Greek + Sanskrit

A

comparative Study

Professor R. D. Ranade.

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Greek and Sanskrit: a comparative study

BY

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Errata.

GREEK AND SANSKRIT : A COMPARATIVE STUDY.

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Contents.

§ 1 Introduction.

In these days when classical Scholars are bestowing deserved attention on the Græco-Indian problem*, and are proving the indebtedness of either the one country or the other, it may not be amiss to do a little side-work and consider the close similarities of the Greek and Sanskrit *languages*. The Græco-Indian problem is a matter of peculiar interest. The striking similarities of the pre-Socratic cosmogonies of Greece and the Paurāṇic cosmogonies of India, of Neo-Platonic mysticism and Yogic ecstasy, of the legend-conceptions in the Iliad and the Rāmāyaṇa, of astronomical names and conceptions like Jāmitra and διάμετρον, and in general the analogies of sculpture and dramaturgy in Greece and India—all these and more have turned the attention of classical Scholars to the question of ' priority ' in all these departments of human activity. Various theories have been advanced to prove the indebtedness of either the one country or the other. In our present Essay, however, we are immediately concerned with the very close resemblance existing between the two noblest *languages* of the world—Greek and Sanskrit. We shall notice *this* especially in this Essay, leaving the problem of philosophical resemblance to some future date.

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* I refer to such valuable attempts as Prof. H. G. Raulinson's forth-coming book on " The Intercourse between India and the Western world " published by Oxford University Press.

Indeed, there have been enthusiasts even here, certain critics maintaining that the Sanskirt language "surpasses the Greek in all those perfections of form which have been hitherto considered the exclusive property of the latter" (Bopp), others holding that Sanskrit does but make poor show in comparison with Greek and going even to the length of saying that it is an unworthy "forgery" of the Greek language (Dugald Stewart). To both we answer that the worth of a language is not to be judged from the many grammatical "forms" which it can keep in service, but from the *literature* it embodies. It is merely admiring the rind, and not the kernel, to say that such and such a language can command such a lengthy list of forms. It is the soul and not the body which is worth loving, and he must be a poor admirer who loves the graces of the body, and not the beauty of the soul.

And considered from the point of view of literature, it is very difficult to say which of the Literatures bears away the palm. That is a question which I leave to more competent critics to decide. I shall be here directly concerned with the extremely close resemblances to Sanskrit language which can be observed even in a partial study of Greek. It is not without significance that when Western Scholars first began the study of Sanskrit, they should have deemed that an entirely new and unoccupied field had opened up before them ; and it is to the European study of *Sanskrit* that the origin of Comparative Philology is to be traced. Indian Scholars, on the other side, may have the same kind of feeling when they begin the study of the Greek language and it is their duty to contribute *their* quota to the study of Comparative Philology. Indeed, Philology has been generally supposed by people to be a subject almost as dry as dust; and as much of this censure is due to their own ignorance of other languages than their own, as to the usual habit of Philologers of not clothing their thoughts in flesh and blood. I shall, there-

fore, try to place before my readers as clearly and simply as possible the many points of resemblance between the two Languages; but I cannot help feeling that in the present attempt I may not be able to enlist the sympathies of those Greek Scholars who do not or will not learn Sanskrit, and also of those Sanskrit scholars who do not or will not learn Greek.
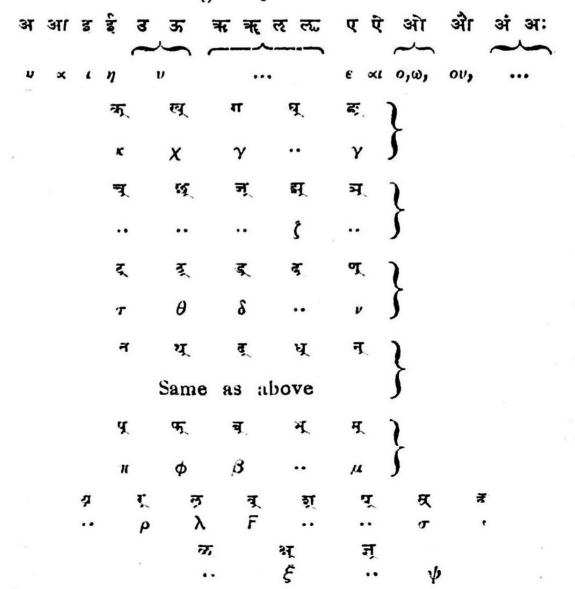
My apology for this Essay is that, in the first place when so much labour has been spent on showing the resemblances of Greek and *Latin*, comparatively little has been done to show the not *less* wonderful resemblances of Greek and *Sanskrit*. In the second place, though the problem of Common *Roots* has been handled ably in such books as Baly's Eur-Aryan Roots, not much has been done to note the points of *Grammar*. Thirdly, there is no *concise* statement of the resemblances of Greek and Sanskrit. Bopp has intermixed reflections on so many other languages, that a scholar who wants to note the resemblances ofGreek and Sanskrit only, does not know the wood for the trees in Bopp. I thought therefore that a concise and clear statement of the *salient* points might interest both Greek and Sanskrit scholars. I may add that the essay is based on an independent study of the languages. Indian Scholars have been standing too much on other people's legs, especially on the legs of Germans. And an independent way of thinking will give the needed corrective to the there-is-a-lion-in-the-path policy of Indians.

I will make one or two more remarks before I come to the subject proper. I have throughout used the Greek and *Devanāgarī* characters instead of the usual Roman. It is as bad a policy to print *Devanāgarī* in Roman characters as, for example, to write *Greek* in Roman characters (which is, by the way, sometimes done by printers for want of type). If European scholars cannot read Devanāgarī fluently, why, they must cultivate the habit of reading the same. Do not Indian scholars at first find it difficult

to read the German or the Greek alphabet? European scholars must pay the pirce of learning a new alphabet, before they begin the study of a language. The second remark that I wish to make is that it is only the *Classical* Sanskrit Grammar that is being mainly compared in this Essay with the Greek and not the *Vedic* Grammar (except in the treatment of *accents*, which donot exist in classical Sanskrit). The Vedic Grammar was only a Grammar *in the making*; and we cannot compare the established forms of Greek with those of a Grammar which was only in the making.

§ 2 Alphabet.

The alphabets of the two languages may be set forth in the following comparative scheme :—

अ आ इ ई उ ऊ ऋ ॠ ऌ ॡ ए ऐ ओ औ अं अः

| υ | x | ι | η | υ | | ... | | ε | αι | o, ω, | ov, | ... |

		क्	ख्	ग	घ्	ङ्	}
		κ	χ	γ	..	γ	
		च्	छ्	ज्	झ्	ञ्	}
		..	..	..	ζ	..	
		ट्	ठ्	ड्	ढ्	ण्	}
		τ	θ	δ	..	ν	
		त्	थ्	द्	ध्	न्	}
		Same as above					
		प्	फ्	ब्	भ्	म्	}
		π	φ	β	..	μ	

| य् | र् | ल् | व् | श् | ष् | स् | ह |
| .. | ρ | λ | F | .. | .. | σ | ˙ |

| क्ष | | श्र् | | ज्ञ् | |
| .. | | ξ | | .. | ψ |

The four Sanskrit vowels ऋ ॠ ऌ ॡ appear in no other language, for the simple fact that they are not *needed*. Speaking from the purely utilitarian point of view, their place can well be taken by रु and लु respectively. Every European knows by experience how hard it is for him to accustom himself to the pronunciation of these strange vowels. Hence, it is meet that they do not appear in Greek.

ए and ऐ ought to be merely *diphthongs* as they are treated in Greek, and not *pure voweles*.

ओ can be rendered into Greek by *o* or ω, but more properly by the latter; and there is no vowel sound corresponding to the *o* in Sanskrit.

अं and अः are no vowels at all, and are not recognised by Panini; their places can be taken by the nasal and the aspirate respectively.

Among the consonants, it may be noticed that there is no consonant in Greek except the ζ=झ्, to take the place of the soft aspirates in Sanskrit viz. घ्, झ्. ढ्, ध्, भ्.

In Greek, no difference is made between the dentals and the linguals and they are fused together.

It may be noticed that γ before κ, γ, χ or ξ corresponds to the Sanskrit ङ्.

No palatal exists in Greek except the ζ.

In Greek, there are no semi-vowels answering to the Sanskrit य्, र्, व्, ल्, and the double consonant ज्ञ. The Digamma of Greek (F) corresponds to the Sanskrit व, the aspirate breathing ʻ does the work of ह्. The double consonant ξ (= κ + σ) is exactly the क्ष (क् + स) of sanskrit. And though there is no conjunct consonant in Greek for ज्ञ, it has got a ψ, for which, except a coinable प्स, there is no recognised conjunct consonant in Sanskrit.

One may notice by comparing the two sets of alphabets, how very near the Greek alphabet is to the Sanskrit, much nearer than it is for example to the Latin,

German and French alphabets. The division into Gutturals, Linguals, Labials etc. exists naturally in Greek, and can only be artificially imposed upon the Latin alphabet; and thus it greatly resembles the divisions of Sanskrit Alphabets in the same groups.

§ 3 Accents

We now come to a very fundamental part of the Greek system viz. the accents. And the similarity and the difference of the Greek and Sanskrit accents have not been, to the best of my knowledge, previously noticed in detail. All, who have even a tolerable knowledge of the Vedas, know how integral a part the accents form in the Vedic system. The accents gradually dropped out of use; and what we have now is an accentless Sanskrit. It may be noticed that though it is customary even now to mark the accents in Greek *composition* (otherwise it would not be a scholary composition at all), in pro-nunciation (e. g. in the English pronunciation of Greek) the accents are entirely ignored. And the time will surely come when the accents will be considered a mere encumbrance, a mere lumber, and will drop out of use even in composition. This seems to be what has happened in the evolution of the sanskrit language, and writers like Mammaṭa, the author of the Kāvya-Prakāśa, have said वेदे एव न काव्ये स्वरः अर्थविशेषप्रतीतिहेतुः (Ullāsa II) : "In the Vedas only and not in Classical literature are accents to make us conscious of a particular meaning."

But both in Greek and Sanskrit, the origin of the accents is to be sought for in the necessity of showing to the unlettered many the particular pitch at which a letter was to be uttered. The Greeks actually did this for the sake of the 'barbarians'; the Indians might have done it for the untutored inlanders. Another reason for the Indian accent was the prevention of text-corruption, by compelling a particular accent for a particular word, especially, when the Literature could only exist on the lips of people.

This soon degenerated in India, and we find a cir-cumflex uttered at a higher pitch than the acute ! This never was so in Greece. The acute retained its proper dignity and supremacy.

It may also be noticed that logically there can be only three accents, the acute with a high pitch, the grave with a low pitch, and the circumflex, representing a fusion of the two. This was what happened both in Greece and India. In Greek, the acute was marked ′ ; in Sans-krit, it was curiously left *unmarked*. [By the bye, it may here be mentioned that Whitney has done real service to the cause of Sanskrit accents by *marking* them in the Greek fashion throughout his very learned grammar]. In Greek, the grave was marked ‵ ; in Sanskrit, it was marked with a line below. The circumflex in Greek was marked ˜ ; in Sanskrit, it was marked with a vertical stroke above. It was this latter method of marking a circumflex with a vertical stroke in Sanskrit, that must have led to the undesirable higher pitch of the circumflex, to which re-ference has been made above.

But while the Greeks did not divide the circumflex into different varieties, this was what actually happened in India. The Indian circumflex was first divided into two varieties, the independent or organic circumflex, and the dependent or accessory circumflex. Then, each of these was divided into different sub-varieties ; and these are too complicated to mention.

One point, however, which is common to the Greek circumflex and the Indian organic circumflex may be mentioned. The Indian organic circumflex, which main-tained its character in all situations, could be on a *long* vowel or on a *short* vowel ; thus रायो ३ वानि: or अस्व ३ न्त: in the former case the numeral 3 was put, in the latter, the numeral 1. The Greek circumflex could, exactly like the Indian organic circumflex of the variety 3, exist only on

a vowel *long* by nature or a diphthong.   To the variety ɪ of the organic circumflex, and to the dependent cir-cumflex, there is no parallel to be found in Greek.

Logically, again, in either language, there could be only *one* acute accent in a word. This was what happened both in Greek and Sanskrit. But there might be *short* forms, which might not claim their due of an acute accent. This also is the same in both languages, and in the case of *identical* forms. Thus while the Greek pronominal forms με, μου, μοι, σε, σου, σοι, are entirely ac-centless, in the sense that they throw their accent on to the preceding word, their equivalent pronominal forms in Sanskrit are also accentless e. g. मा, मे, नौ, न :, त्वा, ते, वां, व :. While the *short* Greek words που, ποι, ποτε, γε, τε, νυν, ὁ ἡ οἱ are also accentless, the *short* Sanskrit words च, वा, उ, स्म, इव, चित्, ह are also without accent. The Greek Enclitics and Proclitics merge in the Sanskrit Atonɪ proper.

But there is one peculiarity in Sanskrit which must be noticed. No word in Greek can have *two* acute accents. There *are* words in Sanskrit, especially the dual com-pounds, and infinitive datives in तवै which have two acute accents, simply for the fact that the words take time in pronunciation ; e. g. द्यावापृथिवी, अपभर्तवै. Just as the ab-normally short forms have no accent, the abnormally long forms might claim two ! This is an accent with a revenge.

In both languages, there is a change of accents, one into another, according to the necessities of declension, conjugation, or position in a sentence involving crasis or contraction. But while in Sanskrit, the acute never changes and holds always its imperial place, in Greek it changes into circumflex and even into grave. It changes into circumflex when e. g. τιμή becomes τιμῆς and τιμῇ i. e. in Genitive and Dative. It changes into grave when e. g. ἀπό τούτου becomes ἀπὸ τούτου. The only accents which change in Sanskrit are the grave and the cir-

cumflex (dependent). They both change into one another ; and never do they become acute or vice versa. In तेनं for example, the grave न becomes circumflex ; and in तेन॒ ते the circumflex न of the former becomes again grave, by the necessities of position, into the details of which we need not enter in this place.

In crasis, however, there is an important difference in Greek and Sanskrit. In Greek, when crasis takes place, the accent of the first word disappears, and that of the latter takes its place ; as *κεἰ* for *κεὶ εἰ*. In Sanskrit, the acute is always powerful irrespective of position.

The Verbs and Vocatives do retain an acute accent in Greek ; in Sanskrit, both lose their acute account. It seems that while Greek is right in the case of the verb, it is wrong in the case of the Vocative, which being treated like an interjection, ought, as in Sanskrit, to have no acute accent. Similarly, the Sanskrit usage for the *verb* seems to have no justification.

Moreover, the general process of the Greek accent may be described as a movement backwards, just as that of the Sanskrit accent is a movement forwards. The tendency in Greek, as is well-known, is to throw the accent as far back as possible ; as *λέγω* and *λέγεται ;* *ἀνθρώπου*, and *ἄνθρωποι* ; the tendency in Sanskrit is to throw the accent as much further as possible ; *e. g.* तुद॒ता (the ता being accented). To this same tendency is to be traced the phenmenon of each of the later enclitics in Greek to throw the acute accent on to the preceding syllable, as *εἴ τίς μοί φησί ποτε*, and the phenomenon of monotone (or as Pāṇini calls it एकश्रुति) of preceding grave accents in Sanskrit throwing the burden on to the later graves *c. g.* सुदृङ्गिॅकसंॄक्, in which ऋ throws its burden on to सं, and सं to ॄ, until a halt comes as ni सुदृङ्गिॅकसंॄग्ग्वांम्. There is only one exception to the

above in the case of the possessive compounds in Sanskrit where accent is thrown backwards *i. c.* on the first member of the compound ; thus, for example, the possessive compound सूर्यतेजस् "possessing the brightness of the Sun" has the acute accent on सू ; while the same compound, if genitive, has the accute on ज.

§ 4 Sandhi.

The so-called Elision, Contraction and Crasis in Greek are but different aspects of the same phenomenon, which is most appositely described by the Sanskrit word Sandhi (= combination). It is remarkable that this combination takes place both in the case of vowels and in the case of consonants in both languages, and the combinations also are identical. Thus, the student of Sanskrit may see remarkable coincidences to Sanskrit in the following Greek contractions :—

$$\alpha + \epsilon = \bar{\alpha} \quad \text{cf.} \quad तव + इन्द्रः = तवेन्द्रः$$
$$\alpha + \eta = \bar{\alpha} \quad \text{cf.} \quad तव + ईशः = तवेशः$$
$$\alpha + o = \omega \quad \text{cf.} \quad हित + उपदेशः = हितोपदेशः$$
$$\alpha + \omega = \omega \quad \text{cf.} \quad तव + ओष्ठ = तवौष्ठ$$
$$\epsilon + \eta = \eta \quad \text{cf.} \quad रति + ईशः = रतीशः$$

These are vowel-combinations. The consonantal combinations we shall have due occasion to notice further on, while we shall have to speak of consonantal declension and conjugation. The coincidences there will be found still more remarkable.

§ 5 Article

It is the duty of a philologer not only to notice the resemblances, but also the *differences* in the case of the languages under consideration. In so doing, he gives due attention to the respective genius of the languages, which made them develop in a particular way. Such a difference presents itself in the case of the Article. Out of the three classical languages, Sanskrit, Latin and Greek, it is only the Greek which shows the existence of

the article ; the first two have no article. Thus, while the function of the article is served in Sanskrit by the demonstrative pronoun, and while the Latin mensa = table, *a* table, and *the* table, there is a distinct Definite Article in Greek, and has all the three genders : ὁ ἡ τὸ, and all the cases of the noun. But, even Greek does not show the existence of the Indefinite article, which is a particular feature of the modern languages of Europe: German, French and English. One does not know how to account for the existence of the Definite Article in Greek, while it is not to be found in the sister classical languages, Sanskrit and Latin.

§ 6 Declension

(1) We now come to the first of the two pillars of any Grammatical System, namely, the Declension of nouns, and the Conjugation of verbs. And here we might begin with the consideration of *cases*. Of all the languages of the world, Sanskrit shows the largest variety of cases ; other languages show a comparatively smaller number. Thus, while Sanskrit shows 8 cases, Latin shows 6, Greek shows 5, and German and French only 4 ; while there is absolutely no declension proper in English, and there are no cases (the Nominative case in English is the so-called designation of the Subject, and the Accusative, of the Object ; but because, there is no variation of form in these, we might either say that there are no cases in English, or if at all, only one case). It may be noticed that in whatever language the cases are lacking, the function of these is served by prepositions. The Sanskrit cases are :—

Nominative.	Ablative.
Accusative.	Genitive.
Instrumental.	Locative.
Dative.	Vocative.

Of these, the Instrumental and Locative are lacking in Latin ; (though there formerly existed a Locative in

Latin, it has now dropped out). These together with the Ablative are lacking in Greek. These three together with the Vocative are lacking in French and German.

We see from the above that a language retains only those cases which are vital to its existence, and we also see that the unused cases, following the law of Natural Selection, drop out in course of time. The four fundamental cases, therefore, seem to be the Nominative, Accusative, Dative and Genitive. The Vocative is properly no case; it is an interjection, often identical in form with the Nominative. The Instrumental, as in Greek, may safely merge in the Dative ; *e. g.* the sentence "he kills the man *with* a stone" may be rendered by the Dative ; τὸν ἄνθρωπον λίθῳ ἀποκτείνει. The Ablative may safely merge in the Genitive, as it has actually done in Greek, and as it already shows a tendency in Sanskrit to be often identical in form with the Genitive, *e. g.* बुद्धेः is both Ablative and Genitive Singular. The Locative again may be identical with the Genitive, as in Greek and Latin. In the latter, the Locative forms *Romae* and *Corinthi* are the same as the Genitive forms. One very interesting consequence follows from this merging of the Locative in the Genitive in the Greek language. As we shall notice later on, the Genitive Absolute in Greek has striking similarities to the Genitive Absolute in Sanskrit; but, it may be noticed that there is a Locative Absolute also in Sanskrit. Now as there is no Locative in Greek, there is no Locative Absolute also ; and as the Locative has merged in the Genitive, the Locative Absolute of Greek merges in the Genitive Absolute.

(2) With regard to *Number*, it may be noticed that Greek and Sanskrit are at one in having a Dual, and in this respect they differ from all other languages. Thus, there is no dual in Latin, German or French ; and even Pāli and Prākrit, which are otherwise so similar to Sanskrit, in this case follow the Latin in refusing to admit the dual. The origin of the dual in both Greek and Sanskrit is to be

traced to the necessity of characterising things which necessarily go in *pairs*, as the eyes, the ears, the hands and the feet ; and as these cannot be pluralised (unless it were in the case of Śiva who had got three eyes, and in the case of Rāvaṇa who had got 20 eyes, 20 ears, 20 hands and 20 feet, and to boot, 10 heads), it was found necể- sary to invent a new kind of number altogether. The dual has existed even from the times of the Veda, where a prominent use seems to have been made of it e. g. अश्विनौ, मित्रावरुणौ, द्यावाष्टथिवी, the last once more illustrating what we have said above that the dual necessarily was used about things like " the heaven and the earth " which went in *pairs* in human thought.

Another thing to be noticed both in Greek and Sanskrit is that when once the dual was introduced in the case of nouns, it was necessary to introduce it in the case of verbs also, as otherwise a *dual* subject might have a *plural* verb. Hence, we find the dual even in the case of verbs both in Greek and Sanskrit.

(3) Coming to Declension proper, we might divide it into vowel declension and consonantal declension, according as the stem ended in a vowel or in a consonant. In either case, in the latter possibly more than in the former, the resemblances between Greek and Sanskrit are very remarkable.

In the former case, as well as in the latter, the case terminations are almost identical with those in Sanskrit :—

ς for Nom : Sing corresponds to स

ν for Acc :   „   „   „ म्

oς for Gen :   „   „   „ स्य or स्

ᾳ or ῳ for Dat :   „   „   „ ए or य

So far in the case of Masculine nouns.

The feminine *consonantal* nouns are to be exactly declined like the masculine consonantals, both in Greek and Sanskrit, thus ὁ φύλαξ and ἡ μάστιξ are to be similarly declined, as well as भगवत् *m* and इ्वष् *f*.

The vowel feminines of the 1st declension in Greek end in ᾱ or η as χῶρᾱ and τιμή, corresponding exactly to the vowel feminines of Sanskrit ending in आ and ई as भार्या and दासी, the Paninian terminations being टाप् and ङीप् or ङीष् .

The Neuter of the second declension in Greek ends in ν (both for Nom: and Acc :) as τὸ δῶρον, τὸ δῶρον, corresponding exactly to the neuter of Sanskrit ending in म्, (both for Nom : and Acc :) as वनं, वनं.

The Neuter consonantals of the third declension in Greek take no termination for Nom: Voc: Acc:, and in other cases are similar to the Masculine, corresponding exactly to the neuter consonantals in Sanskrit, which take no termination for Nom: Voc: Acc: and in other cases are similar to the masculine. Thus σῶμα, σῶμα, σῶμα, σώματος, σώματι correspond to गच्छत्, गच्छत्, गच्छत्, गच्छत: and गच्छति.

But more striking than any of the above resemblances are those which consonantal stems display in both the languages while *fusing* with succeeding consonatal terminations. Thus—

$$\left\{ \begin{array}{l} \kappa + s, \ \gamma + s, \ \chi + s = \xi \\ क् + स्, \ ग् + स्, \ घ् + स् = क्ष \\ \phi\acute{υ}λαξι, \ μάστιξι, \ ὄνυξι \text{ corresponding to } वाक्षु } \end{array} \right.$$

$$\left\{ \begin{array}{l} \pi + s, \ \beta + s, \ \phi + s = \psi \\ प् + स्, \ ब् + स्, \ फ् + स् = प्स \\ \text{as in } \phi λε\psi ί \text{ and } अप्सु } \end{array} \right.$$

But while

$$\left\{ \begin{array}{l} \tau, \ \theta \text{ and } \delta \text{ are dropped before } s \text{ in Greek,} \\ स् \qquad \text{is} \quad \text{,,} \qquad \text{after } त्, थ्, द् \text{ in Sk. in} \\ \qquad\qquad\qquad\qquad\qquad\qquad \text{the Nom:} \end{array} \right.$$

and not   ,,   ,,   ,,   in the Loc:

Thus λαμπάς and λαμπάσι may be contrasted with द्यस् and द्यत्सु, the स् being dropped in the first case and not dropped in the latter.

Other consonantal fusings we shall have occasion to notice under the heading Conjugation.

§ 7 Comparatives and Superlatives.

In the comparison of adjectives again, we meet with resemblances which are extremely noteworthy:

The general terminations in Greek for forming Comparatives and Superlatives are τερος and τατος corresponding to the Sanskrit तर and तम (how the म in the latter came to take the place of τ is a mystery !). Thus

| σοφός | σοφώτερος | σοφώτατος |
| विद्वस् | विद्वत्तर | विद्वत्तम. |

But in Sanskrit, the terminations तर and तम are not restricted to adjectives as in Greek ; they are sometimes applied even

(a) to substantives :—

| नृ | नृतर | नृतम |
| स्त्री | स्त्रीतरा | स्त्रातमा |

(b) to verbs (in the form of तराम् and तमाम्) :—

| पचति | पचतितराम् | पचाततमाम् |
| cooks | cooks better | cooks best |

(c) to pronouns :—

| किं | कतर | कतम |
| which, | which of the two, | which of the many |

(d) to nouns with case inflections :—

| पूर्वाह्णे | पूर्वाह्णेतर | पूर्वाह्णेतम |

(c) and to adverbs, which finds a parallel in Greek :—

कथं	कथंतराम्	कथंतमाम्
नीचैः	नीचैस्तराम्	नीचैस्तमाम्
σοφῶς	σοφώτερον	σοφώτατα
σωφρόνως	σωφρονέστερον	σωφρονέστατα

Then, there is a second method of forming comparatives and superlatives in Greek by adding the termina-

tions ιων and ιστος, corresponding exactly to ईयान् and
इष्ठ ; thus,

ἡδύς	ἡδίων	ἥδιστος
गुरु	गरीयान्	गरिष्ठ

These in both languages are *special* comparatives and
superlatives.

In addition to the two methods above, there is a
third arbitrary method of forming degrees of comparison
quite irresponsibly: thus,

ἀγαθός	ἀμείνων	ἄριστος
	βελτίων	βέλτιστος
वृद्ध	श्रेयस्	श्रेष्ठ
	ज्यायस्	ज्येष्ठ

It may be noticed in these that it is not the termi-
nations that are arbitrary, but only the *stem* assumed in
either language, to which the terminations are applied.

§ 8 Numerals

We next come to the Numerals. The similarities
noticed in the pronunciation of Numerals has been one
of the stock arguments of philologists in favour of point-
ing out the common origin of languages. Thus, for
example, the similar forms pointed out in the three
languages, namely,

Sanskrit:	दश	एकादश	द्वादश	त्रयोदश
Greek:	δέκα	ἕνδεκα	δώδεκα	τρεῖς-δέκα
Latin:	decem	undecim	duodecim	tredecim

have been one of the chief foundations of comparative
Philology. These similarities are not interesting gram-
matically, but, as I said, historically. One can scarcely
deny the common origin of the Indo-European languages
after a consideration of these.

But it is not this aspect that I want here to lay
chief stress on ; it is neither that ordinals corresponding
to these cardinals are similar in all the languages ; but it
is rather the fact that the human mind is seen in its con-

structive activity in the formation of the *adverbial* nu-merals. But this mind can go no further in this case than three or four paces, and then it leans on a crutch. Thus for example compare the following :—

Greek.	*Sanskrit.*	*Latin.*	*German.*		*French.*	
ἅπαξ	सकृत्	semel	ein	mal	une	fois
δίς	द्वि:	bis	zwei	„	deux	„
τρίς	त्रि:	ter	drei	„	trois	„
τετράκις	चतु:	quater	vier	„	quatu	„
πεντάκις	पंचकृत्व:	quinquies-eus	fünf	„	cinq	„

correseonding respectively to the English :—

once, twice, thrice, four times, five times. In Greek, the human mind takes three paces and then leans on the crutch of κις ; in Sanskrit and Latin it takes four paces, and then leans on कृत्व: and *eus* respect-ively ; in German and French, it is absolutely lame and reclines on the crutch (mal and fois) from the beginning ; in English, as in Greek, it goes three paces and then sub-stitutes the ever-recurring "times." The reason for this phenomenon is obviously that it is only the first 3 or 4 forms which are in constant *use* in any language ; and in further forms, there is the grammatical red tape !

§ 9 Conjugation.

(1) When we come to Conjugation, we come to even greater similarities than have been noticed in the forego-ing pages.

The Auxiliary verb in both languages is identical, the stems being ἐσ and अस् respectively. The forms also which it undergoes are very often the same. For example

εἰμί is equivalent to अस्मि.

ἐστί   „   अस्ति.

ἐσμέν   „   स्म :

ἦσαν   „   आसन्.

In other forms, there is a difference.

(2) In Greek, as in Sanskrit, there are *three* voices : the active, the middle, and the passive, corresponding respectively to परस्मैपद्, आत्मनेपद् and what Whitney calls the य-class. Whitney, however, takes the passive not to be a Voice but a Conjugation ; and in his opinion there are two voices in Sanskrit " as in Greek " (Whitney's Grammar P. 200) ! However that might be, the passive of Greek is exactly the य-class of Sanskrit.

Now, exactly as in Greek, there are many roots in Sanskrit which belong to both the active and the middle voices ; while there are others which belong to only the middle (i. e. आत्मनेपद्). These latter in Greek are well-known as Deponent verbs, in as much as they have " laid aside " their Active forms.

Now, a peculiarity of Sanskrit must here be noticed. Particular prepositions in combination with particular verbs change the voice of the verb altogether ; e. g. गम् which is Active becomes Middle when the preposition सं precedes ; on the other hand, रम् which is Middle becomes Active when the prepositions वि, आ and परि precede. Thus we see how prepositions have the power to deprive verbs of their original voice.

It may also be noticed that in Greek, as in Sanskrit, the terminations of the Middle and the Passive are exactly and always identical. Nay, most of the *forms* themselves are identical in many cases. Scholars may recall to mind the many cases of the identity of the Middle and Passive forms of both Greek and Sanskrit roots.

Not only this, even the senses that are meant to be conveyed by the Active and the Middle Voices in Greek and Sanskrit are identical. Thus, in either language, the Active was meant to have a transitive meaning, as throwing the action on to others, and the Middle was meant to have a reflexive meaning, as throwing the action back to oneself. This meaning is absolutely clear in the very significant epithets परस्मैपदं (= परस्मै पदं) and आत्मनेपदं

(= आत्मने पदं) that were invented by Sanskrit grammarians. This seems to have been the original foundation of the difference between the two kinds of voices in both languages ; but while Greek has very nearly retained even now this important difference, it has been almost entirely effaced in Sanskrit, especially in the Epics, where the necessities of versification have often compelled the use of a wrong voice. The difference of voice, compelling a difference of meaning, can be beautifully illustrated from two Greek infinitives: While τιθέναι νόμους (Active = परस्मैपद्) can be used of a despot who enacts laws for *others*, we can only use τίθεσθαι νόμους (Middle = आत्मनेपद) of a self-governing nation, which enacts laws *for itself*. Thus we see that the original difference between Active and Middle has been retained in Greek.

There is again another difference between Greek and Sanskrit. In Sanskrit, the difference of voice in the case of Roots is extended in part to the participles, but never to the infinitives; in Greek, it is extended to the participles and even to the infinitives. Thus

		Pr. p.	P. p.	Infin.
गम्	(Active)	गच्छत्	गत	गन्तुं
रम्	(Middle)	रममाण	रत	रन्तुं

while,

λύω	(Active)	λύων	λύσας	λύειν
λύω	(Middle)	λυόμενος	λυτάμενος	λύεσθαι

गन्तुं and रन्तुं must always end in तुं ; but λύειν and λύεσθαι do not both end in ειν.

(3) In Greek, there are two varieties of Future, two varieties of Perfect and two varieties of Aorist ; in Sanskrit, similarly, we have two varieties of Future, two varieties of Perfect, but *classically* speaking, the appalling number of 7 varieties of Aorist. The beginner may well be confused at this menacing number of 7 varieties, and Whitney has done excellent service to the cause of Aorist by simplifying the varieties, and grouping them under

only three heads : the simple, the reduplicative, and the sigmatic (=sibilant). The cause for this large number of specialised tenses is to be found in the fact that the languages were widening, and it was necessary to restrict and group the tenses under different classes each with a common feature.

(4)   But there is one tense in Sanskrit which does not occur in any other language including Greek and Latin, except perhaps in German ; and it is the *Conditional* (लृङ्). It is used when things might have, but have not happened. It stands to the future as the Imperfect stands to the present. The classical example of Conditional in Sanskrit is :—सुवृष्टिश्चेद्भविष्यत्तदा सुभिक्षमभविष्यत :—

"If there had been abundant rain, there would have been plenty," indicating that there was *not* abundant rain, and therefore there was *not* plenty.

A similar use of the Conditional is to be found in German, *e. g.* "The soldiers would have been killed in the first battle" might be translated :—

"Die Soldaten würden in der ersten Schlacht getödtet worden sein," implying that they were *not* killed.

In this case, Greek does not present us with a parallel to the Sanskrit usage.

(5)   It is a custom with Greek grammarians to divide the majority of Greek verbs into two Conjugations, those ending in ω and μι, and to put down the other Greek verbs as Irregular verbs. This entirely obscures the proper classification of verbs. No attempt has been hitherto made, so far as the present writer knows, of bringing the Greek classification in a line with the Sanskrit classification into 10 Gaṇas or classess. The conjugations in Greek have been hitherto divided on the fundamentum divisionis of the terminations ω and μι ; we have in the present essay divided them according to the signs like ε, nil, reduplication, νυ etc., that the verbs take, thus bringing the Greek system in a line with Sanskrit. To verbs of the 1st conjugation in Sanskrit, whose sign is अ (इय्य्) are similar such

irregular verbs in Greek as γχμέω, δοκέω, whose sign is ε. To verbs of the 2nd conjugation in Sanskrit, whose sign is 'nil', are similar the majority of Greek verbs which take terminations directly, such as φεύγω, πείθω, λείπω. To the 3rd conjugation in Sanskrit, whose distinctive sign is the Reduplication even in the present, correspond such verbs as τίθημι and δίδωμι. The 4th and the 6th conjugation in Sanskrit are so very similar to the 1st, for all *Conjugational* purposes, that one may not attempt to classify Greek verbs under these heads, when similar verbs have been there shown to exist, corresponding to the 1st conjugation in Sanskrit. To the 5th conjugation in Sanskrit whose sign is उ (श्नु), correspond many such Greek verbs as δείκνυμι, whose sign is exactly the same, (νυ=नु.) The 7th and 9th conjugations in Sanskrit, which have the sign न् or न, (श्नम्), नी or ना (श्रा), may correspond to such irregular verbs in Greek as take ν, νε and αν after the stem, such as δάκνω, ὑπισχνέομαι, and αἰσθάνομαι. The 8th conjugation in Sanskrit whose sign is उ has so few roots belonging to it that Greek may be excused if it does not show a parallel. And the 10th of Sanskrit Conugjations is too much like the 1st, 4th and 6th to demand a different class of roots from Greek. Indeed, if we were to hunt down the Greek roots, we can find lists of roots corresponding to each of these four Conjugations.

Moreover, Greek presents us with verbs such as πάσχω and εὑρίσκω, and βιβρώσκω and γιγνώσκω, the first two unreduplicated, and the latter two reduplicated, but all having the distinctive appendage σκ, which marks such roots as being very close to the Sanskrit *Desideratives*, in form at least, if not in meaning, the latter being also reduplicated, and having the mark स्, as चिकीर्षति, जिघांसति, even unreduplicated desideratives being found in Sanskrit as रिप्सत, and धिप्सति, corresponding to the first two Greek verbs mentioned above, while verbs like मीमांसते are also to be found in Sanskrit, which have a reduplicative form, but no reduplicative sense.

(6)   We have said above that the consonantal combinations that take place in the Conjugation of Greek verbs are very similar to the consonantal combinations in Sanskrit. Thus :—

(*a*) Before all terminations beginning with μ, a labial becomes μ, and a guttural becomes γ;

c. g. $\begin{cases} \gamma\acute{\epsilon}\gamma\rho\alpha\mu\mu\alpha\iota & \text{from stem } \gamma\rho\alpha\phi \\ \text{अम्मयं} & \text{from } \text{अप्} + \text{मयं} \end{cases}$

Also, $\begin{cases} \pi\acute{\epsilon}\pi\lambda\epsilon\gamma\mu\alpha\iota & \text{from stem } \pi\lambda\epsilon\kappa \\ (\gamma = \text{ग} \text{ or } \text{ङ}) \\ \text{प्राङ्नुख, or प्राग्मुख from प्राक् + मुख} \end{cases}$

But while, a dental before μ in Greek becomes σ, in Sanskrit, it becomes the nasal न् :—

$\begin{cases} c. g. & \pi\acute{\epsilon}\pi\epsilon\iota\sigma\mu\alpha\iota \text{ from stem } \pi\iota\theta \\ \text{contrast तन्मय} & \text{from } \text{तत्} + \text{मय} \end{cases}$

Occasionally, however, before ऋ and र, the dental त becomes स् in Sanskrit, cf. तस्कर, and बृहस्पति.

(*b*) With all terminations beginning with σ, as in the consonantal *declension*, a guttural becomes ξ, and a labial becomes ψ :—

c. g. $\begin{cases} \pi\acute{\epsilon}\pi\lambda\epsilon\xi\alpha\iota \text{ from stem } \pi\lambda\epsilon\kappa \\ \text{वाक्षु} \quad \text{from } \text{वाक्} + \text{सु.} \end{cases}$

And $\begin{cases} \psi\acute{\epsilon}\gamma\rho\alpha\psi\alpha\iota \text{ from stem } \gamma\rho\alpha\phi \\ \text{अप्सु} \quad \text{from } \text{अप्} + \text{सु} \end{cases}$

But, while in Greek, a dental is dropped before σ, it is not dropped in Sanskrit :—

e. g. $\begin{cases} \pi\acute{\epsilon}\pi\epsilon\iota\sigma\alpha\iota \text{ for } \pi\epsilon\pi\epsilon\iota\theta\sigma\alpha\iota \\ \text{दृप्त्सु} \quad \text{for } \text{दृप्त} + \text{सु} \end{cases}$

(*c*) Before τ, in both languages, a guttural becomes κ, and a labial becomes π :—

e. g. $\begin{cases} \tau\acute{\epsilon}\tau\alpha\kappa\tau\alpha\iota \text{ for } \tau\epsilon\tau\alpha\gamma\tau\alpha\iota \\ \text{वाक्तति for वाग् + तति} \end{cases}$

And $\begin{cases} \gamma\acute{\epsilon}\gamma\rho\alpha\pi\tau\alpha\iota \text{ for } \gamma\epsilon\gamma\rho\alpha\phi\tau\alpha\iota \\ \text{अप्तेजसी} \quad \text{for } \text{अप्} + \text{तेजसी} \end{cases}$

(*d*) Before θ, in both languages, a guttural becomes

χ, and a labial becomes φ (which are the corresponding aspirate letters), a usage which is contrary to Sanskrit :—

c. g. πέπλεχθε   for πεπλεκθε

And λέλειφθε   for λελειπθε

In both the cases considered in (*c*) and (*d*), as in (*a*), the dental in Greek is *always* changed to σ, a usage which is contrary to sanskrit ;

c. g. { πέπεισται for πεπειθται
And { πέπεισθε for πεπειθθε

It may be noticed that only in the case (*b*), that is before σ, the dental is entirely dropped; Greek would not allow two "σ" s to come together; in every other case, the dental, by a strange affinity, becomes σ; from this conversely, it may be argued that the Greek σ itself is *dental in nature*, as has been recognised by Pāṇini in calling स "इन्त्य."

In Sanskrit, not merely is a dental not dropped before स, but if possible, another dental is added : thus the elision in Greek is avenged in Sanskrit; *c. g.* तान् + सहते becomes, in addition to तान्सहते, also तान्त्सहते. It may be seen from the latter that another त् is added, thus again corroborating that σ is dental in nature.

(7) We now come to the most striking similarities of all in the two languages. No one, who considers the following with a little attention, can fail to observe that Sanskrit and Greek *must* have had a common origin.

In both the languages the Imperfect and the Aorist are formed by the augment ε, corresponding exactly to the Sanskrit अ. And again, in both languages, *the Perfect is formed by Reduplication*, a feature which marks Greek and Sanskrit as cognate with each other as apart from other languages.

(*A*) In the case of roots beginning with a consonant, the ε or अ is regularly added as a sign of the Imperfect or Aorist *c. g.* ἔτυπτου (Imp.) and ἔλυσα (Aorist). In the case of a root begin-

ning with a vowel, in either language, long vowels and diphthongs are substituted for the combination of the augment and the vowel ; *e. g.*

$$\begin{cases} \overset{\prime}{\alpha}\gamma\omega & \overset{\cdot}{\eta}\gamma o\nu \text{ (Imp).} \\ \text{अर्चति} & \text{आर्चत} \end{cases}$$

$$\begin{cases} \epsilon\overset{\cdot}{\nu}\rho\overset{\iota}{\iota}\sigma\kappa\omega & \overset{\prime\prime}{\eta}\overset{\prime}{\nu}\rho\iota\sigma\kappa o\nu \text{ (Imp).} \\ \text{ईक्षते} & \text{ऐक्षत} \end{cases}$$

Then again, in either language, verbs compounded with a Preposition *have the Augment between the Preposition and the Verb*: (this incidentally shows that Prepositions are really of the nature of *ad*-verbs and do not form an organic part of the verb, a point which will be noticed later on) :—

$$\begin{cases} \epsilon\overset{\cdot}{\iota}\sigma\text{-}\phi\overset{\prime}{\epsilon}\rho\text{-}\omega & \epsilon\overset{\cdot}{\iota}\sigma\text{-}\epsilon\text{-}\phi\overset{\prime}{\epsilon}\rho\text{-}o\nu \\ \pi\rho o\sigma\text{-}\overset{\prime}{\alpha}\gamma\omega & \pi\rho o\sigma\text{-}\overset{\cdot}{\eta}\gamma o\nu \\ \text{अधि + अर्चति} & \text{अधि + आर्चत = अभ्यार्चत} \\ \text{प्रति + ईक्षते} & \text{प्रति + ऐक्षत = प्रत्यैक्षत} \end{cases}$$

In Greek, the final vowel of the preposition is elided before the Augment ; but in Sanskrit, it combines with the Augment ; *e. g.*

$$\begin{aligned} \overset{\prime}{\alpha}\pi o\text{-}\phi\overset{\prime}{\epsilon}\rho\omega & \qquad \overset{\prime}{\alpha}\pi\text{-}\overset{\prime}{\epsilon}\text{-}\phi\epsilon\rho o\nu \\ \text{उप + ऐक्षत} & \qquad \text{उपैक्षत} \end{aligned}$$

In Greek $\pi\epsilon\rho\overset{\prime}{\iota}$ are $\pi\rho\overset{\prime}{o}$ are exceptions to the above rule, and never elide their vowels, but as in Sanskrit, combine them with the Augment :—

$$\begin{aligned} e\ g. \qquad \pi\rho o\beta\alpha\overset{\prime}{\iota}\nu\omega & \qquad \pi\rho o\overset{\prime\prime}{\nu}\beta\alpha\iota\nu o\nu \\ & \qquad (= \pi\rho o\text{-}\overset{\prime}{\epsilon}\text{-}\beta\alpha\iota\nu o\nu) \end{aligned}$$

(*B*) We next come to the phenomenon af Reduplication. The genesis of Reduplication is to be found in its utility as a mark of completed action, which is the meaning given to the Perfect in both the languages. Hence, Reduplication and the Perfect tense go hand in hand in the two languages.

(a) Reduplication in either language consists
in the repetition of the first consonant of
the root, *plus* the radical vowel in Sans-
krit, and a uniform ϵ in Greek. Thus बुध्
when reduplicated becomes बुबुध्, and the
stem λυ when reduplicated becomes λελυ.
In Attic Reduplication, however, we do find
as in Sanskrit the first *Syllable* repeated:

$$\dot{\epsilon}\lambda\alpha\acute{v}\nu\omega \; — \; \dot{\epsilon}\lambda\acute{\eta}\lambda\alpha\kappa\alpha$$

$$\dot{\epsilon}\lambda\acute{\epsilon}\gamma\chi\omega \; — \; \dot{\epsilon}\lambda\acute{\eta}\lambda\epsilon\gamma\mu\alpha\iota$$

(b) In either language, the hard aspirates are
represented in reduplication by their
corresponding hard unaspirates ; thus *c. g.*
ढ् by ड्, ख by च् and फ् by प्; and θ by
τ, χ by κ, ϕ by π: (it may be noticed that
the substitute of च् for ख is arbitrary: the
proper substitute ought to have been क·
But it may be remembered that च् and क
are both hard unspirates). Thus, खन्
becomes चखान and $\theta\acute{v}\omega$ becomes $\tau\acute{\epsilon}\theta\nu\kappa\alpha$.

(c) In Sanskrit, the soft aspirate takes the
soft unaspirate, as भिद् becomes बिभिद्. In
Greek, no soft aspirates exist except the
ζ (see Section §2 above) ; and this takes
an Augment instead of a Reduplication,
c. g. $\zeta\eta\tau\epsilon$ becomes $\dot{\epsilon}\zeta\acute{\eta}\tau\eta\kappa\alpha$. We may here
compare पाणिनि's अभ्यासे झलां चर : ।

(d) When verbs begin with two consonants
instead of one, or with a double conso-
nant, the general practice in Greek is to
use the Augment instead of Reduplica-
tion, as $\H{\epsilon}\sigma\tau\alpha\lambda\kappa\alpha$ from stem $\sigma\tau\epsilon\lambda$; of Sans-
krit to repeat sometimes the first conso-
nant and sometimes the second *c. g.* क्षिप्-
चिक्षिप् ; स्था-तस्था.

(*e*)   But the Greek practice of reduplicating a mute when followed by a *liquid* (in the case of two consonants coming together) find as exact parallel in Sanskrit :—

γράφω   γέγραφα

क्रुश्र   चुक्रुश्र

(*f*)   In both languages, when roots begin with a vowel, the *general* practice is to have the *Augment* instead of the Reduplication ;

c. g. ὀρθόω in Perfect be comes ὤρθωκα

अद्   „   आद्

There are further rules in Sanskrit on this point, and they only indicate a greater "differentiation."

(*g*)   When a preposition comes before a verb, then the reduplication like the augment, comes between the preposition and the verb: and this rule is identical in Greek and Sanskrit.

πρασ-γράφω   πρασ-γέ-γραφα

प्रति–गम्   प्रति–ज–गाम

(*h*)   The reduplication of the Perfect is retained in both languages even in the Perfect Participle :—

γράφω   γέγραφα   γεγραφώς

गम्   जगाम   जग्मिवस्

the terminations ως and वस् being identical.

Unfortunately, the Pluperfect, the Perfect Subjunctive, the Perfect, Optative, the Perfect Infinitive are lacking in Sanskrit ; otherwise, as in Greek, they would have also retained the reduplication. By the bye, we do here find the superiority of Greek to classical, if not Vedic, Sanskrit in the construction of a variety of forms, which are not even contemplated in Sanskrit.

(*i*)   In general, it may be said that the 1st Greek perfect has no parallel in Sanskrit, as its peculiar sign is κ. The 2nd Greek

perfect corresponds to the 1st Sanskrit perfect, as in these the terminations are applied directly. And again, the 2nd Sanskrit perfect has no parallel in Greek, as it is formed in combination with चकार आस or बभूव.

(8) We thus see that in Greek as in Sanskrit, the Reduplication is an essential element of the Perfect. But in either language it accompanies even the *present* tense of some verbs ; *e. g.* as in Greek τίθημι, δίδωμι. These have been shown above (5) to correspond to the 3rd conjugation in Sanskrit, which also forms its present by Reduplication, *e. g.* हा becomes जहाति, भृ becomes बिभर्ति. Then again, it, is a sign of such other verbs in Greek as βιβρώσκω and γιγώσκω, which because they have both a reduplication, and the mark σκ, may be said to exactly correspond to Sanskrit Desideratives, as चिकीर्षति, बुभूषति, which have both a reduplication and the mark सु.

Beyond the three instances mentioned above, the Reduplication in Sanskrit *Aorist* for a variety of verbs, and in Sanskrit *Frequentatives* does not find a parallel in Greek, *e. g.* अरीरिषम्, अजीजनम् ; चर्करीति and अटाल्यते. It may be noticed that the Frequentative Reduplication is very arbitrary and corresponds to the Attic Reduplication in Greek.

It may be seen that the Reduplication is peculiarly expressive of frequence: hence, it is very suitable for the Frequentatives ; thus, अटाल्यते may be significantly used of wandering frequently, and ceaselessly ; सास्मर्यते of remembering frequently and so on. There are no Frequentatives in Greek, hence the Reduplication is not to be met with in Greek in this connection.

(9) This prepares us to make a few more supplementary remarks on the subject of conjugation, before we finish this part of the subject.

(*a*) We have seen that there *are* Desideratives in Greek, we may now observe that there are even Denominatives in Greek. We know what an important part Denominatives play in Sanskrit. One very often meets with such forms as उत्त्रीयति, रोमंथायते, अप्सरायते, राजानति which have the sense of behaving or being like the person or thing expressed by the noun. The Greek Denominatives do not seem to have this meaning : they are only verbs formed from corresponding nouns ; thus, σημαίνω=to signify comes from the noun σῆμα (τ-)=sign ; δικάζω=to judge from the noun δίκη=justice.

(*b*) To the Causal of Sanskrit, there does not seem to be any parallel formation in Greek. Indeed, the Sanskrit Causal itself is so very like the 10th Conjugation, that one of the two has no right to exist separately. But because the Causal conveys a peculiar meaning—that of an action being *caused* by another—we had rather drop out the 10th Conjugation, so far as the *Conjugation* of verbs is concerned.

(*c*) We have seen that there are no Frequentatives in Greek ; similarly there is not also the so-called Benedictive mood of Sanskrirt. Indeed the Benedictive mood also has no right to exist in Sanskrit, seeing how very similar in meaning, and also in formation, it is to the Potential or Optative. Indeed, Pāṇini himself seems to have recognised this in as much as he combined the Optative (विध्यिलिङ्) with the Benedictive (or as Whitney calls it the Precative) (आशीर्लिङ्) under the common appellation of लिङ्. Moreover the extreme similarity of the terminations involved might well enable us to argue for its non-requirement. Hence, it is no wonder that Greek does not show it : it can *do* with the Optative.

(*d*) But, on the other hand, as we have mentioned above, Sanskrit does not show the Pluperfect, the Perfect Subjunctive, the Perfect Optative, the Perfect Infinitive, and also the Aorist Imperative, the Future Optative, and the Perfect, Future or Aorist Infinitive of Greek.

(*e*) However, one important thing remains to be noticed. There is a Subjunctive in Sanskrit, corresponding to the Greek Subjunctive, but it is only to be found in the Vedas (लेट्). In classical Sanskrit literature, it has almost disappeared ; but in Greek, it retains its full vitality.   Moreover, it may be noticed that the terminations of the Subjunctive both in Greek and Sanskrit are almost exactly similar to the terminations of the Present : (in Sanskrit, the *first* personal terminations of the Subjunctive are, however, more akin to those of the Imperative than of the Present).

(*f*)   There is again a similarity between Greek and Sanskrit in making σ the distinctive sign of the future; e.g. λύσω the future of λύω, and करिष्यामि the future of कृ.

(*g*)   This σ again occurs in the 1 Aorist of Greek and the Sigmatic Aorist of Sanskrit, but in this case, the root is preceded by an Augment (ἐ in Greek and अ in Sanskrit—the same as the Imperfect Augment) ; e. g. ἔλυσα is 1st Aorist of λύω and अकार्षीत् is the Sigmatic Aorist of कृ.

(*h*)   Lastly, the present, future and perfect participles both of Greek and Sanskrit are declined like corresponding adjectives ; e. g. λύων like ἑκών ; and नार्मिनस् like विद्वस्.

§ 10 Syntax.

(1)   We now come to the subject of Syntax; and, here also, we find a great deal of resemblance.

(*a*)   In Greek as in Sanskrit, we very often find adjectives, used simply with the article and without the noun, to denote a general class of persons.   [In Sanskrit, however, the article, being non-existent, is not found.] We may, translate " the good men " as simply οἱ ἀγαθοί in Greek and सन्त : in Sanskrit. In either case, there is no noun.

(*b*) In either language, the duration of time is expressed by the Accusative. Thus " He remains for three days " may be translated in Greek τρεῖς ἡμέρας μένει, and in Sanskrit त्रीणि दिनानि तिष्ठति, in either case the accusative being used.

(*c*) The examples quoted in (*b*) may also incidentally show that the nominatives of the personal pronouns are seldom used in both the languages. In either language, again, they are used when emphasis is required to be shown. Thus, " he says he is writing ", when it is without any emphasis, may be translated in Greek φησί γσάφειν simply, and लिखतीति वक्ति in Sanskrit, in either case the personal pronouns being omitted. On the other hand, " *I* gave the money to the man ", when there is emphasis on " I " is to be translated ἐγώ ἔδωκα τα χρήματα τῳ ἀνδρί, and in Sanskrit also the अहं cannot be omitted.

(*d*) It seems that it is to the above fact that the entire disappearance in Greek of the *Nominative* of the third personal pronoun is due. Thus, there are properly speaking, no equivalents to " he, she, it " in Greek. In Sanskrit, we have equivalents for these सः , सा, तत्, and they can be used when required.

(*e*) Speaking of the pronouns, we might next notice that ἐγώ in its declension takes double forms viz :

ἐμέ, μέ ; ἐμοῦ, μοῦ ; ἐμοί, μοί in the Accusative, Genitive and Dative cases respectively. And in Sanskrit, although there are other cases, such as the Instrumental, Ablative, and Locative, the pronoun अहं, equivalent to the Greek ἐγω, takes double forms which are strikingly similar to the above only in the Accusative, Genitive and Dative exactly as in Greek, viz :

मां, मा ; मम, मे ; मह्यं, मे

(*f*) The next things to be noticed about these double forms are, that the first set of forms, viz: ἐμέ, ἐμοῦ, ἐμοί and मां. मम and मह्यं are more emphatic than the se-

cond set of forms viz : μέ, μοῦ, μοὶ and मा, मे and मे ; and that in either language, the latter set of abbreviated forms are not grammatically allowed to come, at the beginning of sentences, or even at the beginning of any quarter of a verse ; e. g. मे मित्रं would not be allowed at the beginning of a sentence. It has been again already observed, while speaking of accents (§ 3), that all these shorter forms are enclitics and lose their accent in both languages.

(*g*) Then again, in Sanskrit, the particles च. तु. हि cannot begin a sentence; similarly in Greek, their exact equivalents τε, δὲ, γὰρ, must also come second.

(*h*) We must also notice one or two striking *differences* between the usages of Greek and Sanskrit. In Sanskrit, the verb always agrees with its subject in number ; thus a plural subject has a plural verb, and a singular subject a singular verb. In Greek, the usage is often reversed. A subject in the neuter *plural* takes very curiously a *singular* verb, except when living things are indicated ; e. g. "the gifts are praised" must be translated τὰ δῶρα ἐπαινεῖται, while "the children run" is to be translated τὰ τέκνα τρέχουσιν. While, a singular collective noun *may* take a plural verb as in English : thus, "the majority voted for war" may be translated τὸ πλῆθος ἐψηφίσαντο πολεμεῖν. We may compare the English usage : "Government *are* very sorry to learn this".

(*i*) One more difference may be noticed by way of illustration. In Greek, price and value are always expressed by the Genitive. "I value reputation highly" is to be translated δόξαν πολλοῦ τιμῶ, while contrast कियता मूल्येन क्रीतं पुस्तकं. ="At what price was the book bought"? where the Instrumental is used.

(*j*) In Greek, there are no compounds as in Sanskrit. If we go back to the Veda, we will find as few and as simple compounds as possible. It is in the later Sanskrit that the compounds become more and more nume-

rous and more and more complex and we find such long strings of words joined together as have been the particular characteristic of works like the Kādambarī. While the compounds have this virtue in them, that they enable writers to express themselves very briefly, they have also this grave defect that they impede the course of narration, by applying the brake every time and in general dam the flow of prose. If not much prose is to be found in Sanskrit, it is to be attributed specially to the large importance attached to the use of compounds. The compounds may be serviceable within a certain limit; but there is always the danger that the limit may be passed, and the writer may produce " cobwebs of learning, admirable for their fineness of structure, but of no substance and profit ".

It is very meet that Greek does not show compounds : it is better that a language should have no compounds, than that it should have compounds which would stop the progress of the language. Indeed these compounds are not to be met with in any other language except possibly German, where we occasionally meet with genitive and possessive compounds. The reader will easily recall to mind such genitive compounds in German as Frühlingslied = spring-song, where the ' s ' is retained, and may compare such compounds with पष्ठीअलुक् compounds in Sanskrit like दासया:पुत्र:

(*k*) But though, there are not द्वंद्व, कर्मधारय and बहुत्रीहि compounds in Greek, which form a peculiar feature of Sanskrit, we often meet Greek prepositions compounded with verbs as in Sanskrit. But as we have seen, these prepositions are only of the nature of ad-verbs, and they always yield before the Augment or Reduplication e. g. συν-έ-λεγον and πρασ-γέ-γραφα. Thus it is only incidentally that they have come to be compounded with verbs, as they may also go with nouns and pro-nouns (कर्मप्रवचनीय). That they are only contingently attached to verbs may be seen from the fact that even when they go

along with verbs, they govern the very case of the nouns, which they would have governed if they had not been attached to the nouns; *e. g.* in Παρεκομίζοντο τὴν Ἰταλίαν we find the Accusative, which we would have found if the preposition had been used alone. Again, we find in Greek as in Sanskrit, that particular prepositions must always govern particular cases. Thus, εἰς must take Accusative, κατά Genitive or Accusative, and περί Genitive, Dative, or Accusative. Similarly अनु takes Accusative, प्रति Accusative and Ablative, and विना Accusative Instrumental or Ablative. But there is a special use of prepositions in Sanskrit which must be noticed. When they go along with verbs, they often change the voice of the verb altogether, as has been already pointed out; we cannot, for example, say संगच्छति. And in such cases, they cannot be put apart from the verbs. In all other cases, we find the preposition used apart from the verb, very often in the Veda (cf. समाग्निमिन्धतनराः) but very rarely in classical Sanskrit, especially when the preposition has once been acknowledged as an organic part of the compound verb.

(2) We now come to some important matters. We have seen that there is an Imperfect, two Perfects, and two Aorists in Greek, corresponding to an Imperfect, two Perfects, and 3 (Whitney) or 7 (orthodox) Aorists in Sanskrit. Now when any language has so many different tenses to express merely the pastness of an action, it is natural that the grammarian's mind should work on these and find out subtle differences. Now in both languages, we find the Perfect used exactly in the same sense : that of completed action : "I *have* come ". But both languages find out subtle differences in the use of the Imperfect and the Aorist. Greek distinguishes the Imperfect from the Aorist, the first signifying the non-fulfilment of an action : "I was coming"; the second showing the immediate fulfilment of it : "I came". When this fulfilment itself becomes a matter of the past, and some time

has elapsed after it, we have the Perfect. Sanskrit distinguishes the Imperfect from the Aorist in almost the same way, the first showing a matter of yesterday (अनद्यतने अपरोक्षे लङ्) e. g. अरुणद्यवनः साकेतं, the second showing a matter of to-day (अद्यतने अपरोक्षे लुङ्) e. g. प्रातः पाकं अकार्षीत्. When some time has elapsed after this, we have in Sanskrit also the right of using the Perfect (परोक्षे लिट्) e. g. यशोधना धेनुष्वेर्मुमोच.

But though, in Sanskrit, such subtle distinctions were made by *grammarians*, what we find in actual use is a promiscuous huddling up of the tenses. They have all been supposed to be exchangeable with one another for all practical purposes. Nay, even the Sanskrit past participle can take the place of any of these, and Sanskrit writers are generally found to use the past participle in preference to any of the tenses, the principal reason being that it is formed more easily, and more easily remembered.

(3) Next, we must proceed to explain certain verbal forms in Sanskrit, which often cause confusion to a Greek Scholar. Let us consider the following forms :—

गच्छन्	गत	जग्मिवस्	गन्तुं	गत्वा
Present parti-ciple: *going*	Past parti-ciple: *gone*	Perfect parti-ciple: *has gone*	Infinitive: *to go*	Absolutive: *having gone*

To the first corresponds the present participle in Greek e. g. λίων ; to the second, the Aorist participle λύσας ; to the third, the perfect participle λελυκώς ; to the fourth, the Greek Infinitive ; but *for the last, the Absolutive, we have no parallel formation in Greek*; it may be expressed either by the present participle, or more grammatically, by the perfect participle.

(4) We must make a note of the Greek and Sanskrit Infinitives. While the Greek Infinitive has often the sense of a verbal noun and can be used both as subject and object of a verb, the Sanskrit Infinitive can be very rarely used in this way ; more often than not, it is *not*

used in this way. For example, while we have ἡδὺ πολλοὺς ἐχθροὺς ἔχειν ; = is it pleasant to have many enemies ?, and βούλεται τοὺς πολίτας πολεμικοὺς εἶναι = he wishes the citizens to be warlike, the Sanskrit Infinitive has always a *dative* sense, and therefore, cannot be used as subject or object ; e. g. पारसाकांस्ततेा जेतुं प्रतस्थे स्थलवर्त्मना (here जेतुं = in order to conquer). But if we hunt down the Sanskrit usages, we can sometimes alight on such constructions : न युक्तं अशोकां वामपादेन ताडयितुं = " It is not proper to kick the As'oka tree with the left foot ", where the sense of ताडयितुं is that of subject ; and न पृथग्जनवच्छुचो वशं वशिनामुत्तम गंतुमर्हासि = " O best of self-controlled men, you do not, deserve to fall a prey to grief like an ordinary man " where गंतुं has the sense of an object. But this use is rare in Sanskrit. It may, however, be remembered that when the Infinitive is used in the sense of a subject in Greek, it may be preceded by the neuter article (thus clearly showing that it is treated as a verbal noun), but the article must not be prefixed when used in the sense of an object, e. g. τὸ μανθάνειν χαλεπόν ἐστιν = to learn is difficult ; and βούλεται ἐλθεῖν = he wishes to go.

(5) It may also be noticed that there is a great similarity in Greek and Sanskrit in the treatment of negatives. The Greek words to express negations are μή and οὐ the Sanskrit are मा and न. μή is exactly the same as मा, not merely in its form, but also in its use. It is very curious to observe that the proper use of μή and मा in both languages is with the *Imperative* and *Subjunctive*, while that of οὐ and न is with the Indicative ; but while the genius of the Greek language would extend the use of μή with Optatives expressing a wish, and with Substantival Infinitives, Sanskrit would extend the use of मा to the Optative and Future in the sense of ' lest', and with the present participle to express a ' curse'. On the whole, the use of the two particles is exceedingly similar. Scholars in either language may recall instances where μή and मा are used in the senses above indicated.

We may however note one peculiar use of the particles. They are both used with the *Aorist Subjunctive* in the sense of Imperative ; the use of मा in this sense is only to be found in the Veda, as the Subjunctive exists only there ; (with the simple Aorist, however, its use is common enough in classcial literature, cf. मा निषाद प्रतिष्ठां त्वमगमः शाश्वतीः समाः). For example, मा करत् and μή κλέψης τοῦτο τὸ ἀργύριον both express prohibition, and have the sense of Imperative.

(6) We have next to notice the peculiarities of Indirect construction in the two languages. In Greek, the particle used to signify Indirect construction is ὅτι corresponding exactly to the Sanskrit particle इति, which is also used to signify Indirect construction. But we may notice the following differences :—

(*a*) In Greek, the Indirect construction can very often be brought about by the help of the mere Infinitive ; in Sanskrit the particle इति is necessary.

(*b*) In Greek, the particle ὅτι precedes the verb reported ; in Sanskrit, it must follow it. Thus " he says that he is writing " is to be translated in Greek λέγει ὅτι γράφει, and in Sanskrit वक्ति लिखतीति, ὅτι preceding γράφει, and इति following लिखति. Compare also इतीति पलायते.

(*c*) In Greek, after *primary* verbs, the mood and tense of the verb reported *is* retained ; while after *secondary* verbs, it may either be retained or changed to the corresponding tense of the optative mood. In Sanskrit, it *must* always be retained. Thus, " he says that he wrote " is to be translated in Greek λέγει ὅτι ἔγραψεν, and in Sanskrit वदति अलिखमिति the original tense being retained. While, " he said that he was writing "=he said " I am writing "

$$=\text{either } ἔλεγεν\ ὅτι\ γράφοι$$
$$=\quad \text{or } ἔλεγεν\ ὅτι\ γράφει$$

and = अवदत् लिखामीति, the original tense being retained in Sanskrit, but being optionally changed in Greek.

(*d*) Lastly, it may be noticed that the person reported also changes in Greek but not in Sanskrit. Thus, from the last two examples, we can see

$$\acute{\epsilon}\lambda\epsilon\gamma\epsilon\nu\ \acute{o}\tau\iota\ \gamma\rho\alpha\phi\epsilon\iota = \text{he said : " } \textit{he} \text{ is writing ".}$$

अवदत् लिखामीति   = he said : " *I* am writing "

(7) One more striking usage may be noticed, before we finish the subject of Syntax. This is the phenomenon known as the Genitive Absolute in both Greek and Sanskrit. We have seen that there is no Locative in Greek : hence, there is not also in Greek, what is called in Sanskrit grammar, tha Locative Absolute. But the Greek Genitive Absolute performs the functions of both the Genitive and the Locative Absolutes in Sanskrit. Hence, one need not be sorry not to find the Locative Absolute in Greek. The Genitive Absolute then in Greek has principally the following two senses :—

(*a*) the sense of "although", "in spite of"; "Although many soldiers were present, nothing was being done" $= \pi o\lambda\lambda\hat{\omega}\nu\ \sigma\tau\rho\alpha\tau\iota\omega\tau\hat{\omega}\nu\ \pi\alpha\rho\acute{o}\nu\tau\omega\nu\ o\dot{\upsilon}\delta\acute{\epsilon}\nu\ \epsilon\pi\rho\acute{\alpha}\sigma\sigma\epsilon\tau o$. In this sense, the Greek Genitive Absolute is identical with the Sanskrit Genitive Absolute :—"Notwithstanding that Rākshasa was looking on, the Nandas were slaughtered like beasts" = नन्दाः पशव इव हताः पश्यतो राक्षसस्य।

(*b*) the sense of " when " :—"when the victory was announced, the citizens rejoiced" = $\tau\hat{\eta}s\ \nu\acute{\iota}\kappa\eta s\ \acute{\alpha}\gamma\gamma\epsilon\lambda\theta\epsilon\acute{\iota}\sigma\eta s,$ $o\acute{\iota}\ \pi o\lambda\hat{\iota}\tau\alpha\iota\ \acute{\epsilon}\chi\alpha\iota\rho o\nu$. In this sense, the Greek Genitive Absolute is identical with the Sanskrit *Locative* Absolute :— " when thou art king, how can evil befall the subjects"? = नाथे कुतस्त्वय्यशुभं प्रजानाम् ।

§ 11 Conclusion.

Any one who has followed us throughout the discussion of the points of grammar hitherto treated must be struck by the great resemblances which the two languages show. There have been indeed differences ; and we have been careful to note these along with the resemblances.

It is impossible to argue or to prove that any two languages in the world are entirely *identical* : in fact, they would, in such a case, cease to be *two* languages. Our treatment has been entirely *genetic*, at the same time it has been *critical*. We have always inquired into the genesis of grammatical usage, and have often tried to show how any particular usage stands to reason. The comparative treatment of Greek and Sanskrit undertaken in this essay will not fail to impress the reader that Greek and Sanskrit are by no means less similar than Greek and Latin.   This was the point that we wanted to prove. A comparative grammar, in extenso, of Greek and Sanskrit remains to be written. Let us hope that anybody who undertakes the task will find at least some things in this essay which will be helpful to him. We believe we have *for the first time drawn out at great length the striking analogies of Accents and Conjugations* in Greek and Sanskrit.

But it is not seldom that people look askance at the philologist. The resemblances which he shows are supposed to be merely accidental ; the differences which he may point out are supposed to be vital. In spite of such censure, we may say that it is the philologist alone who can do some useful work in illuminating the pages of ancient history, no record of which is left to us except mere language. He brings to light the history which remains shrouded in language, and thus the philologer is the exponent of the customs and manners of nations, of which history proper has nothing to tell.

The most important service, however, which Comparative Philology has done to the cause of research has been to show the *common origin* of nations and languages, so far removed in these days as Greek and Indian. The striking similarities in language exhibited by Greek and Sanskrit, for example, cannot be explained except on the hypothesis of common origin. (1) The *plagiarism* theory of Dugald Stewart need only be mentioned to be refuted.

(2) The theory of *independent parallelism*, though applicable in part to philosophy, can hardly be supposed to suit the similarities of the languages. (3) The theory of *occasional contact*, wherever that might have been, in Alexandria, Babylon, Bactria, or the Punjab, might serve to explain only a few similarities of vocabulary as σάντλον and चंदन, σινδών and Satin, ἸάϜων and यवन, δραχμή and द्राम, διάμετρον and जामित्र, but does not touch the grammatical substructure of the languages. (4) It is to the credit of Comparative Philology that it first showed beyond dispute, that the great similarities of many of the Indo-European languages can not be explained except on the hypothesis of a prolonged and continued common stay together of the nations, which seem to have now parted for ever. Thus it reinforces from an altogether different standpoint the conclusion of *common origin* reached by Geologic and Vedic scholars. Philology may be laughed at by those who pride themselves on their absolute ignorance of languages: those who *do* know languages can not consistently deny the historical importance of philology : while those who may newly take to the study of the different languages will begin to see things in a new perspective, and to quote the words of Charles V, with every new-learnt language, they may even " win a new soul."*

* It is to the great credit of the Aryabhushan Press that they, of all the Indian presses, have achieved the feat of casting *Greek* type for this article for the first time in India. When no other press could offer Greek type, the Aryabhushan voluntarily undertook to cast entirely new type—a matter which is extremely creditable to them.—R. D. R.

Greek & Sanskrit

A

Comparative Study

Professor R. D. Ranade.