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# GRANMATOGRAPHY 

MANUAL OF REFERENCE

TO THE

## ALPHABETS OF ANCIENT AND MODERN LANGUAGES

BASED ON THE GFRMAN COMPILATION

OF
F. BALLHORN.

LONDON
TRÜBNER AND CO., 60, PATERNOSTER ROW.
1861.

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A .256687
$$



## PREFACE.

Teie Grammatograpfy is offered to the Public as a compendions introduction to the reading of the most important ancient and modern languages. Simple in its design, it will be consnlted with advantage by the Philological Student, the Amateur Linguist, the Bookseller, the Corrector of the Press, and the diligent Compositor.

Although substantially based on "Ballhorn's Alphabete," a German compilation, which, in the space of a few years, passed through nine editions, the present mannal has in several articles been very considerably improved and enlarged. Of the new observations which have been inserted, some may prove useful even when this work shall be consulted by the side of the respective Grammars. With regard to the Asiatic Alphabets, it may be stated, that the continued efforts to obtain trustworthy specimens have, in some instances, led to highly satisfactory results. In preparing the type of the Chinese characters, the lateral "Tones" have been adjoined to the 214 symbols of pronunciation. These additions will enable the student, instructed by native teachers, to remember with greater facility the varying articulation of vowel-sounds.

The publishers entertain the hope, that the present work, an humble attempt to assist in the furtherance of philological pursuits, will obtain the entouraging consideration of competent scholars, whose suggestions, available for future editions, are respectfully solicited.


## PERSIAN CUNEITORM CHARACTERS．

There are two main families of Cuneiform Characters whieh，before the expedition，of Alexander the Great，were in use nearly in all Asiatic Countries，subjected to the（Achex－ menides）Persian Kings．One of these，the Arian arrow－headed，is here given，año is a pure alphabet of fixed characters，which was made use of by the old Persians，proper， and is now read with tolerable accuracy．The other，however，not yet deciphered with sufficient certainty，was employed，with＇some modifications，by at least five different nátions， the Babylonians，the Assyrians，the Medo－Scythians（the second in the triglot inscriptions of Persepolis and Bisutun），the Susians and the Armenians．Almost in each of these five sorts of characters can be distinguished three styles，the Archaic，the Lépidary，and the Cursive．

| rmm | vamm | Iom | vaia | rom | vale | nom |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{T r}$ | a | Evr | － | $1 k$ |  | \％ |  |
| TV | i | WIFE | $t$ them | ご |  |  |  |
| ＜ | ＂ | F |  | ＜ | n | 人 | $z, g^{\prime}$ |
| F | k | K | th | K | ， | ＜ |  |
| く | 9 | $\sqrt{17}$ | d | 三 |  | 立 |  |
| ＜＜V | kh | ¢ | dh | －＜ | r | K | r， |
| ＜TV－ | g | 昂 | p | ＊ | I | 《11 |  |
| 位 | $\mathrm{gh}^{\text {h }}$ | ＜ | f | － |  | 夜 | b，u，ni |
| $\bar{T}$ | ${ }^{\text {k }}$ | $\Rightarrow$ | b | F | 9 （8） | 1 | mind |
| －${ }^{\text {P }}$ | g | － HY | m |  |  |  |  |

## MEDIAN CUNEIFORM CHARACTERS

| nom | vism | sim | vitic | vam | vais | rom |  | Stion |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\Rightarrow 1$ | a | $\Rightarrow$ | $t$ | EFF｜ | ${ }_{\text {pli }}$ | E＜1－ |  |  |
| － | ${ }^{4}$ | E－11 | ta | Es\％ | 䊂， | P |  |  |
| E | i | － F | ${ }^{1 i}$ | －1k | yu | － |  |  |
| $\underline{5}$ | 1 | － | ta |  | yo | E |  |  |
| $<$ | ＂ | EF | ${ }_{\text {th }}$ | －＝17－ |  | 天yr |  |  |
| 碞 | a | TE | tii | －Tw | ra | $V$ |  |  |
| 汭 | q | －宔 | tin | －rrk |  | ＜1－ |  |  |
| 晾 | ${ }^{41}$ | Ez1 | P | $E_{\text {rin }}^{\text {r }}$ | ， | 1 |  |  |
| － | ${ }_{k}$ | ＝ | ${ }^{\text {pa }}$ | VE | 析 | w |  |  |
| $\Rightarrow$ | ${ }^{\text {ka }}$ | F | pi | $=1$ | 11 | n | n |  |
| VIF | ${ }^{\text {ka }}$ | ＝ 17 | pe | ＜E | ${ }^{i}$ | EE | ${ }_{\text {ha }}$ |  |
| －$\%$ | kh | I | ${ }^{\text {pu }}$ | E | ${ }_{\text {fe }}$ | $\Rightarrow$ |  |  |
| く $\mathrm{NF}_{\underline{\prime}}$ | ${ }_{\text {kia }}$ | Er | ph | Pr | － | く | ni |  |
| － | ${ }_{\text {kha }}$ | － 1 | $p^{\text {haa }}$ | 渗则 |  | ENE | m |  |

## ASSYRIAN CUNEIFORM CHARACTERS

| romm | yaue | form ${ }^{\text {vanato }}$ | mom | vale | pom | vala |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ＊ |  | W ${ }_{\text {W }}$ | Y |  | 位 |  |
| 二－4 |  | $4{ }^{\text {ch }}$ | $\sqrt{T}$ |  | 立 | r |
| EE |  | غ $\boldsymbol{l}^{2}$ | $\neq$ |  | 二ry |  |
| c |  | －4 | il | p | El |  |
| $1-1$ |  | 二ry | iv |  | El | ir rsh |
|  | b | ＋1，$t$ ，$s$ | $\pm$ |  | ＜ $\mid$ |  |
| ＜${ }^{\text {a }}$ | g；kh | EEY | El | ${ }_{\text {ds }}^{\text {ds，}, \text { ，}}$ | 崩 |  |
| E｜＜1 |  | EEVII | 차 |  | 酎 | s． |
| － 4 | d | 4 | zr |  | 1－ |  |
| EVIV |  | $y^{\text {i }}$ | ㅂㅏㅏ |  | H |  |
| Y | h | 红 i，y | 차 | k | － |  |
|  |  |  |  |  |  |  |
| \＃\＃ | hu，w，y | SYY i，in | $\pm$ |  | Ev | sh |
| \＃ |  | 者埌 | V |  | 平1 |  |
| ＋$<1$ | u | TY | EV1 |  | Wr |  |
| Sll |  | E1 kh | $E / r y$ |  | － |  |
| 4 | － | EI | \＃ 21 |  | ＞ |  |
| ＜ | $\mathrm{v}, \mathrm{h}, \mathrm{a}, \mathrm{r}$ | \＃m，v | 4－1 1 | r |  | a，${ }^{\text {a }}$ |
| 弜 |  | $=1$ | H1 |  | －＜ | nue |
| K ${ }^{\text {k }}$ | ch | $\rightarrow 0$ | W\％ |  | ＜＜K |  |
| 炎 |  | $\geqslant$ | ＋ |  | ｜＜＜1－く |  |


| OLDEST CHARACTERS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arrangement | Hieroglyphics | Hieratic | Demotic | Phanican | Numidian | Early－Hebrew |
| $N$ Alĕph | $\pm$ | ＋ |  | н |  | ＋ |
| J Bēth | $\square$ | $\square$ | 1 | 99 | 7 | Y 9 |
| a Gïmel | $\theta$ |  |  | 71 |  | 71 |
| 7 Dāleth |  | 万 |  | 4.9 | 7 | 94 |
| $\cdots$ Hē | $\square$ | $\square$ | $?$ | 三 | $h$ | $\exists$ |
| ，Vāv | 1 | 1 |  | 77 |  | Y |
| i Zăyı̆n | \} | 7 |  | Z |  |  |
| － | 2 | 2 |  |  |  |  |
| － | n | $\alpha$ | $\wedge$ |  |  |  |
| $\Pi$ Chēth | $n$ | A |  | 月 | ）） | $日$ |
| $\triangle$ Têth | 2 |  | 3 | $\theta$ | 0 |  |
| ，Yōdh | $\longrightarrow$ | － | 21 | ก $\pi$ |  | $z \lambda$ |
| 2 Kăph | 4 | 4 | 4 | 794 | $\jmath y$ | 4 |
| S Lāmèdh | $\wedge$ | 1 | ， | $L \angle 4$ | ） | L |
| ロ Mêm | mm | $\underline{4}$ | $\leqslant$ | サ4 4 | y 4 | צ |
| 3 Nūn | $\square$ | 2 |  | 44 | 1 | $y$ |
| －Sāmêk | 1 | 4 | $\underline{L}$ | ， | K |  |
| \％Ayĭn | \％ | $\stackrel{\text { L }}{ }$ | 2 | 00 | （） | $0 \diamond$ |
| ${ }^{2} \mathrm{Pe}$ | 9 | ， | ， | ๆ | ） | 7 |
| צ Tsādhē | \％ |  |  | $r r$ |  | $m$ |
| F Q＇ōph | 翏 | 4 | 4 | $p 9$ | $\nabla$ | ＇P P |
| 7 Rēsh | Q | R | C | 94 | 7 | 94 |
| 6 Shīn | －＂ | $m$ | cm | $4 \% \psi$ |  | W w |
| $\bigcirc$ Tāv | Y |  |  | h 4 | X十 | X 十 |
| ค | 1 | $S$ | S |  |  |  |

## OLDEST CHARACTERS



HEBREW


The six consonants ก ミラーヌコ have a two－ fold pronunciation：1）a harder and more slen－ der sound（tenuis），like our bgdkpt，and 2）a smoother sound accompanied by a soft aspiration．The harder sonnd is the primeval； it occurs at the beginning of words and syl－ lables without a vowel preceding immediately， and is indicated by a point（Daghesh lene）in those six consonants．They are aspirated after a vowel immediately preceding；in manu－ scripts this is indicated by the Raphe（ ${ }^{-}$），but in printed books the aspiration is shown by the absence of the Daghesh．
classification of the consonants．
a）According to the organs of speech by which they are pronounced：
1）gntturals（gutturales）$n$ \＃
2）palatals（palatinue）$P$ と
3）linguals（linguales）on $n$ and $\eta\}$
4）dentals（dentales）
5）labials（labiales）$ッ=ワ$ ワ
The ${ }^{9}$ partakes of the 1 ．and 3．classes．
b）According to their sound：
1）aspirated consonants（aspirantes）：$-\boldsymbol{y}$
2）soft consonants（molles）：liquids 7 2 $\dot{\vdots}$ ， semivowels in
3）sibilants（sibilantes）：：


## VOWELS．

That the scale of the five vowels ă ěío oo is derived from the three primitive vowels a i oo，is to be seen much more distinctly in the Hebrew and the otber Semitic languages than in other languages．The $e$ has been formed by a $+\mathfrak{l}$ ，the o by $\mathrm{a}+$ oo，and，properly speak－ ing，both are contracted diphthongs ：e $=a i$ ， $\hat{o}=$ au．－The full vowels formed by this process are the following，arranged according to the three principal vowels and to their pro－ sodical quantity：

```
        Vowel ă(N)
T Q'amets, à a
- Patach, à.
        Vowel ě-i゙(')
_... Tsere (with Yodlı), ê
-. Chireq (magnum), i
#.T Tsere (without Yodh), ē (ê)
#
    written %)
- Chireq (parvum), í (i).
    Vowel 0-00 (1)
    j Cholem (nuagnum), ò
    f Shureq, ì
        Cholem (parvum),\overline{o}(\hat{0})
        Q'amets - chatuph, ŏ
        Q'ibbuts,ŏŏ (\overline{ō}).
```

The vowels，or vowel－points，are placed under the consonants after which they are pronounced（ 7 ra）；but the Patach，placed under a guttural at the end of a word，is pro－ nounced before this guttural，m ruach，in which case it is named Patach furtivum．The Cholem（without Vav）is placed above the consonant on the left side ： $\bar{i} \mathrm{r} \ddot{\mathrm{o}}$ ．The figure i is to be pronounced sometimes ov，the being consonant，and the－preceding it；sometimes vo，the Cholem being read after the Vav．It is more accurate to distinguish thus：i ov，i vo，i $\hat{0}$ ；likewise also＂（Shureq）and＂（Vay with Daghesh）．As，however，（Shureq）is readily discernible，because a vowel neither can precede nor follow it，only this form is made use of．

In opposition to the vowels
：－Shva（She ${ }^{\mathbf{e}} \mathrm{va}$ ）indicates the absence of a full and distinet vowel．Therefore
1）placed under a cousonant concluding a syllable，itindicates the complete absence of a vowel and serves to divide the pre－ ceding syllable from the following（ $S h^{\mathrm{e}} v a$ quiescens）．It is not made use of，how－ ever，when the consonant concluding the syllable at the same time concludes the word，except in the case of the Final Qoph（7），and those words ending in two consonants，when each of them is to be furnished with a Sheva，e．g．יֶ？
2）itrepresents a slight and indistinctyowel， as it were only the onset or beginning of a vowel（ $S h^{\mathrm{e}}$ va mobile）．
The $S h^{\mathrm{e}^{2}}$ mabile is pronounced somewhat more clear and distinet in the so called Cha－ teph－vowels（ $\quad$ Tָ vowel to the $S h^{\mathrm{e}} \mathrm{va}$ simplex；in opposition to which it is also named $S h^{\mathrm{E}} v a$ compositum．＇There are three Chatephs：
$\because$ Chateph Patach, half ă
$\because$ Chateph-Seghol, half ĕ
$\mp$ Chateph-Qamets, half o.

## READING－SIGNS．

There are some reading－signs which have close connexion with the vowels and probably were introduced at the same time．Amongst these is to be noticed the diacritical point of y and $\dot{\psi}$ ．Meeting together with the Cholem $(-)$ ，only one point is made use of which re－ presents both；therefore $\%$ is to be pronounced so，if no other vowel－point is added；and osh， when the preceding consonant is unpointed，

More frequently we see a point placed in the consonant to indicate in general a harder pronunciation．There are three cases to be distinguished，viz：

Daghesh forte，doubling the consonants．
Daghesh lene，hardening the consonant；it stands only in the six mutue：תפコワมコ in the above named cases；otherwise the point oecurring in these consonants must be a $D a$－ ghesh forte．
Mappiq，indieates that those consonants， which are also used as vowels，are then to be pronouneed as eonsonants；in modern printing it is made use of only in the $m$ at the end of the words．
In opposition to the point hardening the eonsonant，a little stroke standing above the consonant indicates his softer sound．This stroke called
Raphe（ ${ }^{-}$）is now almost out of use，and is only employed in order to indicate express－ ly the absence of a Daghesh or Mappiq．

## ACCENTS．

The general design of the accents is to indi－ cate the rhythmical members of the rerses in the Old Testament．In doing this，they per－ form a twofold duty；for the accents mark at one and the same time partly the logical re－ lation of each word to the whole sentence， and partly the aecented syllable of eachin single word．In the first ease the accents supply the punctuation，in the latter they are signs of tone．－As signs of tone，the different accents are equivalent，because there is in Hebrew only one kind of accentuation．In most words， the last syllable is accented，more rarely the last but one．－As signs of punctuation，their use is more complieated，because they not only separate words，like our points，commas and colons，but also join one to the other． Therefore they are divided in Distinctivi and Conjunctivi．In the following list they are ar－ ranged not aecording to their grammatical value，but according to their being placed below the consonants or above them，in order to give a more faeile view of them．
áCCENTS Placed under consonants．
，Silluq only at the end of the verse，there－ fore always joined with ：Soph－pasuq， which stands between the single verses．
${ }_{n}$ Athnach，mostly in the midst of a verse
＝Yethibh（always to the left of the vowel）．
，Tebhir
－Tiphcha initiale
，Merkha
，Double－Merkha
，Munach
．Mahpakh（to the right of the vowel）
Darga
y Yärach
，Tiphcha finale．
accents placed above consonants．
$\therefore$ Segholta
：Zaqeph－qaton
：Zaqeph－gadhol
－Rebhia
$\sim$ Zarqa
＇Qadma
＇Pashta
：Shalshelet
${ }^{\mu}$ Paser
${ }^{9 P}$ Qarne－phara
$\rho$ Great－Telisha
Q Little－Telisha
－Gäresh
＂Double－Gäresh．
ACCENTS CONSISTING OF TWO PARTS BELONG－ ING TOGETHER，THE ONE ABOVE，AND THE OTHER BELOW CONSONANTS．
＜Merkha mahpakhatum
，Merkha sarqatum
$\stackrel{\sim}{2} \underset{\sim}{\sim}$ Mahpakh sarqatum．
：Soph－pasuq，separating verses．
1 Pesiq，between the words．
－Maqqeph，hypben，aloft，between the words． ，Metheg，sign of tone（to the left of the vowel）．

## NUMERALS．

There are no nmmerieal ciphers in Hebrew； but consonants are used instead of them．The units are expressed by $s$－ 0 ，the tens by＂－s， $100-400$ by $p-r$ ．The numbers $500-900$ sometimes are expressed by the five final letters $7^{500} \quad \square 600 \quad{ }^{700}$ ๆ $800 \quad \gamma^{900,}$ sometimes by $r=400$ with addition of the other hundreds，e．g．$p=500$ ．In compound numbers，the greater is placed first，e．g．s－ 11，，121．The number 15 is written with iv（ $9+6$ ），instead of 7 ，because the name of God Thn＇begins with these letters；and for the same reason， 16 is written instead of 9 ． The thousands are expressed by the units， superscribing two points，e．g． $\mathbf{\Sigma} 1000$ ．

## ABBREVIATIONS．

＇A stroke aloft to the left of the eonsonant， e．g．＇s，denotes that this consonant serves as a numeral．By the side of the last con－ sonant of a word，e．g．＇res（三cren）it marks an abbreviation．
＂Two strokes above a word，e．g．I＂s，indi－ cate that eaeh of these letters stands for a separate word abbreviated．
o or＊in eopies of the Hebrew Bible refer to the readings placed in the margin or at the foot of the page．The first is of Masoretic， and the other is of modern origin．


# HEBREW RUNNING-HAND 



FINAL LETTERS.

Polish.

$$
\begin{aligned}
& \hat{r}=7 \text { och } \\
& \mathrm{q}=\mathrm{a} \mathrm{~m} \\
& 1=; \mathrm{n} \\
& \beta=\text { ๆ } \mathrm{f} \\
& \phi=V \mathrm{cz}
\end{aligned}
$$

German.

$$
\begin{aligned}
& \vec{\Gamma}=\mathrm{ccll} \\
& Q=Q 111 \\
& 1=1 n \\
& 3 \& 2=71 \\
& \rho^{\prime}=\gamma \in z
\end{aligned}
$$

## SAMARITAN

| Form | Name | Pronunciation | Numerical value |
| :---: | :---: | :---: | :---: |
| $N$ | Aleph | Spiritus lenis | 1 |
| 9 | Beth | , b bh | 2 |
| $\boldsymbol{Y}$ | Gimel | g gh | 3 |
| 5 | Daleth | d dh | 4 |
| \# | He | h Spir. asper | 5 |
| $\underline{1}$ | Vav | W V | 6 |
| $\xrightarrow{4}$ | Zayin | $s$ ds | 7 |
| H1 | Cheth | ch hh | 8 |
| $\sqrt{7}$ | Teth | t | 9 |
| 171 | Yodh | y | 10 |
| ${ }^{\mu}$ | Kaph | k ch | 20 |
| 2 | Lamedh | 1 | 30 |
| $2 y$ | Mem | m | 40 |
| ] | Nun | n | 50 |
| P | Samek | S | 60 |
| $\nabla$ | Ayin | \% habrew | 70 |
| 7 | Pe | p ph | 80 |
| $\pi 11$ | Tsadhe | ts | 90 |
| P | Q'oph | k | 100 |
| 9 | Resh | r | 200 |
| us | Shin | sh | 300 |
| $\lambda$ | Tav | t th | 400 |

## NOTES.

The Samariton is a Semitic language. Therefore, the ulphabet consists only of consonants ( 22 in unmber) and is read from right to left. As in this language words caonot he seporated at the end of the lines, the two letters ending the last word are separated from the others and placed at the end of the line: but in printing this is generally avoided by diminishing or enlorging the spaces between the single words.

Save some points ond scanty orthographical signs, there ere in Samaritan no vowal-marks, occents or other diacritical signs as in Hebrew. Therefore we are somewhat in the dark ohout the pronunciation of the consononts and vowels and it con be acquired only by comparison with the Syriac and the Hehrew.

## VOWELS.

There are no vowel-marks as in other Semitic languages. However, to supply this want and to indicate somewhat the pronunciation, some consonants are used as vowels, viz.

$$
\begin{aligned}
& \text { a } \mathbb{K}, \mathfrak{Z}, \nabla \\
& \text { e } \mathbb{K}, \boldsymbol{m} \\
& \text { in } \Pi \\
& 0,00 \mathbf{x}
\end{aligned}
$$

Of two consonants beginning a word, the first is pronounced as if it were a slight and indistinct vowel, similar to the Hehrew Shwa.

## DIACRITICAL SIGNS.

The only diocritical sign is a stroke over the consonant (e.g, $\overline{\boldsymbol{K}}$ ) serving to distinguish two different words written in the same manner, or two different forms derived from one and the same root, or to indicate some letter added or omitted. When placed over $\sqrt{7}$ or $\mathbf{Y}$, the stroke indicates that thesa letters are real consononts, not representing vowels.

## PUNCTUATION.

A point is put by the side of the final letter of a word. Besides this, the following signs laive heet introdnced by the transcribers:

* or * or ** at the end of a sentence.
- (also *) at the end of part of a sentence, like our colon,
 or section.
$<\therefore *==\therefore \circ>$ or similar signs, sometimes agoin and again repeated, hetween the enil of one section, paragrapb or chapter, and the beginning of the other.
The numbers are written as in Hebrew (see under).


## SYRIAC



## SYRIAC

Cut in the printing-office of B. G. Trubnee in Leipzig, conformably to original drawings by Professor Tullberg of Upsaia and Professor Bernstein of Breslau.




ARABIC

| Name | Form |  |  |  | Pronnnciation | Numericalvalue |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Unconnected | $\begin{array}{\|c} \text { connereted } \\ \text { with } \\ \text { tha feteeder } \end{array}$ | $\underset{\substack{\text { connected } \\ \text { with both }}}{\text { chen }}$ |  |  |  |
| Elif | 1 | 1 | - | - | $\boldsymbol{\aleph}$ Spir. lenis | 1 |
| Ba | ب | بب | $\stackrel{+}{ }$ | $?$ | b | 2 |
| Ta | ய | تّ | $\ddot{ }$ | 3 | 毛 | 400 |
| Tha | ¢ | - | $\dot{\text { ̇ }}$ | 3 | th | 500 |
| Jim | ? | ? | $\leq$ | $\bigcirc$ | j | 3 |
| Hha | $c$ | 2 | $\leq 1$ | $\sim$ | hh | 8 |
| Cha | - | ~ | $\pm$ | $\dot{-}$ | ch | 600 |
| Dal | 0 | d | . . . |  | d | 4 |
| Dhal | $j$ | d |  | -•• | dh or ds | 700 |
| Ra | , | $\gamma \checkmark$ |  | $\cdots$ | r | 200 |
| Zay | ; | $;$ |  | $\cdots$ | z | 7 |
| Sin | U | U | m | $\sim$ | S | 60 |
| Shin | ش | ش | ش | شه | sh | 300 |
| Ssad | 0 | ט | n | ص | SS or ç | 90 |
| Ddad | ض | ض | ض | ضض | d or dd | 800 |
| Tta | $b$ | b | $b$ | b | - tt or th | 9 |
| Zza | E | E | b | ظ | ZZ | 900 |
| Ain | $\varepsilon$ | $\varepsilon$ | $\boldsymbol{\ell}$ | ع | ข Spir. gutt. | - 70 |
| Ghain | غ | $\dot{\text { c }}$ | $\dot{\lambda}$ | $\dot{s}$ | gh | 1000 |
| Fa | ف | غ | $\dot{\text { i }}$ | $\mathfrak{j}$ | $f$ | 80 |
| Qaf | ت | ق | 3 | 3 | k | 100 |
| Kaf | U | ك | $\leqslant \leqslant$ | $5 \leqslant$ | k soft | 20 |
| Lam | $J$ | $d$ | d | 1 | 1 | 30 |
| Mim | $p$ | $\stackrel{ }{+}$ | * | 0 | m1 | 40 |
| Nun | $\cup$ | - | i | ذ | n | 50 |
| Ha | > Final y | $x$ Tinal $\ddot{\text { x }}$ | 8 | 0 | h | 5 |
| Waw | , | 9 | . | -•• | w | 6 |
| Ya | $\leqslant$ | 1 | A | $\stackrel{3}{2}$ | y , i | 10 |
| orthographical signs |  |  |  |  |  |  |
|  | $\cdots$ | [ 5 | E 3 | $\pm$ \& | $\pm$ |  |

VOWELS．

At the end of the substantives the vowels are doubled to indicate the case，viz．：

$$
\text { s on } \Rightarrow \text { in } \equiv \text { an }
$$

This is called Nunation，because，in pronouncing，Nun is added to the vowel．


## ORTHOGRAPHICAL SIGNS．

－Jeźma，separating syllables，is written over the final．consonant of all shut syllable and indicates；that the syllable is finished and the consonant to ．be pronounced with the preceding vowel；it corresponds to the Shwa quiescens of the Hebrew．
－Teshdid，mark of doubling．The final consonant of a syllable being the same as that beginning the following one，this consonant is written only once，but marked with the sign w，which corresponds to the Hebrew Daghesh forte．In African manu－ scripts it is written vor $A$ ．
－Hamza is placed generally above the Elif，when this is used as a consonant and furnished with a vowel；when this vowel is a Kesre，the Hamza is placed beneath； sometimes also it stands above the $Y$ ．In Kufic Korans it is supplied by a little green stroke，in Moorish or African manuscripts by a thick green or yellow dot．
$\simeq$ Wesla，joining－mark．The Elif，at the commencement of a word，is sometimes in pronnnciation absorbed by the final vowel of the preceding word．In this case，the vowel of the Elif is elided and marked by the Wesla．
～Medda stands above an Elif pronounced by Fatha and followed by a Hamza；it in－ dicates the prolongation of the a．It is placed，also，above an Elif at the commence－ ment of a word，or instead of an omitted Elif．Besides，this sign is a mark of abbre－ viation．

## PUNCTUATION．

There are no signs of punctuation in Arabic，only in the Koran the verses are separated by 凝．This sign，however，or ${ }^{6}$ or ${ }^{6}{ }^{6}$ or a red dot，is employed also in other books at the end of a section．In manuscripts，sometimes，a new section begins with a word written in red colour；in mannscript dictionaries a red line is placed above each catch－word．

CIPHERS．
Formerly，the Arabs，like other oriental nations，used the letters of the alphabet to express numbers；at a later period，however，they adopted the following 10 special figures， called by us Enropeans the Arabian ciphers，by the Arabs themselves the Indian ones，

| 1 | $\mu$ | $\mu$ | $f$ | 0 | 4 | $V$ | $A$ | 9 | $*$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

Regarding their composition and value they accord with onr numerals，which are taken from them，whereas the consonants expressing ciphers are written from right to left， viz．｜ 14 （ 1861 ）．

| ARABIC LIGATURES |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Ba－Jim <br> Ba－Hha <br> Ba－Hha－Jim <br> Ba－Cha <br> Ta－Jim <br> Ta－Hha <br> Ta－Cha <br> Tha－Hha |  | Tha－Cha <br> Jim－Jim <br> Jim－Hha <br> Hha－Jim <br> Hha－Jim－Jim <br> Hha－Jim－Hha <br> Hha－Hha <br> Hha－Hha－Jim |


| ARABIC LIGATURES |  |  |  |
| :---: | :---: | :---: | :---: |
| $\bar{z}$ | Hha－Cha | ＜ | Kaf－Cha |
| 官 | Cha－Jim | $y 3$ | Lam－Elif |
| $\dot{z}$ | Cha－Hha | 克 | Lam－Jim |
| بّ | Sin－Jim |  | Lam－Jim－Hha |
|  | Sin－Hha |  | Lam－Hha－ |
| س゙ | Sin－Cha | $\frac{1}{2}$ | Lam－Hha－Jim |
| 華 | Shin－Jim | \％ | Lam－Hha－Hha |
| 葢 | Shin－Hha | 人 | Lam－Cha |
| ششُ شٌ | Shin－Cha | 总 | Lam－Cha－Jim |
| 号 | Ssad－Jim | $\cdots$ | Lam－Mim－Hha－Jim |
| $\chi^{0} \underbrace{\circ}$ | Ssad－Hha | $\pm$ | Lam－Mim－Hha－Hha |
|  | Ssad－Cha | لى | Lam－Ya |
| ¢ | Ddad－Jim | 全 | Mim－Jim |
| 家 | Ddad－Hha | 全 $\leq$ | Mim－Hha |
| sto | Tta－Hha | シャ | Mim－Hha－Jim |
| ¢ | Ain－Jim | $\bigcirc$ | Mim－Hha－Hha |
| S | Ain－Hha | － | Mim－Cha |
| ¢ | Ghain－Jim | 官 | Nun－Jim |
| ¢ | Ghain－Hha |  | Nun－Hha |
| ¢ ${ }_{\text {¢ }}$ | Fa－Jim | ̇i ذ | Nun－Cha |
|  | Fa－Hha | ¢ | Ha－Jim |
| غ $\dot{C}^{\text {® }}$ | Fa－Cha | 盛 | Ha－Hha |
| ف | $\mathrm{Fa}-\mathrm{Ya}$ | 尔 | Ha－Cha |
| 蒌 | Qaf－Jim | p | Ha－Mim |
| ciz | Qaf－Hha | 号 | Ya－Jim |
| 艺 | Qaf－Cha |  | Ya－Jim－Hha |
| $\leqslant 6$ | Kaf－Elif | ¢ | Ya－Hha |
| 菟 | Kaf－Jim | $\cdots$ | Ya－Hha－Hha |
| 㐱 $\leq$ | Kaf－Hha | ¢ | Ya－Cha |

## AETHIOPIAN AND AMHARIC

| Name | Form |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | with ut | \％ | with | will e | with |  |  |
| Hoi |  |  |  |  |  | U |  |  |
| Lawi |  | 1 | $\Lambda$ |  |  | 1 | 10 |  |
| Haut | $\boldsymbol{m}$ ha | Ir ${ }^{\text {hu }}$ | $\boldsymbol{\hbar}_{\mathbf{2}}$ | d | ¢ | m | \＄ | h |
| Mai | $\infty$ ma | －0．mu | O2 mi | 09 ma | 02 me | － |  | m |
| Saut | $\boldsymbol{U}^{\text {sid }}$ | W | UL si | U． | ${ }^{4}$ | $\underline{\square}$ |  |  |
| Rees |  |  |  | G | $\angle$ | C． | C |  |
| Sat |  |  | İ． | \％ | \％ | त | $\underline{1}$ |  |
| ＊Shat | İR sha | IT ${ }^{\text {che }}$ |  | fi sha | Tris she | त | T | sh |
| Kaf |  |  |  |  | \＄ |  |  |  |
| Bet |  | n ${ }^{\text {bu }}$ | ח， |  | 几 | П | $\bigcirc$ | b |
| Tawi |  | t $\quad$ u |  |  | t | T | $\stackrel{1}{7}$ |  |
| ＊Tsha | T tsha | 宥 tshu |  | Ft tsha | 安 the | ＇ | T |  |
| Harm |  | －3．hu | F |  |  | 4 |  | h |
| N |  | \％ |  |  |  |  |  |  |
| ＊Gnah | T gna | \％gra | \％ | 穴 gna | \％gne | \％ | T | g |
| Alf |  | 㐋 | K |  | \％ | K |  |  |
| Kaf | $\boldsymbol{n}$ ka | 5 | $\square$ | ${ }^{5}$ | ！ | $\boldsymbol{n}$ | ก |  |
| ＊ | In cha | Tr．chu | ${ }^{3}$ | $\boldsymbol{T}$ cha | $T_{5}$ che | T | ¢ |  |
| Wawi | （1） | （1． | $\pm$ | \＄ |  | （1） | （1） |  |
| Ai |  |  | $\mathrm{O}_{2}$ |  | $\mathrm{O}_{3}$ |  | ［ |  |
| Z | H | $\mathbf{H}^{\text {zu }}$ | H． | H | H | H | H |  |
| ＊Z | ${ }^{\mathbf{H}}$ | F ju | ${ }^{+}$ | H | H | H | H | j |
| Yaman | P | P ya | R | P | R | P | P－ |  |
| Dent |  |  | P | P | P | P． | $\underline{\square}$ | d |
| ＊Jent |  | 䞨 ju | 砍 |  | \％ | 官 | \％ |  |
| Geml |  | 2．gu | 2 gi |  | 2 |  | 1 | g |
| Tait | In | In ${ }^{\text {tu }}$ | m， | $\pi$ | m | \％ | （ |  |
| ＊T | mil tha | MF tshu | mi．tshi | Hit | nit tohe | 4 | ${ }^{\text {r }}$ |  |
| Pait |  | \＆pu | 8．pi |  | $\boldsymbol{\delta}^{\mathbf{8}} \mathrm{pe}$ |  | 8 |  |
| Tzada | $\boldsymbol{8}$ tsa | 8 8．tsu | R． |  | 8 lse | $\boldsymbol{R}$ | 8 |  |
| Tsapp | $\boldsymbol{\theta}$ tsa |  |  |  |  |  | － | ts |
| Aff |  |  |  |  |  |  | E | f |
| Pa |  |  |  |  |  |  |  |  |
| DIPHTHO |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

## AETHIOPIAN

Cut in the printing-office of F. A. Brockhaus in Leipzig under the direction of the German Oriental Society.

| Will ă | Wilh $\hat{\text { u }}$ | Wih i | Wiht $\hat{a}$ | With ê | Wih | With 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\boldsymbol{v}$ ha | U. hù | y. hi | $y$ hà | \% hê | $v$ he | $\boldsymbol{\sim}$ h hô |
| $n$ lạ | A. lù | ก. li | 1 là | A. le | A le | n- 10 ó |
| ¢h ha | h. | the $\mathrm{h}_{\text {it }}$ : | d_ ḥà | d. hẹ | ¢ h he | A họ |
| co ma | a0. ṃu | $\mathrm{arg}_{4} \mathrm{mi}$ | ¢7 mâ | al. me | $\boldsymbol{T}$ me | qP mồ |
| $\boldsymbol{u}$ - s a | w. s. su | 4. ${ }^{\text {cisi }}$ | थı şâ | ${ }_{4}$ | $\mu^{\prime \prime}$ |  |
| C ra | 4. rù | $6 \quad \mathrm{ri}$ | 6. râ | $\square_{6}$ rê | C. re | C. rô |
| ${ }^{\boldsymbol{n}}$ sa | - ${ }^{\text {resu }}$ | C. si | ¢ sâ | ¢ ${ }^{\text {che }}$ | A se | ( ${ }^{\text {cos }}$ |
| ( ${ }^{\text {d }}$ a | \$ qu. | \$. $\mathrm{q}^{\text {l }}$ | . ${ }^{\text {d }}$ qa | t qee | \$ qe | ¢ $\mathrm{q}^{\text {ô }}$ |
| ( ${ }^{\text {ba }}$ | f1- bu | I. bi | $\$ bà & (b) bè & -n be & $\boldsymbol{n}$ bô |  |  |  |
| + ta | \# tu | tit | J. tâ | \# tê | + te | P to |
| -1 ha | - hat | 7. hi | 3 h hâ | \#. hè | 4 he | The |
| 4 na | \%. nù | \% ni | ¢ n â | ${ }^{6}$ nê | 3 ne | ¢ ${ }^{\text {cos }}$ |
| h -a | h. -u | \%. -1 | \% 4 | \% -è | 3 -e | $\lambda$-ó |
| h ka | 'h- kù | h. ki | $h$ kà | th ké | n ke | h kô |
| m wa | m. wù | ¢. wi | $\boldsymbol{P}$ wà | $\boldsymbol{T}$ wê | a. we | $\boldsymbol{P}$ wô |
| $0{ }^{\text {c }} \mathrm{a}$ | D. ${ }^{\text {e }}$ | $9_{4}{ }^{\text {i }}$ | 9 'al | \% ${ }^{\text {c }}$ | d $^{\text {e }} \mathrm{e}$ | $\boldsymbol{f}^{\circ} \mathrm{o}$ |
|  | $\mathbf{H z}^{\text {zu }}$ | H. $\mathrm{zi}^{\text {i }}$ | H zâ | H. zê | H ze | H zo . |
| $P$ ya | f. yù | R. yì | $\boldsymbol{f}$ yâ | Pu yê | $\boldsymbol{e}$ ye | P- yò ${ }^{\text {a }}$ |
| $\boldsymbol{f}$ da | 9. dù | P. di | \% dâ | $\boldsymbol{S}$ dè | $\rho$ de | 8 dô |
| 7 ga | 7. gù | 7. gi | ? gà | 2 ge | 7 ge | 7 go |
| (n ta | 71. tù | m. ${ }_{\text {ti }}$ | q ! | [. | T te | (n) tọ |
| \& pa | 8. pua | 8. pi | \% paà | \$. pệ | \% pe | \& poó |
| $8{ }^{\text {za }}$ | 8. $\mathrm{z}^{\text {a }}$ | 7. zi | 7 z ${ }^{\text {a }}$ | \% zêe | 8* ze | 2 zo |
| ( $z^{\text {a }}$ | 0. qư $^{\text {a }}$ | 2. ${ }^{\text {2i }}$ | 9 2a | 2. 2e | $\boldsymbol{t}$ ze | 8 zo |
| 6. fa | 4. fư | 6 fi | 4. fà | $66_{0} \mathrm{fe}$ | ¢ fe | 6. fo |
| T pa | F pu | T $\mathrm{pi}^{\text {i }}$ | ; pâ | T pê | T pe | T pồ |

DIPHTHONGS．


PUNCTUATION．

：Stop for the division of words Comma Semicolon ：Full stop numbers．

<br>

Ethiopic，formerly the vernacular language of the Abyssinians，by whom it was called G氖z，is only prescrved in writings．As a Semitic language it bears a close affinity to the Himyaric，a South－Arabian dialect，which was superseded in the times of Malomed．The Ethiopic possesses a high degree of flexibility which is mainly due to the diligence with which the study of Greek writings was cultivated in Abyssinia．The Alphabet originally consisted of consonants without indications of vowels．In form it approaches the Himyarie and thus differs from the other Semitic characters．Ancient Ethiopic inscriptions show examples of writing from right to left；owing，however，to the early influence of Greek literature，espe－ cially after the introduetion of Cbristianity，the arrangement of words was fixed from left to right．At the same time the coalition of consonants and vowels was indicated by particular forms，which gave rise to the adoption of a complete syllabarium．With the change of the ruling power in the fourteenth century the Ethiopic language began to decay，and rapidly falling into disuse，it is now replaced by the Amharic langnage．

## AMHARIC．

This language deriving its name from the kingdom of Amhara in Abyssinia，has supplant－ ed the ancient Ethiopic idiom．The kings of Shoa，on gaining the upper hand，effected the preponderance of the Amharic language，to the exclusion of the kindred Ethiopic．The Alphabets of both languages are identical，except the following Characters，which are peculiar to the Amharic language．

| with a | with $\hat{u}$ | with i | with $\hat{\text { à }}$ | with $\hat{\text { en }}$ | wilh e | with ô |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\pi$ sha | 7i．shu | 7．shi | 万it shà | $\mathrm{n}^{\mathbf{K}}$ \％she | 7i she |  |
| \％f tsha | \％tshù | If tshir | 汭 tsha | \％tshe | 第 tshe | 早 tshô |
| \％ina |  | ＇z ill |  | \％ne | nine | 首 |
| Ti kha | ＂in khư | ＇fi．khi | If khal | ＇n，khe | nin ke | ＇fi kho |
| Trija ${ }^{\text {（Tr．）}}$ | $7{ }^{18} \mathrm{ju}$ | Tr：${ }^{\text {ji }}$ | Tr jà | T ${ }^{\text {j }}$ | Pr je | $\boldsymbol{T r}$ jô |
| $\mathrm{E}^{\text {e }} \mathrm{j}$ | 京 ju | \％ji | \％jab | 甬 ${ }^{\text {j }}$ | P．je | 家 ${ }^{\text {d }}$ |
| ab chha | 6bs chhư | G．chhi | $\sigma_{2}$ chhâ | 6ichhe |  | $5^{50}$ chhô |

DIPHTHONGS．

| A lua | Th sua | 3 nua | \％tua |
| :---: | :---: | :---: | :---: |
| 27 mua | 9 bua | 4 \％\％ | 60．cua |
| 呂 rua | $\lambda$ tua | P yua | \＆zua |
| $\$$ sua | F cua | \％dua | \％fua |

## TURKISH.

The Turkish language is a compound of words taken from the Tatar, Persian and Arabic languages. The high dialect, only. spoken at Constantinople by peopls of quality, and serving as ths written language, is a compound of Persian and Arabic words. Like most oriental languages, Turkish is written and read from right to lsft.
| Elif supplies the german vowels $a, y, o$, $u$, the consonants of the word being hard; but the german $e, i, z, \ddot{u}$, the consonants - being soft. When Alif is followed by a hard consonant, the - (Ustun) is pronounced like $u$, the 一 (Esre) like $y$, and the, (Utru) like 0 or $u$. Following, however, a soft consonant, the $=$ (Ustun) is to be read as $e$, the - (Esre) as $i$, and the, (Utru) as o or $u$. In the middle and at the end of words, without Hamzalif, the Alif is always pronounced like $a$, but with Hamzalif, like ê.
$\longleftarrow B a$ is our b. After Ta, Tha, Jim, Cha, $\operatorname{Sin}$, Shin, Ssad, Tta', Qaf, Gef it is often read like $p$.

- $P a$ is our $p$.
*. Ta is our $t$. In the conjngation of some verbs it is changed into Dal.
ثنلث Tha is our s or ss, except the word tult. The Arabs pronounce it like th.
- Jim, the italian $g$ before e or $i$. When meeting the consonants named above in connection with the letter $ب$, it is pronounced like Tchim. Tchin like.our ch in chess.
Hha like $h$ in have.
Cha, the german ch in branchen.
ง Dal like d. It is pronounced like $t$ when meeting the consonants named above in connection with the letter


## j Dhál like $z$.

, Ra like $r$.
) Za like our $z$.
U Sin like s, ss.
ش Shin like sn.
v Ssad like sharp ss.
ض Ddad, like our $z$; the Arabs pronounce it like $d$.
b Tta like $t$ or th; it is aften confounded with Ta and Dal.
fo $Z_{z a}$ like onr $z$.
$\varepsilon$
Ain like a strong guttural and nasal $a$, $y, u$.
غ
Ghain like $g$ guttural.
G Fa like our $f$.
G Qaf like $k, k h$ or $c k$.
(5) Kaf, like $q$ or $k$, as in the frencb words qui, quel.
(ك) Gef, accords with our $g$ in give; in some cases it is prononnced like $g i$ very soft; in the middle of words and in some terminations like $y$.
Saghur Nun, i. e. mute Nun, like the french nasal- $n$ in mon, son.
$\int L a m$ our $l$; in some cases it is soft like $l$ in limb, in some hard like $l$ in all.
$p$ Mim, like $m$.

- Nun our $n$; but when followed by a $B a$, it is prononnced like $m$.
, Waw our or v; furnished with Utru, it is prononnced like $u$ in conjunction with hard consonants; like german $\bar{u}$ or $\overrightarrow{0}$, how ever, in conjunction with soft ones.
© Ha like our $h$; at the end of words it is mostly pronounced like $a$ or e.
Y Lamelif, lu or lia (Ligature).
ي
$Y a$, when a consonant like our $y$, when a vowel like $i$; it represents a vowel only in the middle or at the end of words.


## ORTHOGRAPHICAL SIGNS.

- Ustun is placed over the consonants and pronounced like $a$ with a hard consonant, like e with a soft one.
- Esre below the consonants, is prononnced like vowel $y$ with a bard consonant, but like $i$ with a soft one.
, Utru is prononnced like o or $u$ with a hard consonant, but like o or $u$ with a soft one.
- Iki ustun (donble Ustun) like•en.
= Iki esre (double Esre) like in.
${ }_{5}$ Iki utru (double Utru) like on or un.
The three last marks are only employed in Arabic words.
- Jesm (sign of pause) is placed over a consonant wanting a vowel, followed by an other consonant.
- Teshdid or Shedde when placed over a consonant doubles it.
$\sim$ Meddelif or Medda, is only placed over the Alif', which, then, is always pronounced like $a$.
- Hamzelif or Hamza; placed over Elif, is prónounced like ê; over Waw, like $u$, over $Y a$, like $i$; at the end of words, ending with a vowel, like $i$.


## PERSIAN

| Name． | Form |  |  |  | Pronun－ ciation | Numer： value | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | uncon－ nected | $\left\|\begin{array}{c} \text { connoeted } \\ \text { Fith a } \\ \text { preceding } \\ \text { letter } \end{array}\right\|$ | conaected with both | $\left\lvert\, \begin{gathered} \text { connected } \\ \text { with a } \\ \text { followiog } \\ \text { letter } \end{gathered}\right.$ |  |  |  |
| Elif | 1 | L |  |  | Spiritus lenis | 1 | Many Arabic words having been |
| Ba | 4 | － | $\underset{\sim}{1}$ | $?$ | b | 2 | introduced into the Persian language， |
| Pa | $\underset{\sim}{\dagger}$ | ب\％ | $\underline{1}$ | $\because$ |  |  | the Persian alphabet consists of 32 |
| Ta | － | هت | $\ddot{\chi}$ | 3 | t soft | 400 | read from right to lefl；of these consonants， 28 are common to both |
| Tha | シ் | ه | $\dot{\chi}$ | \％ | S sharp | 500 | languages：only the following four are purely Persian： |
| Jim | C | 亩 | $\leq$ | $\bigcirc$ | j | 3 |  |
| ＇Tchim | \％ | 令 | $\bigcirc$ | $\geqslant$ | tch |  | － |
| Hha |  |  | $s$ | $\rightarrow$ | hh sharp | 8 |  |
|  |  |  | 5 | $\pm$ | kh guttur |  | VOWELS． |
| Cha | $\dot{\text { ¢ }}$ | － | st | $\bigcirc$ | kh guttur． | 0 | All Persian letters are consonants． |
| Dal | 3 | $d$ |  |  | d | 4 | except Elif，Waw andYa，whicb also supply iong vowela（theWaw，aome－ |
| Dhal | $j$ | d |  |  | Z soft | 700 | times，represents a short vowel ）： |
| Ra | ） | 5 | － |  | r | 200 | $1 \mathrm{a}, \mathrm{w}$ ¢ y ． |
| Za | j | $j$ | －． |  | Z soft | 7 | The short vowels are writen thus： |
| Zha | j | ＋ | ． |  | zhorjfrench |  | 二＿Zabar，a－Zir，e ，Pish，u |
| Sin | U | U | H． | سن | S sharp | 60 |  |
| Shin | شن | 岗 | 苗 | شٌ | sh． | 300 |  |
| Ssad | 0 | U | $\cdots$ | $ص$ | S sharp | 90 | sometimes supplies the Elif；it is |
| Ddad | ض | טض | ض | ضض | Z hard | 800 | also placed above an Elif in the middle of a word，when the Elif |
| Tta | b | 1. | 6 | －b | t | － 9 | represents a cousonant． |
| Zza | 16 | E | $\underline{\square}$ | 16 | $z^{\text {c hard }}$ | 900 | ${ }^{\omega}$ Teishdid，doubles the letter over which it is placed． |
| Ain | $\varepsilon$ | $c$ | 2 | $\varepsilon$ | Spiritus lenis | 70 | ～Medda．Instbad of an Elif |
| Ghain | $\dot{\varepsilon}$ |  | $\dot{\lambda}$ | غ | gh guttur． | 1000 | written twice，a Medda is placed over it． 11 is properly a second Elif， |
| Fa | ， | فغ | $\dot{\boldsymbol{\varepsilon}}$ | j |  | － 80 | but written lengthwise；sometines it |
| Qaf | \％ | $\hat{*}$ | $\ddot{\text { ® }}$ | 3 | k guttur． | 100 | －Jezma，over a consonant by |
| Kaf | s |  | $\leq \pi$ | $\leqslant 5$ | k | － 20 | which a syllahle ends．lt is also placed |
| Gaf | $\omega$ | $\dot{\text { ¢ }}$ | 关 | 安 | g palatal |  | over Waw or Ya，when they form a diphthotig with a preceding． |
| Lam | $J$ | $d$ | d | J | 1 | 30 | －．－－ |
| Mim |  |  | ＋ | 0 | m | 40 | CIPHERS． |
|  |  |  |  |  | n | 50. | －To write numbers，the Porsians |
| Nun | $v$ | $\vartheta$ | i | ذ | n | 50 | employ either the alphabet．or the Arabic cipliera（see under）． |
| Waw | 9 | 9 |  |  | $\dot{\mathbf{W}}$ | 6 | Arabic ciphera（see under）． |
| Ha | 8 | X | $\frac{8}{6}$ | $\infty$ | h | 5 | ligature． |
| Ya | 5 | $s$ | A | ？ | $y$ and i | 10 | y \( |
| ) Lam－Elif，la． |  |  |  |  |  |  |  |

## AFGHAN OR PUSHTOO

| Figure |  |  | Pronun－ ciation | Figure |  |  | （tande $\begin{gathered}\text { Pronun－} \\ \text { ciation }\end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| unconnécted | in the midst | ${ }_{\text {ate }}^{\substack{\text { nt the com－} \\ \text { mencement }}}$ |  | unconnected | ｜in the midat | $\xrightarrow[\substack{\text { at the conn－} \\ \text { mencement }}]{ }$ |  |
| 1 | 16 | 1 | a，á，i，u | ش | ش | \＃ | sh |
| －ب | $\stackrel{+}{4}$ | ب | b | － | مبّ هِّ | بٌ | khín |
| پ | $\uparrow$ | \％ | p | v | $\sim$ | 0 | SS |
| $\because$ | $\ddot{ }$ | 3 | t | ض | ض | ضض | dz |
| （\％ | － | 3 | tt | $b$ | b | b | t |
| ث | $\dot{*}$ | ث | t＇s | E | E | $\boldsymbol{b}^{-}$ | z |
| ＊ | $\stackrel{\text { 关 }}{ }$ | $\grave{\text { ̇ }}$ | t＇s | $\varepsilon$ | 2 | $=$ | æ，$\hat{\text { a }}$ |
| ج | S | $\stackrel{\square}{\square}$ | j | $\dot{\text { غ }}$ | $\dot{\text { غ }}$ | غ | gh |
| ج | $\bigcirc$ | $\geqslant$ | ch | ف | $\dot{8}$ | $\dot{\square}$ | $f$ |
| c | $\leq$ | － | h | ت | $\ddot{ }$ | 3 | k，q |
| $\dot{\nu}$ | $\pm$ | خ | kh | $\checkmark$ | $\leq K$ | $\leqslant 5$ | k |
| S | $d$ | $\checkmark$ | d | 5 | 568 | 5 | g |
| \＄ | $\theta$ | $\$$ | d！ | $J$ | $\lambda$ | 1 | 1 |
| $j$ | d | $j$ | Z | $p$ ． | ＋ | 0 | m |
| ） | 厂 | $\gamma$ | 1 | $\mathcal{*}$ | i | ذ | n |
| 2 | 2 | 6 | $\underline{r}$ | サ | － | $j$ |  |
| ； | ； | ； | z | ， | \％ | ， | w ú 0 |
| シ | $\stackrel{\text { ¢ }}{ \pm}$ | $\pm$ | dz | 8 x | 8 | 9 | h |
| ． 3 | ¢ | 9 3 | jz | $=$ | \＆ | 5 | a |
| س | m． | س， | S | 5 | $\stackrel{4}{4}$ | ： | y，e，í，ai |

## NOTES．

Before the introduction of arabic words，the original Pushtoo alphabet consisted only of 29 different sounds；at present，the Afghans make use also of the 28 arabic letters，and of these four letters used in Persian ：$\underset{\sim}{\boldsymbol{z}} \dot{\boldsymbol{y}}$ ，and from which results an alphabet of 40 different cbaracters which are all consonants．

The Pushtoo vowels are the same as the Arabic and Persian：
—Zabar or Fatha a，－Zer or Kisreth e， ，Pesh or Zammahu．
They are placed either above or under the conso－ nant beginning a syllable，as： $6 a_{2} \underset{j}{;} b i$ ， $\dot{H}^{3}$ bu．Zabar followed by $二$ is read as the
diphthong au；followed by thong ai．
$s$ ，as the diph－
－or O Jesm or Jesmal indicates that the consonant lias no vowel and the syllable is finished．
＿Meddah or Medd，an other form of Elif， －is sign of producing a syllable．
w．Teshdid indicates that a consonant is to be pronounced double．
$\simeq$ Wesla，joining－mark．
气 Hamzah supplies the place of Elif．
$=-5$ Tonwin is the arabic Nunation at the end of the words，pronounced by ad－ ding a $n$ to the wowels：an，$i n, y n$ ．

## COPTIC

| Figure | Name | Pronunciation |
| :---: | :---: | :---: |
| $\boldsymbol{\lambda} 2$ | Alpha | a |
| B B | Vida | b v |
| $\Gamma$ | Gamma | $\stackrel{\text { g }}{ }$ |
| $\lambda$ 入 | Dalda | d |
| E e | Ei | $\stackrel{\square}{\square}$ |
| $\zeta 5$ | Zida | z |
| H | Hida | y |
| $\boldsymbol{\theta} \boldsymbol{\theta}$ | Thida | th |
| I J | Jauda | i |
| K K | Kabba | k |
| $\lambda \lambda$ | Laula | 1 |
| U $\quad$－ | Mi | m |
| N s | Ni | n |
| $\xi \xi$ | Exi | x |
| 0 O | 0 | 0 short |
| II | Pi | p b |
| P p | Ro | r |
| C | Sima | s |
| T T | Dau | t d |
| $\bigcirc \boldsymbol{r}$ | He | i，ü Germ． |
| $\Phi$ Ф | Phi | ph |
| X $\times$ | Chi | ch sc |
| $\Psi \Psi$ | Ebsi | ps |
| W $\omega$ | 0 | 0 long |
| ¢ ¢ | Fei | f ph |
| 8 \＆ | Hori | h |
| ち D | Chei | kh |
| U ${ }^{\text {d }}$ | Scei | sh |
| $\chi^{x}$ | Giangia | g dslı |
| $\sigma \sigma$ | Scima | sk sc gh |
| 「 | Dei Ligature | ti |
| $\boldsymbol{E} \quad \mathrm{a}$ | So | Cipher 6 |

The Coptic language is divided into two dialects：the upper－egjptian or thebaic or sahidie，＇and the lower－ egyptian or memphitic or coptic par excellence， to which may be odled a third，the bashmuric dia－ lect．The letters $\&-\infty$ in the Coptic alphalet are of greek origin； 9 － 6 on the other hatad sig－ nify sounds which oither warted at all in－the greek langunge，or which since the ehristian era no longer used in writing ；they are taken from the elder egyptian． This sign $f$ denotes the syllohle ti；its prototype is the somitic and greok Tat．

The vowels arc：

$$
\& \in J 0
$$

the 00 is written by $\mathbf{O r}$ ，like in greek；hefore a consonant it is pronounced hy 00 ，hefore a vowil by V ．The coptic diphthongs are：

## \＆J EJ OS

pronounced in the salidic dialect only as $\mathfrak{e}, ~ \breve{1}, \breve{1}_{1}$ in the memphitic，however，as the gormon diplithongs ai，ei，oi．

## READING－SIGNS AND PUNCTUATION．

－alove a letter ：the greek gravis．
＇behind a word in sahidic manoseripts：dividing sign．
＂I＇signifies a greater pause，likr our semicolen or point．
：signifles a shopter pause，like our comma．
－sign of division．
＿sign of abbreviature olieve the charaters．
－grophic sign above some claracters in sahidic monascripts．
－diacritic sign behind some words in sahidic manu－ scripts．
，Comma，only in later sahidic manuscripts．
－orthographic sign ahove some characters in mem－ phitic hooks．

## NUMERICAL VALUE．

The numerical value of the caplic characters is the same as in greek：Numerals aro written by $\rightarrow$ ahove the leltera；the thousands are marked by ，below near the letter．${ }^{-}$（90）supplies the place of the greek $\uparrow$ ． （koppa）．

## CHINESE.

A calculation, based upon the Imperial Chinese Dictionary, ehowe that the Chinese language is represented by 43,496 charactere or symbole. Of thie numher 13,000 are totally irrelevant and congiet of aigne which are obeolete, incorrectly formed, and unexplained. For the expressione in ordinary literature ahout 4000 eigns appear to suffice. The writinge of Con-foo-teg (Confucius) and his disciples can even be read by the help of oniy 2500 charactere, and a knowledge of these will eazhle the etudent tolerebly to understand all Chinese worke on hietory and philosophy. In lieu of the phonetic and lexicographical eytem, which appertains to moet languageg, the Chinees have adopted 214 tigne any of which, being placed by the tide of an unknown character, indicates at once its pronunciation. Theso indicatore of eound, are termed by the Chinese "Tribunals". European grammariane have called them "Keys" ar "Radicals". Occasionally the "Tones" (modulating accente) are appended at the top or foot of the character, at the right or the left gide. Such accente are described ag followe,

1 o $]$ even tone. 2 [o entering tone. 3$]^{0}$ falling̀ tone. $4^{\circ} \square$ rising tone.
The "Keys" are divided into 17 Claeses, according to the number of atrokes of which each character is compoeed, and are arranged in the following order:

Class

1. consisting of 1 etroke extende from Nr. 1-6


Cle66
10. consigting of 10 strokes ex tend 6 from Nr.187-194
 ( $201-204$ " 205-208 ) 209-210 » 211 *211-213 * 214

1 - $\quad y \check{\text { u }}$, one
$2 \mid$ o chiĕh, perpendicular stroke
3 o tien, point
4 o piěh,strokeslanting to the left
$5 \underset{\sim}{7} y i$, crooked stroke
6 J
kiu, hooked stroke
7o urh, two
8 _Lyitièn-yiwa
$9 \wedge_{0 j i n, m a n}$
10 Lu chàh, foot
117 ola $\operatorname{sha} h$, to enter
12 o $p a h$, eight
$13 \prod_{0}$ kwah, desert
$140 \leadsto$ mièn, to cover
$15^{\circ}$ pin, ice
$16 \boldsymbol{\mu}^{\circ}$ chi, bench

${ }_{49}{ }^{\circ}$ chi，self
50 而。chin，cloth
${ }_{51}{ }^{\circ}$ 干 ${ }_{k a n, \text { shield，spear }}$
52．Y／yuěn，source
53.$)^{\text {L }}$ yin，hut

54 긍ํ ${ }^{\circ}$ tsou，long walk
55。み kóng，higher
56 （首 yiĕh，spear
57 需 $k \delta n g$ ，a bow
58 \＃．kway，Come！
${ }_{59}{ }^{\circ}$ san，coat
$60 \mathcal{T}^{\circ}{ }_{\text {shuiang－jin，two }}$ 61 心 $^{\circ}$ sin，heart
$62{ }^{\circ}$ 戈 $k 0 h$, a lance
${ }_{63}{ }_{0}$ F $\quad w^{\prime}$＇ō，inner door
64 手 $^{\circ}{ }_{\text {sheu，hand }}$
65 支 ${ }^{\circ}{ }^{t z}$ ，branch
66 支 $^{\circ}$ chi，the stalk
${ }_{67}{ }^{\circ} \frac{1}{\boldsymbol{\alpha}}$ funn，gentle
68 半 $t o u$, a measure
${ }_{69}$ 斤。chin，hatchet，
$70 \cdot{ }^{\circ}$－万 $\begin{gathered}\text { pound } \\ \text { fang，a square，}\end{gathered}$
${ }^{1}{ }^{\circ}$ 无 $f^{\text {Pe，no }}$
72 日。shěh，suu，day

73 日。yuěh，to talk
74 月。yueh，moon
75 木。moh，tree
$76 \widehat{R}^{\circ}$ chien，debtor
77 止 ${ }^{\circ} t s^{\prime}$ ，to stop
$78^{\circ}$ 多 tie，wicked
79 役 $k \delta h$ ，the young
$80^{\circ}$ 姃 $f$ ， 0 ，is not
81 H．$_{0} p i$ ，to compare
$82 \circ$ 毛 mou，feather
83 氏 ${ }^{\circ}{ }^{s z}$ ，clan
84 气́ chi，air
85 水 $^{\circ}$ shway，water
86。炏chaw，fire
${ }_{87} \pi^{\circ}{ }^{\text {tsou，claws，nails }}$
$8_{8}^{\circ}$ 分 $f^{\prime} \delta h$ ，father
89。交 yow，sign
90 H．chuang，pole
91。片 pièn，splinter
92。牙 yah，teeth
${ }_{93}$ 。牛 ${ }^{\text {niu，ox }}$
$94^{\circ}$ 夫 $c h ı$ èn， $\operatorname{dog}$
95 。立 yuĕn，intermin－
${ }^{96}$ 玉。nìh，gem

97。瓜 kwah，melon
98。瓦 wàh，tiles， earthenware
99 \＃．${ }^{\text {kant，sweet }}$
100 生 $^{\circ}$ senn，to live，to give birth 101。用 $\begin{gathered}\text { give bir } \\ \text { gong，to use }\end{gathered}$田。tien，field廹。 piĕh，piece
104 广。tsiěh，sick
105 棘 fàh，to divide
106．白 $\quad b u h$ ，white 107。皮 bi，skin IIIL min，implement 109 目。mòh，eye $110 \circ$ 矛 madh，spear ${ }_{111}$ 与 $^{\text {º }}$ shi，arrow ${ }_{112}$ 石 ${ }_{0}$ shiëh，stone ${ }_{113}$ 西 $^{\circ}$ sz，to admonish 114 聞。nahy or shoh， 115。天 $\begin{gathered}\text { clapper of a bell } \\ \text { haw，grạin }\end{gathered}$ 116 穴。 yuĕh，cave
117 立。lie，to stand行 ${ }^{\circ}$ choh，bamboo 1190米 ${ }_{m i, \text { rice }}$
120 糸 ${ }^{\circ} \cdot s^{\prime} z$ ，silk．
$121{\underset{\text { H．}}{0}}^{f^{\prime} o w, j a r}$
$122^{\circ} \sqrt{\mathrm{X}}$／lang，hedge
123 三 $y$ yang，sheep
124 겍 $u$ ，long feathers
125 ťa laò，old
126 ПIII urh，and
$127 \underset{\text { \＃}}{\text { \＃}}$ lie，handle of a
128 FF ull，the ear
129 丰 yuêh，to mani－
130 余 $j \delta h$, flesh
131 平 chin，an official
132 （ ${ }^{\circ} t s^{\prime} z$ ，fromoneself
133 五 $^{\circ} \mathrm{tsz}$, to arrive，
$134 \boldsymbol{G}^{\circ}$ chiu，mortar
$135 \mathbb{I}_{0}$ chweh，tongue
136 Ho $_{0}$ chiah，strong
$137_{0}$ 开 chiu，vessel
138 豆 $\begin{gathered}\text { kun，inferioror－} \\ \text { der of nature }\end{gathered}$
139 世号 sĕh，colour
140 忚 $^{\circ}$ tsaò，grass
141 o ${ }^{1}$＇hoo，tiger
142 Hio $^{\circ}$ chong，insects
143 III $^{\circ}$ shwèh，blood
144 解 $^{\circ} j e n$ ，to walk，to act

145 朴。 ${ }^{i}$ ，colthing
${ }^{146}$ 两。 yiu，twilight
147 冒 ${ }^{\circ}$ chien，to see
$148^{\circ}$ 届 krìh，horn，cor－
ner
149 릎 nien，word
150 分 $k o ̂ h$, apertures
$151^{\circ}$ F tou，head
152 。 家 shï，swine
153 ＊ $\begin{array}{r}\text { chi，superior or－} \\ \text { der of animals }\end{array}$
154 E $p e ̀ i$, valuables
155 雨。 $_{0}$ chěh，red
156 글 tsou，to walk
157 元
158 F $^{\circ}$ shin，body 159。韭 chü，cart $160^{\circ} \frac{z^{2}}{\text { F }} \sin$ ，bitter，hard－ $161_{0} \sqrt{\mathscr{X V}}$ jĕn，an hour， 162 㱜 $^{\circ}$ tseu，to run 163 国 164 㖾 $y o o$ ，twilight
165 下た $_{0}^{\circ}$ tsie，to separate
166 里 $^{\circ} l i$ ，one third of
a mile
167 王 o chin，gold，metal
168 。 言 chang，long


| $193 \text { 鼻。 }$ | lieh，to cup open | $\text { \| } 201 \text { 。畀 }$ | hwang，yellow | $208 \text { 気 }{ }^{\text {気 }}$ | chï，rat |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $194 \text { 。舄 }$ | $k w a y$, devil | 202。惒 | $s h \ddot{u}$ ，millet | 209ㅇ․ 鼻 | püh，nose |
| 195。魚 | $n \ddot{u}$, fish | 203 與。 | ＇hêlı，black | $210 \text { 六出 }^{\circ}$ | $t s i$ ，to put in or－ der，equal |
| $196^{\circ} \text { 鲁 }$ | nià ，bird | $204 \text { 皆 }$ | chi，embroidery | $211 \text { 装众 }^{\circ}$ | $t s^{\prime} z$ ，the back teeth |
| 197 。國 | loo，brine | 205。眮 | min，a toad | 212。部占 | long，dragon |
| $198 \text { 库。 }$ | $l o ̀ h$, stag | $206{ }^{\circ} \text { 师 }$ | tin，tripod |  | kway，tortoise |
| 麥。 | meh，wheat | $207 \text { 。鼓 }$ | koo，drum | $214 \text { 畣。 }$ | yàh，a musical instrument |
| 200。有伭 | $m a \hat{,}$ hemp |  |  |  |  |

## ARITHMETICAL FIGURES．

All arithmetical combinations are performed by 17 Cardinal figures．In the subjoined table，three different forms of uumerical characters are given．The series in the left column represents the plain hand which serves for literary and＇ordinary purposes．In the middle column words are employed instead of figures．This class is used in bonds，con－ tracts etc．，where it is of importance to guard against alterations and fraud．The figures in the right column，written in a＂running hand＂，are used by merchants and traders in keeping their business accounts．


The numbers by which 10,100 etc．are multiplied are placed at the top of the multiplicand． The numbers added to ten etc．，are marked below the fignre．

$$
\text { Example }+ \text { ten. } \overline{\text { I }} \text { twice ten and two, or } 22
$$

# JAPANESE <br> in the KATA-KANA character. 

(This type was cut under the direction of Prof. J. Hoffmax of Leyden and cast by N. Textradee in Rotterdam.)


## ABBREVIATIONS AND ORTHOGRAPHICAL SIGNS.

7 koto. 7 goto. $\quad>$ site. 王 tama.
) Sign of donbling a letter, placed in the middle line.
人 Sign of doubling a syllable.
1 Sign of lengthening a vowel. $\qquad$ ?

- Full stop. V comma, towards the right, beyond the middle line.


## SANSCRIT

## CONSONANTS.

Each consonant is sounded with an iuherent short $a$.

| GUTTURALS. | LABIALS. |
| :---: | :---: |
| क ka | $\square \quad \text { pa }$ |
| E kha | ¢ pha |
| $J \mathrm{ga}$ | ब ba |
| を gha | み bha |
| ٪ na | म ma |
| PALATALS. | SEMI-VOWELS. |
| च cha | $\text { य } \quad \mathbf{y a}$ |
| Es ch'ha | $₹ \quad \text { ra }$ |
| T ja | ल la |
| Of j'ha | व) va |
| Ј ก̃a |  |
| CEREBRALS | SIBLLANTS AND |
| $\boldsymbol{6}$ ta | ASPIRATES. |
| 3 tha | शा sha |
|  | ष sh'ha |
| 3 da |  |
| $\overline{6}$ dha | स sa |
| TT na | ङ ha |
| DENTALS. | क $\quad 1$ |
| त ta | This character peculiar |
| ¢ tha | to the Rig-Veda has a sound which partakes |
| $\overline{4}$ da | of $l$ and $r$. It stands for the cersbral $d \alpha$. When |
| ध dha | it represents the aspirats of this letter, it is |
| T na | exprssesed by os (lha). |

- Virâma (pauss) is placsd under a final consonsnt, and denotss the absence of the inherent short $a$.
| indicates the close of a ssintsnce, ending in a vowel, a dipbthong or a visarga. In postry it denotes the half of a verses. At the end of a verse or a period tbis mark is douhled. Il.
$\int$ serves 1. as thes sign of hiatus, 2. as sign of the elision of $a$ after $e$ and $o, 3$. as the sign of coalsscencs of two $a$.
0 is tbs esign of abbrsviation.
$r$ and $A$ represent the letter $r$. The former sign is pronounced heforo the consonant (and the semivowel ri) at the top of which it is placed; the latter sign is placed under ths consonant and sounded after it.


## VOWELS.

The vowels in the left row are uttersd as initials or ars placed befors their consonants. The vowclsigne in the right divisiou being medials and finals, coalesce with thsir consongnts, and ars respectively paced over, under, before and after the letters.


NASAL SOUNDS.
Anusvàra and © Anunàsika, are substitutes for $m$ and $n$. The anunasika has its place ahove the letter or laterally with virama underneath.
: h (or properly é) visarga, + jihvâmûliya and $Y$ upadbinánlya,
are strong final aspirates. The visdrget which is the substitute for $s$ and ${ }^{\text {a }}$ is the only ons in common use. The last two figns hear also the common dsaiguation of ardhavisarga.

PROSODIAL MARKS.
| denotes brevity, $S$ lengih.

## ACCENTS.

- Anudâtla or grave sccent stands under the vowel.

I Svarita or circumflex is put over the vowel. In connexion with thess marks the numerals $\%$ and 3 serve as accents.

## NUMERALS.

$\begin{array}{llllllllll}8 & \$ & 3 & 8 & 4 & 6 & \ddots & 6 & \$ & 0 \\ 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 0\end{array}$

## SANSCRIT

The similarity of shape occasions mistakes in correcting proofs；it may tharsfore be of advantage both to compositors and rsaders of proofs to make use of the annexsd numbers of reference．The form of the subjoined Alphabet differs frome that which precedes，but is superior in point of correctness．

| 1 Y | a | 27 rr | $\mathbf{r e}$（withAcc．） | 53 क् | kya | 79 示 | ńka |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 F्रा | â | $28 \mathrm{Na}^{\circ}$ | ai（mithAcc．） | 54 क | kra | 80 刕 | ńkta |
| 3 इ | i | 29 － | raim̃ | 55 兩 | kra | 81 尔可 | ńkya |
| 1 ई | î | 30 ： |  | 56 क्ल | kla | 82 砏 | ńksha |
| 5 J | $\mathbf{u}$ | 31. |  | 57 ¢ | kva | 83 ड | ṅkha |
| 6 Э | 人̂ | $32 \sim$ |  | 58 펴 | $\mathbf{k s h a}\langle\mathbf{x}$ ） | 84 दु | ńkhya |
| 7 FIC | ri | 331 | \％ | 59 \％ | ksh | 85 圌 | ńga |
| 8 习习्ट | ¢̣i | 34 II | ¢ | 60 द्रम | kshma | 86 硈 | ligya |
| 9 ल | $!\mathbf{1}$ | 350 |  | 61 प्द्य | kshya | 87 द्ध | ńgha |
| 10，ल्द्ध | \̣i | $36-$ | 2 | 62 द्व | kshva | 88 द्रु | íghya |
| 11 ए | e | 37 S | 䓂 | 63 स | kha | 89 砢 | ńghra |
| 12 T | â | 38. | 9 | 64 T0 | kh | 90 E | ńńa |
| 13 f | i | 39 \} | O | 65 स्य | khya | 91 च | cha（ća）． |
| 14 | î | 40 － | \％ | 66 ग | ga | 92 ₹ | ch（c） |
| 15 f | rî | 41 | $\stackrel{\overparen{C}}{ }$ | 67 J | g＇ | 93 च | cı́a |
| 16 | u | 42 1 | 気。 | 68 म | gna | 94 च्रु | ćçha |
| 17 a | $\hat{\mathbf{u}}$ | 43 c | ¢ | 69 ग्यू | gnya | 95 可 | cıùa |
| 18 c | rị | 44 k |  | 70 य | gra | 96 चम | ćma |
| 19 E | rị | 45 － |  | 71 ग्य | grya | 97 च्य | ćya |
| $20<$ | ！ | 46 क | ka | 72 घ | gha | 98 उ | cha |
| 21 ¢ | ịi | 47 क | kka | 73 E | gh | 99 छु | ćhra |
| $22 \sim$ | e | 48 तु | kta | 74 घ | ghna | 100 ज | ja |
| $23 \sim$ | ai | 49 कय | ktya | 75 घ्म | ghma | 101 Ј | j |
| 247 | 0 | 50 雨 | ktva | 76 घ्य | ghya | 102 ज़ | jja |
| $25 \sim$ | e（with Acc．） | 51 क्न | kna | 77 घ | ghra | 103 ज | jī̀a |
| $26 \sim$ | re | 52 क्न | kma | 78 ङ | ńa | 1045 | jĩ |

SANSCRIT

| 105 水而 | jiha | 133 रड | ṇdrá | 161 E | th | 189 ध्य | dhya |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 106 ज्य | jya | 134 \ड़ | ṇdrya | 162 थ्य | thya | 190 ध्र | dinra |
| 107 ज | jra |  | ṇlha | 163 द | da | 191 可 | diva |
| 108 जa | jva | 136 स | ṇıa | 164 दु | du | 192 न | na |
| 109 万2 | jha |  | nya | 165 दू | dû | 193 テ． | n |
| 110 犮 | jha | 138 रब | ṇva | 166 E | drıi | 194 ना | nta |
| 111 ज | ña | 139 त | ta | 167 奀 | dga | 195 न्य | ntya |
| 1125 | ก̃ | 140 「 | t | 168 䂞 | dgha | 196 न्त | ntra |
| 113 局 | ñća | 141 下 | tka | 169 द | dda | 197 न्द् | nda |
| 114 可 | ñja | 142 त | tta | 170 長 | ddba | 198 न्द्र | ndra |
| 115 乙 | ta | 143 त्य | ttya | 171 ह्य | ddya | 199 न्ध | ndha |
| 116 示 | tha | 144 च्र | ttra | 172 寻 | ddha | 200 न्ध्र | ndhra |
| 117 己 | t！${ }^{\text {．}}$ | 145 त्व | ttva | 173 E | ddhya | 201 न | nna |
| 118 己 | tya | 146 त | tna | 174 द | dna | 202 न्र | npra |
| 119 ठ | tha | 147 तप | tpa | 175 家 | dba | 203 न्फ | npha |
| 120 ठय | thya | 148 त | tpra | 176 局 | dbra | 204 न象 | nplıra |
| 121 万 | thra | 149 तИ | tpha | 177 द | dbha | 205 न्म | nma |
| 122 ड | da | 150 त | tphra | 178 F्ञ | dbhya | 206 न्य | nya |
| 123 㝥 | dda | 151 Tम | tma | 179 स्म | dma | 207 न्स | nsa |
| 124 ड | dda | 152 न्य | tmya | 180 ह्य | dya | 208 प | pa |
| 125 ढ | dha | 153 न्य | tya | 181 द | dra | 209 乙 | p |
| 126 ढन | dhya | 154 习 | tra | 182 व्य | drya | 210 प | pta |
| 127 द | dhra | 155 च्य | trya | 183 辰 | dva | 211.8 | pna |
| 125 近 | na | 156 व | tva | 184 द्य | dvya | 212 प4 | ppa |
| 129 近 | $\underline{\square}$ | 157 स | tsa | 185 घ | dha | 213 प | pma |
| 130 राट | n ¢ $\mathrm{a}^{\text {a }}$ | 158 तन | tsna | 186 E | dh | 214 प | pya |
| 131 स | ṇtha | 159 त्य | tsya | 187 \＃ | dhna | 215 प | pra |
| 132 सड | ṇda | 160 ध | tha | 188 धम | dhma | 216 ल | pla |


| SANSCRIT |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 217 प्व | pva | 245 य | ya | 273 ग्र | çra | 301 स | sma |
| 218 ［ | psa | 246 | y | 274 प्र | çla | 302 स्य | smya |
| 219 फ | pha | 247 च | y | 275 파 | çva | 303 स्य | sya |
| 220 ब | ba | 248 य्य | y ${ }^{\text {a }}$ | 276 शश | ça | 304 स | sra |
| 221 － | b | 249 T | ra | 277 ष | sla | 305 स्व | sva |
| 222 व्प | bgha | 250 ミ | ru | 278 区 | sh | 306 स | ssa |
| 223 न्ज | bja | 251 Eᄌ | rû | 279 ष्ट | shṭa | 307 ह | ha |
| 224 ब्द | bda | 252 ल | la | 250 ष्ट्य | shty | 308 ह | h |
| 225 ब्ध | bdha | 253 ミ | 1 | 251 \％ | shṭra | 309 를 | hṛi |
| 226 ® | bba | 254 ल्क | Ika | 232 鹿 | shltrya | 310 ह | hı̣a |
| 227 अ | bbla | 255 ल्प | lpa | 283 ष्ट्र | shtrya | 311 हू | lna |
| 228 त्र | bra | 256 ल्म | 1ma | 284 库 | shțta | 312 ह | hma |
| 229 म | bla | 257 ल्य | lya | 285 | slıṭha | 313 ह्य | hya |
| 230 み | bh | 258 ल | lla | 286 प्⿺𠃊 | shṇa | 314 हृ | hra |
| 231 भ्य | blya | 259 ल्व | lva | 287 ष्प | slipa | 315 है | hla |
| 232 碞 | bhra | 260 व | va | 283 ष्प | slppra | 316 इ | hva |
| 233 抲 | bhva | 261 万 | v | 289 ष्म | shma | 317 あ | 1 |
| 234 म | ma | 262 व | v | 290 区 | shya | 318 疋 | Tha |
| 235 耳 | m | 263 व्य | vya | 291 स | sa | 3199 | 1 |
| 236 म | maa | 264 व | vra | 292 天 | s | 320 2 | 2 |
| 237 म्प | mpa | 265 ब | vva | 293 स | ska | 3213 | 3 |
| 238 म्प | mpra | 266 श | ça | 294 स | skha | 3228 | 4 |
| 239 石 | mba | 267 ㅍ | ça | 295 र्त | sta | 3234 | 5 |
| 240 म्न | mbla | 268 श | ¢ | 296 स्ल | stra | 324 \％ | 6 |
| 241 म्य | mya | 269 又 | ¢ | 297 स्थ | stha | 325 ง | 7 |
| 242 म्र | mra | 270 妆 | ¢ća | 298 स | sna | 326 t | 8 |
| 243 स | mla | 271 맘 | ççya | 299 स्प | spa | 327 C | 9 |
| 244 म्स | msa | 272 ग्न | çna | 300 स्फ | spha | $3 \geq 80$ | 0 |

## TAMIL

The Tamil language was earlier cultivated than the other members of the Drâvidian family. It includes two dialects the (ancient) Shen-Tamil and the (modern) Kodun-Tumil. Tamil is spoken throughout the plain of the Carnatic, below the ghauts from Pulicat to cape Comorin, to the neighbourhood of Trivandrum; also in the northern and western part of Ceylon where in ancient times Tamilians established their settlements. This language has

12 vowels and 18 consonants. It is read from left to right.

## SHORT V0WELS.



THE CORRESPONDING LONG VOWELS.

| 2b | â | in alp |
| :---: | :---: | :---: |
| ஈ | i | , feel |
| ஊ | $\hat{\mathbf{u}}$ | nfoo |
| ஏ | $\hat{\mathbf{e}}$ | n they |
| ¢ | 人 | , 8ole |

## DIPHTH0NGS.

ツ $\quad$ ey in eye
จด ou $\because$ foul
CONSONANTS.
$\dot{\boldsymbol{\infty}} \quad k$
$\dot{\boldsymbol{b}} \quad \mathbf{n} \quad \mathrm{ng}$ in long
$\dot{\boldsymbol{f}} \quad \mathrm{s}$


## LIQUDS.

u. $y$ as in yes


The consonants have been divided into rough, soft and intermediate sounds. The first class includes the tenues $(\dot{\Phi}, \dot{8}, \dot{L}, \dot{\Phi}, \dot{H}, \dot{\rho})$. The second class contains the corresponding Nasals. The third class contains the Liquids. A dot placed at the top of a consonant indicates the absence of a vowel, but is omitted in native MSS.

The following rules are to be noticed in the pronunciation.
a) Short $a$, before the soft letters ன், ண், the intermediate letters $\dot{\pi}, \dot{\text { ல }}, \dot{\operatorname{\sigma }}, \dot{\varphi}$, and at the end of polysyllabic words, sounds like $e$ in men.
b) Combined with a preceding $\dot{\pi}$ it receives the same sound.
c) The vowels $e$ and $\hat{e}$ as initials are pronounced as if $y$ were placed before them.
d) The vowels $i(\hat{\imath})$ and $e(\hat{e})$ before linguals ( $\dot{L}, \dot{\text { ® }}$ and $\dot{\operatorname{\sigma }}, \dot{p}$ and $\dot{\mathscr{y}}$ ) are respectively articulated somewhat deeper than the French $u$ and $e u$.
e) The consonants $\dot{\boldsymbol{\epsilon}}, \dot{\mathbf{y}}, \dot{\dot{L}}$ are only hardened as initial letters, or when doubled in the middle of a word. The same is the case with $\dot{L}^{\circ}$ which does not occur as an initial in pure Tamil words.
f) When $\dot{க}, \dot{\dot{L}}, \dot{\operatorname{s}}, \dot{ப}$ occur as medials of a word, $\dot{\Phi}$ sounds like $c h, \dot{\varphi}$ like $b$, த́த like $t h$, and $\dot{L}$ like the Sanscrit cerebral $d$.
g) $\dot{\mathscr{f}}$ is always sharply hissed like ss. When the nasal ஞ் precedes, it coalesces with it and sounds like $n g$ (in angel). When doubled after $\dot{L}^{\dot{L}}$, or $\dot{\dot{m}}$, it sounds like $c h$ (in church).
h) $e$ and $y$ at the end of a syllable have an intermediate sound of $i$ (in vine) and $a i$ (in vain).
i) Double $\dot{m}$ sounds like $t$. After the corresponding nasal ணा, it may be pronounced like $d$.

The Tamil Alphabet being syllabic, a word is divisible in any part, so long as the consonant remains united with its vowel. In punctuation the full stop alone is employed.

The vowels, in their separate forms, are only used as initials. The following table shows their mode of coalition whit the consonants. The short $a$, as in Sanscrit, is not expressed before a consonant.

additional letters and contractions.


sh shă shit shì s să ch Month Year Om | a sacred |
| :---: |
| word |
| $\substack{\text { a }}$ |

## NUMERALS.


Examples of compound numbers, $\omega_{\infty}=11$, $\mathfrak{\omega}=12$ etc.

| ZEND |  |  |  | BURMESE |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FORM | sound | FORM | SOUND | VOWELS |  |  |  |
| $N$ | a | 5 | z | FORM | sound | FORM | sound |
| $\cdots$ | à | N | İ | 33 | a | (1) | è |
| $\checkmark$ | i | 0 | t | $3 จ 2$ | â | $3{ }^{\circ}$ | ey |
| t | î | $\bigcirc$ | $\underline{t}$ | ¢ | ie | 600 | ăŭ |
| , | u | 6 | th | ${ }_{c}^{\text {cf }}$ | ee | 6 Or | $-^{\text {au }}$ |
| 9 | ù | $\checkmark$ | d | ? | $u 0$ | 3ٌ | ă |
| $\varepsilon$ | e (e) | $¢$ | dh | $\stackrel{\otimes}{8}$ | ヘ̂̀ 0 Ō | 32วः | âh |
| $\xi$ | è | J | $n$ | CONSONANTS |  |  |  |
| $\pm$ | ê | $\stackrel{ }{ }$ | p |  |  |  |  |
| 】 | 0 | d | f | $\infty$ | k | 3 | d |
| $\downarrow$ | ó | y) | b | จ | kh | $\bigcirc$ | dh |
| 10 | ào | 6 | 1 m | $\bigcirc$ | g | P | $n$ |
| ${ }_{*}$ | an | $C$ | y initial | 20 | gh | 0 | P |
|  |  |  |  | C | $\begin{aligned} & \text { ng \& gn } \\ & \text { ch } \end{aligned}$ | 9 | ph |
| 9 | k | د | y melial |  |  |  | b |
| б | kh | 7 |  | 20 | chh | $\infty$ | bh |
|  |  |  |  |  |  |  |  |
| $\omega$ | q | 4 | v initial | 9 | j | 6 | m |
| @ | g | " | $v$ medial | al | jh | $\omega$ | y |
| 9 | gh | ช | w | po | ก1 | 9 | r |
| S | n | $\checkmark$ | ¢ | $\varepsilon$ | t | $\infty$ | 1 |
| 2 | $\dot{\text { c }}$ | щ | sh | $\delta$ | ṭh | 0 | w |
| $p$ |  |  |  | O | d | 0 |  |
| $\zeta$ | j | 4 | $s$ | $?$ |  |  | $s$ |
|  |  | $\omega$ | h | 0 | dh | $\infty$ | b |
| e |  |  |  | $\begin{aligned} & \infty \\ & \infty \\ & \infty \end{aligned}$ | $n$$\mathbf{n}$th | $\begin{aligned} & \mathcal{E} \\ & 32 \end{aligned}$ | 1 |
| PUNCTUATION. |  |  |  |  |  |  | an |
|  |  |  |  | an |  |  |  |
|  |  |  |  |  |  |  |  |

CANARESE（CARNÀtaca）．
This language，belonging to the Dravidian family，is spoken throughout the plateau of Mysore，in some of the western districts of the Nizam territory，and in the district of Canara on the Malabar coast．

| eg a | S ê | ๕ nga | \％ta | య ya |
| :---: | :---: | :---: | :---: | :---: |
| $\bigodot$ ¢ â | $\bigcirc$ ai | ఒ cha | ช tha | ర $\mathbf{r a}$ |
| 2 i （ee） | 20 | $\downarrow_{1}$ chha | б da | d） la |
| © 1 （ $\bar{e} \bar{e}$ ） | $\%_{0}$ | \％ja | ¢ dha | వ va |
| $\frac{1}{5}$ u（00） | 官 ${ }^{\text {a }}$ | ${\underset{1}{0}}_{\sim}^{\text {u }}$ jha | इ $n x$ | ช sa |
| ede un（ō0） | $\bigcirc{ }^{-}$ | プ กัa | \％pa | ô sha |
| Wr r | ：$\dot{\mathrm{h}}$ | 也 t＇a | 区 pha | $\sqrt{\text { za }}$ |
| ゆّ r ＇ | \％ F | б t＇ha | $2) \mathrm{ba}$ | ¢＇ha |
| －1 | $2) \mathrm{kha}$ | ๘ d＇a | ษ bha | 8 ¢ |
| d＊${ }^{\prime}$ | $K \quad \text { ga }$ | ¢ d＇ha | W ma | eo sha |
| ఎ e | యి gha | $m$ n＇a |  |  |

LIGATURES

| \％ | ki | ד${ }^{\text {P }}$ ） n | దా dâ | ふ nna | వా vâ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \％o | ku | డి d＇e | ¢ di | むu pu | ฐை vu |
| \％＇00 | kô | 国3 d＇o | ©¢ dî | W pra | ஞ－vù |
| 흈 | ksha | $8 \cdot \mathrm{ti}$ | \％de | ST ${ }^{\text {a }}$ bhu | ${ }^{\prime} C^{C} \mathrm{vi}$ |
| $\pi$ | ga | 8 8ip ti | （డ్ర）dri | మ్మ mma | వ $\Gamma^{\text {vi＇}}$ |
| ㅇ | gí | 50 ta | 克 n | ర¢ râ | Sp vai |
| $x$ | gu | \％te ！ | న＞na | ర2 re | వ్ర vvu |
| 2 | ge | ઠิ\} tai | న ni | ȩ lâ | ¢P shâ |
| กฺ¢ | gê | \％${ }^{\text {J tu}}$ | Pp nî | ers la | \％sht＇a |
| スู | gai | \％tte | $\sim \mathrm{nu}$ | อ\％ 10 | م̂n hô |
| 冈＞ | ñà | （\％）．tra | ² ne | $\mathcal{V}$ va |  |

## GUJERATI or GUZERATTEE．

This Alphabet is derived from the Sanccrit（Devanagari）charactere，from which it principally differs in the omission of the connecting lines．Gujerati is spoken in the provincs of Gujerat（Guzerat），aspe－ cially by the Parsee inhahitants，and is considerad to the the mercantile language of Western India．In modarn times various Gujerati publications bave appeared in Bombay．


LIGATURES

| $\chi_{1}{ }_{\text {ki }}$ | 69\％${ }^{\text {ji }}$ | $\mathrm{Ll}_{\text {n＇i }}$ |  | $g$ vn |
| :---: | :---: | :---: | :---: | :---: |
| 8 ku | $6^{6} \mathrm{ju}$ | 山 n＇u | $\hat{U}_{\mathrm{pi}}$ | ¢ vâ |
| \％kn | ${ }^{2}$ ju | 以边 1 | Y pu | $\underbrace{}_{1 i}$ |
| ひれ khi | जl jhi | $\bigcap_{\text {ti }}$ | $)^{\text {pu }}$ |  |
| थु khu | Hु jhu | Sti | L．pa | 3 |
| थु khû | Gr jhu | $5{ }^{\text {tu}}$ | $\chi 2 \mathrm{phi}$ | ${ }^{\text {E }}$ |
| 这 | टl $\mathrm{t}^{\prime}$ | S．${ }^{\text {to }}$ | \％phu |  |
| ong | 己 t＇u | थी thi | $\%^{\text {phu }}$ | $3{ }^{\text {ru}}$ |
| Of gu | ${ }^{2} \mathrm{t}^{\prime} \mathrm{u}$ | थु thu | onbi | $3{ }^{\text {rat }}$ |
| ph．gû | ¢ ${ }^{\text {chihi }}$ | \＆that |  | 2 nc |
| Q $\chi_{\text {ghi }}$ | \％t＇hi | $\begin{aligned} & { }^{2}{ }^{\text {thua }} \\ & \text { दी } \end{aligned}$ |  | 3）su |
| धु ghu | 3 thu | El di | ¢ ${ }_{\text {on }}$ | स入 |
| \＆ghû |  | G du | が bhi | 20 çi |
| Ul chi | $\int^{\text {d }} \mathrm{i}$ | $\xi^{\text {du }}$ | तु bhu |  |
| chu | \＃ु d＇u | \＆${ }_{\text {dhi }}$ | on bha | \％${ }^{\text {80 }}$ |
| $\}_{\text {y }}$ chû | Y d＇û | \＆f dhx | $\mathcal{\sim} \mathrm{mi}$ |  |
| Eी chhi | $6 \mathrm{~d}^{\text {＇hi }}$ | g dhû | भु mu | ك） hi |
| 4）chhu | ל d＇hu | $\wedge_{1 i}$ | น้ mina | \％${ }^{\text {hu }}$ |
| Eg chhù | प̛ d＇hû | $\}^{\text {nu }}$ | ch vi | \％．hio |

## TELUGU

one of the branches of the Drâvidian stock，is spoken along the eastern coast of India from the neigh－ bourhood of Pulicat to Chicacole．Inland it extends to the eastern boundary of the Maratha Coun－ try and Mysore，including within its pange the ceded districts and Kurnool，the greater part of the territories of the Nizam，the Hyderabad Country and a portion of the Nagpore Country．Thie language is spoken by about 14 millions．

| $\Theta$ a | $\mathcal{D} \hat{e}$ | \＆nga | త ta | $\gamma \mathrm{ra}$ |
| :---: | :---: | :---: | :---: | :---: |
| セ－â | $\int$ ĕ | చ cha | ¢ tha | e la |
| Q i（ee） | \％ 0 | そ chha | 区 da | る va |
| Of î（ēè） | \＆$\hat{0}$ | $\boldsymbol{\tau}_{\mathbf{L}} \mathbf{j a}$ | ¢ dha | of sa |
| ed ${ }^{\text {e }}$（ 00 ） | $\vec{\sim}^{\text {® }}$ ио | ¢ jha | र na（soft） | a）sha |
| ES6 â（ō̄） | $\bigcirc$ | $\mathcal{L}^{2}$ nya | ప pa | $\sqrt{5 a}$ |
| ひ $\mathrm{r}^{\text {u }}$ | ： h | や t＇a | $\oint \mathrm{pha}$ | fo ha |
| ${ }^{2}$ | $\leqslant \mathrm{k} 2$ | 〒 t＇ha | ข ba | \＆）$\ddagger$ |
| E i | 2 kha | ๘ d＇a |  | 8 － |
| Sri＇ | $\times$ ga | ¢ d＇ha | a | $\omega$ sha |
| a＇e | యu gha |  | మ ma | 7 Pause |

LIGATURES

| 50 kâ | ఝ్రూ jhâ | మr mâ | తి ti | ¢ల？l，li |
| :---: | :---: | :---: | :---: | :---: |
| 56 ku | ＠ీ jhî̀ | మి mi | （6）tî | ev Iu |
| SGo kụ̂ | యujhin | మ mu | తు ta | $e^{\text {sol }} \mathrm{l}$ |
| $5^{\circ} \mathrm{k} \mathrm{o}$ | ఝూjhu |  |  |  |
| \％ksha | $2^{\text {r }}$ ñâ | మె me | O | C lla |
| $\overline{7} \text { ge }$ | $\chi^{4} \mathrm{nu}$ | మై mo | త్తు ttu | $\stackrel{\text { ¢ }}{\text { ¢ }}$ li |
| त C gê | నౌn | మ్ర mmu | （త）tra | ぷ vâ |
| $\mathfrak{K}$ gau | ని ni | ars yâ | $\omega$ ¢ dâ | ช vu |
| Froshâ | $\oint$ nî | య yi | దิ dî | Dె ve |
| , యీ ghâ | $\mathfrak{N}$ | యె ye | దు du | వ vva |
| యิ） $\mathrm{\sim}$ gu | 3 ne | యొ yo | దె de | Sj vou |
| య్యా ghû | ${ }_{5}^{2} \text { nna }$ | రా râ | ¢ా do | \％si |
| ఇr ngà | むొpo | $\theta$ ri | 茵 ddu | ate shâ |
| ๕๐ nga | హ్వు ppu | 2̛or niu | ¢ ${ }^{\text {P }}$ ddhâ |  |
| －u chi | Шా bâ | E t＇e | ¢＞dhâ |  |
| 人, chu | బ）bu | ๘ు $d^{4} u$ | ठ rî | \゙つ sâ |
| చu chu | Fo bhâ | cou d＇hu |  | క్ర ${ }^{\text {Ssâ }}$ |

## BENGALI.

This Alphabet is based on the Devanagari character. In gome instances the ciroular ghape hae been altered into an angular form, in others the form has been entirely changed. The Bengali language is less mixed than the neighbouring idioms.


## BÚGİS

is supposed to be the most ancient of the lauguages spoken in the island of Celeber. The same
Alphabet is uged in the Macagsar language.


Every consoinant has an inherent vowel, with which it forms a separate syllable.
The following vowels vary in position:

> e beforc a letter.
> J over a letter.
> 1 o after a letter.
> - u onder a letter.
> ung at the top of a letter.

## JAVANESE



VOWELS and DIACRITICAL SIGNS, called Sandangun.


## PODOS or PADAS.

Under this designation the Javanese writing contains the following eigne:

Podo luhur. With this sign superiors begin their letters to inferiors.
[0] ] Pod madyo is used at the commencement of letters by persons of equal rank.

Rn] fl Podo and ap, with this superscription an inGHA ferior addresses a superior.

Podo-bab elands at the beginning of a new paragraph.

A Podo-lingso, the usual stop at the end of a sentence or a detached word. In poetry it marks the end of verses, which are - Er written consecutively like prose. It is doubled at the end of a section.

- dodo andegging lyelatu or dirgo muraras occasGionally replaces the Podo-lingso; mostly it accompanies numerals, and isolates them from the adjoining words.
(1) lu munta. When the vowel of a final syllable is an utu, this character takes a Tret $y^{\prime} a$ in the centre.
Sulu mendut. When the vowel of the lat cylcable is a $S u k u$ it takes this form.
Dirge mure is the name of the sign placed over the Taking or Taling-Tarung, when this vowel occurs in the final syllable.

3 Podo wotyan angleyenno. Under this name the Tarung ie employed as a sign of separation.
$\{$ Piselep ingslembarg gede, serves to divide poetry.


Purwo-podo stands at the beginning of poems.


Madyo-podo, at the beginning of a song following another, when the melody end the measure are changed.


Wasono-podo at the end of a poem.

## LIGATURES.

The following ligatures consist of the (Vowel-) singe Suku, Tyokro, Keret and Pinkal combined with the ordinary chsracters and Pansangans. The diacritical marks are also added.

| a) | 5 | ay | d | d | C) | \% | g |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }^{*}$ | ay | 5 | d | d | col | \% | ${ }^{\text {ang }}$ |
| a) | $a \mathrm{y}$ | -3) | 0 | (c) | d | 8 | 哂 |
| y | ${ }^{5}$ | d | m | cl | 61 | d ${ }^{2}$ | am |
| ${ }^{\text {x, }}$ | an) | ${ }^{\text {c }}$ | $\mathrm{cog}_{0}$ | c) | cal | cs | 8 |
| m | an | 3 | ${ }_{4}^{18}$ | cal | will | ${ }_{4}^{4}$ | \% |
| 3 | 9) | 6 | $\stackrel{\omega}{\omega}$ | © | ©l | 4 | ag |
| ${ }^{203}$ | 9 | 6 | 19 | (0) | el | c | 碞 |
| ${ }^{517}$ | m | 0 | ${ }_{*}^{4}$ | cal | cel | -m | ${ }^{\text {w }}$ |
| 9 | ay | 0 | $\rightarrow$ |  | cll | ald | xy |
| 9 | $4{ }^{4}$ | - | W | (i) ${ }^{\text {c }}$ | clel | ${ }^{\text {onl }}$ | $y$ |
| ny | am | C | ${ }^{4}$ | $\zeta$ | C | m | uy |
| as | a) | ${ }_{5}$ | \% | $\zeta$ | 6 | ayl | mg |
| 4 | 5 | $\stackrel{9}{9}$ | ${ }^{\text {a }}$ | d | 9 | al | H |
|  |  |  |  |  | 9 |  |  |

[^0]
## OBSERVATIONS.

'lhs Javanese language has 20 lettsrs which are called Aksoro, Sastro or Tiarakan. They are written from left to right, without being joined togsther. By the many auxiliary letters, vowele and diacritical signs, the numbers of characters is considerably increased. The Pasangans, empleyed in the Alphslet, are in close connexion with the sign Palen, which in fact they replace. When a oonsonant occurs in the midals of a word, and is to be deprived of its vowel, a Paten must he employed. Tho
obviate a disjunction arising from the nse of this sign, the Paten is omitted, but the letter, which follows the mute consonant, is changed in form or in position or in beth. The eubstituting sign is then called Pasangan. The Pasangans bsing mieetly placed undsr the commen letters, while some vowels and diecritical signs figure above the lsters, the Javanese writing runs within thres rows. The pesition of a character in one row or an other is indicated in this Alphabet by the addition of dots:

## TIBETAN

| Form | Value | Form | Valne |
| :---: | :---: | :---: | :---: |
| 川 | k | ప్ | m |
| $\square$ | kh | $\frac{6}{5}$ | ts |
| 杖 | g | 5 | tsh |
| $\Sigma$ | ng | $\underline{E}$ | s |
| 3 | ch | 3 | w |
| $\overline{6}$ | chls | $q$ | j（Prench） |
| $E$ | j | ヨ | z |
| $?$ | nya | $\square$ | ha |
| 5 | t | u | y |
| 9 | th | I | r |
| $\Sigma$ | d | 2 | I |
| $\bar{\sigma}$ | n | 99 | sh |
| 5 | p | N | s |
| $z$ | ph | 5 | h |
| ］ | b | GV | a |

## VOWELS．

The Tibetan language is read from left to right and has five vowels．The vowel a is inherent in the several consonants．When confusion is apprehended from the ahsence of a distinct a after the prefixes

## す 7 日 $\boldsymbol{d}$

the sign $\boldsymbol{L}$ is inserted to denote a．The remaining vowels are written and named as follows，

> 7 gigu i zhabs-kyu u drengbu e naro o

The yigu drengbu and naro are placed above their consonants，the zhabs－kyu below them．When double，the zhabs－kyu is pro－ nounced uu or ow；double drengbu ay or ie；double naro oo or ou．Gigu is often formed thus $P$
$\Delta$ is placed below the letters． $\mathbf{P h}$ is chang－ ed by it into $f$ ；ss into $x$ ．Under the other letters it represents the vowel a； according to others it denotes $u$ ．
－placed over th，a and $h$ denotes with the first of these letters mce with the other two m ．According to others it signifies ang and ong．

## ACCENTS．

7 guttural sign
$\Gamma$ palatal $\cdot n$
$\angle$ nasal＂
7 sign of the singular number．
PUNCTUATION．
997 is an introductory sign．Besides this figure other varieties are in use．
T Comma．Two sueh signs are equal to a full stop．Four such strokes，with $\because \because \cdot$ between them，denote＂the end＂．
T is inserted between the syllables．
0 o mark the stress of a word．

LIGATURES．

-


## MONGOLIAN

| consonants |  |  |  |
| :---: | :---: | :---: | :---: |
| Inital | Medial | Final | valae |
| T | Y | $f^{\circ}$ | n |
| 6 | 6 | 7 | b |
| 8 | $\nabla$ |  | ch Scotch |
| 8 | 판 |  | gh gutural |
| $\checkmark$ | $\bigcirc$ | 7 H | k |
| $\checkmark$ | 6 |  | g |
| 5 | 5 | $\checkmark$ | m |
| 7 | 7 | 7 | 1 |
| $\kappa$ | $\kappa$ | ¢ | $\mathbf{r}$ |
| $\sim$ | 5 | $\nabla$ | t |
| 4 | 5 | F $p$ | d |
| 5 | 5 |  | y |
| 5 | ᄃ |  | z，dz |
| $=$ | $=$ |  | ts or ch |
| 1. | $A$ | N 1 | s |
| 人＂ | 侯 |  | sh |
| $\sigma$ | $\checkmark$ |  | w |

vOWELS

| Initial | medial | Final | Value |
| :---: | :---: | :---: | :---: |
| $\pi$ | 「 | 17 | a） |
| T | － | 17 | e |
| T | 5 | $\bigcirc$ | i |
| To | $\bigcirc$ | ๑ | 0 |
| $\rightarrow$ | $\nabla$ | 6 | u ${ }_{\text {¢ }}^{\text {¢ }}$ |
| Tros | $\bigcirc$ | $\theta$ | $\stackrel{\square}{0}$ ． |
| T0 | 0 | $\theta$ | － |

IT This sign divides sentences．
$\because$ is used at the end of a period．

Mongolian hooks are not numbered hy the page hut by the folio．It is nsual to head each folio by $O$ or some other mark like this．

## OBSERVATIONS．

Like the Mantshu the Mongolian cha－－ racters are written in perpendicular lines from left to right．The Alphabet consists of seven vowels，together with diphthongs derived from them，and of seventeen con－ sonants which vary in form according to their position at the heginning，the middle， and the end of a word；or according to the effect exercised upon them by certain orthographical rules．－The consonants are not regarded as isolated sounds，hut are always joined to vowels with which they form simple syllables．An exception is made to this rule when a consonant occurs as the final of a syllable or a word．But eren such final consonants may be attended by a vowel．A variation of the Mougolian characters is known under the name of Galik，

## ARMENIAN

| Form | Name | Value | $\begin{aligned} & \hline \text { Num. } \\ & \text { power } \end{aligned}$ | Form | Name | Value | $\begin{aligned} & \hline \text { Num.. } \\ & \text { power. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13． | Jpe | a | 1 | W | mien | m | 200 |
| R $\boldsymbol{f}$ | pien | p | 2 | 3 d | he or ye | h or y （in | 300 |
| け 7 | kim | k ck | 3 | ${ }^{\prime} 1$. | no0 |  | 400 |
| T 7 | tah | $t$（soft） | 4 | C， 2 | shah | sh | 500 |
| b 6 | yetch | y （cons．） | 5 | $11 \times$ | wo | wo（in word） | 600 |
| $\bigcirc$ ， 2 | zah | z | 6 | 2 ع | tchah | tch | 700 |
| 1： 5 | è | e（inmet） | 7 | I） 4 | bé | b | 800 |
| 1． | yet |  | 8 | 9， 2 | tché | ch（6oft | 900 |
| do．${ }^{\text {d }}$ | twoh | t （hard） | 9 | 10 $n$ | rah | r （hard） | 1000 |
| お $\downarrow$ | zhe | $\mathrm{j}_{\text {（ }}^{\text {rencch }}$ ） | 10 | l］« | sé | s | 2000 |
| $\boldsymbol{r} \boldsymbol{l}$ | inni | i（in ili） | 20 | 1，4 | viev | v | 3000 |
| 1，L | lune | 1 | 30 | S | dune | d | 4000 |
| 10 ${ }^{\prime \prime}$ | khe | $\mathrm{ch}_{(\text {German }}$ | 40 | $\mathrm{f}^{-\boldsymbol{r}}$ | ré | r （8oft） | 5000 |
| ＇6 | dzah | z （talaian） | 50 | 3 g | tzvoh | tz（hard） | 6000 |
| 14 | ghien | g （hard） | 60 | $\mathrm{l}^{1} 2$ | une | u （in due） | 7000 |
| $\pm 5$ | kwoh | h | 70 | （1）中 | pure | p | 8000 |
| 2 a | tzah | tz（boft） | 80 | －${ }^{\text {P }}$ | ké | k | 9000 |
| 1． 2 | ghahd | $\gamma$（Romaio） | 90 | （） | 0 | 0 | 10000 |
| $\chi^{*}$ | jé | j | 100 | （4）$\$$ | pha | f | 20000 |

LIGATURES．


## ACCENTS and PUNCTUATIONS．

| －acute | ，apostrophe | $\sim$ sign of length |
| :---: | :---: | :---: |
| ＇grave | ，comma | －sign of brevity and abbrevi－ |
| －circumflex | ：colon or semicolon | at |
| ${ }^{6}$ rough breathing | ．full stop | ${ }^{-}$sign of abbreviation，it also con－ |
| ${ }^{\text {soft breathing }}$ | ，hyphen | verts a letter into a numeral． |

## GEORGIAN.

The Georgian language is written in two Alphabets. The ancient character, used in the Bible and ecclesiastical works, is called Khütsūri (i.e.sacerdotal). The character Mkhedrūli (or rather Mlhedrūli khéli i.e.Soldier's hand) is used in ordinary writing and printing.


## GREEK

| Form | Name | Value |
| :---: | :---: | :---: |
| A $\boldsymbol{\alpha}$ | Alpha | a |
| B $\beta$ | Beta | b |
| $\Gamma \gamma$ | Gamma | g |
| $\Delta \delta$ | Delta | d |
| E $\varepsilon$ | Epsīlon | e short |
| Z $\zeta$ | Zeta | Z |
| H $\boldsymbol{\eta}$ | Eta | e long |
| $\Theta 9 \theta$ | Theta | th |
| I 6 | Iota | i |
| K $x$ | Карра | k |
| $1 \lambda$ | Lambda | 1 |
| M $\mu$ | My | m |
| N v | Ny | 11 |
| 島 $\boldsymbol{\xi}$ | Xi | x |
| 0 O | Ominkron | 0 short |
| II $\pi$ | Pi | p |
| P $p$ | Rho | $r$ |
| $\Sigma \sigma_{5}$ | Sigina | s |
| T $\tau$ | Tau | t |
| $\boldsymbol{Y}$ | Ypsilon | u |
| $\Phi \varphi$. | Phi | f ph |
| $\mathbf{X} \chi$ | Chi | ch |
| $\boldsymbol{\Psi} \psi$ | Psi | ps |
| $\boldsymbol{\Omega} \boldsymbol{\omega}$ | Omĕga | 0 long |

## OBSERVATIONS.

$\gamma$ hefore $\gamma$ ond the other palatals ( $x \times \xi$ )

$t$ is a mere vowel and never represents the consonantal sound of $y$, as 'I $\omega v i \alpha \dot{\alpha}$ (I-onia). In foreign words the deficient consonant was replaced by c . as Ioúlcos (Julius).
$\sigma$ is an initial and medial s. The fnal is marked by the sign of g . The latter is, in some modern editions, used at the end of medial ayllables.
$\tau$ before c . followed by a vowel, retains its proper sound ofti, and is not pronounced like shi, as $\Gamma \alpha \lambda \alpha \tau \iota \alpha$ (Ga-la-ti-a).

## SPIRITS or BREATHINGS.

Every Greak word, commeacing with a vowel, has over this initial either
(') spiritus lenis, the sof breathing.
or (") spiritus asper, the rough braatbing.
The former is aspirated before a vowel and equal to our $h$. The spiritus lenis is placed over an unaspirated initial vowel.

When a word commences with a diphtheng ( $\alpha \mathrm{L}, \mathrm{EL}, \mathrm{OL}, \mathrm{ut}, \alpha \mathrm{u}$, $\varepsilon \cup, \eta \cup, \circ \cup, \omega \cup)$, the breathinga as well as the accents are placed over the second vowel, as $\alpha$ ÜTO5, OLo5, Elx@́v. $p$ always has the rough breathing at the baginning of a word. In the middle of a word, when this letter is doubled, the first $\rho$ has the soft and the second the rough breatbing, as $\beta \bar{\beta}$.

## ACCENTS.

' acute or slarp?'sound.
' grave or heavy sound.
~ circumflex or long and trailing sound.
Accents, comhined with either of the brathings or with the dieresis, are marked in the following manner,

## PUNCTUATION and OTHER MARKS.

The point and comma are used in Greek as in English. There is no samicolon. The Colon is denoted hy a dot over the line ("). The note of intarrogation is (;). In some modern editons the note of exclamation (!) has bsen introduced.
The Comma is also used to distinguish two worda of equal spelling. As ó, $\tau$, тó, $\tau \varepsilon$, differing form the particles 0 oft , то $\tau$. This sign is termed Diastole or Hyper-diastole.

The following signa are used in connexion with latters and syllables. The Apostrophe ("), the Dizresis ("), over a vowel saparated from the sound of a praceding vowel, and the Coronis' in contracted words to denote a Crasis as toủvavtiov for to Evarution.

Iota subscriptum is the Iota under the vowels $\alpha, \eta, \varphi$, and indicates the etymology of the words. Formerly this $t$ was pronouncad, and had its place by the side of the vowel. This lateral Iota is still used in words apelled with capital letters, as THI


## NUMERALS.

Tha Greeks amployed the latters of the alphabet to denote the numerals, but as these charactera wera not suffleient for this purpose, the 5 (Baỹ, Vau) or $F$ (Digamma) was inserted after the $\varepsilon$, the (Kóm $\pi \alpha)$ after $\pi$, and $\mathbb{T}(\Sigma \alpha \mu \pi \bar{i})$ after $\omega$. The letters employad as numerals are distinguished by a top line sloping, to the right as $\alpha^{\prime \prime} 1, \beta^{\prime} 2, s^{\prime} 6, i^{\prime} 10, c \alpha^{\prime} 11, x^{\prime} 20, x 5^{\prime} 26$, $\rho^{\prime} 100, \sigma^{\prime} 200, \sigma \lambda \beta^{\prime} 232$ etc. The thousands recommence with $\alpha$, and have a stroke below on the lefl. as $\alpha 1000, \beta \sigma \lambda \beta^{\prime} 2232$.

GREEK LIGATURES AND ABBREVIATIONS．
These contractions are peculiar to old editions of Greek works．They are no longer used in

| 04 | $\alpha \iota$ | 䲱 ELVaし | 8 | $0 v$ | 56 | OTt |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| av | $\alpha \nu$ |  | Gдf | oủ $\delta \varepsilon$ | 50 | бro |
| Ob | $\alpha \lambda$ | $\delta \quad \varepsilon \lambda$ | ส่่ช | ov่ | 59 | $\sigma t ¢$ |
| SM | $\alpha \lambda \lambda$ | ivg $\varepsilon \lambda \lambda$ | ぶ心 | ov่าov̀ | 50 | $\sigma \tau v$ |
| $\alpha$ | $\alpha \nu$ |  |  |  | $5{ }^{5}$ | $\sigma \tau \omega$ |
| d＇so | $\dot{\alpha}^{\boldsymbol{\alpha}} \boldsymbol{0}$ | civ év |  | $\pi \alpha \rho \dot{\alpha}$ | 00 | $\sigma v$ |
| $\partial{ }^{\prime}$ | $\dot{\alpha}$ | 次 $\boldsymbol{\varepsilon} \boldsymbol{\xi}$ | गो | лєı | $\sigma^{*}$ | $\sigma \omega$ |
| $\alpha$ | $\alpha s$ | 勺ิํา | W¢ | $\pi \varepsilon \bigcirc$ | 7 | $\tau$ |
| a ${ }^{\text {d }}$ | $\alpha{ }^{3}$ | ¢－6 દ̇лะv |  | леৎ | c | $\tau \cdot \alpha$ |
| cinti | $\alpha \vec{v} \tau 0 \sim$ |  | wel | $\pi \varepsilon \rho i$ | J | $\tau \alpha \iota$ |
| dinsf | $\alpha \hat{v} \tau \tilde{\nu}$ | 4 $8 \pi$ | лue | $\pi \eta \nu$ | 芳 | $\tau \alpha \tilde{s}$ |
| 6 | $\beta$ |  | $\pi 0$ | $\pi \pi$ | $70_{0}^{20}$ | $\tau \alpha \tilde{\tau} \tau \alpha$ |
| $\Gamma$ | $\gamma$ |  |  | $\pi \varrho$ | T | $\tau \varepsilon \iota$ |
| 20 | $\gamma \alpha$ | $0^{6} \quad \varepsilon v$ | meg | $\pi \varrho о$ | T 6 | $\tau \eta \nu$ |
| 28 | $\gamma \dot{\alpha}$ | $\log ^{0} \quad \eta \nu$ | 7 | $\pi \tau$ | ${ }^{7}$ | $\tau \dot{\eta} \nu$ |
| 8 | $\gamma \gamma$ | $\theta \quad \boldsymbol{\theta}$ | $\pi$ | $\pi v$ | \＄ | $\boldsymbol{\tau} \boldsymbol{\eta} S$ |
| $F$ | $\gamma \gamma$ | $9 \sim \quad \vartheta \alpha$ | $\pi \mathrm{m}$ | $\pi \omega$ | 2 | $\boldsymbol{\tau} \boldsymbol{l}$ |
| 28 | $\gamma \varepsilon$ | $\mathcal{V \varepsilon}_{\boldsymbol{\varepsilon}} \quad \vartheta \varepsilon$ |  | $\varrho \alpha$ | r | то |
| 2 | $\gamma \varepsilon \iota$ | H Эを |  | $0 \iota$ | $\%$ | $\tau 0$ |
| 2 O | $\gamma \varepsilon \lambda$ | 9n 97 |  | ＠o | J＇ | $\boldsymbol{\tau}$ |
| 83 | $\gamma \varepsilon \lambda \lambda$. | 9 9ı | $C \quad 5$ | $\sigma$ | $\frac{17}{6}$ | тòv |
| 38 | $\gamma \varepsilon \nu$ | Yo Эo |  | $\sigma \alpha$ | T8 | Tov |
| 勺 | $\gamma \leq 0$ | 9v | $6{ }^{4}$ | $\sigma \alpha \tilde{v} \tau \alpha$ | T8 | тov |
| $2 m$ | $\gamma \eta$ | \％ai wai | $\sigma \varepsilon$ | $\sigma \varepsilon$ | $\mathcal{F}^{\boldsymbol{z}}$ | тov |
| 2 | $\gamma \iota$ | xal 2ai | Os | $\sigma \varepsilon \iota$ | $\stackrel{7}{7}$ | тоข |
| ＊5 | yivetat | \％ $2 \alpha i$ | on | $\sigma \eta$ | \} | too |
| 20 | $\gamma \nu$ |  | oum | $\sigma \eta \nu$ | ग 7 | $\boldsymbol{\tau}$ |
| 20 | زo | $\chi^{+1}$ | Of | $\sigma \vartheta \alpha \iota$ | $\pi$ | $\boldsymbol{v}$ |
| 2 | \％o | $x y \quad x \alpha \tau \alpha$ | at |  | \％ | $\tau \omega$ |
| $\gamma$ | $\gamma v$ |  |  | \％$\chi$ | $\pi{ }^{6}$ | $\tau \tilde{\omega}$ |
| 20 | $\gamma \omega$ | $\lambda \lambda \lambda \lambda$ | or | $\sigma$ | $m^{*}$ | $\tau \tilde{\omega} \nu$ |
| $d$ | $\delta$ |  |  | $\sigma 0$ | 295 | $\tau \tilde{\omega} \nu$ |
| ว゙ | $\delta{ }^{\prime}$ | $\widehat{\mu} \cdot \mu \dot{\varepsilon} \nu$ | 6 | бо | $\delta$ | $\tilde{v}$ |
| J8 | $\delta \varepsilon v$ | wij $\mu \dot{\nu}$ | $\pm$ | $\sigma \pi$ | 4 | $v$ |
| 305 | $\delta \varepsilon \xi$ |  | arodu | $\sigma \pi \alpha \nu$ | $w$ | $\underset{\sim}{v}$ |
| $\lambda / a$ | $\delta \iota \alpha$ | $\mu_{\gamma}^{\boldsymbol{T}} \mu \varepsilon \tau \bar{\gamma}$ |  | $\sigma \sigma$ | บ | $\underset{\boldsymbol{v}}{\boldsymbol{v}} \boldsymbol{\pi}$ |
| 2） $0^{\circ}$ | $\delta ı \alpha$ | $\mu \stackrel{1}{\top} \quad \mu \varepsilon \tau \dot{\alpha}$ | 5 | $\sigma \tau$ | Leos | ขло |
| d |  | Mis umv | 50 | $\sigma \tau \alpha$ | $\chi^{\prime N}$ | $\chi \alpha \nu$ |
| 0 | 0 | \％\％oiov | $5 E$ | $\sigma \tau \boldsymbol{\varepsilon}$ | $x$ | $\chi \iota$ |
| ${ }_{4}$ | $\varepsilon \iota$ | O 0iov | 5 | бrєı | 25 | $\chi \varrho$ |
| ¢ | $\varepsilon \iota$ | （G）os | 51 | $\sigma \tau \eta$ | $\psi$ | $\psi!$ |

## ROMAIC or MODERN GREEK.

The Alphabet coneista of the following 24 letters, which are the ame as in ancient Greck.



The vowela are $a,=, \eta, \leftarrow, \cup, u$ and $\omega$.

## PRONUNCLATION.

A a (Alpha) ehort or long as in papa.
B $\beta$ (Vita) is represented by $b h$ or $v$. In sound it differs alightly from the English $v$, the mouth being eomewhat rounded in the articulation of the Romaic letter.
$\Gamma \gamma$ (Gamma) is an aspirate of $g$ in $g o$. In $\gamma \gamma$ the first gamma becomes naaal; arүeخoc, for instence, is pronounced ang-ye-tos. It receives the same gound before the pelatals $\times \xi$ and $y_{1}$ as avayx ( $a$-nang-ki). Before $\varepsilon$ and $u$ it is liks $y$ in yes. To produce the sound of our $g$ iu grey, the Modern Greeks use Гx as I'xpsïyu. (Graham).
$\Delta \delta$ (Delta) is aspirated as th in the.
E e (Epsilon) as the $e$ in pet.
Z (Zita) like z. Zun่ (zo-ĩ).
00 (Thita) like th in thick.
It (lota) like $i$ in machine. Whan t is placed under the vowels as in o $\} \boldsymbol{\psi}$. or by the aide of capital vowele (At, $\mathrm{H}_{t}, \mathcal{U}_{t}$ ) it is not aounded and only lengthens the principal vowel. This is known as the Iota subscriptum.
K x (Kappa) like our $k$. It is softened after the nabal $\gamma$ hence $\alpha \gamma x \lambda d$ is pronounced angliá.
$\Delta \lambda$ (Lamvda) like $l$ in long. Before $t$ it has the sound of thi in William.
M $\mu$ (Mi) like $m$. Placed before s, tbese two letters
 combinetion of $\mu \pi$ takes the sound of $b$ in words received from foreign languages, but in compound Romaic words, each letter retains ita ori-
 pee-reo-ma).
$\mathrm{N}:(N i)$ is $n$. Placed before T , the two letters coslesce in the eound of $d$, which is articulated somewbat herder than the $\delta$. For example נtc(;aut (diwani). vit have conjointly the sound of $j$; as vi弓auc (jami). When the latters $v$ and form part of two syllables in a compound word they retain their natural sound of nt. For example ev-enas (en-timos). Before the vowel t the $v$ is articulated like $n i$ in opinion as viazw (nyipto).
E $\xi(X i)$ is $X$.
0 O (Omikron) like o in dot.
$\Pi \pi$ (Pi) like $p$.
P p(Ro) like $r$ in rod. If doubled, it luas a sharper gound.
$\boldsymbol{\Sigma} \alpha$ (Sigma) like $s$ in so. Before $B, \Gamma, \Delta, Z, \Delta$, $\mathrm{M}, \mathrm{N}, \mathrm{P}$ and in the proclitics (anch as toijs $\tau \dot{\alpha} \varsigma)$ before the asme consonants, the Sigma is sounded like $z$, as $\Sigma \mu \dot{\operatorname{j} p \vee \eta ~(Z n i r n i) . ~}$
T $\tau$ (Taph) is $t$. Tt sounds eometimes like ts, but generally like ch, as risients (chelepis). Worda with $\tau \zeta$ are mostly of foreign origin.
 (triolion).
(1) (Phi) like $f$ or ph.

X $\gamma$ (Khi or Chi) like tbe Germen or Scotch ch. Before the vowels $a, o, u$, it is more harsh than before $e$ and $i$.
$\Psi \Psi\left(P_{s i}\right)$ like $p s$ in gipsy.
$Q \omega$ (Onega) is the long $o$.
The following are diphthonga ac, av, $\varepsilon$, $\varepsilon v, 7$, ot and of ( B ). At bounds like $e$ in ethics. The is
of au, eu, $\eta \mathrm{\eta}$ bounds like $\beta$ before $a$ vowel, or the soft and liquid letters $\beta, \gamma, \delta, \zeta, \lambda, \mu, \nu, p$. ot is like ee and ou like 00 in good.

The diæresis over the ascond vowel of diphthongs restores to each vowel its original cound; $\alpha i, \alpha i$, eï, \& $u$ era pronounced aeparately $\alpha-\iota, \alpha-u d c$.

## BREATHINGS and PUNCTUATION.

The Romaic or Modern Greek admits like the ancient language two marks over initial vowels, namely the Smooth breathing Spiritus denis ('), which is not noticed in reading, and the Rough breathing Spiritus asper ('), which in classical Greak takes the sonnd of our $h$, but is not audible in the modern language. The $\rho$, as an initial, is invariably marked with the rough breathing. In double $p$ the first hae tbe smooth and the second the rough breathing.
The namea of the etops are, тèzta, full stop (.),
 oomme (9) and oqusiov epwrijosws sign of interrogation (i). The mark of exclamation (1) is rarely used.
To these signa must be added the apostrophe and the diagresis. The former (') denotes the elision
 instead of a $\pi$ ' atc. 'This eliaion of vowels' occurs


In $x \ddot{\alpha} y$ (inatead of xai $\dot{\alpha} \nu$ ) and $x \dot{d} v \sum_{y z i}$ (instead of kai $\alpha \mathrm{K} v$ Évas) etc, the mark (') denotes the coalescence of vowals (xpaiac) and ia called coromis. This mark is often used in contractions as $\mu \sigma^{3} \mathrm{xh}_{\mathrm{m}}$中av ti $\chi$ ípl.
The diæresia prevents the union of diphthongs.


Another mark of separation is the diastole (,), which resembles the comms, and is used to distinguish the pronoun $\%$, $\tau$ and the adverb $x i, ~ i z$ trom the conjunction 8 izi and the adverb tife.

## ACCENTS.

The tone ia indicated by three accents, namely the circumfex ( $\pi$ epta $\pi \omega \mu \sum_{y \eta}$ ) " or long accent, the acute (o $\gamma$ rid)' or sharp accent, and the grave ( (japsiz) or heavy accent in final syllablea. Some mono ayllabic words, being unaccented, are called atona. The circumffex cen only be placed on the ultimete and penultimate ayllable. When the vowel of a final syllable is long, the penultimate vowel cannot take the circumflex. A word ia termed peri spomenon, when it has the circumflex on its last syllabla, or if it is a monosyllable and is marked with this accent. When the oircumflex occurs over the penult, the word is properispomenon.
The Acute takes ite place in the penultimate and ante-penultimate syllable. Also on the final syllable at the end ot a period, or when an enclitic tollows ( $i, e$, a word like $\mu \nu \dot{u}, \mu \circ i, \mu \dot{k}$ which throws its accent on the antecedent).

When the final ayllabla is long, the acuta cannot revert to the ante-penultimate.
When the acute occurs in a monosyllable or in a final syllable, the word is called oxyconon; the penultimate, thus accented, is called parasytonon; and the ante-penultimate with the acute is proparoxytonon.

## OLD－SLAVONIC（CYRILLIC）．

Basad on tha most ancient MSS，and cut unclar the direction of tha I．R．Aulic Councillor Dr．Pall Jog．Schafarif gt the type－factory of Gotrlieg Hanee Söhne in Prague．

| Form | Name | Value | Form | Name | Value |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A a | Az | a | $\Phi \boldsymbol{\Phi}$ | Fert | f，ph |
| E E | Buky | b | $\boldsymbol{X} \times$ | Chěr | kh |
| E ${ }^{\text {a }}$ | Vèdi | v | 0 0 | 0 | o |
| I | Glagol＇ | g | \％ 0 | Ot | ot |
| A A | Dobro | d | ！！ | Ci | ts |
| E $\boldsymbol{E}$ | Est＇ | e | Y $\mathbf{Y}$ | Cerv＇ | č |
| W $\boldsymbol{N}^{\text {\％}}$ | Živěte | ż | III III | Ša | $\dot{s}$ |
| S $\mathbf{s}$ | Zělo | z | 川 | Šta | š̀t，šč |
| 33 | Zemija | z | T T | Jer | － |
| 1 H | lže | i | W ы | Jery | y |
| I | 1 | i | ओ ы | Jery | y |
| 11 | 1 | i，y | h b | Jerek | － |
| 16 | Kako | k | \％ 5 | Jei | ě |
| $\boldsymbol{\lambda}$ | Ljudi | 1 | 10 ю | Ju | yu |
| M m | Mysilite | m | 14．a | Ja | ya |
| N N | $\mathrm{Naš}$ | n | If 1 | Je | ．ye |
| 0 0 | On | 0 | （ ${ }^{\text {a }}$ | $\mathrm{Es}_{5}$ | ¢ |
| II | Pokoj | p | ¢ ¢ | As | a |
| P | Rci（Reci） | r | HM | Jes | ye |
| C | Slovo | s | 隹比 | Jass | ya |
| T T | Tverdo | t | 3 \％ | Ksi | x |
| \％$\dagger$ | Těrv＇ | i | $\Psi$ | Psi | ps |
| OY or | Uk | u | $\theta 0$ | Thita | th |
| $\boldsymbol{\delta} \boldsymbol{8}$ | Uk | u | r $V$ | lżica | y |

NUMERICAL LETTERS．

$\begin{array}{llllllllllllll}1 & 2 & 3 & 4 & 5 & 11 & 12 & 13 & 14 & 15 & 21 & 22 & 23 & 24 \\ 25\end{array}$

abBREVIATIONS（In Slavonic Titly）．
－－Titla（simple）．
a Dobro－Titla．
m Glagol＇－Titla．
＊Oneček．
a Slovo－Titla．
Pajerek．

## NOTES．

1）The powar and pronunoiation of the accentad
Roman）charactars are aufficiently axplained in tha Polish and Czachian Alphabata
2）Tha alphabatical namas hava basn rectifiad and，as regards the nasala，completad acoording to approvad anaiant authoritias．
3）Tha charactare ara degignad to he printed without the abbraviationa，which as ralica of tha
middle ages must be restrictad to accleaiaetical works．Here they are solaly introducad as hiatori－ cal forms．The＂Pajerak＂is a Jer or Jerek placed ovar a letter．
4）As in ancient MSS，the numbare are indicated by the insertion of the latters batwean two dots． Tha＂Titla＂formarly used have thus become un－ necessary．

## GLAGOLITIC．

According to ancient MSS（sec．XI－XII）designed by Dr．Paul Jos．Schafarik，eut at the type－factory of Gottlaz Haase Söhne in Prague．

| Form | Name | Value |  | Num ： value | Form | Name | Value |  | Num： value |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Cyrill． | Latin |  |  |  | Cyrill． | Latin |  |
| 巾＋ | Az | a | a | 1 | $\boldsymbol{\text { ¢ }}$ \％ | Uk | ov | u | 400 |
| 世 е | Buky | б | $b$ | 2 | $\Phi \quad \phi$ |  |  |  |  |
| ชช | Vědi | E | v | 3 |  | Fert | \＄ | f，ph | 500 |
| $\%$ \％ | Glagol＇ | r | g | 4 | b b | Chěr | $x$ | ch | 600 |
| 8 \＆ | Dobro | I | d | 5 | （1） 0 | Ó | ${ }_{0}$ | 0 | 700 |
| 33 | Est | E | e | 6 | $\boldsymbol{¢} \boldsymbol{\square}$ | Šta | 41 | št | 800 |
| ぬ ヵ | Živěte | \％ | z | 7 | V v | Ci | 1 | c | 900 |
| 8 \％ | Zèlo | s | z | 8 | 安 | Červ＇ | Y | $\Sigma$ | 1000 |
| $\theta_{0}$ os | Zemlja | 3 | z | 9 | Ш ш | Ša | $\pm$ | s |  |
| \％ $\boldsymbol{P}^{8}$ | lže | 11 | i | 10 |  |  |  |  |  |
| 88 | I | i | i | 20 | $8 \quad 8$ | Jer | I | $\frac{0}{e}$ |  |
| M M $\quad$ ， | Děrv' o. | ち， 1 | dj，j | 30 | 8 8889 | Jery | m | y |  |
| － 1 | Jot ． |  |  |  | 88 | Jerck |  | $\frac{\mathrm{e}}{}$ |  |
| 3 ： | Kako | $\kappa$ | k | 40 | 11 | Jerek | b | i |  |
| 8 \＆ | Ljudi | $\pi$ | 1 | 50 | A a | Jer | t | è，ja |  |
| ¢ \％ |  |  |  |  | $\mathbb{P}^{\text {P }}$ | Ju | 10 | ju |  |
| M M | Myslite | M | in | 60 | $\pm$ ¢ | Es | $\ldots$ | e |  |
| P $p$ | $\mathrm{Naš}$ | H | n | 70 | $\boldsymbol{\chi 1}$ | As | ${ }^{3}$ | － 2 |  |
| 9 g | On | 0 | 0 | 80 | （ 36 | Jes | t | je |  |
| Pr | Pokoj | $n$ | p | 90 | 48 | Jąs | \％ | ją |  |
| $b$ b | R＇ci | $p$ | r | 100 | $\theta \rightarrow$ | Thita | $\pm$ | th |  |
| 88 | Slovo | c | $s$ | 200 | 8 | Ižica | $v$ | y |  |
| 000 | Tvr＇do | T | t | 300 |  |  |  |  |  |

NOTES．
1．The letter Jery is a compound of Jer and Iže．
2．The letters ${ }^{\circ}-m$ and $\&$ are duplicate forms． $\mathcal{F}$ and $\&$ are peculiar to Bulgarian MSS；$M$ and are Croatian characters．\＆on the other hand is not a real duplicate form of $\phi$ ，it being identical with $\theta$ ，which is used instead of $\phi$ ．
3．These characters are arranged to be printed without abbreviations，which are confined to liturgical books．
4．The numerical power．of the letters is indicated by dots on both sides，as －ヵ．．e．etc．
5．Further iuformation on the value and the pronunciation of the accented letters is given in the Czechian and Polish Alphabets．

# CROATO－GLAGOLITIC． 

Designed from Croatian MSS and printed works by Dr．Paul Jos．Schafarik；cut at the type－ factory of Gotilier HaAse Sönne in Prague．

| Form | Name | Value | Num： value | Form | Name | Value | Num： value |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 历 $\quad$ ¢ | Az | a | 1 | \＃ $\boldsymbol{y}$ | Uk | u | 400 |
| 世 世 | Buky | b | 2 | Ф $\boldsymbol{\text { ¢ }}$ | Fert | f，ph | 500 |
| ［1］III | Vědi | v | 3 | 7a 7 | Cherr | kh（ch） | 600 |
| 78 | Glagol＇ | g | 4 | （1） | Ó | ó | 700 |
| ■b $\quad$ b | Dobro | d | 5 |  | Šta | št | 800 |
| 33 | Est＇ | e | 6 | V 9 | Ci | ts | 900 |
| 㮌而 | Živěte | ž | 7 | 告 年 | Červ＇ | $\stackrel{\text { c }}{ }$ | 1000 |
| 回 ${ }^{\text {® }}$ | Zělo | z | 8 | Ш1］ | $\stackrel{\text { Ša }}{ }$ | s |  |
| 时 $0_{0}$ | Zemlja | z | 9 | － 8 | Jer | $\bigcirc$ |  |
| 吅 | lže | i | 10 | \＃兩 | Jer | e |  |
| 8 8 | 1 | i | 20 | －88 88 |  |  |  |
|  | Děrv＇ |  |  | －898 88 ¢9 | Jery | y |  |
| ITP IP | č．Jot | dy， y | 30 | －8 8 |  | e |  |
| 5 5 | Kako | k | 40 | I I | Jerek | $\overline{\mathbf{i}}$ |  |
| ゅ切 | Ljudi | I | 50 | A $\boldsymbol{B}$ | Jet＇ | ě，ya |  |
| $\boldsymbol{R} \quad \mathrm{M}$ | Myslite | m | 60 | Ill Il | Ju | yu |  |
| P $\mathbf{P}$ | Naš | n | 70 | ¢ ¢ | Fs | e |  |
| 8 g | On | 0 | 80 | ¢も 耻 | As | a |  |
| ［0］ | Pokoj | p | 90 | 犹 3 | Jęs | ye |  |
| Б b | R＇ci | r | 100 |  | Jąs | yą |  |
| R $\mathbf{8}$ | Slovo | $s$ | 200 | 吅 吅 | Thita | th |  |
| IIJ IU | Tvr＇do | t | 300 | $8 \quad 8$ | Ižica | y |  |

NOTES．
1．These characters are designed to be printed without the abbreviations，pecu－ liar to liturgical works．
2．The numerical letters are distinguished by dots on both sides，as ．而．．e．etc．
3．The punctuation is the same as in other languages．
4．The letters $£, \mathfrak{x}, \mathfrak{F}$ and $\mathbb{R} \in$ ，the forms of and $\boldsymbol{x}$ ，together with the combina－
 of as only occurs in Croatian MSS．
5．The value and pronunciation of the accented Roman characters may be as－ certained by referring to the Czechian and Polish Alphabets．

## RUSSIAN

| Form |  | Name | Value | Observations |
| :---: | :---: | :---: | :---: | :---: |
| Straight | Italic |  |  |  |
| A a | A $\boldsymbol{a}$ | As | a | The Russian Alphabet con－ sists of 35 letters．Ecclesiasti－ |
| Б б | $\boldsymbol{\sigma}$ б | Buki | b | cal and Old－Russian works， |
| B B | B ${ }^{\text {b }}$ | Vyedi | v ff | being written in the ancient Slavonic character，contain the |
| $\boldsymbol{\Gamma}$ | $\boldsymbol{\Gamma} \boldsymbol{\imath}$ | Glagol | g gh | following additional letters， $\sigma \text { (Selo) s, } \mathbf{\sigma} \text { or } 8(\text { (Ik) u, }$ |
| A 1 | $A, \lambda, \partial$ | Dobro | d |  |
| E e | $\boldsymbol{E} \boldsymbol{e}$ | Yest | é yé yo o | In ecclesiastical books these |
| \％ж | $\boldsymbol{\oiiint} \boldsymbol{\varkappa}$ | Zhivete | zh sh | letters serve as numerals，and are arranged as in Greek．The |
| 33 | $3{ }^{3}$ | Zemla | z | sign ${ }^{\circ}$ ，is placed over numeri－ cal letters． |
| ИЙ и й | $И \breve{\Pi} \boldsymbol{И} \boldsymbol{u}$ | Izhe | i |  |
| I i ì | $\boldsymbol{I} \ddot{i}$ | I | i | a bas the sounds of $b a r$ and $b a t$ ． $\sigma$ like $b$ ．Before the strong |
| If l | $\boldsymbol{K} \boldsymbol{K}$ | Kako | k ck | consonants and as a final letter it sound like $p$ |
| I $\boldsymbol{1}$ | $\boldsymbol{I} \boldsymbol{\lambda}$ | Lïudi | 1 | B 1）At the beginning of a syl－ |
| M M | M $\quad$ M | Muislete | 1 m | lable and hefore $\boldsymbol{A} \mathbf{p} \mathrm{p}$ like $v .2$ ） As a final，and before a hard |
| $\mathrm{H}_{\mathbf{H}}$ | $\boldsymbol{H} \boldsymbol{H}$ | Nash | n | consonant，like ff． <br> r 1）As an initial and medial |
| 0 0 | 0 o | On | 0 a | letter nearly like $g$ in give，but |
| II | II $n$ | Pokoi | p | with a hard Hibernian aspira－ tion．2）As a final，or before $s h$ ， |
| P p | $\boldsymbol{P} p$ | Rtsui | r | Iike $k$ ．3）In ecclesiastical pro－ nunciation it is aspirated like |
| C c | $C \quad c$ | Slovo | S | $h$ ．In some words，especially |
| T T III | $\boldsymbol{T} \boldsymbol{T} \boldsymbol{m}$ | Tverdo | t | foreign，it sounds like $c h$ in the Scotch loch．4）The adjectival |
| y y | $\boldsymbol{V} y$ | U | u | and pronominal ending ro is commonly pronounced $v o$ ，and |
| Ф $\Phi$ | $\boldsymbol{\Phi} \boldsymbol{g}$ | Fert | ph f | in inferior style it is even spelled |
| X $\mathbf{X}$ | $\boldsymbol{X} \cdot \boldsymbol{x}$ | Kherr | $\mathrm{kh}\left(\mathrm{ch}_{\text {in }}^{\text {Ger．}}\right.$ ． | ${ }^{\text {sob }}$ as our $d$ ． |
| Ц ц | $\boldsymbol{L} \boldsymbol{u}$ | Tsui | ts | e 1）At the beginning of syl－ lables like yai．2）At the end of |
| U I | $\boldsymbol{Y} \boldsymbol{u}$ | Tsherv | ch | syllables like $e$ in met，with a |
| UI III | III u | Sha | sh | feeble $y$ before it．After sibi－ lants this $y$ is not heard．3） |
| I以 щ | III u | Shtsha | shch | When accented it sounds like yeo in yeoman，and after $\boldsymbol{\mp} ч$ II |
| В $\quad$ | 万 $\quad$ | Yerr | hard suffix | $щ ц$ like $o$ in go．This rule is applied a）before a consonant |
| b ${ }^{\text {b }}$ | $\boldsymbol{B I} \boldsymbol{b l}$ | Yerui | ui i thick | applied a）betore a consonant |
| b b | $\boldsymbol{b} \quad b$ | Yer | soft suffix | $\mathbf{5}, \mathbf{3} ; b$ ）at the end of a word； <br> c）in the instrumental case ero |
| あ b | $\boldsymbol{B} \boldsymbol{I} \boldsymbol{\square} \boldsymbol{\square}$ | Yat | yé éyo | or eй of nouns fem．sing；$d$ ）be－ |
| Э | $\boldsymbol{y}$ | E |  | fore $\mathbf{\Gamma}, \mathbf{\kappa}, \mathbf{x}$ ，and the sibilants ж，II．e）in the present tense． |
| Ю ю | $\boldsymbol{H}$ ю | Yu | yoo Fr． | In improved spelling the sound of $y 0$ or 0 is indicated by e ．This |
| （ $\quad$ | $\boldsymbol{H} \boldsymbol{A}$ | Ya | ya yè | ë also denotes the French sound |
| $\theta \quad \boldsymbol{\theta}$ | $\boldsymbol{\theta} \boldsymbol{\theta}$ | Fita |  | of eu．${ }_{\text {\＃like } j \text { in }}$ the French word |
| $\boldsymbol{r}$ | $V^{*} \boldsymbol{r}$ | Izhitza | y v | jour． $u$ and $\mathbf{i}$ sound alike． |

RUSSIAN


3 This reversed $e$ is the initial of words commencing with the sonnd ai. It occurs in foreign words in which it replaces oe.
10 sounds like ew. In foreign words it is similar to the French $u$.

я when accented, sounds like ya in yard. In unaccented initial syllables it sounds $y e$. After consonants it is pronounced like $e$ in met. As a final letter it takes the sound of ya in yard.
$\theta$ represents the same Greek letter but is pronounced like $F$. In modern derivations from the Greek it is replaced by $F$.
$\mathbf{r}$ only occurs in Greek words. At the beginning of a word or after a consonant it sounds like ee, and after a vowel like $v$.

The letters $h, c, x, f$, do not occur in the Russian alphabet. They are represented as follows: 1) $h$ is replaced by $\boldsymbol{r}$, as in Гамбург; Hamburg, or it is omitted altogether, especially
in Latin words as Аниибалы, Hannibal. 2) с before $e, i, y$, sounding like tbe German $z$ or $t z$, is expressed by п as Щидеронъ, and before $a, v, u$ by $k$, as Коллегія. 3) $x$ is expressed by кс, as A.jereth (Alexius). 4) $f$ and the German $v$ are changed into $\boldsymbol{\Phi}$, as $\boldsymbol{\Phi}_{\text {рндрия }}$ Frederick.

## DIPHTHONGS.

Preper diphthengs are only formed by the a following a vowsl: This letter receives in sach a case a characteristic sign st the tep (ii). The diphthougs are ай ей їй ой уй ый вй әй юй яй.

## ACCENTS.

The stress of an accented vowel is indicated by the acute (1) and the grsve (1). The former denotes the raising, the lsater the depression of the tone. The accents are only then marked in writing, when correspending forms are to be distingnished from one enother. They are placed over the followiog vowels


SERVIAN．
（Modern form，cut by F．Rōsce in Laipzio．）
This language is divided into the dialecta of the Her－ zegovina，of Rebsava and Syrmia．The Serviana use the Slavonic（Cyrillic），the Croats and Wends the Roman

| Cyrillic | Latin | Pronunciation |
| :---: | :---: | :---: |
| A a | A a | a |
| B 6 | B．b | b |
| B $\quad$ B | V v | v |
| $\Gamma \quad \Gamma$ | G g | g |
| A ${ }^{\text {a }}$ | D d | d |
| ち $\quad$ ¢ | Dj dj | dy，Hungarian gy |
| E e | E e | e |
| Ж ж | $\dot{\text { Z }}$ ¢ | j in French |
| 33 | Z $\quad 2$ | 2 |
| И и | 1 i | i |
| I i | 1 i | y |
| J j | J j | y |
| K к | K k | k |
| A | L I | 1 |
| 历 $\boldsymbol{\Omega}$ | Lj lj | ly，Ital．gl，gli |
| M M | M m | m |
| H H | N n | n |
| Њ њ | Nj nj | ñ Ital．and Fr．ng |
| 0 0 | 0 O | 0 |
| $\Pi \quad \Pi$ | P p | p |
| P p | R r | r |
| C c | S s | s |
| T T | $T \mathrm{t}$ | t |
| ћ $\boldsymbol{\hbar}$ | C＇ćc | ly， 1 j |
| y y | U u | u |
| Ф $\quad$ ¢ | F f | f |
| X X | H $h$ | h |
| 【 ц | C c | ts |
| 4 ¢ | C | ch |
| Ш⿺𠃊 | S | sh |
| 以 щ | Šć scc | shch |
| Ђ $\quad$ ¢ | － | hardening suffix |
| Ы ы | 1 i | ee，French u |
| b b | － | softening suffix |
| G b | Je je ě ie | yé，ié |
| 6 E | Je je | yé |
| Ю ю | Ju ju | yū |
| Я я | Ja ja | yà |
| II 4 | Dž dž | J |
| $\theta \theta$ | Th th | th |

## ILLYRIAN．

Nr．I reprasants tha＂organio＂orthography now used in Roman－Catholic publicationa；Nre．II and III are to aome extent currant in Slavonia，

Croatia and Dalmatia．

| I． | II． | III． | Pronunciation |
| :---: | :---: | :---: | :---: |
| a | a | a |  |
| b | b | b | The Vowels a， $\mathrm{o}, \mathrm{n}, \mathrm{i}$, | e sound as in German or Italian：

è as a medial，follows all tbe consonants except gutturals．It rarely is o final letter and never an． initial．les general sound is lika ye（in yes）．In the dialect of the Herze－ govina it has the same pronunciation when not lengthened，othervise it sounds like ee combined with ye，as is heard in see yet．Before i，like y in ye．In the Syrmian dislect it varias between ay and ee．In the Ressava dialect it almost invariably sounds like ay（in nay）． This ě is now of en spelled ie．
c is like ts in lots．
ć and tj almost like ts．
The differance betwaen these spellings is，that $\mathbf{c}$ can be used indiscriminate－ ly，and tj only in derivad words．
č like j in jar．
dj sud gj are neorly like j in jar．
lj like lli in William． nj like ni in opinion． s like sh．
z̀ lika s in measure．
dž like j in jar．
r has the power both of a consonant and a vowel． As a consonant it sounds as in other languages．As a vowel it forms a separate syllable and is pronounced with a very slight sound of $e$ ．The orthogrsphy of this syllable varies．Some spell it èr，the Ragnsans àr．Others omit à and è and simply write $r$ ，others again write i ．

Accents used in Servian：acute（｀）：sign of lenglh（＇）：$\smile$ or ${ }^{n}$ sign of brevity．

## WALLACHIAN

| Form | Name | Value |  | Modern Shape | Improved Moder | n Shape |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9 a | As | a |  | A a | Antiqua Curre |  |
| Б $\quad$ | Buke | b | phabet on the left | F $\quad$ ¢ ${ }^{\text {b }}$ | A a：$A \quad a$ | a |
| R ${ }^{\text {e }}$ | Vide | v | thers are two va－ | b $\quad$ b b |  | b |
| $\mathrm{F}_{\mathrm{r}}$ | Glagol | g | rieties of charac－ ters． | B $\quad$ B ${ }^{\text {I }}$ |  |  |
| Д．$л$ | Dobro | d |  | $\boldsymbol{\Gamma} \quad \mathbf{\Gamma}$ g | b | v |
| \＆$\epsilon$ | Yest | ye elong | is appended to a | Д $\quad$ a ${ }^{\text {d }}$ | $\Gamma \quad \Gamma \quad \Gamma$ | g |
| \％ж | Shivete | zh | consonant at the and of a word | E $\mathrm{E}^{\text {a }}$ y | D $\mathbf{d} \boldsymbol{D} \quad d$ | d |
| $\mathcal{S H}_{5}$ | Zalo | Nr． 6 | end of 2 word without heing | Ж ※ zh | E e E | yé e |
| 33 | Zemlia | z | sounded．In mo－ dern printing it is |  |  | yé e |
| Н Й й | I | i | dern printing it is omitted． | 3 z | J J ¢ | j（Fr．） |
|  | Ishe | y |  | i | Z $\mathrm{z}: \begin{aligned} & \text { l }\end{aligned}$ | z |
| $\boldsymbol{K}$ к | Kako | k | （employed inwords | $\begin{array}{llll}\text { K } & \mathbf{k} & \mathbf{k}\end{array}$ | $\begin{array}{ll:l}\text { I } & \text { i } & I\end{array}$ | i |
| N $\boldsymbol{\lambda}$ | Lïude | 1 | of Slavonic origin． | $\boldsymbol{\lambda} \boldsymbol{\pi}$ |  |  |
| M m | Meslite | m | 「 Ishitza，occurs | $\boldsymbol{\Lambda}$ $\boldsymbol{\Lambda}$ l <br> $\mathbf{M}$ $\mathbf{M}$ m | $\mathbf{K} \mathbf{k} \boldsymbol{K} \boldsymbol{K}$ | k |
| $\mathrm{H}_{\boldsymbol{H}}$ | Nash | n | in words derived | M M m | $\begin{array}{lllll}\mathrm{L} & \boldsymbol{d} & L & \boldsymbol{L}\end{array}$ | 1 |
| 0 o | On | 0 | from the Grsek． After vowels its | H $\quad \mathbf{H}$ | M m ： $\mathrm{Mm}^{\text {m }}$ | m |
| II $n$ | Pokoi | p | sound is $\sigma$ ，sfter | 0 O | M m M m |  |
| P $p$ | Rtse | r | consonsnts，$i$（as in $B i t)$ ． | II II | ${ }^{\mathrm{n}} \quad N n$ | n |
| E | Slovo | s |  |  | O 0 ： 0 O 0 | 0 |
| T T | Tverdo | t |  | C | $\Pi \quad$ п：$\Pi \quad \pi$ |  |
| 88 | Uk | u | Short accents． | C c | $\begin{array}{ll:ll}1 & \Pi & \pi\end{array}$ |  |
| Oy oy | Uniku | u | $\bigcirc$ is placed over | T T | $\boldsymbol{P}$ ： $\boldsymbol{P} \quad \boldsymbol{p}$ | r |
| $\Phi \Phi$ | Fert | f ph | an initial vowel and the diph－ | y $\quad \mathbf{y}$ |  | s |
| $\mathbf{X} \times$ | Khir | kh h |  | $\begin{array}{ll}\boldsymbol{\Phi} & \mathbf{S}\end{array}$ | T t ．$\quad$ T $\quad t$ | t |
| $\omega$ ¢ | 0 | o long | $\bigcirc$ stands over a | $\boldsymbol{\Phi}$ $\mathbf{\Phi}$ f <br> $\mathbf{X}$ $\mathbf{x}$  <br> lab   |  |  |
| 】 п | Tsi | ts | medial and fnal | $\mathbf{X} \quad \mathbf{x}$ kh（ch） | у $\boldsymbol{\gamma} \boldsymbol{\gamma}$ | － |
| I 7 | Cher | ch | Hand over a finsl $\mathbf{1}$ ． | Ц ц ${ }^{\text {¢ }}$ | $\begin{array}{lllll}\boldsymbol{\Phi} & \boldsymbol{\Phi} & \boldsymbol{\Phi} & \phi\end{array}$ | f |
| III m | Sha | sh |  | I $\quad \mathbf{I}$ | $\mathbf{X} \quad \mathbf{x} \quad \boldsymbol{X}$ |  |
| 锞近 | Shta | sht |  | III 世 |  | （ol） |
| Ђ $\quad$ \％ | Yor | e short | Long accents． |  | U． | ts |
| \％ | Yaty | éa | ＂over initial vow－ | III，14，sht | $\boldsymbol{\Psi} \boldsymbol{\Psi} \boldsymbol{\Psi} \boldsymbol{u}$ | ch |
| 面 | Yus | è（uüh） | els and ovor 10. | 万 $\quad$ b | U ш $\quad$ IIu | sh |
| ю ю | Yu | yu | －over medial row－ | W t éa |  |  |
| ［行 $\mathbf{1 a}$ | Yako | ya |  | ¢ я ya | b $\mathbf{6}$ $\boldsymbol{b}$ $\boldsymbol{b}$ |  |
| 面 | Ia | ya | over the medial a sind the final |  | $\hat{1} \hat{1}$ | （ün） |
| $\theta 8$ | Ftita | ft th | $\mathbf{a}, \mathbf{B}, \mathbf{f}, \mathbf{H} .$ | m m（uüh） | प 凹： |  |
| ＋ | Psi | ps | over alhre－ | 不 | ¢ $x^{2}$ |  |
| ${ }^{3}$ | Xi |  | vistions and let－ | II $\quad$ I ${ }^{\text {j }}$ | apostrophised | TtERS． |
| $\mathbf{V}$ | Ishitza | v i＊ | ters amploysd as |  |  | Ŏ ${ }^{\text {y }}$ |
| 不 | Ün | anng in Germ． |  | $\underset{\text { used in forsign }}{8}$ | Aáeeliil |  |
| 11 | Je | j |  | words． | Uu ¢ D d S Ss ş T | d＇${ }^{\prime}$ |

[^1]
## POLISH

|  | a like a |
| :---: | :---: |
|  | $\begin{gathered} A_{a}-\mathrm{ong} \\ \mathrm{e}-\mathrm{e} \\ \mathrm{e}-\mathrm{ié} \end{gathered}$ |
| $\mathrm{E} e$ - eng |  |
| Óó - ou |  |
| $\mathbf{u}-\mathrm{u}$ |  |
| $y-e(a)$ |  |
| $\begin{aligned} & b-b \\ & b^{\prime}-b y \end{aligned}$ |  |
|  |  |
| $\mathrm{c}_{\text {c }}$ - ts |  |
|  |  |
|  | cz - ch |
| $\begin{aligned} & d-d \\ & d z-d z \end{aligned}$ |  |
|  |  |
| dź - dzy' |  |
| dż-j |  |
| $\mathrm{f}-\mathrm{f}$ |  |
|  | $\mathrm{g}-\mathrm{g}$ |
| $\mathrm{h}-\mathrm{h}(\mathrm{ch})$ |  |
| ch - kh |  |
| $\begin{aligned} & \mathbf{j}-\mathrm{y} \\ & \mathrm{k}-\mathrm{k} \end{aligned}$ |  |
|  |  |
| $1-1$ |  |
| Kı - - |  |
| $\begin{aligned} & \mathrm{m}-\mathrm{m} \\ & \dot{\mathrm{~m}}-\mathrm{my} \end{aligned}$ |  |
|  |  |
| n - n |  |
| Ńńn - ny' |  |
| $\mathrm{p}-\mathrm{p}$ |  |
| $\mathbf{p}^{\prime}-\mathrm{p}$ |  |
| $\mathbf{r}-\mathrm{r}$ |  |
| rz - rsh |  |
| S ${ }^{\text {s }} \mathrm{s}-\mathrm{s}-\mathrm{sy}$, |  |
|  |  |
| sz - sh |  |
| $\mathrm{t}-\mathrm{t}$. |  |
| $\mathbf{w}-\mathrm{v}$ |  |
| w - vy' |  |
| z - ${ }^{\text {z }}$, |  |
|  | 安自, - $\mathbf{z y}^{\prime}$ |
|  |  |

The marginal column shows the pronanciation of Polish letters in as far as it approximates the English. The vowels $a, e, i, o$, $o u, u, u \ddot{u}$ in the adjoining column are sounded as in German. The following pecnliarities must he noticed.

In addition to the five elementary vowels, common to the European languages, occurs $y$, which is deeper than the $i$ and sharper than the French mute $e$ (in poudre, Polish pudyr). As accessory vowels of $a, e$ stand the nasals $a$ and $\varepsilon$ (ong, eng). Before $b, p$, they sound $o m$, hut nasally; $\dot{e}$, always strongly accented, is an intermediate of $e$ and $i$. In $i e, i a$, io, iu the $i$ merely indicates the softness of the preceding consonant; in fact this $i$ forms part of such a consonant. $\dot{\delta}$ is a strongly accented deep $o$, nearly like $u$. Hence the Polish vowels descend in the following gradation: $i, e ́,(i e), e, e, y, a, q, o, o, u$.

These vowels have a clear. and distinct sonnd, except the $i$ which obtains the consonantal force of $y$, when it is followed by $a$ vowel and preceded by $b, c, d z, m, n, p, s, w, z$. In this case the $i$ is merely the medium of softening the consonant, Ex: biodro (loin) sounds byodro. Before $e$ it becomes $i e$.

The consonants $\dot{b}, \dot{c}, d \dot{z}, m, n, p, s, v, z$ are attended hy a slight and rapid articulation of $y$, as if written $b y, c y, d z y, n y$, $n y, p y, s y, w y, z y$. They stand as finals of words, and also of syllables followed hy consonants. Of these letters $\dot{c}$ takes the intermediate sound of our $h$ and $c h$.
$c$ sounds like $t s$ in wants.
$c z$ is our $c h$, and $s z$ our $s h$.
$d z$ sonnds like $d s$ in wands.
$d \dot{z}$ is like $j$ in $j a r$.
$h$ is of rare occurrence, the Slavonic $h$ being represented in Polish by $g$. It is as guttural as the German ch, Ex: hultaj (a Good for nothing).
$\ell$ the virgulated $l$ is heavier than the common $l$. The middle part of the tongue is more raised in the articulation of this letter.
$r z$ is $r$ blended with $\dot{z}$. The $r$ is softly rolled, and its $z$ is like the French $j$. Ex: przy.
$\dot{z}$ like $j$ in the French word $j o u r$.
To avoid the accumulation of softening iota-marks of the letters $\dot{b}, \dot{m}, \dot{n}, \dot{p}, s, \dot{w}, \dot{z}$, the following process is preferred. Before a vowel an $i$ is inserted (as bia mia etc.); before $i$ however and before consonants the iota-sign is dispensed with; $\dot{b}, \dot{p}, \dot{w}, \dot{m}$, lose this sign even at the end of a word. Owing to the diminution of the characteristic signs, the letters $w, b, p, m, n, s, z$ deviate from the original rule and may be followed hy either $i$ or $y$.

## SORBIAN or WENDISH OF LUSATIA.

The vowels are: $\mathrm{a}, \mathrm{o}, \mathrm{u}, \mathrm{y}, \mathrm{e}, \mathrm{i}$. The union of a and o makes $\mathrm{o} ; \mathrm{o}$ and u form ó; e and i coalesce on e . The semi-consonant $j$ is connected with $i ; h$ with $e ; w$ wilh a $o u$.

The consonants are divided 1) into Labials $w, f, v, b, p, m$. 2) Polatals ind Lingtials $n, l, r$. 3) Dentals d, t, ć. 4) Sibilants $z \dot{z}, \mathrm{~s}$ £̀, c č. 5) Gutturals $\mathrm{h} \mathrm{ch}(\mathrm{g}) \mathrm{k}$.

With regard to their articulation these consonants are divided into broad and slender sounds, according as they are harilened or softened in their uttcrance.

> Broad sounds: w, w' $\mathrm{b}, \mathrm{b}^{\prime}, \mathrm{z}, \dot{z}, \mathrm{~d}, \mathrm{dz}, \mathrm{d} \dot{z}, \mathrm{~h}, \mathrm{~g}$.
> Slender sounds: $\mathrm{f}, \mathrm{v}, \mathrm{p}, \dot{\mathrm{p}}, \mathrm{s}, \mathrm{s}, \mathrm{t}, \mathrm{c}, \mathrm{c}, \mathrm{c}, \mathrm{ds}, \mathrm{ts}, \mathrm{ch}, \mathrm{k}$.

Between these letters nine intermediates take their place: $m, m, n, \dot{m}, l^{\prime}, l, x, r, i$.
The whole Alphabet thus consists of the following 8 vowels and 32 consonants. A (ò) $\mathbf{o}, \dot{o}, u, y, e$,
 $\mathrm{ts}, \mathrm{l}, \mathrm{ch}, \mathrm{g}, \mathrm{k}$.

In combining one consonant or several consonants with a owel to form a syllable, a distinction is made between hard soft and neutral consonants.

At the same time the following rule is to be observed. In the grammatical combinations of structure, derivation, declension, enmparison and conjugation the vowel $y$ cannot follow a soft consonant, nor can e and ifollow a hard consonant, whilst the neutral consonants may bus succeeded liy either y or i. In conformily with this rule are reckoned as

Hard, lrzsddztc (h ch gk).
Neutral, wfbpmndsts.
The letters qu and $\mathbf{x}$, in words of foreign origin, arc spelled kw and ks, as kwadrat, Aleksander, kwas. Also $g$ occurs only in foreign words. V and $f$ are found in but few vernacular terms.

## PRONUNCIATION OF THE CONSONANTS.

 (arute) $\dot{e}$ and $\mathbf{i}$ this accent is unnecessary, because these vowels are sumfient to soften the preceding: consonants.
$\chi$ sounds like $\mathbf{v}$. In the north-eastern part of the country it is protounced like a harsh 1 . For instance čólo.
dz as in English, but without a break between the two letters. Example na fidzy.
dź like g in gentle, as dėera, nadżya.
$z$ as in English, f. i. zuby.
$\dot{z}$ like the s in pleasure, f. i. żolty.
š like sh, f. i. šaty, šéry.
c like ts, as cybać.
é nearly like ch in cluirn, f. i. ćern.
ct the sharpest sibilant like tch in wretch, f. i. čorny.
ds, ts like ts, f. i. tsihac.
ch is frequently pronounced hard, like c before $\mathrm{a}, \mathrm{o}, \mathfrak{u}$, especially at the beginning of words, for instance chory.
j like y in yes.
$s$ like z .
w like v .

## PRONUNCIATION OF THE VOWELS.

a $i u$ as the vowels in are, here, true.
$e$ is acute, grave, or long. After $\mathrm{c} z \mathrm{~s}$ it is often pronounced like $y$.
o acute grave or lengthened.
ó deep nearly like $u$.
è like ea in dear.
y deep as ea in dearth.

## CZECHIAN or BOIHEMIAN.

Roman.
 Čy

German.


$q$ and $x$ only occtir in foreign words. $q u$ is genarally replaced by kv as kvitance (receipt). Some writers use $w$ for $v$ and ou for au.

The accented vowels á é í ú y and $\mathfrak{u}$ are long: without accent their pronunciation is short.
ě i í are termad sof vowals. The others are hard. h ch kr are hard consonents.
$c$ č $d^{\prime} j$ ň $\check{r}$ š $\grave{t}$ ž are soft, and
bdfglmnnstyzare called ibalednite consonants.

## THE FOLLOWING SOUNDS DIFFER FROM THE ENGLISH PRONUNCIATION.

a sounds like the first a in papa.
á like a in father.
c even hefore $k$, sounds like ts, as necky (nets-kü) tha tray.
e like ch in church.
d hefore i i or when marked with the liquifying sign $(\underset{d}{ }$ ) is sounded $d y$. This consonantal $y$ is sofly blended with its $d$, as div or diw (pronounced dyiv).
e lika e in den.
é like a in late.
è as ye in yet. It can only occur after $v, f, b, p$, $\mathrm{m}, \mathrm{n}, \mathrm{d}$, t with which it coalesces. As vëk (vyek) a century.
cy like a in late followed lyy $y$ in yet, as woley (call thou). This final $y$ forms a distinct sound.
$g$ as in garnet. It only occurs in foreign words.
$h$ aspirated at tha beginning and in the middle of a wnrd like $h$ in house. At the end of a syllable it partakes of the guttural sound of ch and is somewhat softer than ch in tha Scotch loch.
ch like ch in the Stotch word loch, as chleb
(bread).
i as in grin.
i like ee in green.
j like $y$, as jaro (pr. yaro) springtime,
$n$ before i í, or when marked n , sounds like ni in opinion.
0 as in of.
ó as in door.
0 is a diphthong which blends the sound of 0 (in pole) with $u$ (in put). These vowels rctain their separate pronunciation in verhs with prefixed po, as poubrati ( $\mathrm{po}-\mathrm{u}-\mathrm{bra}-\mathrm{ti}$ ).

$t$ before i í, or when marked $\check{t}$, sounds like a $t$ with which the semi-vowel y coalesces, as lulipan (pron. tyoo-le-pan) tulip.
u as in put.
$\dot{u}$ and' $\mathfrak{u}$ long as in blue.
$y$ like $u$ in the French pure.
$z$ as in English but.
z. like $s$ in measure.

## ORTHOEPIC RULES.

1) The vowels with the long accent (') should not be lengthened to excess,
2) The consonants $s$, š, $z, ~ z ̌, ~ b e c o m e ~ m u t c ~ b e f o r e ~$ the affix sky, as vessky,
3) The consonant $\mathbf{j}$, as an initial before another consonat, is not pronounced, as jsem. When a syllable ending in a rowel precedes, the $j$ becomes audible.
4) The compounds te ds and ts are pronouncod like c; dš ond tš, like č.
5) Prepositions consisting of a simple consonanl. such as $\mathrm{k}, \mathrm{s}, \mathrm{v}, \mathrm{z}$, although standing by themselves, do nol form a syllable, but are sounded together with the first syllablo of the next word, for iostance $k$ tobe s námi. These unconnected prepositions cannol be placed by themselves at the end of a line or a page.
6) The auxiliary verb. jsem, jsi, jest-jsmc, jste, jsou, line conjunctional parlicles byeh, bys, by, bychom, byste, bý, and the reflective pronouns se, si oltached to an active porticiple, are blended together in the pronunciation and joined by a hyphen. The same is the case when si, se are pestpositions of nouns or adjectives. E. g. shledání-se, modlící-se.
7) The soft consonants must be carcfully distinguished in articulation frow the indefinites, and the $i$ íez must properly coalesce with the latter.
8) Tho sibilants $c$ s $\%$ differ from eacll other as well as from č šz.
9) $h$ is never mute. Example hrom (thunder) in which the $h$ sounds is the $h$ in the Sateh pronuncialion of which.
10) The accent always rests on the first syllable, as be-žim, pri-nesu. The accented syllahle may at the sume time be lengthened, as sná-žint, krá-sa.

DIVISION OF SYLLABLES.
In words which are diflicult to pronounee, owing to the complication of consonants, it is of importance
to ascertain the component syllables. In this language most syllables end in vowels, The followiog circumstances most be noticed in applying this rule,

1) A consonant placed between two vowels or hetween a vowel and 1 or $r$, joins the next syllable. Examplo: stra-ka, ba-vl-na.
2) Of saveral consonants, followed hy a vowel, only the last consonant goes to the next syllable; yel sk, šk, st, št are not separated but join the next.syllable, In sucli instances the preceding syluble is offen without a vower, while 1 or $r$ forms the medial consonant. Exanple, hrn-čír.
3) $l, r, r$, with a vowel after are joined by the preceding consonant in forming one syllahle. To this rule $n$ forms an exception. The consonants $s k$, šk, st, st must without separation he annexed to the syllable which follows. Exampla, kno-flík, zei-dlik, svě-tlo, han-li-vẏ.
4) Compound words are divided according to their component parts, as ou-voz, ná-dvo-ří.

## HUNGARIAN.

The Hungarian language eomprises 31 sonants which are expressed by the Roman Alphabet. Owing to the combinations of some letters the Alphabet is formed as follows:

$$
\begin{aligned}
& \text { a b cs cz defg gy hijklymmnyoöpr.s.sz } \\
& \mathrm{t} \text { ty } \mathbf{u} \text { ü } \mathrm{v} \mathrm{z} \text { zs. }
\end{aligned}
$$

The vowels a eioö $u \ddot{u}$, are sounded as in German. With the accent at the top the vowels á é íóóu $u u^{\prime}$ are lengthened.

The combinations cs cz gy ly ny sz ty zs represent single articulations and are inseparable in spelling.
cs sounds like ch as kocsi.


With regard to the consonants is to be noticed that,
$j$ is pronounced like $y$ in $y e s$, and
$s$ like the English $s h$, as sas.

The letters c ch $q w x$ are only found in foreign words, for instance Cato, Achilles. $y$ does not represent an independent sound, but simply helps to soften the antecedent letter. Nevertheless in Old-Hungarian words $y$ and $c h$ are employed as independent letters. The former then sounds like $i$ in $i t$, and $c h$ as in clurch. For example Pálfy, Forgach,

The compounds $c s$ and $c z$ are often denoted by $t s$ and $t z$. Modern Orthography rejects this spelling except in words where the $t$ is radical, as barátság (not baraeság).

## LETTISH.

The Lets have adopted the following 22 letters of the German Alphabet,

The $c$ and $\mathfrak{b}$ are only used in combination with $\mathfrak{f}$ to express the sounds of $(\mathbb{d})$ and $(d)$. The $\mathfrak{G}$ moreover serves to lengthen the vowels. The German consonants $\mathfrak{b} d f \mathfrak{v}$ never occur in Lettish. Nor are $\mathfrak{i}$ and it in use. The $i x y$ are represented by $t w, t i v$,

By means of the 22 eharacters the following 34 simple sounds of the Lettish language are formed.

##  

## PRONUNCIATION OF THE SIMPLE VOWELS.

$\mathfrak{a}$ e $\mathfrak{i} \mathfrak{u}$ are short. When lengthened they are marked thns,

$$
\hat{\mathfrak{a}} \hat{\mathfrak{e}} \hat{\mathfrak{\imath}} \hat{\mathfrak{u}}
$$

The $o$ is always long, nevertheless it receives the lengthening mark to distinguish the accented $\mathfrak{o l}$ and $\hat{\mathfrak{o}}$ from the lighter $\mathfrak{o}$.

## PRONUNCIATION OF THE DIPHTHONGS.

There are six diphthongs in this langnage, at au ei oi ui ee. The first five are pronounced as in German. Although ai and ei are naturally long they occur with the circumflex $\mathfrak{a i}$ ei. The diphthong oi only appears in the word woi. When aut and ui are to become separate syllables the $u$ and $\mathfrak{i}$ are marked with the diæresis, $\mathfrak{a i i}, \mathfrak{u i}$. Peculiar is the sound of ee; it passes from the articulation of ee (such as is heard in the German word See or in the English word say) to an intermediate sound, such as is heard in the second $\mathfrak{a}$ of advantage.

## CONSONANTS.

The following letters bave the English sound, $\mathfrak{b}$ b $\mathfrak{m i n f t}$. The $j$ is a consonant like our $y ; \mathfrak{w}$ sounds as $\mathfrak{v}$, and $\mathfrak{f}$ like tô. The labials $\mathfrak{b} \mathfrak{m} \downarrow \mathfrak{w}$ may be followed by the modifying $\mathfrak{j}$, which like the Russian $b$, helps to soften the consonant and causes a slight $i$ to ring after it. It cannot be separated from tbe consonant nor uttered as an independent letter. $\mathfrak{l} \mathfrak{n} \mathfrak{r}$ are virgulated as $\mathfrak{f} \mathfrak{n} \mathfrak{f}$, instead of being followed by $\mathfrak{j}$. Besides these letters the following four are virgulated.
$f$ like the German $\mathfrak{f}$ before $\mathfrak{e}$ and $\mathfrak{i} ; \mathfrak{g}$ is like $\mathfrak{f}$ before $\mathfrak{a} \mathfrak{a}$.
$t$ hard like $k$ in $k i n g$, $t$ as $c$ in come, cut.
$f$, sharp like our $s$. $\varepsilon$ is the final of this sharp $f$.
f is soft like our ${ }^{\gamma}$.
Dj form an inseparable sonnd like the soft Italian $z$.
fd sharp like the Russian $m$ and the English $s h$. The virgula of $f$ and fof does not indicate the sound of an inherent $\mathfrak{j}$. It only helps to distinguish the sharply pronounced consonant from the soft $\mathfrak{j}$ and $\lceil d)$, the latter is pronounced like the Russian \# or the French $j$ in jour.
tid) is like the Einglish $c h$ and bjal like $g$ in gentle.

## PRONUNCIATION OF SUCCESSIVE CONSONANTS.

Two or more Consonants, joined together in one syllable or in two syllables, must be so articulated that each should retain its original and independent sound. The $\mathfrak{n}$ is somewhat modified by the $g$ and $f$. It being assimilated with these letters, its sound is like that in the English words sing, sink (not as in tingle, tinkle). When $g$ and $t$ are marked with the cross-stroke the $n$ is likewise virgulated; and is then pronounced in accordance with the foregoing rules.

## GERMAN

| $A \quad \pi$ | $\mathfrak{A l}$ | a | Pl a | $\mathfrak{R} \quad \mathfrak{n}$ ． | n | Clu＊＊＊ |  | ä |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathscr{L}$ | $\mathfrak{B} \mathfrak{b}$ | b | Cor a | $\bigcirc 0$ | 0 | $⿻^{\circ \prime \prime}$ | B 0 | ö |
| $\mathcal{L}^{2}$ | （5） $\mathfrak{c}$ | c | $\not P$ | $\mathfrak{F} \quad \mathfrak{p}$ | p | $\mathscr{O L \prime}$ | $\mathfrak{U}$ | ü |
| $\theta^{i} 2$ | $\mathfrak{D} \mathfrak{D}$ | d | \％ 7 | $\mathfrak{Q}$ | q | if | d） | ch |
| $f=$ | （E） | e | $\cdots$－ | $\mathfrak{H}$ | r | －$k$ | cf | ck |
| $e^{2} \not f$ | $\mathfrak{F}$ f | f | Dif6 | S1is | S | －f | ff | ff |
| $y-x$ | （5） $\mathfrak{g}$ | g | $\bigcirc 1$ | $\mathfrak{T}$ | t | －fio | fi | fi |
|  | $\mathfrak{G}$ h | h． | D | $\mathfrak{u} \quad \mathfrak{u}$ | u | $\Delta \\|^{k^{1}}$ | $f 1$ | $f$ |
| of $i$ | $\mathfrak{J} i$ | i | $A I$ | $\mathfrak{B}$ | v |  | fir | si |
|  | $\mathfrak{F}$ | j | MPax | $\mathfrak{W} \quad \mathfrak{w}$ | w | $\mathcal{P}$ | ff | SS |
| $N^{2}$ | § $\mathfrak{f}$ | k | $\mathscr{B}-$ | $\mathfrak{X}$ | x | 7 |  | st |
| $\mathscr{L}$ | ． 1 | 1 | 27 7 | $\mathfrak{Y}$ y | y | － 2 | $\underline{\beta}$ | sz |
| $302 \text { un }$ | $\mathfrak{M}$ m | m |  | 3 z | z | 5 | 晃 | tz |

The rewele are：a ả e i o ön it．The diplathongs or componad vowels are：ai ci aul an cll all other lettars are consonants．

Simple vowels．
Every rowel，followed by two consonants，is short，if followed by only one consonant it is long．
A a is prenounced like a in the English word father． 9月 $\ddot{a}$ is pronounced like a in the Einglish word late． E e is pronounced like $e$ in the English word let．
If $i$ io pronounced like $e$ in the Eilglish word me．
So is pronounced like $o$ in the English word hope．
ゆ̆ is proneuncedilike ou in the trench＇word seul．
$\mathfrak{H} \mathfrak{u}$ ia pronounced tike 00 in the Engliah word roof．
$\mathfrak{d}$ it is pronounced like the French $u$ ．There is no corresponding sound in the Finglish language．
If）$y$ has the sound of the German $t$ ，by which it is generelly replaced．

## Double vowels．

The double vewels an，ce，on，are no diphthongs， because oply one letter，is，sounded，and the second serves to indicate that the sylahle is loag．
if is pronounced like ea in the English word meat．

## Diphthonge．

In the German diphtiongs，the twe vowels must be sounded one aftel the other，hul so quickly as 10 form only one syllable．
ai and ei are proneunced almost alike，and have the sound of the English $i$ in the word fire．
alt is pronouoced tike ou in the English word house．
aft and en sound almost like oy in the word joy．

## Coneonante．

The pronubeistion of the consobants difers but lithe in the two languages：the learner should no－ tieo the following peculiarities．

G $c$ before $a$ e and $i$ is pronounced like ts．
Before a $\cup 13$ ，before a consonant，and at the and of a ayllable it is pronounced like $k$ ，by which in most cases it may he replaced．

6h al the beginning of a word is pronounced like $k$ ，except in wordss derived from the Frenels， in which it retains the French pronunciation．

In the middle or at the end of a word d）has a pronunciation quite peculiar to the German language， and more or legs guttursl，but for which no corre－ sponding sound cad be found in English；it is like the Scotch th in the word loch sfter a o $u$ au，hut softer：after â e id du âu ell，and after a consodant．
48 or ${ }^{6} f$ is pronounced like $x$ when these conso－
nants helong to the root or radical syllable．
But the if preserves its gultural prenunciation． when it stande ${ }^{\text {whefore the }} 8$ or $i$ by cuntraction or in a cbmpound word．
（g）at the beginning of a sylable is pronounced fike the Engilish $g$ in the word good；but between two vowels，in the middle of a word and at the end of a syllable it has a sound like the d，only mueb softened．
After it at the end of a word it is prononneed like a very soft．$l$ ．
$\mathfrak{W} H$ is alwsys，aspirated at the begioning of a syllable． The aspiration becomes however almost imper－ ceptible hefore a fipaler
After a vowel or $3 t$ ，the $b$ is not pronounced， but，only indicates that the syllable is long．
J i only stands at the heginning of at stlable snil is pronounced like the English $y$ in the woid yel． if replaces the alouble $f$ ，aod is proneunced short．
En qut has the sound of $k v$ in English．
$\mathbb{S} f$ at the heginning of a syllable is pronounced like the English $\approx$ ，at the end of a syllable hovever like the lingliah $s$ ．

Tlie longilis placed at the beginning and in the middlo． sonly at the end of syllables．If in an uninflected werd there are two fohe after another，they are written if 6 is ooly placed at the end or in the middle of syltables，has the sound of the English ss．

Stif id is pronounced like the English sh．
it and ip are pronounced like $s t$ and $s p$ in Eng－ lisls；but in some parts of Germany thev pronounce it at the beginning of a word like sht，and if like shp． $38 y$ has the sound of $f$ ．
$W^{5} \mathfrak{t}$ is pronounced like the English 0 ．
3 $\%$ बंs spunded like $t s$ ．
；replaces the double of and is proneunced very hard．

## DANISH



## SWEDISH.

The Alphabet consists of the following 28 letters,

Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm Nn Oo 

## PRONUNCIATION OF THE VOWELS.

The vowels $a o \not \subset \stackrel{\circ}{a}$ are hard, and $e i \dot{y} a \ddot{a}$ are soft. The vowels $a i u$ sound as in German or Italian. $\ddot{a}$ is like $a$ in bare. $\stackrel{\circ}{a}$ like $o$ in tone. The $e$ sounds as $a$ in ale. 1) when forming an independent syllable, Ex : e-vig (eternal). 2) at the end of a syllable, Ex : ande (spirit). 3) In many monosyllabic words, inflections, derivations and compounds. $e$ sounds like $a i$ in $a i r .1$ ) before $f g l m n r$, when the next syllable of the same word is a consonant, as efter (after). 2) before $j$ as $n e j$ (no). 3) in many monosyllables, as elg (elk). These rules have many exceptions. $o$ has two sounds, 1) nearly as in move, when it constitutes a syllable by itself, or at the end of a word; also before the radical $m$, in nouns and adjectives; in all derivatives of words ending in 0 ; before $x$ and in various other forms of words. 2) o pas a lengthened sound before a final $f$, and a sharp sound (as in not) before $m n p r t$. - is mostly lengthened (nearly like the French eu in 7eur) as $d \ddot{0}$ (to die), or the sound is sharper and quicker, as för (for).

There are no diphthongs in this language.

## CONSONANTS.

$b$ retains its ordinary sound.
$c$ before $k$ stands for $k k$. Before $h$ it only occurs in the Swedish word Och (pronounced ock). Before the soft vowels it sounds like $s$, before the hard vowels like $k$.
$d$ sounds like our $d$. Before $t$ like $t$. As a final after $n$ almost like $n$. Before $j$ it is silent.
$f$ as in English. At the end of a word like $v$. In the middle of a word before $v$ of the same syllable, also after $l$ and $r$, it is mute Ex: kalfven (pron. kalven). $f$ and $v$ of separate syllables retain their original sounds. Ex: drifved (=driv-ved).
$g$ 1) as in good before a hard vowel, before $i$ and $e$ in a sharp unaecented syllable, at the end, and before a consonant of the same syllable. 2) like $y$ in $y e s$, before the soft vowels, and after $l$ and $r$. Ex: $g e$ (like $y a)$. Of this rule there are some exceptions. 3) like $c k$ when a $t$ follows. Ex: sagt (=sackt). 4) like $n g$ when a syllable ends in $g n$, as vagn (pronounced vangn). 5) before $j$ it is mute. Ex: gjort (pr. jort). $h$ is aspirated, before $j$ and $v$ it is mute.
$j$ like $y$ in yes. After $f m n p$ the $j$ is clearly artieulated and the preceding consonant has a very slight pronunciation. As a final letter it is somewhat like the German ch.
7 1) as in English. It is subject to the same rules as $g .2$ ) before the soft vowels it is like our ch. In kjortel the $k$ sounds like $t$.
$l$ before $j$ is mute.
$m$ as in English. The final $m$ sounds like two $m$ in those radical words which, on being inflected, are spelled with double $n$. Ex: lam (pron. lamm).
$\cdot q$ with $v$ after, sounds like $k v$.
$r$ and $s$ as in English. stj, sj, skj like $s h$. sk before soft vowels is likewise pronounced as $s h$.
$t$ as in English. $t j$ like $c h$ in church. tion, with a hard vowel before it, like schone, and after a consonant like shone.
$v$ as in English. The word von is pronounced fon as in German from whieh language it is borrowed.
$x$ is like $7 s$.
$z$ is pronounced like $s$.

## ANGLO－SAXON．

The Anglo－Saxon language developed itself from the Low－Germen（Old－Saxon）idiom，which was in－ troduced in England hy the Saxons in ar bafore the fifith century．In the ninth century this language was cul－ tiveted in writing，and obtained currency tbrough the agency of laws and translations．In the eleventh century，with the overthrow of the Sason dynasty and the commencement of the Norman rule，French became the language of the court and of judicial pro－ ceedings．The knowledge of the Auglo－Saxon language was coufined to the dopendent classes and to the re－ sidents of convents．In the thirteenth century，when this idiom once more became pnpular，it had received such an amount of foraign elements，and had lost so many native characteristics，that it could only he con－ sidered as a mixed dialent，out of which the modern Eoglish language was gradually formed．

| A a a | PRONUNCIATION． |
| :---: | :---: |
| B b b | a e i o u have the sane sound as in German or Itatian． |
| Cec | y has the same force as in Eng＊ |
| D $\boldsymbol{d} \mathrm{d}$ | lish． |
| Gee | $\mathfrak{x}$ sounds as a in that． |
| FFf |  |
| CJg | The Consonants have the following |
| b h h | c is in all instances hard lik |
| I 1 i | stands for kw． |
| l2 k k | $f$ hetween two vowels or as a final |
| Ll 1 | $g$ is alwops like the modern $g$ in |
|  | g is always like the modarn g in go．Decasionally 3 accurs instead |
|  | of g ．This letter takes the sound |
|  | y |
| 00 | cg is used instead of gg |
| P p p | $\mathbf{h}_{4}$ is a strong aspirate．As a final |
| $\mathbf{R} \boldsymbol{\mu} \mathbf{r}$ | sonant it resembles the German |
| S $\boldsymbol{r}$ | ch． |
| Tct | hw answers to the English wh．h is also found before the liquids |
| Uu u | $1, \mathrm{n}, 1$. |
| VP v | w snmatimes procedes r and l ． |
| X $x$ | $p$（tha）hard，like th in thick． |
|  | J（elli）soft，like th in this．Usually <br> （）is the initial and $\delta$ the fllal of |
|  |  |
| 円 6 dh | $\mathcal{Y}$ and $\mathcal{F}$ slands for and． |
|  | $\dagger$ etands for pæt． |
| blt | £ stands for ofde． |

Tho accent（＂）over a vowel denotes its lenglh．In words of equal spelling this accent points out the difference of sound and meening．For instance an （but，eke）ac（onk）．The clision of $m$ and $n$ is indi－ cated by o short line（－）over the antecedent lettor．

## IRISH．

It bas been a sulyect of toarned diseussions whe－ ther the lrish in the l＇agan period made use of the ancient alphnbets，which are known by the name of ogham，and are preserved in some sculptured mo－ numants and in various NSS．With the introduction of Christianity and the spreading of conventual edu－ cation the suhjoined Alphabet was formed，which is still employed in anliquarian publications ond in some works intonded for the lrish people．At the present time the Irish language is frequently written and printed in Ronan（linglist）cheracters．

| 2 al a | 2l） 115 |
| :---: | :---: |
| 13 b | Ny n |
| Ccek | 000 |
| ゆo d | $\boldsymbol{P} \boldsymbol{p} \mathrm{p}$ |
| eee | $\boldsymbol{R} \boldsymbol{\sim}$ |
| Fff | $s{ }^{1}$ |
| 35 g | $\tau \tau$ |
| 1 1 i | U $v^{\text {a }}$ |
| 1 l 1 | b） 11 |

## LIgatures．

Irish MSS，contain contractions of which the following are the most usual．

| $\pi$ | chd | $\dot{5}$ |
| :---: | :---: | :---: |
| $40^{\circ}$ | adh | \％0，行 |
| 4 E | e | 11 |
| \％ | air | 11）${ }^{6}$ |
| 4 | an | 111\％ |
| $\boldsymbol{4}$ | am | ii） |
| 7 | agur＇ | 1）0 |
| 4 | ar | T1 |
| b | v w | $p$ |
| bit | v W | 1315 |
| bp | b | 112 |
| cc |  | － |
| CC | g | 15 |
| C | ch | $\dot{\text { ¢ }}$ |
| 아 | d | T |
| ct | d | 电 |
| e | ea | \％ |
| edio | ea | －080 |
|  | h | rioe |
| 5 | g | 仿亏 |

## GOTHIC

| Form | Value | $\begin{array}{\|l\|l} \hline \begin{array}{l} \text { umm: } \\ \text { power } \end{array} \end{array}$ | $\begin{gathered} \text { Ligatures and } \\ \text { marks } \end{gathered}$ | Observations |
| :---: | :---: | :---: | :---: | :---: |
| $\boldsymbol{\beta}$ | a | 1 | [Ligatures | es |
| B | b | 2 | of frequent | spoken by the eastern Germans who were de- |
| r | g | 3 | Skeireing. | longs to the Indo-Germanic family, and as a dead |
| a | d | 4 | T for ht | language, it has been remarkably preserved in the most ancient relic of Germanie literature, It |
| e | e | 5 | M - NA | is the first of the sister-languages that was com- |
| u | q | 6 | M - min | mitted to writing, and has thus reached us in its original purity. Although the relics of Gothic |
| z | z | 7 | rk - nk | literature are very scanty, for beyond the frag- |
| h | h | 8 | $\mathrm{WN} \text { - NH }$ | mentary version of the Bible and the so called Skeireins, we possess but insignificant remains, |
| $\psi$ | $\mathrm{dh}(\mathrm{p})$ | 9 | M - na | there is enongh matter extant to afford' a perfect |
| ı | i | 10 | ns - NS | insight into the grammatical structure of the language. |
| k | k | 20 |  | The Gothic Alphabet has the adjoining 25 |
| $\boldsymbol{\lambda}$ | 1 | 30 |  | gnage was not cultivated by native grammarian |
| H | m | 40 | $\psi-\psi R$ | The invention of the Gothic characters is attributed to Uluhilas. |

To distinguisly the numerical letters from the other charaeters, the sign - or - - is placed above or below the number. In these cases the diæresis over the $i$ is omitted. Such letters receive a characteristie dot on the right and left. In the Neapolitan copy two dots, in the shape af a colon, are placed on both sides of the letter. Instead of dots the upright circnmflex is 1 sometimes to be found,

$$
\overrightarrow{\cdot B}(2), \quad: \vec{H}:(40), \quad \text {, }(60)
$$

The "catchword" is likewise enclosed between upright circumflexes, as $\boldsymbol{\in}$

## ORTHOGRAPHICAL SIGNS.

1. Diacritical signs only oceur in the diæresis over the initial $\ddot{I}$.
2. Punctuation. As a general rule the single stop represents the brief pause, and the double stop a longer pause. Yet this punctuation is not consistently carried out, such signs being often introdueed without purpose, and contrary to the sense. After a long pause a blanc space is left. In the other parts of the text the words are all strung together without division, and sometimes the new sentence is placed in an other line, in which case the initial letters are preceded by the sign $\longrightarrow$ or $\longrightarrow$
3. Thedivision of a word, written in two lines, is often made without any rule, and merely to fill the vacant spaee. The separation is in rare instances indieated by a hyphen, which then is marked at the beginning of the new line, and not at the end of the preceding one.
4. Quotathons are distinguished from the text by the single upright mark or the donble ff. This mark is eontinued in the margin before all the lines which contain the quotation.

In the Skeireins, which has single marks of quotation, the sign $\because$ is superadded in the first line, and the sign $\quad$ in the last.
5. Abbreviations. The elision of $n$ is marked by $\Rightarrow$ or $\longrightarrow$, and $m$ by or -2. These signs are generally used at the end of a line, when there is not enough spaee for the letters, but sometimes they also occur in the middle of a line. Real abbreviations are in some instances indicated by the sign, before and after the word, but generally the signs $\stackrel{\sim}{\longrightarrow}$ or ${ }^{2}$ are employed.

## RUNES

| Form | Name | Value | $\begin{aligned} & \text { Num: } \\ & \text { power } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| $F$ | Fé | f | 1 |
| M | Ur | u | 2 |
| $\stackrel{\rightharpoonup}{ }$ | Thurs | th | 3 |
| $才$ | 0 s | 0 | 4 |
| $R$ | Reid | r | 5 |
| Y | Kaun | k | 6 |
| * | Hagl | h | 7 |
| 卜 | Naud | n | 8 |
| 1 | Is | i | 9 |
| $\lambda$ | Ar | a | 10 |
| 4 | Sol | s | 11 |
| $\uparrow$ | Tyr | t | 12 |
| $B$ | Biörk | b | 13 |
| 1 | Laugr | 1 | 14 |
| $\Psi$ | Madr | m | 15 |
| $\lambda$ | Yr | y | 16 | an the insuffuciency of the Rumic alphabet was more sensibly felt, four additional letters were adopted, namely $e, g, p$ and $v$. Their names were no longer in conformity with the 16 archaic characters. Nor were new shapes given to these Runes. The simple expedient of adding one dot or two to the kindred letter was considered sufficient; therefore these sign bear the name of stungnar runir (dotted runes). The old letters adapted to this purpose are $i, k, b$ and $f$. When the Roman characters, along with the use of paper and parchment were adopted in the North, the Runes were increased by the addition of $d h, d, a e, o e, u e$, and subsequently by the superfluous letters $c, q, x$ and $z$. The latter signs may be regarded as spurious augmentations of the Runes. The same criticism scems to hold good in reference to the three double runes, by wish the numerals were increased to ninteen, and beyond which the numeral system of the Runes does not extend.

The 3 double-runes are,

$$
\begin{array}{lll}
\lambda \mathrm{al}, & \text { Arlaugr. } & 17 . \\
\mathcal{F} \mathrm{mm}, & \text { Tvimadr. } 18 . \\
\phi \mathrm{tt}, & \text { Belgthor. } 19 .
\end{array}
$$

To express the subsequent numbers, several Runcs were combined.

$$
\lambda \lambda(=\text { twice ten }) \text { denoted } 20, \dot{A} \mathbb{P}=21 . \lambda \lambda M=22 \text { and so on. }
$$




[^0]:    O The small pasangan Wo is placed below a letter standing in the third row.
    s a These omall diacriticsl marks̊ are pleced under auxiliary letters which stand in the third row.
    / The short Layar is employed when there is no room for the large Layar.
    Lhis mark is placed under the letters Wo and Ngo to form the vowels $u$ and 0 .

[^1]:    The Alphahet to the laft is used in liturgical and ancient works．With the improved cultivation of the language the latters have heen considerahly simplified，as is shown in the two Alphshets at the right．No notice has been taken here of the ancient names aud the accentuation of the letters．

