc. *pru-hipid* 'prohibuerit', Lat. *in-eo* Umbr. en-etu imp. 'inito', Lat. *con-vertō* Umbr. *co-vortus* 'redierit'. To the prim. Indg. enclisis of the verb in the principal sentence may also be due Lat. *né-sciō*, *nōn vīs*, *mā-vīs* etc. So also *igitur* which is the same as the second member of *ad-igitur* and occurred originally only in such combinations as *quid igitur?* = \**quid agitur?* etc.; if *igitur* at a later period appeared as the first word in a sentence this is parallel to the similar use of Greek *τοι* in *τοι-γαρ-οὖν*. Here belongs further also the unaccented forms of the indic. of the substantive verb, as Lat. *pótis-sum póssum*, *sítus-est sítust*, Umbr. *peretom-est* 'peremtum est', Osc. *prúftú-set* 'probata sunt'.

The enclisis of certain pronouns and particles was also descended from the early period. Lat. *sí quis*, *núm quis* etc., Umb. *sve-pis* Volsc. *se-pis* Osc. *svae-pis* 'si quis', Osc. *pútúrúspíd* pl. 'utrique'. Lat. *ne-que*, Umbr. *nei-p* 'nec, non, neu', Osc. *nei-p ne-p* 'nec, neu'; Lat. *uter-que*, Umbr. *putres-pe* 'utriusque'. Lat. *sī-c*, *hī-ce hī-c*, Umbr. *eso-c* 'sic', Osc. *ion-c* 'eum'. Lat. *alter-ve*.

Postpositions too were enclitic in primitive Italic. Lat. *quō-cum*, Umbr. *asa-ku* 'apud aram'. Lat. *tantis-per parum-per sem-per*, Umbr. *trio-per* 'per tria, ter', Osc. *petiro-pert* 'quater'. It is impossible however to make out if this usage was pre-Italic.

Certain vowel weakenings may have been called into being in the prim. Italic period through the action of initial ac-

centuation. Cp. the nominatives Lat. Umbr. *ager* Osc. *Frunter* against Gr. ἀγρός, Lat. *famul* Osc. *famel* 'famulus', §§ 623 rem. 1. 633. 655, 9. Compare further the loss of the final vowel in some prepositions, as Lat. *ab* = Gr. ὑπο, *s-ub* = Gr. ὑπο: Lat. *ab-dō*, Pelig. *af-āed* 'abdidit', Lat. *sub-dō sub-tendō*, Umbr. *su-tentu* 'subtendito'. Here syncope might be suspected (§ 633). Yet it must be remembered that these prepositions often stood before vowels, and thus the form which had lost its final vowel before other vowels, might have become generalised (§ 655, 1).

§ 680. In Latin the initial accentuation, descended from the prim. Ital. period, caused vowel reduction in the next syllable, which had the weakest accent. The method of its action was twofold, the syllable either retained its syllabic value or, as a syllable, entirely disappeared.

*pepercī* from \**péparcī*: *parcō*. *cecīdī* from \**cécaidī*: *caedō*. *cōn-scendō* from \**cón-scandō*: *scandō*. *an-hēlō* from \**án-(h)anslō*: *hālō* from \*(*h*)*anslō* (§ 208). *ex-erceō* from \**éx-arceō*: *arceō*. *ob-sideō* from \**ób-sedeō*: *sedeō*. *cōn-ficiō cōn-fectu-s* from \**cón-faciō \*cón-factu-s*: *faciō factus*. *prae-hibeō* from \**prái-habeō*: *habeō*, Umbr. *pre-habia* 'praehibeat'. *cōn-stituo* from \**cón-statuō*: *statuō*, Osc. *Anter-statai* dat. '\**Interstítai*'. *ex-īstumō* from \**éx-aistumō*: *aestumō*. *in-clūdō* from \**ín-claudō*: *claudō*. *sē-cernō in-certu-s* from \**sē-crinō \*ín-crito-s*: Gr. ἄκριτος. *in-īmīcū-s* from \**ín-amīco-s*: *amīcu-s*. *con-tubernāli-s* from \**cón-tabernāli-s*: *taberna*. Cp. §§ 33. 65. 81. 97. 109 d. That this vowel weakening was not one of the oldest historical characteristics of the prim. Latin period, is shown by the form of the borrowed words *Alixenter*, *Agrigentum*, *Tarentum*; these came by their *e* instead of *a* through the same phonetic law and were at the time accented on the first syllable.

Rem. Historical forms like *ab-arceō* beside *ab-erceō*, *ob-tractō* beside *ob-trectō*, *ex-pandō* do not prove that the law worked irregularly. Such forms depend on a re-composition, just as e. g. Mod.HG. *ur-theil dritt-theil* for *urteil drittel* show a revival of the second part of the compound after the analogy of *theil*.

*ind-uō* from \**índ-ovō*. *cluācru-s* from \**élavācru-s*. See § 172, 1.

*reppulī* from \**ré-pepulī*. *ūndecim* from \**ūnu(s)-decim*. *surpuī* from \**sūb-rapuī*. See § 633.

Perhaps the fact, that *o* remained unweakened before consonants in final syllables, e. g. *novo-s socio-s (sociu-s)*, but became an irrational vowel in middle syllables, e. g. *novi-tās socie-tās*, is to be explained from a secondary accent carried by the final syllable in polysyllabic words. Cp. § 81 p. 73.

§ 681. In trisyllabic and polysyllabic words an expiratory secondary accent developed itself in pre-literary Latin according to the quantity of the penultimate syllable. If this syllable was long it bore the accent, if short, the accent was carried by the antepenult. Thus \**pépercī* became *pepércī*, \**inimīcu-s inimīcu-s*, \**éxīstumāmus exīstumāmus*, and \**éxīstumō* passed into *exīstumō*, \**cōnficiunt* into *cōnficiunt*, gen. \**cōntubernālium* into *contubernālium*.

Rem. "The Romance languages, by preserving, as a rule, the first syllable of Latin words while unaccented middle syllables often disappeared show that the first syllable always retained a considerable secondary accent; cp. \**mānsiōnāticum* French *maisnage, ménage*". Thurneysen *Revue Celt.* VI 313.

Through loss of vowel in final syllables this new word-accent came to stand here and there on the last syllable, as in *llīc(e)*, *tantō-n(e)*, *audīn(e)*, *disturbāt* from *disturbāvit*, *mūnīt* from *mūnīvit*. Whether the nominatives as *nostrās Arpīnās Samnīs Compāns*, usually classified with these forms, were genuine Latin nominative formations, may be doubted.

It is difficult to get a clear idea of the nature of the newly developed expiratory accent as syllabic accent.

According to the native grammarians there were an acute (´) and a circumflex accent (^). The former stood on all short vowels, e. g. *nūx*, *béne*, *véterem*, on long vowels in the antepenult, e. g. *déleō*, and on long vowels in the penultimate, if the final syllable was long, c. g. *régēs*. The latter stood on long vowels in monosyllables and on the final syllable of polysyllabic words, e. g. *rêx*, *illīc*, and on the long vowels of the penultimate, if the end syllable was short, e. g. *rêgis*, *rêgīna*. So far as the accentuation of the long vowels is concerned

(*régēs*, but *rēgis*), this difference in the forms of the syllabic accent is probably rightly regarded as a pedantic fiction of the grammarians.

Vowel shortening in *Júppiter* (*Jupiter*) etc. points, as we saw in § 612, to a clear cut accent. Nevertheless the reason for the separate treatment of the words in question, while other words apparently similarly formed have no shortening, is quite obscure.

§ 682. Besides the cases of enclisis, mentioned in § 679, there are others whose age we are not in a position to determine. Here may be mentioned especially combinations like *invicem*, *dēnuō* from *dē novō*, *īlicō* from \**in slocō*, *profectō* from \**pró factō* originally something like 'as good as a fact' (cp. *cōnfectu-s* § 680).

Compound words with an enclitic as second member were also subjected to this new law of accent (§ 681). \**tántō-ne*, \**úter-que*, \**útrā-que*, \**útrōrum-que*, \**scéleris-que*, \**scélerum-que* passed over into *tantōne*, *utérque*, *utrāque*, *utrōrúmque*, *scelerísque*, *scelerrúmque*; here too the accent of the initial syllable was retained as secondary accent. On the analogy of such accentuation people also said *tantáne*, *utráque*, where the new law had nothing to do with the giving up of the original accentuation, and *scelerá-que*, for which \**sceléráque* might have been expected. In the latter case moreover this analogy was not, as it seems, the only influence; the circumstance that the last syllable of polysyllabic words had originally a secondary accent (cp. § 680 p. 548) was also not without effect. In combinations like *scelera-que* which were always felt by the speaker as a combination of two elements, the tone movement of the uncompounded first member (*scélerà*) counteracted the accentuation of the antepenult (\**sceléraque*) which formed a sharp contrast to it. This seems to be specially supported by *agité-dum* which had no form so accentuated as *scelerís-que* alongside it.

The retention of the old accentuation by *íta-que úti-que* etc., is to be explained from the fact that they were no longer felt as

compounds. They might be adduced as additional proof that \**útrā-que*, \**tántā-ne* was once the pronunciation.

§ 683. We saw that in prehistoric times Umbrian-Samn. dialects shared the initial accentuation of Latin. Hence the numerous instances of syncope in these dialects, as Umbr. *osatu* 'operato' Osc. *úpsannam* 'operandam' from \**ópesā-*, see § 633.

Whether this accentuation still prevailed at the date of our monuments or whether a new system of accentuation had already taken its place, is a subject for further investigation. The extensive rejection of vowels in final syllables, as in Umbr. *pihaz* 'piatus' Osc. *túvtíks* 'publicus' (§§ 633. 655, 5), leads us to conjecture that the initial accentuation was retained.

#### Old Irish.

§ 684. The effects of accent on the form of words, prove that in the primitive Keltic period the first syllable had come to bear the word-accent owing to the development of an expiratory secondary accent.

This mode of accentuation prevailed in noun forms whether the word was simple or compound. O.Ir. *necht* O.Corn. *noit* 'neptis': Skr. *naptī-ṣ*. O.Ir. *cloth* 'renowned' O.Bret. *clot* (f.?) 'renown': Skr. *śrutá-*. Gall. *Tri-casses*; the accentuation of this word is cleared up by its Romance form, French *Troyes* (from \**Tricas*). O.Ir. *táus* 'leadership, superiority, beginning', Cymr. *tywys* 'guidance' from \**tó-uessu-s* = \**to-ued+tu-* (O.Ir. *do-fédim* 'I lead'), with its derivative in *-áko-* \**tó-uessáko-s* O.Ir. *tóisech* 'guide' Cymr. *tywysog* 'guide, leader, chief' O.Kelt. inscript. (Denbighshire) *tovisaci*; the great antiquity of the accentuation of this prefix follows from the *t-* instead of *d-* in the Gaelic and in the Britannic branch.

In the case of the verb there was a difference according as the verbal form was accompanied by a preposition or not. While the uncompounded verb had initial accentuation (e. g. O.Ir. *caraim* O.Cymr. *caram* 'I love'), the compound verb was not accented on the first syllable of the word, but on the first syllable of the second member of the combination; the imperative formed



an exception, for in it the preposition bore the word-accent. A peculiarity doubtless to be referred to the prim. Indg. verbal accentuation. The accentuation of the prim. Indg. subordinate sentence was retained and generalised; the imperative alone, which had no place in the subordinate sentence, still represents the accentuation of the principal sentence (cp. Skr. *prá-bhara*, Gr. *πρό-φερει*). Irish has best preserved these relations, e. g. *do-mélim* 'vescor', but imper. *tó-míl* 'vescere'; *do-bérid* 'fertis, datis', but imper. *táibrith* 'ferte, date'. The prefix form *do-* with *d* shows that the Britannic branch once shared in them (Thurneysen *Revue Celt.* VI 311).

The fact that, in the time of the prim. Keltic unitary period, when the initial syllables received the word-accent, combinations like O.Ir. *do-mélim* did not take the accent on the pre-position, proves that the latter was not yet fused with the verbal form into an indissoluble unity. The *n* of *con-* etc. points also to this as will be seen below.

Thus far the relationships of verbal accentuation allow themselves to be without difficulty connected with those which we must presuppose for the Indg. primitive period. Now Irish still shows a rule of accentuation which also seems to date from prim. Keltic, viz. the same accentuation as in the imperative 1. after the negative particles *nī nī* 'non' (*manī* 'si non', *conī* 'ut non' etc.), *nā nād nāch* 'non'; 2. after the relative (s)*a(n)*, if it was suffixed to a preposition, including the particle *in-* 'in which' and the conjunctions *ar-an-* 'ut', *dī-an-* 'cum', *co-n-* 'donec, ut'; 3. after the interrogative particle *ind- inn- in-*. E. g. *nī épur* 'non dico' beside *at-blur*. That this accentuation goes back to prim. Keltic, is shown by the double form *con-* and *cóm-* of the preposition, corresponding to Lat. *cum*. Thus *con-écat* 'possunt', but *nī cúmcat* 'non possunt'. The transition from *m* to *n* cannot be comprehended from the difference of accentuation by itself, but only from the prim. Keltic sound-law according to which final *-m* became *-n* (§§ 211. 657, 8); *com* thus became *con* at a time when as yet no closer connexion with immediately succeeding verbal forms had been introduced (cp.

Goth. *and-beita* 'I scold', § 687). The retention of the *m* in *nī cumcat* will then have been due to the same cause as in the imperative, that is, the firm connexion of the preposition with the verb and the accentuation of *cóm-* in *nī cúmcat* were prim. Keltic. It has not yet been satisfactorily explained how this method of accentuation in the case of preceding negative particles etc., was arrived at in prim. Keltic.

Enclisis, inherited from the prim. Indg. period, probably appears in O.Ir. *cā-ch* O.Cymr. *pau-p* 'everybody', O.Ir. *ne-ch* Cymr. *ne-p* 'quisquam, ullus' (scarcely to be connected directly with Gr. *-τε*, since we should expect \**cāich* \**neich*).

§ 685. The accentuation, characterised in the last paragraph as primitive Keltic, appears to have experienced no material alteration in the special Irish development down to the Old Irish period.

How the strongly expiratory word-accent occasioned in many cases sound-weakening and loss of syllables, has been remarked in §§ 66. 82. 90. 98. 106. 613. 623 rem. 1. 634. 657. Consequently the Indg. vowels retained their qualitative and quantitative differences with comparative purity only in syllables under the principal accent.

We have seen in § 634 that in a certain prehistoric period of Irish the syllable immediately following the accented syllable in trisyllabic and polysyllabic words had the weakest accent, cp. e. g. dat. *cáirt-ib* beside gen. sg. *cárat*, to nom. *cára* 'friend'.

The prim. Keltic accentuation suffered greater changes in Britannic. Cymric accents almost all polysyllables on the penult. Matters are more complicated in Bas Breton.

#### Germanic.

§ 686. Verner's law, treated in §§ 530. 581, shows that the prim. Indg. free accentuation had still long existed in the special primitive Germanic period. On the chronology of this sound-law cp. also § 541. The word-accent had at that

time, as has been remarked in § 670 p. 536, an expiratory character.

§ 687. During the prim. Germanic period a new expiratory accentuation came into being, which in all material points was similar to that of Keltic.

The first syllable became the bearer of the accent in nominal forms, both simple and compound. Goth. *fádar* OHG. *fáter* etc. 'father' from prim. Germ. \**fáðer-*, older \**faðer-*: Skr. *pitár-*. Goth. *háidu-s* OHG. *hêit* 'manner': Skr. *kētú-ṣ*. Goth. *ánda-vaurdi* OHG. *ánt-wurti* 'answer'.

The simple verb likewise took initial accentuation. Goth. *vítum* OHG. *wízzum* 'we know' from prim. Germ. \**vitumi*, older \**vitumí*: Skr. *vidmá*. Goth. *sátja* OHG. *sézzu* 'I set' from prim. Germ. \**sátijō*, older \**satijō*: Skr. *sādáyāmi*.

On the other hand in the compound verb<sup>1)</sup> the first syllable of the second member received the accent. Goth. *fra-líusa* OHG. *far-líusu* 'I lose'. OHG. *fír-túom* 'I extirpate, destroy, execrate', cp. *frá-tāt* 'scelus'; *ir-lóubōm* 'I permit' cp. *úr-loub* 'permission'; *ob-lázzu* 'I forgive', cp. *áb-lāz* 'pardon'; *zir-gángu* 'deficio', cp. *zúr-gang* 'defectio', also Ags. *zea-twe* pl. 'equipment' = Goth. \**gá-tēvōs*. The different forms, which the prefix assumes in Goth. *and-beita* 'I chide' *and-hafja* 'I answer' and *anda-beit* 'blame' *anda-hafts* 'answer' show that this accentuation of compounded verbs was due to the fact that the preposition did not form a word-unity with the following verb. The pre-Germanic form of the prefix was \**antá* (cp. Gr. *ἄντα*), and if the prim. Germ. \**anda* in *and-beita* etc. had lost its final *-a*, this loss can only be explained by the law of finals (§ 660, 1), thus *anda* must at that time have been still an independent word. Cp. O.Ir. *con-* in *con-écat* § 684 p. 551.

Rem. The tmesis in Gothic, as *ga-u-láubjats* 'do ye two believe?', *ga-u-hva-sēhvi* 'if he saw aught'; *bi-u-gitái* 'shall he find?', *diz-uh-þan-sat* 'and he then seized' (see Bernhardt on I. Corinth. XV, 15) seems, at first sight, yet more distinctly to point to this slack connexion of the pre-

1) Denominatives like OHG. *ántwurtēn* 'to answer' from *ántwurti*, *úrchunden* 'to testify' from *úrchundi* 'testimony' do not of course belong to this class.

position with the verb in the prim. Germ. period. But Kluge (Kuhn's *Ztschr.* XXVI 80) assumes with good reason that the prefix was not proclitic here, but had the full accent and that the verbal form was enclitic, just as in Skr. *ápa ca tiṣṭhati* etc. If this is right, this tmesis does not prove anything for cases like *fra-lhusa*.

In Germanic, so far as we can see, the imperative of compounds does not, as in Keltic § 684, form an exception. For Gothic cp. *andbindiþ* John XI, 44 'loose ye', *andhafjiþ* Mark XI, 30 'answer ye' not *anda-*. It had thus no doubt the accentuation of the subordinate sentence on the analogy of other verbal forms. An extension of this accentuation beyond its original sphere may be observed in the noun formations which attach themselves closely to the verb. That the passive participles had originally, in agreement with Skr. *prá-bhṛta-s* etc., the nominal accentuation, is still shown by e. g. Goth. *ánda-páhts* 'discreet' beside *and-págekjan* 'to deliberate', OHG. *úntar-tán* Mod.HG. *únter-than* 'subject', *dúruh-noht* 'perfect' (to *duruh-núgan*), *missi-lungen* 'miscarried' (to *missi-lingen*), Ags. *frá-coð* 'despised' = Goth. *fra-kunþs*. But beside these already Goth. *and-húliþs* and *bitans*, OHG. *far-hólan* etc. Cp. Kluge loc. cit., p. 68 ff.

Enclitics descended from pre-Germanic. *-h* in Goth. *ni-h* 'and not' = Lat. *ne-que*, *hvō-h* fem. 'each', cp. Lat. *quae-que*. *-k* in Goth. *mi-k* (OHG. *mi-h*) 'me', cp. Gr. *ἐμέ-γε*.

The new accentuation of Germanic had probably occasioned to some degree vowel absorption in the prim. unitary period. See § 635.

The question is, did the new accentuation arise through the development of an expiratory accent on the first syllable of the word, which struggled for a long time with the old word-accent and finally overpowered it, or is Verner right in saying (Kuhn's *Ztschr.* XXIII 129): "The transition to the fixed accentuation (root accentuation) is an analogical formation, completely carried out. The cases, in which the accent rested upon the root-syllable, were already under the old principle of accentuation in the majority, and this mode of accentuation then spread itself in the Germanic primitive language, since the word-forms,

which had the accent on the ending, gradually threw it back on to the root syllable". That in certain cases the analogy of forms, accented on the first syllable from of old, had influence, is not to be denied, but I do not think that we can rid ourselves of the assumption of a free development of the recessive accent. I do not see e. g. how the effect of analogy helps us in the case of the numerous polysyllabic adverbs and prepositions whose initial syllable, as has been established by Verner's law, had originally no accent.

§ 688. In Gothic there are a number of sound-weakening which show that the new Germanic accentuation remained for a certain time in this dialect on the whole unchanged, e. g. *sátja* 'I set' from \**sátiǰō*, *súnjus* 'sons' from \**súniǰiz* (cp. with this *qius* from \**qiya-z*, § 179 p. 156), *bairis* 'bearest' from \**birizi*. See § 635. 660.

It cannot be decided with certainty whether this system of accentuation existed still at the period of our monuments. The alterations in Gothic, which appear in the period after Ulfilas, do not prevent us from assuming that the traditional accentuation had remained, and so we may believe that it did remain.

§ 689. In West Germanic, especially in High German, the new accentuation has persisted in the main down to the present day.

The West Germanic law of syncope (§ 635) shows us the position of the word accent, and at the same time the relation of stress, which the accents of syllables without the principal accent, had to one another. If e. g. in OHG. *hórta* (Goth. *háusida*) the *i* was dropped, but remained in *nérita* (Goth. *násida*), the second syllable must have had a weaker accent in the first case than in the second; and *hórta* shows further that the last syllable in the older form \**hórita* had a secondary accent. According to Paul (Paul-Braune's Beitr. VI 136 ff.) the secondary accent in polysyllables did not merely follow mechanical routine, but was guided also by logical principles. The logical character of the secondary accents is shown by their varying with the flexion in the same word. Thus

e. g. the ending of the nom. and acc. sg. and probably also of the plural had a weaker grade of accent than the endings of the other cases, so that in the nom. and acc. of trisyllabic nouns the penult had stronger accent-stress than the last, while in the other cases the reverse held true. Paul conjectures that these functional differences of accent were already in existence in the primitive Germanic period.

In a number of cases vowel loss is to be explained from frequent enclitic or proclitic use of the word. Thus OHG. *mo nan* from *imo inan*, see p. 484; *mih* 'me' *daz* 'that' with final vowel loss in contrast with such forms as *chumi*, see p. 517. Cp. Paul loc. cit. pp. 125. 132. 144 and elsewhere.

### Baltic-Slavonic.

§ 690. Lithuanian and a part of the Slavonic languages show freedom of accentuation, and there can be no doubt that this method of accentuation extends back to prim. Baltic and prim. Slavonic. But the two branches go in details only partially hand in hand, and neither of the two systems quite agrees with the system which must be presupposed for the prim. Indg. period.

There are here two possibilities — either new principles of accentuation came into being as in other Indg. languages, which caused a new word-accent but which are still concealed from us, or the innovations in accent were the affects of analogy only, the old inherited word-accent having been generalised differently in different categories of forms. The latter, so far as we can see at present, is the more probable hypothesis and two examples may be given to show how in this way deviations from the prim. Indg. word-accent could have arisen. The accent falls on the ending in the 1. and 2. sg. in Lithuanian, and in Slavonic (i. e. in the dialects which retained the original Slavonic accentuation) in all the persons of the pres. indic. corresponding to the Skr. *váhāmi* (Indg. \**uég̃hō*): Lith. *vežù*, *vežì*, Russ. *vezú* *vezés'* *vezét* etc., Bulg. *vezú* *vezés* *vezé* etc.

Servian *vèzēm vèzěš vèzē* etc. (for older *\*vezém* etc., see § 692). We may assume that in the period of the Balt.-Slav. prim. community, the accent was already at any rate on the 1. sg.<sup>1)</sup> pushed from the root syllable towards the end of the word (cp. Leskien Archiv. f. slav. Phil. V 509 f.). If we consider now that the final accentuation in present forms composing the Skr. 6. class (*tudāmi*) comes from prim. Indg., that this accentuation therefore in such forms as Lith. *sukù* Russ. *skú* 'I turn', may be treated as original, it is not hard to conjecture that in prim. Baltic-Slavonic *\*uežō* was modified into *\*uežō* after the analogy of *\*sukō*. In Lith. and Slav. the masculine noun stems in *o* never have the accent on the final syllable in the nom. and acc. sg. If then e. g. Lith. *dūma-s dūma* and Russ. *dym* (O.Bulg. *dymŭ*) correspond to Skr. *dhūmá-s dhūmá-m* and Greek *θῦμός-ς θῦμό-ν*, this may depend on a generalisation of the accentuation of such nouns as Lith. *viška-s viška* Russ. *vólk* (Skr. *vŷka-s, vŷka-m*). Whether the whole of the deviation in Baltic-Slav. accent from the prim. Indg., may be thus explained, rests with more accurate investigation to show.

It seems to me to be highly probable that the Balt.-Slav. innovations, as regards the position of the word-accent, were brought about in this latter manner, owing to the fact that the twofold quality of the Lith. syllabic accent is historically connected with that of Greek (§ 671), although this duality of the syllabic accentuation has directly nothing to do with the contrast between syllables with and syllables without the high tone (see p. 530).

It may be further mentioned that Baltic-Slavonic, like all other branches of languages, possesses old inherited enclitics. Lith. *nè-gi* 'not surely' *kàs-gi* 'who surely? who then?', O.Bulg.

1) The prim. Slav. and O.Bulg. form *vezq* was not in any case, it is true, the Indg. form *\*ueghō*, but a conjunctive form *\*ueghām* = Lat. *veham* (see § 219), which suppressed the indic. form. But this conj. form too had the accent originally on the root syllable and we may assume that the accentuation of the indic. and conj. forms was identical at that time of the prim. Slavonic period when the two forms were used indifferently i. e. shortly before the suppression of the indic. form.

*ne-go ne-že*, the strengthened comparative particle *ne* (cp. Skr. *ná* 'not' and 'even as'): Skr. *gha* in *ná gha* etc. O.Bulg. *mi* 'mihī' enclitic beside *mĭně*, like Skr. *mē* beside *māhyam*. Indefinite pronouns Lith. *ka-s* O.Bulg. stem *ko-* (nom. *kū-to*), e. g. Lith. *nė-kas* O.Bulg. *ni-kūto* (dat. *ni-komu*) 'nobody'.

### § 691. Baltic.

The accentuation of Prussian is not known.

Lettic always accents the first syllable, and it is clear that this accentuation is younger than the Lith. free accentuation. The syllabic accent is of a twofold character. We have to distinguish between broken ('gestossen') and lengthened ('gedehnt') tone; for further information see Bielenstein *Die lett. Sprache* I 32 ff.

Lithuanian accentuation seems on the whole to be the unchanged continuation of that of prim. Baltic.

It is essentially expiratory throughout, as it seems, the whole sphere of the language. The musical accent does not however play a subordinate part.

In certain Lithuanian districts the word-accent is thrown back on to the initial syllable. This phenomenon is apparently most widely spread in the Memel dialect, and in this case it might perhaps be due to the influence of the Lettic dialect (des kurischen Dialektes). In the other dialects, e. g. that of Godlewa (see Brugmann *Lit. Volksl. u. Märch.* p. 295), such influence cannot be assumed, except in case that the eastern, little known dialects similarly share in the change, and thus a geographical communication with the area of the Lettic language be established.

Frequent elaborate attempts have been made to explain the differences of syllabic accentuation, which is either broken ('gestossen') or slurred ('geschliffen' better 'schleifend'). But the descriptions of these differences differ materially from one another, so that it is not easy to form a correct picture from them. The chief points are as follow :

1. Short syllables have always the same single-pointed accent, e. g. *bū-tas* ('house'). Syllables, in which a tautosyllabic liquid or nasal follows the short vowel, form an exception to this



rule; these sound-combinations stand on the same level as the diphthongs (*ai* etc.).

2. In long syllables, that is, in such as contain a long vowel or short vowel + *i*, *u*, nasal, liquid, it makes a difference whether the moment of the greatest intensity of expiration falls on the first or last mora. In the former case we have the broken ('gestossen') accent, e. g. *bū|ti* ('to be'), *lāu|kiu* ('I abide'), *vār|na* ('crow'), in the latter the slurred ('geschliffen'), e. g. *kū|das* ('thin, lean'), *tvā|nas* ('an overflowing'), *lai|kas* ('field') *vi|kas* ('wolf'). No fluctuation seems to take place with broken accentuation, the voice-stress slackens steadily. On the other hand a secondary point seems to exist with slurred accentuation. Kurschat says of the latter accent, that a leap is made to a higher step, "so that such a vowel appears, as it were, compounded of two vowels of which the first is unaccented, the second accented", and that also a "falling" takes place between the first and the second step. The secondary point — which in any case is insignificant — is thus situated before the chief point. Sievers *Phonet.*<sup>3</sup> 203. also indicates this accent as double pointed. Musically speaking the broken tone is a simple falling, the slurred either a simple rising ( / ) or a combination of a rising and a level tone ( / — ).

Rem. The quantity of syllables was taken too little into account in the older investigations on Lith. accentuation. Baranowski and H. Weber in the *East Lith. texts* p. XV sqq. throw light on the relation of this to the accent. That which is published here is unfortunately only the beginning of a systematic exposition of the Lith. accentuation, so that in a work like ours it is only possible to take account of it incidentally. The chief points are as follow:

In Lith. a distinction is to be made between short, medium long and long vowels and syllables ( ∪ , ∪ ∪ , ∪ ∪ ∪ ). Liquids and nasals, which follow a vowel, can form one or two morae. The varieties of accentuation are caused by these differences of quantity, not conversely.

If no tautosyllabic liquid<sup>1</sup>) follows a middle long vowel, the accent always falls on the second mora of the vowel ( ∪ ∪ ), e. g. *tvā|nas*. Medium long syllables always have the slurred tone.

If a tautosyllabic short liquid follows a medium long vowel, the accent falls on the first mora of the syllable ( ∪ ∪ ∪ ), e. g. *vār-na*, as if *vār|na*.

1) That which we have said here and in the following exposition of the liquids, also holds good of the nasals in all cases.

But if the vowel is short and the tautosyllabic liquid medium long, the second mora of it, that is, the third of the syllable, has the accent (◡◡), e. g. *vař|das* ('name'), as if *vař|das*. In the latter case a shifting of quantity took place in certain dialects, the vowel becoming medium long and the liquid short, *vař|das* became *vaar|das*.

Long vowels (◡◡) can be accented on the first (◡◡) and on the last mora (◡◡), e. g. *bú|ti* = *búuu|ti*, *sū|das* 'justice' = *suuu|das*.

If we apply these laws to the law of vowel shortening in final syllables, treated in § 664, 3 (p. 523), we have the following results: As *\*gerá* became *gerà*, the final syllable was deprived of two morae, ◡◡ became ◡. *anō* had a medium long vowel (◡◡) and retained it. In the transition of *gér̃s* to *geřs* ◡◡ (*éer̃*) first became ◡◡ (*ér̃*); but the medium long syllable did not tolerate this accentuation, ◡◡ necessarily arose, thus *geřs*.

We saw in § 664, 2 that *sē|nas* 'old' *gē|ras* 'good' became *séns gér̃s*. The second syllable being abolished as such and in the former case the *n*, in the latter the *r*, adding a mora to the preceding medium long vowel (◡◡), the result was first of all ◡◡◡. This accent position was not tolerated, there arose ◡◡◡, thus *séns, gér̃s*. Has not also the dat. pl. *vilkāms* from *vilkāmus* been brought about in the same manner (cp. § 664, 2)?

If a short vowel was dropped in the last syllable which had the word-tone (§ 664, 1. 2), the syllable immediately preceding it received the word-accent in the shape of a slurred tone. This modification cannot have taken place in absolute finality. Loc. sg. *tojè* passed into *tōj*, instr. pl. *tom̃s* into *tōms*, instr. sg. *akim̃i* into *akim̃̃*, instr. pl. *akim̃s* into *akim̃̃s*, *pirmà* into *pirm̃̃*. According to this the gen. sg. *akmeņs dukteřs* had arisen from *\*akmen-ès \*dukter-ès*.

It may be mentioned lastly that in nominal compounds, if the first member has the word-accent of the whole compound, the second member exhibits its own word-tone as secondary accent, e. g. *vaik-palaikis* 'a worthless young fellow' *isz-kekszinis* 'bastard child', and that likewise verbal forms, if they had the prefix *pér-* 'over, through', retain their own word-accent as secondary accent, e. g. *pér-lēkti* 'to fly over' *pér-važiūti* 'to ride through'.

§ 692. Slavonic. Since the accentuation of Old Bulgarian is not recorded and the phonetic changes of the prim. Slav. and O.Bulg. periods offer insufficient help for the determination of the accentuation (cp. § 281 rem. 3 extr.), we are obliged to

have recourse in the first instance to the Modern Slavonic dialects.

Of these Polish, Sorabian and Czech have given up the free word-accent. They accent all words in the same position; Polish has the accent on the penult, Sorabian and Czech on the first syllable.

Among the West Slav. languages Polabian preserved the movable accent, the material is here however of a limited nature. The languages of special importance are the South Slavonic languages (Servian-Croatian-Slovenian and Bulgarian) and the Russian dialects. These represent on the whole the prim. Slavonic accentuation. But it must be noticed that in the greatest part of the Servian-Croatian dialects, in the so-called Štokavian dialect (i. e. in the dialect, in which the neut. interrogative pronoun is *što*, in contrast to Čakavian, where this pronoun is *ča*), a shifting of the principal accent has taken place in such a manner that it was thrown back from its original position near a syllable from the beginning of the word, so that it only preserved its old position when it originally rested on the first syllable.

Thus e. g. on account of Russ. *nesú* Bulg. *nesŭ* Ser.-Štokav. *něsēm* (from *\*nesēm*) Režian. *něsě* we can deduce a final syllabic accentuation for O.Bulg. *nesā* and further for prim. Slav. *\*nesā*.

Rem. Many excellent treatises have been made on the accentuation of single Slav. languages and dialects. But a treatment on the whole Slavonic accentuation in general is still wanting, and since my knowledge of the modern Slavonic dialects is insufficient to undertake such a treatment and to be able to draw conclusions for the prim. Slav. period, I leave off with the above hints.

## ADDITIONS AND CORRECTIONS.

- P. 10 l. 6 read Manx for Many.
- p. 15 l. 6 read in for im.
- p. 31 l. 8 read Germanic for Teutonic.
- p. 78 last line read *drōz* for *droz*.
- p. 94 l. 18 and p. 406 l. 19 (cp. also p. 95 l. 22, p. 274 § 354, l. 8, p. 350 l. 7 from the bottom) occurs the root *sqhajt-*, *sqhajt-* 'scindere'. Since Av. *scindayeiti*, which has been assigned to this root, belongs rather to *skenda-* 'blow' from \**skanda-* (on the *i* in the root-syllable *scind-* cp. § 94 p. 89), while Av. *sid-* in the 3. sing. opt. perf. *hi-sid̄-yāb̄* 'might have torn, destroyed' corresponds to Skr. *chid-* (see Hübschmann *Ztschr. d. deutsch. morgenl. Gesellsch.* XXXVIII 424 f., Burg Kuhn's *Ztschr.* XXIX 358 ff.), the root must probably be put down with a palatal sound as *skhajt-*, *skhajt-* (cf. § 400) and Lith. *skėdrà skaištùs* be explained according to § 467 (cp. also § 414 rem.).
- p. 223 § 280 l. 2 read bordering for boarding.
- p. 224 last line but 4 read Low Sorab. for Low. Sorab.
- p. 288 l. 3 read \**suekrû-* for \**suekrû-*.
- p. 325 § 437 l. 1 read Ir. Brit. *b* initially and in the combination *ng*; and add O.Ir. *imb* 'butter' which by mistake has been put as an example to § 438<sup>b</sup>) at the end of *a*) in § 437.
- p. 326 ll. 10—11 omit On what . . . . . I cannot say.

## ABBREVIATIONS.

- Ags. = Anglo-Saxon.  
 cpf. = common primitive form.  
 fr. = from.  
 MHG. = Middle High German.  
 OHG. = Old High German.  
 OS. = Old Saxon.  
 prim. f. = primitive form.













