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THE STUDENTS' SERIES OF  
HISTORICAL AND COMPARATIVE  
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EDITED BY JOSEPH WRIGHT

COMPARATIVE GRAMMAR  
OF THE  
GREEK LANGUAGE

BY

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‘Nur das Beispiel führt zum Licht;  
Vieles Reden thut es nicht’

HENRY FROWDE  
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## PREFACE

IN writing this Grammar I have followed as far as possible the plan adopted in the other Grammars of the Series, my object being to furnish students with a concise account of the phonology, word-formation, and inflexions of the language. As the book is not intended for specialists<sup>1</sup> some more or less important details have been intentionally omitted. This is especially the case in regard to those dialects which have been preserved in such scanty fragments as to render it impossible for us to give a full account of their phonology. It must not, however, be assumed that these dialects have been entirely omitted; on the contrary, I have made considerable use of them in the phonology and elsewhere, wherever they have helped to throw light upon the development and history of the other dialects, such as Attic, Ionic, Doric, Aeolic.

Much of the time and labour spent on this Grammar has been taken up with selecting examples from the vast amount of material which I had collected to illustrate the sound-laws of the various dialects. This selection was necessary if I was to keep steadily in view the class of students for whom the Series of Grammars was originally planned, otherwise it would have been far easier to produce a Comparative Greek Grammar at least three times the size of the present one. In spite of this great compression of the material, I venture to think that I have included within a modest compass all that the ordinary

<sup>1</sup> In Greek Philology.

student will require to know about the subject, and I believe that the student who thoroughly masters the book will not only have gained a comprehensive knowledge of Comparative Greek Grammar in particular, but will also have acquired the elements of the Comparative Grammar of the Sanskrit, Latin, and Germanic languages. Examples have been more copiously used from these than from the other branches of the Indo-Germanic family of languages, because it can be safely inferred that the students who study this Grammar will already possess a practical knowledge of one or more of them.

This Grammar makes no pretence whatever of being an original and exhaustive treatise on the subject. In a book of this kind there is practically no scope for a display of either of these features, but I have contrived to bring within a comparatively small space a great deal of matter which will be new to students, and especially to those who are unable to study the subject in works written in foreign languages. All that I have attempted to do is to furnish our countrymen with a systematic and scientific treatment of Comparative Greek Grammar based upon the philological books and articles of the best workers of the present day in the wide field of Comparative Philology. Specialists in the subject will accordingly find little that is new in the book.

In Greek as in all the other Indo-Germanic languages there are still innumerable points which have never been satisfactorily explained, and not a few points about which there is a great divergence of opinion even among the best philologists. In all such cases I have carefully considered the various explanations which have been proposed, and have given those with which I agreed without, as a rule,

stating my authority, but where I was unable to agree with any of the proposed explanations I have generally preferred to state that the phenomenon in question has never been satisfactorily explained or that the explanation is unknown, rather than burden the book with attempted explanations with which I did not agree. I have generally omitted to give the authorities for various statements made throughout the Grammar, except in special cases where I thought it desirable to refer the student for further information to the sources which deal more fully with the case in point.

I gratefully acknowledge the help I have derived from the learned books and articles by the splendid band of German Philologists who have done so much to throw light upon the history and philology of the various Indo-Germanic languages. On pp. xiv-xvii will be found a select list of the books and articles which I have found most useful in the writing of this book, but a mere place in a list would not adequately express my indebtedness to the works of Brugmann, Hirt, Gustav Meyer, Osthoff, Johannes Schmidt, and Wackernagel. In conclusion I wish to express my sincere thanks to the Controller of the University Press for his great kindness in complying with my wishes in regard to special type; to Mr. A. Davidson, for his valuable collaboration in the making of the index verborum; and lastly to the press-reader, Mr. W. F. R. Shilleto, for his invaluable help with the reading of the proofs.

JOSEPH WRIGHT.

OXFORD,

*January, 1912.*

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## ABBREVIATIONS

<p>abl. = Ablative            Aeol. = Aeolic            Arcad. = Arcadian            Arm. = Armenian            Att. = Attic            Balt. = Baltic            Boeot. = Boeotian            Cret. = Cretan            Cypr. = Cyprian            dial. = dialect(s)            Dor. = Doric            El. = Elean            ep. = epic            Germ. = German            Goth. = Gothic            Gr. = Greek            Heracl. = Heracleean            Herod. = Herodotus            Hesych. = Hesychius            Hom. = Homer(ic)            Indg. = Indo-Germanic            instr. = instrumental            Ion. = Ionic            Lac. = Laconian</p>	<p>Lat. = Latin            Lesb. = Lesbian            Lith. = Lithuanian            loc. = locative            Locr. = Locrian            ME. = Middle English            NE. = New English            NHG. = New High German            M.Ir. = Middle Irish            OE. = Old English            OHG. = Old High German            O.Icel. = Old Icelandic            O.Ir. = Old Irish            O.Lat. = Old Latin            OS. = Old Saxon            Osc. = Oscan            O.Slav. = Old Slavonic            Pamph. = Pamphylian            prim. = primitive            Skr. = Sanskrit            Thess. = Thessalian            Umbr. = Umbrian            Ved. = Vedic</p>
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The asterisk \* prefixed to a word denotes a theoretical form, as  $\eta a$  from  $*\eta\sigma a$  = Indg.  $*\acute{e}sm$ ;  $\sigma\pi\alpha\iota\rho\omega$  from  $*\sigma\pi\alpha\rho\eta\omega$  = Indg.  $*sprj\acute{o}$ .

## TRANSCRIPTION

IN the following remarks on transcription we shall only deal with such points as are likely to present a difficulty to the student who is unfamiliar with the transcription used throughout this Grammar.

Long vowels are generally indicated by  $\bar{\quad}$ , as  $\bar{a}$ ,  $\bar{i}$ ,  $\bar{u}$ ; nasal vowels by  $\text{̃}$ , as  $\text{ã}$ ,  $\text{õ}$ ; close vowels by  $\text{.}$  or  $\text{˘}$ , as  $\text{e}$  or  $\text{è}$ ; vocalic liquids and nasals by  $\text{̄}$ , as  $\text{l̄}$ ,  $\text{m̄}$ ,  $\text{n̄}$ ,  $\text{r̄}$ ;  $\text{ö}$  = the  $\text{ö}$  in German **Götter**, and  $\text{ü}$  the  $\text{ü}$  in **Mütter**.

SANSKRIT:— $\text{ñ}$  = the palatal, and  $\text{ŋ}$  the guttural **ng**-sound.  $\text{j}$  = the **j** in NE. **just**. The dot  $\text{.}$  is placed under a dental,  $\text{n}$  and  $\text{ś}$ , to indicate the cerebral pronunciation of these consonants, as  $\text{ṭ}$ ,  $\text{ḍ}$ ,  $\text{ṇ}$ ,  $\text{ṣ}$ . The combination explosive +  $\text{h}$  is pronounced as a voiceless or voiced aspirate according as the first element is voiceless or voiced, as **th**, **ph**, **dh**, **bh**.  $\text{c}$  = the **ch** in NE. **church**.  $\text{ś}$  is the palatal and  $\text{ṣ}$  the cerebral **sh**-sound. Final  $\text{-ḥ}$  from older  $\text{-s}$  or  $\text{-ś}$  = **h** in NE. **hand**.

PRIMITIVE GERMANIC:—In the writing of primitive Germanic forms the signs  $\text{þ}$  = the **th** in NE. **thin**;  $\text{đ}$ ,  $\text{ḥ}$  the **th** in NE. **then**;  $\text{b}$  = a bilabial spirant which may be pronounced like the **v** in NE. **vine**;  $\text{g}$  = a voiced spirant, often heard in the pronunciation of German **sagen**;  $\text{x}$  = German **ch** and the **ch** in Scotch **loch**.

GOTHIC:— $\text{ái}$  = the **e** in NE. **get**;  $\text{ái}$  = nearly the **i** in NE. **five**;  $\text{aú}$  = the **o** in NE. **lot**;  $\text{áu}$  = nearly the **ou** in NE. **house**;  $\text{ei}$  =  $\bar{i}$  like the **ie** in German **sie** and nearly like the **ee** in NE. **feed**.  $\text{þ}$  = the **th** in NE. **thin**; medially after vowels  $\text{b}$ ,  $\text{d}$  = the **v** in NE. **living** and the **th** in **then**; medially between vowels  $\text{g}$  = prim. Germanic  $\text{g}$ , before another guttural it was pronounced like the **n**, **ng** in NE.

**think, sing**; **j** = NE. **y** in **you**; initially before and medially between vowels **h** = the **h** in NE. **hand**, but in other positions it was like the **ch** in Scotch **loch**; **lv** = the **wh** in the Scotch pronunciation of **when**; **q** = the **qu** in NE. **queen**.

LITHUANIAN:—**e** = the **e** in NE. **get**; **è** = long close  $\bar{e}$  like the first **e** in German **leben**; **o** = long close  $\bar{o}$  like the **o** in German **Bote**; **ë** = the diphthong **ie** or **ia**; **û** = the diphthong **uo** or **ua**; **y** =  $\bar{i}$  like the **ie** in German **sie** and nearly like the **ee** in NE. **feed**. **j** = the **y** in NE. **you**; **ž** = the **s** in NE. **measure** and the **j** in French **jour**; **c** = the **ts** in NE. **cats**; **cz** = the **ch** in NE. **church**; **sz** = the **sh** in NE. **ship**.

OLD SLAVONIC:—**ě** = a long close  $\bar{e}$  like the first **e** in German **leben**, but in some positions it was probably a diphthong **ja** or **ea**; **ĩ** = a very close **e** nearly like the **é** in French **été**; **ũ** = a very close **o** or **ö**; **y** was probably an unrounded **u**-sound. **j** = the **y** in NE. **you**; **c** = the **ts** in NE. **cats**; **č** = the **ch** in NE. **church**; **ch** = the **ch** in Scotch **loch**.



## INTRODUCTION

§ 1. Greek forms one branch of the Indo-Germanic family of languages. This great family of languages is usually divided into eight branches :—

I. **Aryan**, consisting of: (1) The Indian group, including Vedic (the language of the Vedas), classical Sanskrit, and the Prākṛit dialects. The oldest portions of the Vedas date at least as far back as 1500 B. C., and some scholars fix their date at a much earlier period, see Winternitz, *Geschichte der indischen Litteratur*, pp. 246–58. (2) The Iranian group, including (a) West Iranian (Old Persian, the language of the Persian cuneiform inscriptions, dating from about 520–350 B. C.); (b) East Iranian (Avesta—sometimes called Zend-Avesta, Zend, and Old Bactrian—the language of the Avesta, the sacred books of the Zoroastrians).

II. **Armenian**, the oldest monuments of which belong to the fifth century A. D.

III. **Greek**, with its numerous dialects (§ 2).

IV. **Albanian**, the language of ancient Illyria. The oldest monuments belong to the seventeenth century.

V. **Italic**, consisting of Latin and the Umbrian-Samnitic dialects. From the popular form of Latin are descended the Romance languages: Portuguese, Spanish, Catalanian, Provençal, French, Italian, Raetoromanic, Roumanian or Wallachian.

VI. **Keltic**, consisting of: (1) Gaulish (known to us by Keltic names and words quoted by Latin and Greek authors, and inscriptions on coins); (2) Britannic, including Cymric or Welsh, Cornish, and Bas Breton or Armorican (the

oldest records of Cymric and Bas Breton date back to the eighth or ninth century); (3) Gaelic, including Irish-Gaelic, Scotch-Gaelic, and Manx. The oldest monuments are the Old Gaelic ogam inscriptions which probably date as far back as about 500 A. D.

VII. **Germanic**, consisting of:—

(1) Gothic. Almost the only source of our knowledge of the Gothic language is the fragments of the biblical translation made in the fourth century by Ulfilas, the Bishop of the West Goths.

(2) **Scandinavian** or **North Germanic**, which is subdivided into two groups: (a) East Scandinavian, including Swedish, Gutnish, and Danish; (b) West Scandinavian, including Norwegian, and Icelandic.

The oldest records of this branch are the runic inscriptions, some of which date as far back as the third or fourth century.

(3) **West Germanic**, which is composed of:—

(a) High German, the oldest monuments of which belong to about the middle of the eighth century.

(b) Low Franconian, called Old Low Franconian or Old Dutch until about 1200.

(c) Low German, with records dating back to the ninth century. Up to about 1200 it is generally called Old Saxon.

(d) Frisian, the oldest records of which belong to the fourteenth century.

(e) English, the oldest records of which belong to about the end of the seventh century.

VIII. **Baltic-Slavonic**, consisting of: (1) The Baltic division, embracing (a) Old Prussian, which became extinct in the seventeenth century, (b) Lithuanian, (c) Lettic (the oldest records of Lithuanian and Lettic belong to the sixteenth century); (2) the Slavonic division, embracing: (a) the South-Eastern group, including Russian (Great

Russian, White Russian, and Little Russian), Bulgarian, and Illyrian (Servian, Croatian, Slovenian); (b) the Western group, including Czech (Bohemian), Sorabian (Wendish), Polish and Polabian. The oldest records (Old Bulgarian, also called Old Church Slavonic) belong to the second half of the ninth century A. D.

§ 2. The oldest Greek records exhibit clearly defined dialectal peculiarities which have been treated in some detail in the phonology and accidence of this book. For a detailed account of the Greek dialects and of the literature on the subject see Thumb, *Handbuch der griechischen Dialekte* (1909).

It is to Greek inscriptions that we must look for the purest forms of the various dialects. The literary language, especially that of the poets, is in many respects artificially constructed. Towards the end of the fifth century B. C. was gradually formed on the basis of the Attic dialect a literary language common to all Greeks, which almost entirely excluded the use of the other dialects from the later prose literature of antiquity. In this grammar Attic is taken as the standard and is treated in greater detail than the other dialects. It was formerly the custom to divide the Greek dialects into three groups:—Ionic-Attic, Doric, and Aeolic. This threefold division was both unsatisfactory and unscientific, because Aeolic was made to embrace all Greek dialects which were not either Ionic-Attic or Doric, whereas strictly speaking Aeolic proper only embraces the North-East group of dialects. The only really scientific classification of the dialects must be based on the lexicographical and grammatical peculiarities as exhibited on the oldest inscriptions. In this manner Greek can be conveniently divided into the following dialects or groups of dialects:—

I. **Ionic-Attic**: (1) Ionic including the dialects of (a) The central portion of the West Coast of Asia Minor together

with the islands of Chios and Samos; (b) The Cyclades: Naxos, Ceos, Delos, Paros, Thasos, Siphnos, Andros, Ios, Myconos; (c) Euboea. (2) The dialect of Attica.

II. **The Doric group** including the dialects of (1) Laconia together with the dialects of Tarentum and Heraclea; (2) Messenia; (3) Argolis and Aegina; (4) Corinth together with Corcyra; (5) Megara together with Byzantium and Selinus; (6) The Peloponnesian colonies of Sicily; (7) Crete; (8) Melos and Thera together with Cyrene; (9) Rhodes together with Gela and Acragas; (10) The other Doric islands in the Aegean: Anaphe, Astypalaea, Telos, Nisyros, Cnidos, Calymna, Cos, &c.

III. **The dialect of Achaia and its colonies.**

IV. **The dialect of Elis.**

V. **The North-West group** including the dialects of (1) Epirus, Acarnania, Aetolia, Phthiotis and of the Aenianes; (2) Locris and Phocis including Delphi.

VI. **The Arcadian-Cyprian group** including the dialects of (1) Arcadia; (2) Cyprus.

VII. **The North-East or Aeolic group** including the dialects of (1) Lesbos and the coast of Asia Minor adjoining; (2) Thessaly except Phthiotis; (3) Boeotia.

VIII. **The dialect of Pamphylia.**

# PHONOLOGY

## CHAPTER I

### PRONUNCIATION

§ 3. The account of Greek pronunciation given below is only approximately accurate. It is impossible to ascertain with perfect certainty the exact pronunciation of any language in its oldest period. The Greek letters had not always the same sound-value in all the dialects, and at different periods the same letter was often used to express different sounds. Many examples of this kind will be found in the phonology. For a detailed account of Greek pronunciation see Blass, *Über die Aussprache des Griechischen*, third edition (1888); and for the history of the alphabet see Kirchhoff, *Studien zur Geschichte des griechischen Alphabets*, fourth edition (1887), and Giles, *Manual of Comparative Philology*, second edition (1901), pp. 517-22, where other literature on the subject will also be found.

#### A. THE VOWELS.

§ 4. *a*, *i*, *v* were used to express both short and long vowels. When long they are expressed in this grammar by *ā*, *ī*, *v̄*. *ε*, *ο* were short, the corresponding long of which were expressed by *η*, *ω*.

§ 5. *a* had approximately the same sound as in German **Mann**, **Gast**, and northern English dial. **lad**, as *ἀγρός*, *τιμάω*, *δάκρυ*, *οἶδα*; *πατήρ*, *στατός*; *δέκα*, *τατός*; *βάλλω*, *πλατύς*; *θάρσος*, *ἔδρακον*.

$\bar{a}$  had the same sound as the **a** in English **father**, as  $\tau\acute{\iota}\mu\acute{\alpha}\tau\epsilon$ ,  $\mu\acute{\epsilon}\lambda\bar{\alpha}\varsigma$ ,  $\chi\acute{\omega}\rho\bar{\alpha}$ , Dor.  $\acute{\alpha}\delta\acute{\upsilon}\varsigma$ ,  $\acute{\alpha}\tau\tau\eta\rho$ ,  $\tau\acute{\iota}\mu\acute{\alpha}$ .

§ 6.  $\epsilon$  was a close vowel in Attic and Ionic like the  $\acute{e}$  in French **été**, as  $\acute{\epsilon}\delta\omega$ ,  $\acute{\phi}\acute{\epsilon}\rho\omega$ ,  $\omicron\acute{\iota}\delta\epsilon$ . That  $\epsilon$  was close in these dialects is shown by the contraction of  $\epsilon\epsilon$  to  $\epsilon\iota$  (§ 12) in words like  $\phi\iota\lambda\epsilon\acute{\iota}\tau\epsilon$  from  $\phi\iota\lambda\acute{\epsilon}\epsilon\tau\epsilon$ . In Aeolic and some Doric dialects the  $\epsilon$  was open, hence the contraction of  $\epsilon\epsilon$  to  $\eta$  in words like  $\phi\acute{\iota}\lambda\eta$ ,  $\acute{\eta}\chi\omicron\nu$  = Att.  $\phi\acute{\iota}\lambda\epsilon\iota$ ,  $\acute{\epsilon}\acute{\iota}\chi\omicron\nu$ ; and it must also have been open in Elean and Locrian where  $\epsilon$  partly became  $\alpha$  (§ 44, note 2).

$\eta$  was an open vowel like the **ai** in English **air** and the  $\grave{e}$  in French **père**, as  $Z\acute{\eta}\nu$ ,  $\tau\acute{\iota}\theta\eta\mu\iota$ ,  $\acute{\epsilon}\acute{\iota}\eta\varsigma$ ; Att. Ion.  $\mu\acute{\eta}\tau\eta\rho$ ,  $\acute{\epsilon}\phi\eta\nu\alpha$ ,  $\sigma\epsilon\lambda\acute{\eta}\nu\eta$  beside Dor.  $\mu\acute{\alpha}\tau\eta\rho$ ,  $\acute{\epsilon}\phi\bar{\alpha}\nu\alpha$ ,  $\sigma\epsilon\lambda\acute{\alpha}\nu\bar{\alpha}$ . The  $\eta$  from older  $\bar{a}$  was originally more open than the  $\eta$  = Indg.  $\bar{e}$ , the former was written **H** and the latter **E** on old Ionic inscriptions, but the two sounds fell together in Attic in the fifth century B. C., see §§ 50, 51.

§ 7. It cannot be determined whether  $\iota$  was an open vowel like the **i** in English **bit** or a close vowel like the **i** in French **fini**, as  $\acute{\iota}\mu\epsilon\nu$ ,  $\pi\acute{\omicron}\lambda\iota\varsigma$ ,  $\tau\rho\iota\sigma\acute{\iota}$ .

$\bar{i}$  was probably close like the **ie** in German **Vieh** (=  $\bar{f}\bar{i}$ ), and nearly like the **ee** in English **see**, as  $\acute{\iota}\mu\acute{\alpha}\varsigma$ ,  $\pi\acute{\iota}\theta\iota$ ,  $\pi\acute{\iota}\omicron\nu$ ,  $\kappa\lambda\acute{\iota}\nu\omega$ .

§ 8.  $o$  was a close vowel which is common in some English dialects in such words as **coal** ( $k\acute{o}l$ ), **foal** ( $f\acute{o}l$ ), and in the final syllable of such words as **fellow** ( $f\acute{e}l\acute{o}$ ), **window** ( $w\acute{\iota}nd\acute{o}$ ). It corresponded in quality but not in quantity to the **o** in German **Bote** ( $b\acute{o}t\acute{e}$ ), as  $\acute{\omicron}\kappa\tau\acute{\omega}$ ,  $\pi\acute{\omicron}\tau\epsilon\rho\omicron\varsigma$ ,  $\pi\rho\acute{\omicron}$ . That  $o$  was close in Attic and Ionic is shown by the contraction of  $oo$  to  $ou$  (§ 17) in words like  $\delta\eta\lambda\omicron\upsilon\mu\epsilon\nu$  from  $\delta\eta\lambda\acute{o}\omicron\mu\epsilon\nu$ .

$\omega$  was an open vowel like the **au** in English **aught**, as  $\delta\acute{\iota}\delta\omega\mu\iota$ ,  $\delta\acute{\omega}\tau\omega\rho$ ,  $\acute{\phi}\acute{\epsilon}\rho\omega$ .

§ 9. In Attic, Ionic and probably also in some other dialects  $\upsilon$  (=  $\bar{u}$ ) had the same sound as the **u** in French **tu**, as  $\acute{\epsilon}\rho\upsilon\theta\rho\acute{\omicron}\varsigma$ ,  $\zeta\upsilon\gamma\acute{\omicron}\nu$ ,  $\mu\acute{\epsilon}\theta\upsilon$ . The original **u**-sound (= the **u** in

English full) remained in Laconian, Boeotian, Lesbian, Thessalian, Arcadian, Cyprian and Pamphylian, but was generally written *ou* (see § 47, note 1).

$\bar{u} = \bar{ü}$  in those dialects which changed short *u* to *ü*, as *ἔφῦτον, θῦμός, μῦς*.

§ 10. The short diphthongs *αι, ει, οι; αυ, ευ, ου; υι = α, ε, ο + ι; α, ε, ο + υ; υ + ι*, but the original *u* quality was preserved in the second element of the *u*-diphthongs.

§ 11. *αι* was nearly like the *i* in English *five*, as *αἶθω, φέρεται; βαίνω, τέκταινα*.

§ 12. *ει* (= Indg. *ei*, § 58) had nearly the same sound as the *ai* in English *stain* until about the beginning of the fifth century B. C., it then became long close  $\bar{e}$  in Attic, Ionic and the milder Doric dialects, although the *ει* was retained in writing, as *εἴσι, λείπω, πείθω; κτείνω, φθείρω*. The *ει* was then used to express the long close  $\bar{e}$  which arose from contraction and from compensation lengthening, as *φίλει, τρεῖς, εἶχον* from *φίλεε, \*τρέγες, \*έ-εχον; εἶς = Cret. ἔνς, τιθείς, χαρίεις* from *\*τιθεντς, \*χαριφεντς*; this *ει* was written *ε* on the oldest Attic inscriptions, whereas prim. Greek *ει* was always written *ει*.

§ 13. *οι* had the same sound as the *oy* in English *boy*, as *οἶδα, φέρομεν, λύκοι*.

§ 14. *υι = üi* (see *υ* above) was a special Greek development and arose partly from the loss of an intervening consonant and partly from contraction, as *ιδύια, υἰός* from *\*φιδυσα, \*συιγος*, loc. sing. Hom. *πληθυῖ*.

§ 15. *αυ* had the same sound as the *au* in German *Haus*, and was nearly like the *ou* in standard English *house*, as *αὔξάνω, ταῦρος*.

§ 16. *ευ* had approximately the same sound as is often heard in the southern English dialect pronunciation of *house* (*eus*), *mouse* (*meus*), as *γεύω, πεύθομαι, Ζεῦ*.

§ 17. *ου* (= Indg. *ou*, § 62) = *ο + υ* (see *ο* above) until the fifth century B. C., it then became long close  $\bar{u}$  through the

intermediate stage of long close  $\bar{o}$ , although the *ou* was retained in writing. The *ou* was then used to express the long close  $\bar{o}$  later  $\bar{u}$  which arose from contraction and compensation lengthening, as *νοῦς*, *λύκου*, *δηλοῦμεν*, from *νόος*, &c.; *δουρός* from \**δορφός*; *φέρουσι* = Dor. *φέροντι*, *λύκουσ* = Cret. *λύκους*, *διδούς* from \**διδοντες*; this *ou* was written *o* on the oldest Attic inscriptions, whereas prim. Greek *ou* was always written *ou*.

§ 18. The original long diphthongs  $\bar{a}i$ ,  $\bar{e}i$ ,  $\bar{o}i$ ;  $\bar{a}u$ ,  $\bar{e}u$ ,  $\bar{o}u$  became short before consonants already in prim. Greek, as in *δραῖμεν*, *γραφεῖμεν*, *λύκοις*; *ναῦς*, *Ζεὺς*, *βοῦς*, from \**δραῖμεν*, &c. (§ 63). The second element of the long final diphthongs  $\bar{a}i$ ,  $\bar{e}i$ ,  $\bar{o}i$  ceased to be pronounced in the second century B.C., and in *ηι* probably much earlier. The modern mode of writing these diphthongs as  $\alpha$ ,  $\eta$ ,  $\omega$  (*θεᾶ*, *χώρα*, *τῆμη*, *λύκω*) only dates back to manuscripts of the twelfth century.

## B. THE CONSONANTS.

§ 19. The voiceless explosives  $\pi$ ,  $\tau$ ,  $\kappa$ , the voiced explosives  $\beta$ ,  $\delta$ , the nasals  $\mu$ ,  $\nu$  and the liquid  $\lambda$  had approximately the same sound-values as in English. The remaining consonants require special attention.

§ 20. In the oldest period of the language  $\gamma$  was in all positions a voiced explosive like the *g* in English *go* or *ago*, as *γένος*, *γυνή*, *ἀγρός*, *ἀμέλγω*, *ὀλίγος*, but already at an early period it became a voiced spirant in the popular dialect medially between vowels. The guttural nasal  $\eta$  (= the *n* in English *think* and the *ng* in *sing*) was expressed by  $\nu$  on the oldest inscriptions, but after the combinations  $\gamma\nu$ ,  $\gamma\mu$  had become  $\eta\nu$ ,  $\eta\mu$  in such words as *γίγνομαι*, *ἀγμός* (§ 155), it came to be expressed by  $\gamma$ , as *ἄγγελος*, *ἀγκών*, *ἄγχω*, *σφίγξ*.

§ 21. In the earliest historic period of the language  $\zeta$  was a compound consonant like the *zd* in English *blaz(e)d*



and arose from older **dz** by metathesis (§ 129, 8), as *ζυγόν*, *Ζεύς*, *ἐλπίζω*, *πεξός*, *ἄζομαι*. The **dz** must have become **zd** before the *ν* disappeared in words like *Ἀθήναζε* from \**Ἀθάνανζ-δε* (§ 153); cp. also forms like *διόζοτος*, *θεόζοτος* beside *διόσδοτος*, *θεόσδοτος*. ζ probably became **z** in Attic some time during the fourth century B. C. Some scholars assume that ζ was pronounced like the **s** (= **ž**) in English **measure**, **pleasure** already in the earliest period of the language.

§ 22. ρ had a strong trill formed by trilling the point of the tongue against the gums. It was voiceless initially (written ρ̣, see § 215), and medially after φ, θ, χ and probably after all other voiceless consonants. In other positions it was voiced like the Scotch **r** in **hard**, **bearing**, **bear**, as *ἐρυθρός*, *φέρω*, *ἀγρός*, *ἔαρ*.

§ 23. σ was voiced (= **z**) before voiced explosives, as *πρέσβυς*, *σβέννυμι*, *διόσδοτος*, *μίσγω*, but voiceless in other positions, as *στατός*, *θάρσος*, *λύκος*. It is doubtful how the Ionic -σσ- and Attic, Boeotian, Thessalian and Cretan -ττ- were pronounced in such words as Ion. *πίσσα*, *θάσσων*, *πρήσσων* beside Attic, &c. *πίττα*, *θάπτων*, *πράπτων* (cp. § 129, 7). Some scholars assume that the -σσ-, -ττ- was like the **th** in English **thin** or a kind of lisped **s**, whilst others think that the sound was the same as the **sh** in English **she**.

§ 24. φ, θ, χ were aspirated voiceless explosives like the **p**, **t**, **k** in German **paar**, **teil**, **kein** and in the Anglo-Irish pronunciation of **pair**, **tell**, **kill**, as *φέρω*, *νέφος*, *ὄφρυς*; *θερμός*, *πείθω*, *τίθημι*, *οἶσθα*; *χειμών*, *λείχω*, *ἄγχω*. θ became a spirant (= **th** in English **thin**) at an early period in some dialects. φ and χ also became spirants later, but φ, θ, χ must have been aspirated voiceless explosives at the time de-aspiration took place, cp. *πέφευγα*, *τρέφω*, *κέχυκα*: *φεύγω*, *θρέψω*, *χέω* (§ 115); and also when π, τ, κ became aspirated before a following rough breathing, cp. *ἀφ' ὧν*, *ἀνθ' οὐ*, *οὐχ ὅπως*.

§ 25. ξ, ψ probably represented the combinations κs, πs (often written χs, φs), as ξξω, λέξω, γράψω, λείψω.

§ 26. The spiritus asper ' corresponded to the English h in house, and was originally represented by H. It disappeared in the prehistoric period in Lesbian, Elean, the dialect of Gortyn, and the Ionic of Asia Minor. H then came to be used in Ionic to represent the ē from older ā (§ 51). At a later period the H was halved ɥ, ɣ, and the former was used for the spiritus asper and the latter for the lenis. From these fragments came the later signs ' and '.

§ 27. On ƒ and ɸ see § 120 and § 47, note 2.

#### ACCENT.

§ 28. By accent in its widest sense is meant the gradation of a word or word-group according to the degree of stress or of pitch with which its various syllables are uttered. Although strictly speaking there are as many different degrees of accent in a word or word-group as there are syllables, yet for ordinary purposes it is only necessary to distinguish three degrees, the principal accent, the secondary accent, and the weak accent or as it is generally termed the absence of accent. The secondary accent is as a rule separated from the principal accent by at least one intervening syllable.

All the Indo-Germanic languages have partly pitch (musical) and partly stress (expiratory) accent, but one or other of the two systems of accentuation always predominates in each language, thus in Greek and Vedic the accent was predominantly pitch, whereas in the oldest periods of the Italic dialects, and the Keltic and Germanic languages, the accent was predominantly stress. The effect of this difference in the system of accentuation is clearly seen by the preservation of the vowels in unaccented syllables in the former languages and by the weakening or loss of them in the latter. In the early period of the

parent Indg. language, the stress accent must have been more predominant than the pitch accent, because it is only upon this assumption that we are able to account for the origin of the various phenomena of quantitative ablaut (§§ 86-90). It is now a generally accepted theory that at a later period of the parent language the system of accentuation became predominantly pitch with which was probably connected the origin of qualitative ablaut (§ 83). This pitch accent was preserved in Greek and Vedic, but became predominantly stress again in the primitive period of nearly all the other languages. It had also become predominantly stress in Greek by about the beginning of the Christian era, see Kretschmer, *Kuhn's Zeitschrift*, xxx, pp. 591-600.

§ 29. The quality of the prim. Indg. syllable-accent was of two kinds, the 'broken' or acute and the 'slurred' or circumflex. The former was a rising and the latter a rising-falling accent. Long vowels with the acute accent were bimoric and those with the circumflex trimoric. All original long vowels including the first element of long diphthongs had the acute accent. The circumflex accent was unoriginal and arose in prim. Indo-Germanic in the following manner:—(a) From the contraction of vowels, as  $\cdot\tilde{a}s$  from  $\cdot\bar{a}\text{-es}$  in the nom. pl. of  $\bar{a}$ -stems,  $\cdot\tilde{o}s$  from  $\cdot\text{o-es}$  in the nom. pl. of  $\text{o}$ -stems,  $\cdot\tilde{oi}$  from  $\cdot\text{o-ai}$  in the dat. sing. of  $\text{o}$ -stems, cp.  $\theta\epsilon\hat{\omega}$ , see § 79. The circumflex also arose by vowel contraction within Greek itself, as  $\tau\rho\epsilon\hat{\iota}s$  from  $\ast\tau\rho\acute{\epsilon}\acute{\iota}\epsilon s$ ,  $\eta\chi\acute{o}\hat{u}s$  from  $\eta\chi\acute{o}\acute{o}s$ ,  $\phi\omicron\rho\epsilon\hat{\iota}\tau\epsilon$  from  $\phi\omicron\rho\acute{\epsilon}\acute{\epsilon}\tau\epsilon$ ,  $\phi\omicron\rho\hat{\omega}$  from  $\phi\omicron\rho\acute{\epsilon}\acute{\omega}$ . (b) When a short vowel disappeared after a long vowel, as in gen. sing.  $\theta\epsilon\hat{a}s$  from an original form  $\ast dhwes\bar{a}so$  (cp. § 92 (a)), cp. also  $\nu\acute{a}\hat{u}s$  from an original form  $\ast n\acute{a}wos$  beside  $Z\acute{e}\acute{u}s$  from  $\ast dj\acute{e}wos$ . (c) When a medial long diphthong lost its second element, as in acc. sing.  $\beta\hat{\omega}\nu$ , Vedic  $g\acute{a}m$  (= metrically  $gaam$ ),  $Z\eta\hat{\nu}$ , Vedic  $dy\acute{a}m$  (= metrically  $dyaam$ ), from  $\ast g\acute{o}m$ ,  $\ast dj\acute{e}m$ , older  $\ast g\acute{o}m$ ,  $\ast dj\acute{e}m$ . The

same change from the acute to the circumflex accent also took place in prim. Indo-Germanic when a nasal or liquid disappeared after a long vowel, as Lith. *akmũ* (= *•ō̃*), *stone* beside *ἡγεμών*; Goth. *tuggō* (= *•ō̃*), *tongue* beside *hana* (= *•ōn* or *•ēn*), *cock*; Lith. *motė* (= *•ē̃*), *wife* beside *πατήρ*. This distinction in the quality of the accent was preserved in final syllables containing a long vowel in Greek, Vedic, Lithuanian, and in the oldest periods of the Germanic languages. The old inherited difference in the quality of the syllable-accent was also preserved in Greek in final syllables which had not the principal accent, cp. loc. sing. *οἴκοι*, *φερομένοι* beside *Ἴσθμοῖ* and nom. pl. *οἴκοι*, *φερόμενοι* beside *ἰσθμοί*, *θεοί*; opt. *λείποι*, cp. Lith. *te-sukė*, *he shall turn*. The circumflexed trimoric and the acuted dimoric short diphthongs of final syllables had each lost a mora in prim. Greek before the trisyllabic law came into operation (§ 30).

§ 30. The word-accent in the parent Indg. language was free or movable, that is its position was not determined either by the number or the length of the syllables which a word contained. This freedom in the position of the principal accent of a word was better preserved in Vedic than in any of the other Indg. languages. The free accent was still preserved in prim. Germanic at the time when Verner's Law operated, whereby the voiceless spirants became voiced when the vowel immediately preceding them did not bear the principal accent of the word (§ 100, note 4). At a later period of the prim. Germanic language, the principal accent became confined to the first syllable of the word. And in like manner the principal accent of the word became confined to the first syllable in prim. Italic and Keltic, for the further history of the principal accent in these branches see Brugmann, *Grundriss*, &c., vol. i, second ed., pp. 971-80.

The word-accent became restricted in its freedom in

prim. Greek by the development of the so-called trisyllabic law whereby the principal accent could not be further than the third syllable from the end of the word nor further than the second syllable when the last syllable was originally long, as *ἀπότισις* from \**ἄποτισις*: Skr. *āpa-citiḥ*, *φερόμενος*, *φερομένοιο* from \**φέρομενος*, \**φέρομένοιο*: Skr. *bhāramāṇaḥ*, *bhāramāṇasya*, *γενέων* from \**γένεσων*: Skr. *jānasām*, *ἠδίων*: Skr. *svādīyān*, *ἠδίω* from \**σφᾶδι-ῶσα*, cp. Skr. *svādīyaśam*. Words of the type *πόλεως* from older *πόληος* by quantitative metathesis (§ 72) are not exceptions to the above law, which was older than the change of *ηο* to *εω*. At the time when this new system of accentuation came into existence the original trimoric long vowels and short diphthongs and the original bimoric short diphthongs *-oi*, *-ai*, *-ei* had each lost a mora (§ 29), cp. *γενέων* from Indg. \**génēsōm*, loc. sing. *φερομένοι* beside nom. pl. *φερόμενοι*; *φέρεσθαι*, *φέρομαι*.

The new system of accentuation was also extended to polysyllabic enclitic words in which more than the two or respectively three last morae were unaccented, as *πότερος*, *ποτέροιο* from \**ἔποτερος*, \**ἔποτεροιο*, *ἡμων*, *ἡμῖν* from \**ἡμων*, \**ἡμῖν* (cp. *μου*, *μοι*); *λίπωμεν*, *δέδορκα* from \**λι-πωμεν*, \**δεδορκα* (§ 38).

NOTE.—In the Lesbian dialect the accent was in all cases thrown as far back as the trisyllabic law would permit, as *βασιλευς*, *ἔρυθρος*, *θῦμος*, *Ζεὺς*, *πόταμος*, *σόφος* = Att. *βασιλεύς*, *ἐρυθρός*, *θυμός*, *Ζεὺς*, *ποταμός*, *σοφός*. For peculiarities of the Doric dialect see § 38, note.

§ 31. In words ending in a trochee with a long vowel or a diphthong in the penultimate, the highest pitch went from the second mora of the syllable to the first, as *ἦμα* from \**ἦμα*, *νῆες* from \**νάφες*, hence also *ἔστῶτες* from *ἔσταότες*.

§ 32. Dactylic oxytona or oxytona ending in a dactyl

became paroxytona, as *ἀγκύλος, αἰόλος, βοηδρόμος, γομφίος, θηρίον, καμπύλος, λογογράφος, ὄφρυος, ποικίλος, τελεσφόρος*, beside *αἰγοβοσκός, παχυλός, &c.* This law has numerous exceptions owing to analogical formations, as *δημοβόρος, αἰσχρολόγος* after the analogy of forms like *τελεσφόρος*; *ἀριστερός* after *δεξιτερός*; *αἰρετός, αἰνετός* after *μενετός, &c.*; *λελυμένος, τεταμένος* after *πεπληγμένος, πεφυγμένος*.

§ 33. But apart from the above changes and analogical formations like *χρῦσοῦς* for \**χρῦσους* after the analogy of *χρῦσοῦ, -ῶ*, and conversely *εὔνου, -ω* for \**εὔνοῦ, -ῶ* after *εὔνου*; *τιθεῖσι, διδοῦσι* for \**τίθεισι, \*δίδουσι* after *ιστάσι* from \**ιστάᾱσι* (§ 439); *έμός, τέός, έός* for \**έμος, \*τέφος, \*έφος* after \**μός, σός, φός*, the original Indg. accent generally remained in Greek when it did not come in conflict with the trisyllabic law, cp. *γένος, γένεος*: Skr. *jánaḥ, jánasaḥ, μέθυ*: Skr. *mádhū, θύγατερ*: Skr. *dúhitar, φράτορες*: Skr. *bhrátaraḥ, οὔθαρ*: Skr. *údhar, δώτωρ*: Skr. *dātā, πατήρ, πατέρα, πατράσι*: Skr. *pitā, pitāram, pitṛṣu*, Dor. *πώς, ποδός, ποσί*: Skr. *pāt, padāḥ, patsú, γενετήρ*: Skr. *janitā, κλυτός*: Skr. *śrutāḥ, έρυθρός*: Skr. *rudiráḥ, βαρύς*: Skr. *gurúḥ, ώκύς*: Skr. *āśúḥ, έπτά*: Skr. *saptā, &c.*

§ 34. As we have already seen (§ 28) there are strictly speaking as many grades of accent in a word as there are syllables. In Greek the principal accent of a word was indicated by the acute or circumflex and all other syllables were regarded as unaccented. And as papyri show an attempt was sometimes made to indicate such syllables by the grave accent, as in *θεόσδοτὸς*. But in ordinary Greek the grave accent became restricted to final syllables and merely denoted the absence of accent as contrasted with the acute, as *ἀνδρὶ τούτῳ, περὶ τούτου* beside *τούτου πέρι*.

§ 35. In sentence-accent we have to do with the accentual relations between the various members of a sentence or word-group. No word of whatever part of speech was

originally always accented in every position in the sentence. Any word could under certain conditions lose its independent accent and thus become enclitic. Certain particles were always enclitic already in the parent Indg. language, as \**qe* = *τε*, Skr. *ca*, Lat. *que*, \**ge* in *έμέγε* = Goth. *mi-k*, OE. *me-c*, \**de* in *οίκόν-δε*, &c. The original distinction between the accented and unaccented forms of the pronouns was still preserved in the oldest periods of the separate Indg. languages and in many of these languages it has been preserved down to the present day (§§ 397 ff.).

§ 36. The vocative was originally partly accented and partly enclitic or unaccented. It was accented at the beginning of a sentence and unaccented in other positions. The accented form became for the most part generalized in prim. Greek and thus came to have the same accentuation as the nominative. Vocatives like *άδελφε*, *θύγατερ*, *πόνηρε*, *μόχθηρε*, *Άγάμεμνον* probably represent the original forms \**άδελφε*, \**θυγατερ*, &c., cp. *πότερος* from \**ποτερος* (§ 30), and that forms like *Ζεῦ* = *Ζέυ*, *πάτερ*, *άνερ* for \**Ζευ*, \**πατερ*, \**άνερ* were accented after the analogy of the trisyllabic forms which were subject to the trisyllabic law. In Vedic the accent was always thrown back on to the first syllable when the sentence began with the vocative, as *άgnē*, *dēvi*, *vádhu*, *pítar*, beside nom. *agníh*, *fire*, *dēví*, *goddess*, *vadhúh*, *woman*, *pítá*, acc. *pítáram*, *father*.

§ 37. When one word defined another more closely in compounds the first element was generally accented and the second became enclitic, as *ανά-βασις*, *έν-υπνος*, *παρά-παν*, *πρό-δοσις*, *ύπέρ-μορον*, cp. Lat. *dénuo* = *dē novō*; *ά-δωρος*, *ά-λυτος*, *ά-φθιτος*, cp. OE. *ún-cūþ*, *unknown*; *Νεά-πολις*, *πάμ-παν*, cp. Lat. *decém-virī*; *έν-δεκα*, *δώ-δεκα* = Skr. *dvā-dāsa*, *έκατόμ-βη*, *δί-φρος*; *Διός-κουροι*, *Διός-δοτος*, *Έλλάς-ποντος*.

§ 38. In prim. Indo-Germanic the finite forms of the

verb were partly accented and partly enclitic. But when the one and when the other form was used, it is impossible to determine for all cases because the original system of verbal accentuation has not been preserved in the historic period of any of the languages. It was best preserved in Vedic in which the finite forms of the verb were always accented in subordinate sentences and at the beginning of principal sentences, but unaccented in all other positions, cp. **yádi pragácchati**, *if he goes forward*, **āpnóti imá lōkám**, *he obtains this world*, beside **prá gacchati**, *he goes forward*, **ní padyatē**, *he lies down*, **á-bharam** = ἔ-φερον, but the fixed rule that the finite forms were always accented in subordinate sentences, independently of their position in the sentence, was doubtless a special development within Vedic itself. The original rule in the parent Indg. language probably was that the finite forms were accented when they began the sentence, but unaccented when they came after the subject. But after negatives and other adverbs including the augment, they were partly accented and partly unaccented. The type οὗ φημι, ἀπό-λαβε, πρόσ-λαβε, ἔ-λαβον was probably the rule at the beginning of the sentence, and also after unaccented words, as παρ-έκ-δος, συμ-πρό-ες, παρ-έ-σχον, προσ-εἶχον.

The original rule that the finite forms were accented when they began the sentence was preserved in Greek in a few aorist imperatives like εἰπέ, ἐλθέ, εὐρέ, λαβέ (§ 540) beside ἄπειπε, ἄπελθε, ἔξευρε, ἀπόλαβε, and such imperative forms became generalized for all positions in the sentence, cp. also aor. mid. imperatives like λαβοῦ, λιποῦ, &c. In other respects it became the rule in prim. Greek to throw back the accent of the finite forms as far as was permitted by the trisyllabic law, as ἔφερον, φέρουσι, φερόμεθα, ἐφερόμεθα, ἐλιπόμην; ἵμεν, ἴδμεν (ἴσμεν), δίδομεν, δέδορκα for older \*ἰμέν, \*φιδμέν, \*διδομέν, \*δεδόρκα = Skr. imáh, vidmá, da-d-máh, dadárśa; λίπον, λίπομεν for



older \*λιπόν, \*λιπόμεν, &c. The original unaccented or enclitic forms then came to be accented after the analogy of the original accented forms. The original accented and unaccented forms were preserved side by side in εἶ, ἔστι, φῆς beside εἶμι, ἐστί, φημι, φησι, &c.

NOTE.—Doric had a processive accent both in verbs and nouns as compared with Attic, as ἐλάβον, ἐλύσαν, ἐστάσαν, ἐφιλάθην = Att. ἔλαβον, ἔλυσαν, ἔστησαν, ἐφίληθην; ἀγγέλοι, αἶγες, ἀνθρώποι, φιλοσόφοι = Att. ἄγγελοι, αἶγες, ἄνθρωποι, φιλόσοφοι.

§ 39. Oxytona preserved their accent in pausa, but otherwise became proclitic, as ἀνδρὶ τούτῳ. The only exception is the interrogative pronoun τίς which always preserved its accent.

§ 40. The accented word in combinations consisting of an accented word and an enclitic preserved its original accentuation when the combination was in accordance with the trisyllabic law, as φίλος τις, πολλάκις γε, καλός τις, ἀγαθός τις, φῶς τε, πατήρ μου, τιμῆς τε, ἀγαθὰ τινα, καλός ἐστι, ποταμοί τινες, αὐτός φησιν.

If the enclitic became accented by the trisyllabic law, the first word was accented in the same manner as it would be if followed by another originally accented word, as αὐτὸς πότερον, πατήρ ἡμεῶν, &c. Forms like ἤκουσά τινων, παῖδές τινων, καλῶν τινων, &c. for \*ἤκουσα τίνων, &c. were due to the analogy of ἤκουσά τινος, &c.; and conversely ἄλγεα ἡμῖν for \*ἄλγεά ἡμῖν after the analogy of ἄλγεα ἡμῖν.

In other cases where we should expect the original accentuation to be regulated by the trisyllabic law, we find nothing but deviations from the law. These deviations were due to the tendency in the language to preserve the position and individuality of the accent of the first word, and partly also to prevent two acutes following each other in successive syllables. The trisyllabic law only held good for

these combinations in so far as not more than two syllables were allowed to be unaccented after the principal accent :—

The first word, whether proparoxytone or properisponenon, got the acute accent on the final syllable in addition to its own accent, *ἄνθρωπόν τινα, ἄγγελός τις, πόλεμόν τινα, πρῶτός φησι, σῶμά τε, σῶμά που, σῶμά τινος*. This acute was the same which unaccented words had before enclitics, as *περί τε, ἀλλά τινες, εἶ που, &c.*

Paroxytona remained unchanged before monosyllabic enclitics containing a long vowel, as *ἄλλως πως, πολλάκις πως*.

Dissyllabic enclitics got a principal accent after paroxytona, as *φίλος ἐστί, τέχνης τινός, ἄλλων τινῶν*. This was the same accent which enclitics had at the beginning of a sentence, as *τινῶν μέν*. See Brugmann, *Griechische Grammatik*, pp. 157–9.

## CHAPTER II

### THE PRIMITIVE INDO-GERMANIC VOWEL-SOUNDS

§ 41. The parent Indo-Germanic language had the following vowel-system :—

Short vowels	a, e, i, o, u, ə
Long „	ā, ē, ī, ō, ū
Short diphthongs	ai, ei, oi, au, eu, ou
Long „	āi, ēi, ōi, āu, ēu, ōu
Short vocalic	ɪ, ɱ, ŋ, ʀ

NOTE.—1. The short vowels i, u, ə, the long vowels ī, ū, and vocalic ɪ, ɱ, ŋ, ʀ occurred originally only in syllables which did not bear the principal accent of the word.

The short vowels *i*, *u*, and vocalic *ɪ*, *ʊ*, *ɨ*, *ɜ* arose from the loss of *e* in the strong forms *ei*, *eu*, *el*, *em*, *en*, *er*, which was caused by the principal accent having been shifted to some other syllable in the word.

*ə*, the quality of which cannot be precisely defined, arose from the weakening of an original *ā*, *ē*, or *ō*, caused by the loss of accent. It is generally pronounced like the final vowel in German *Gabe*, *gift*.

*ī* and *ū* were contractions of weak diphthongs which arose from the strong forms *eiə*, *āi*, *ēi*, *ōi*; *euə*, *āu*, *ēu*, *ōu* through the loss of accent. The *e* in *eiə*, *euə* had disappeared before the contraction took place. Although the *əi*, *əu*, which arose from the weakening of long diphthongs, generally became contracted to *ī*, *ū*, there are phonological reasons for assuming that they occasionally became *ai*, *au* under certain unknown conditions and thus fell together with original *ai*, *au*, but the uncontracted forms were so rare in the parent Indg. language that no further account will be taken of them in this Grammar.

The diphthongs were falling diphthongs, that is the accent was on the first element (see § 98, note 4). Strictly speaking the combination *a*, *e*, or *o* + nasal or liquid is also a diphthong, because the history and development of such combinations are precisely parallel with those of the diphthongs *ai*, *ei*, *oi* and *au*, *eu*, *ou*. See Ch. IV.

2. Upon theoretical grounds it is generally assumed that the parent Indg. language contained long vocalic *ī*, *ū*, *ɨ*, *ɜ*, see § 68.

§ 42. In the following table is given the normal development of the prim. Indo-Germanic short and long vowels, short diphthongs, and short vocalic nasals and liquids in the more important languages, viz. Greek, Sanskrit, Latin, Old Irish, Gothic, Old English, Lithuanian and Old Slavonic :—

Indg.	Gr.	Skr.	Lat.	O.Ir.	Goth.	OE.	Lith.	O.Slav.
a	α	a	a	a	a	æ, (a)	a	o
e	ε	a	e, (o, i)	e, (i)	i, (ái)	e, (i)	e	e
i	ι	i	i	i, (e)	i, (ái)	i	i	ĩ
o	ο	a, (ā)	o, (u)	o, (u)	a	æ, (a)	a	o
u	υ	u	u	o, (u)	u, (aú)	u, (o)	u	ũ
ə	α	i	a	a	a	æ, (a)	a	o
ā	ā, (η)	ā	ā	ā	ō	ō	ō	a
ē	η	ā	ē	ī	ē	æ	é	ě
ī	ι	ī	ī	ī	ei	ī	y	i
ō	ω	ā	ō	ā	ō	ō	û	a
ū	υ	ū	ū	ū	ū	ū	ū	y
ai	αι	ē	ai, (ae)	ai, (ae)	ái	ā	ai, (è)	ě
ei	ει	ē	ei, (ī)	ē, (ia)	ei	ī	ei, (è)	i
oi	οι	ē	oi, (oe, ū)	oi, (oe)	ái	ā	ai, (è)	ě
au	αυ	ō	au	ō, (ua)	áu	ēa	au	u
eu	ευ	ō	ou, (ū)	ō, (ua)	iu	ēo	au	u
ou	ου	ō	ou, (ū)	ō, (ua)	áu	ēa	au	u
ṁ	α, (αμ)	a, (am)	em	im, (am)	um	um	iñ, (im)	ę, (ĩm)
ṅ	α, (αν)	a, (an)	en	in, (an)	un	un	iñ, (in)	ę, (ĩn)
l̥	αλ, (λα)	r̥, (ir, ur)	ol, (ul), al	li, (al, la)	ul, (lu)	ol	ĩl, (il)	ĩl, (lĩ, lũ)
r̥	αρ, (ρα)	r̥, (ir, ur)	or, (ur), ar	ri, (ar, ra)	aúr, (ru)	or	iř, (ir)	ĩr, (rĩ, rũ)

NOTE.—From the above table are omitted numerous details for which the grammars of the separate languages should be consulted.

## CHAPTER III

## THE GREEK DEVELOPMENT OF THE INDO-GERMANIC VOWEL-SYSTEM

## A. THE SHORT VOWELS.

## a

§ 43. Indg. **a** remained in Greek as also in the oldest periods of the other languages except Old Slavonic where it became **o**, as *ἀγρός*, Skr. *ájraḥ*, Lat. *ager*, Goth. *akrs*, *field*; *ἄγω*, Skr. *ájāmi*, Lat. *ago*, O.Ir. *agim*, *I drive, lead*, O.Icel. *aka*, *to drive*; *ἄγχω*, Lat. *ango*, cp. Goth. *agwus*, *narrow*; *ἄλλος*, Lat. *alius*, Goth. *aljis*, *other*; *ἄλς*, Lat. gen. *salis*, O.Ir. *salann*, Goth. *salt*, O.Slav. *solī*, *salt*; *ἄμφω*, Lat. *ambo*; *ἄνεμος*, *wind*, Lat. *animus*, *mind*, O.Ir. *anim*, *soul*, Skr. *ániti*, *he breathes*, Goth. *us-anan*, *to breathe out, expire*; *ἀντί*, Skr. *ánti*, *opposite, before*, Lat. *ante*, *before*, Goth. *and*, *along, on*, Lith. *añt*, *on*; *ἄξων*, Skr. *ákṣaḥ*, Lat. *axis*, OHG. *ahsa*, Lith. *aszis*, *axle*; *ἀπό*, Skr. *ápa*, Lat. *ab*, Goth. *af*, *from, away from*; *ἀρώ*, Lat. *aro*, Goth. *arja*, Lith. *ariù*, *I plough*, cp. O.Ir. *arathar*, *plough*; *δάκρυ*, Lat. *dacruma*, *lacruma*, Goth. *tagr*, *tear*; *κάπρος*, *wild boar*, Lat. *caper*, O.Icel. *hafr*, *he-goat*; *οἶδα* = Skr. *véda*.

## e

§ 44. Indg. **e** (=Skr. **a**, Lat. **e**, (**o**, **i**), O.Ir. **e**, (**i**), Goth. **i**, (**aí**), OE. **e**, (**i**), Lith. O.Slav. **e**) generally remained in Greek, as *γένος*, Skr. *jánaḥ*, Lat. *genus*, *race, generation*; *γένυς*, Skr. *hānuḥ*, *jawbone*, Lat. *gena*, Goth. *kinnus*, *cheek*; *δέκα*, Skr. *dáśa*, Lat. *decem*, Goth. *taíhun*, *ten*; *ἐγώ*, Skr. *ahám*, Lat. *ego*, Goth. *ik*, *I*; *ἕδος*, Skr. *sádaḥ*, *seat*, Lat. *sedēre*, OE. *sittan*, *to sit*; *ἕδω*, Skr. *ádmi*, Lat. *edo*, OE. *ete*, *I eat*; *ἔνος*, Skr. *sánaḥ*, Lat. *senex*, O.Ir. *sen*, Goth.

sineigs, Lith. *sēnas*, *old*; ἔπεται, Skr. *sácatē*, Lat. *sequitur*, *he follows*, Lith. *sekù*, *I follow*; ἐπτά, Skr. *saptá*, Lat. *septem*, O.Ir. *secht*, Goth. *sibun*, Lith. *septynì*, *seven*; ἔρπω, Skr. *sárpāmi*, Lat. *serpo*, *I creep*; ἐστί, Skr. *ásti*, Lat. *est*, Goth. *ist*, Lith. *ėsti*, *is*; κλέπτω, Lat. *clepo*, Goth. *hlifa*, *I steal*; μέσσος, μέσος from \*μέθjos, Skr. *mádhyaḥ*, Lat. *medius*, Goth. *midjis*, *middle*; πέντε, Skr. *páñca*, Goth. *fimf*, Lith. *penkì*, *five*; περί, Skr. *pári*, *around*, *about*, Lat. *per-*, O.Ir. *er-*, Goth. *faír-*, Lith. *per-*, *through*; τε, Skr. *ca*, Lat. *que*, *and*; φέρω, Skr. *bhárāmi*, Lat. *fero*, O.Ir. *berim*, O.E. *bere*, O.Slav. *bera*, *I bear*; Cret. *τρέες*, Att. *τρεις*, Skr. *tráyah*, from \*tréjes, *three*; νέ(φ)ος, Skr. *návah*, Lat. *novos*, -us, Goth. *niujis*, *new*; ρέ(φ)ει, Skr. *srávati*, *it flows*; ἄγε, Lat. *age*; δέδορκα = Skr. *dadárśa*; ἔφερον = Skr. *ábharam*, λύκε = Skr. *vḷka*, Lat. *lupe*; γένεος = Skr. *jánasaḥ*, Lat. *generis*; πατέρες = Skr. *pitáraḥ*; φέρετε = Skr. *bháratha*, Goth. *baíriþ*, O.Slav. *berete*.

NOTE.—1. It is difficult to account for the *ι* beside *ε* in ἴσθι : ἐστί, ἰστίη, ἰστιά : ἐστιά, κίρνημι : κεράννῦμι, κρίμνημι : κρεμάννῦμι, ὀριγνάομαι : ὀρέγω, Hom. πίσυρες : Att. τέτταρες, πίτηνημι : πετάννῦμι, σκιδόνημι : σκεδάννῦμι, χθιζός : χθές, χίλιοι from \*χίσλιοι : χείλιοι from \*χέσλιοι = Lesb. χέλλιοι ; ἵππος : Lat. *equos*. In some of the above examples the *ι* : *ε* may be due to vowel-assimilation, cp. §§ 73-4.

2. *ε* became *α* before *ρ* in the dialects of Elis and Locris, as *φάργον*, *πατάρα*, *φάρην* = *ἔργον*, *πατέρα*, *φέρειν*.

3. *ε* became *ι* before guttural vowels in Boeot. Cypr. Pamph. Thessal. and some of the Doric dialects (Arg. Cret. Heracl. and Lac.), as *θιός* = *θεός*; Boeot. *φέτια* = *ἔτεα*; Cret. *ἰωντι* = Att. *ἔωσι*.

### i

§ 45. Indg. *i* remained in Greek and generally also in the oldest periods of the other languages, in Latin it became *e* finally (*mare* beside pl. *maria*) and before *r* from older *s*

(gen. cineris beside nom. cinis), as δι- from \*δφι-, Skr. dvi-, Lat. bi-, OE. twi-, two; Hom. φίδμεν, ἴδμεν, Skr. vidmá, OE. witon, we know, cp. Lat. vidēre; ἴμεν = Skr. imáh, cp. Lat. itum; Dor. acc. ἱν, him, Lat. Goth. is, Lith. jis, he; μινύθω, Skr. minōmi, Lat. minuo, I lessen, Goth. mins, less; πίσσα, πίττα from \*πικja, Lat. pix, Lith. pìkis, pitch; τίς, Lat. quis, who?; loc. pl. τρισί, Skr. triṣú, Lat. tribus, O.Ir. trib, Goth. þrim, Lith. trisè, tribus; ἡδιστος, Skr. svádiṣṭhaḥ, Goth. sutists, sweetest; ἴσταμι, ἴστημι = Skr. tíṣṭhāmi, cp. Lat. sisto; εἰμί, Skr. ásmi, Lith. esmì, am; ἐστί, Skr. ásti, Lith. ėsti, is; Dor. φέροντι = Skr. bháranti; πόλις, πόλιν, cp. Skr. áviḥ, acc. ávim, sheep, Lat. turris, turrim; loc. sing. μητρὶ = Skr. mātári, Lat. māt̄re, O.Slav. materi.

## o

§ 46. Indg. o (Skr. a, also ā in open syllables, Lat. O.Ir. o, (u), Goth. Lith. a, O.Slav. o) remained in Greek, as γόμφος, nail, bolt, Skr. jámbhaḥ, tooth, OE. camb, comb; δέδορκε = Skr. dadárṣa; δόμος, Lat. domus; ὄις, Skr. áviḥ, Lat. ovis, Lith. avìs, sheep, cp. Goth. awistr, sheep-fold; ὀκτώ, Skr. aṣṭá, aṣṭāú, Lat. octō, O.Ir. ocht, Goth. ahtáu, eight; ὄς, Skr. yáḥ, who; dual ὄσσε, cp. Lat. oculus, Lith. akìs, O.Slav. oko, eye; πόρκος, Lat. porcus, O.Ir. orc, OHG. farah, pig, boar; πόσις, Lith. pàts, husband, Skr. pátiḥ, master, cp. Lat. potis; πρότερος, Skr. kataráḥ, Goth. lvaþar, Lith. katràs, which of two?; πρό, Skr. prá, before, Lat. pro-, O.Ir. ro-, Goth. fra-, Lith. pra-, O.Slav. pro-; τό, Skr. tád, Goth. þat-a, O.Slav. to, the, this; λύκος = Skr. vṛkaḥ, Lat. lupus, wolf; γένος, Skr. jánaḥ, Lat. genus, race, generation; ζυγόν, Skr. yugám, Lat. jugum, yoke, Dor. φέρομες, Skr. bhárāmaḥ, Goth. baíram, we bear; Dor. φέροντι, Skr. bháranti, Lat. ferunt, Goth. baírand, they bear; ἔφερον = Skr. ábharam.

## u

§ 47. Indg. **u** remained in the oldest Greek and generally also in the oldest periods of the other languages, but already at an early period it became **ü** in Attic and Ionic and probably also in many of the other dialects, as *έρυθρός*, Skr. *rudhiráh*, Lat. *ruber*, *red*; *ζυγόν*, Skr. *yugám*, Lat. *jugum*, Goth. *juk*, *yoke*; *θυγάτηρ*, Skr. *duhitár*-, Goth. *daúhtar*, Lith. *duktė*, *daughter*; *κλυτός*, Skr. *śrutáh*, Lat. *in-clutus*, *renowned*; gen. *κυνός* = Skr. *śúnaḥ*, Lith. *szuñs*, cp. OE. *hund*, *hound*; *νύός*, Skr. *snuṣṣá*, Lat. *nurus*, *daughter-in-law*; *βαρύς*, Skr. *gurúḥ*, Goth. *kaúrus*, *heavy*; *δάκρυ*, Lat. *dacruma*, *lacruma*; *ἡδύς* = Skr. *svādúḥ*; *μέθυ*, *wine*, Skr. *mádhu*, Lith. *medùs*, *honey*, OE. *medu*, *mead*.

NOTE.—1. The original **u**-sound seems to have been regularly preserved in the Laconian, Boeotian, Lesbian, Thessalian, Arcadian, Cyprian and Pamphylian dialects. In these dialects it is mostly represented by *ov* (sometimes also by *o*) after the introduction of the Ionic alphabet at about the end of the fifth century B. C. In Boeotian **u** became *ju* (*iov*) after dental explosives and *λ*, *ν*, *σ*.

2. We have no means of determining the approximate date at which **u** became **ü** (= the **u** in French *tu*) in Attic and Ionic. But it is certain that Ionic *v* was no longer pronounced like the **u** in English *put* at the end of the fifth century B. C., otherwise the Boeotians, &c., would not have taken *ov* to represent their **u**-sound, when they adopted the Ionic alphabet. Original **u** must have become a front vowel (**ü**) in Attic at the period of the oldest inscriptions, because before *ψ* the guttural tenuis is always represented by **K** and never by **φ**, see Meistershans, *Grammatik der att. Inschriften*, pp. 3, 22. On the other hand the Attic and Ionic change of **u** to **ü** must be older than the **ū** (written *ov*) which arose from older *oo*, *eo* (§ 80), otherwise this **ū** would have fallen together with original Indg. **ū** (§ 55), cp. gen. sing. *λόγου* from *\*λόγοο*, *γένους*, older *γένεος* from *\*γένεσοο* = Skr. *jánasaḥ*, beside *μῦς* = Skr. *múṣ*-, Lat. OE. *mūs*.



§ 48. Indg. initial **u** appears as **ú**. It is difficult to account for this change unless we may assume that **u** became **ú** through the intermediate stages **ü**, **íu**, **jú** (cp. § 127), cp. the development of Old French **u** in words like NE. **use** (**júz**, northern dial. **íuz**), ME. **úsen** from O.Fr. **user**:—**ὔδρος**, **ὔδρα**, *water serpent*, Skr. **udráh**, *water animal*, Lith. **údra**, *otter*; **ὔπερ**, Skr. **upári**, Lat. **s-uper**, Goth. **ufar**, *over, above*; **ὔστερος**, Skr. **úttarah**, *latter, later*.

ə

§ 49. ə, which arose from the weakening of original **ā**, **ē**, **ō** (§ 87), became **a** in all the Indg. languages, except the Aryan branch where it became **i**, as **πατήρ**, Lat. **pater**, O.Ir. **athir**, Goth. **fadar**, Skr. **pitár-**, *father*; **στατός**, Lat. **status**, Skr. **sthitáh**, *standing*, Goth. **staps**, *place*; **θυγάτηρ**, Skr. **duhitár-**, *daughter*; **παν-δαμάτωρ**, cp. Skr. **damitár-**, *tamer*; **κάματος** = Skr. **śamitáh**; **ἄνεμος**: Skr. **ániti**, *he breathes*; **γενέτωρ** = Skr. **janitár-**; **κρέας**, Skr. **kravíh**, *flesh, raw meat*; nom. acc. neut. pl. **φέροντα** = Skr. **bháranti**.

NOTE.—In forms like **θετός**, Skr. **hitáh**, **τίθμεν** for **\*τίθαμεν**: **τίθημι**; **δοτός**, Lat. **datus**, **δίδομεν** for **\*δίδαμεν**: **δίδωμι** the **ε**, **ο** was due to qualitative assimilation to the **η**, **ω**, but this does not account for the **ε** in the second syllable of dissyllabic heavy bases like **γενέτωρ**: Skr. **janitár-**.

## B. THE LONG VOWELS.

ā

§ 50. Indg. **ā** (= Skr. Lat. O.Ir. **ā**, Germanic Lith. **ō**, O.Slav. **a**) remained in all the Greek dialects except Ionic and Attic, as Dor. **ἄδύς**, Skr. **svādúh**, Lat. **suāvis**, OS. **swōti**, *sweet*; Dor. **μάτηρ**, Skr. **mātár-**, Lat. **māter**, O.Ir. **māthir**, OE. **mōdor**, O.Slav. **mati**, *mother*, Lith. **motė**, *wife*; Dor. **φᾱγός**, *a kind of oak*, Lat. **fāgus**, OE. **bōc-trēow**, *beech*;

Dor. φράτηρ, *member of a clan*, Skr. bhrātar-, Lat. frāter, O.Ir. brāthir, OE. brōþor, *brother*, Lith. broterėlis, *little brother*; Dor. ἔβαν, Skr. āgām, *I went*; Dor. ἔσταν, Skr. ásthām, *I stood*, Lat. stāre, *to stand*, cp. OE. stōd, *I stood*; nom. acc. sing. Dor. τῖμά, τῖμάν, cp. Skr. áśvā, áśvām, *mare*; ending of the third pers. dual active Dor. -ταν = Skr. -tām.

§ 51. Indg. ā became η (=long open ē) in prim. Attic and Ionic. In the oldest historic period this η was more open than the η = Indg. ē (§ 52), the former being written Η and the latter Ε in the oldest Ionic inscriptions. η from older ā remained in Ionic, but became ā again in Attic after ρ, ε, ι, as Dor. ἄδύς, ἴσταμι, μάτηρ, φάμί, ἔβαν, τῖμά = Attic, Ionic ἡδύς, ἴστημι, &c. Attic πράττω, χώρα, γενεά, νεανίας, βία, καρδιά = Ionic πρήσσω, χώρα, γενεή, νεηνίης, βίη, κραδίη. But η did not become ā after ρ in Attic when an intervening f had disappeared, as Att. κόρη, Ion. κούρη, Arcad. κόρφα; Att. δέρη, Ion. δειρή, Lesb. δέρρα, from \*δέρφα.

## ē

§ 52. Indg. ē (= Skr. ā, Lat. Goth. ē, O.Ir. ī, Lith. è, OE. æ, O.Slav. ě) generally remained in Greek, as ἄημι from \*ἄ-φη-μι, Skr. vāmi, *I blow*, Lith. vėjas, *wind*; Hom. ἦα, Skr. āsam, *I was*; ἡμί-, Skr. sāmí, Lat. sēmi-, *half*; acc. Ζῆν = Skr. dyām, *sky*; μῆν, Lat. mēnsis, O.Ir. mí, *month*, Skr. mās-, Goth. mēna, Lith. mėnu, *moon*; πλήθω, *I am full*, Skr. prātāḥ, Lat. im-plētus, *full, filled*; τίθημι = Skr. dádhāmi, cp. Lith. dėti, *to put, place*; εἶης, Skr. syāḥ, O.Lat. siēs, *thou mayest be*.

NOTE.—1. In the oldest Attic and Ionic η = Indg. ē was closer than η from Indg. ā (§ 51), the former being written Ε and the latter Η in the oldest Ionic inscriptions, as ΜΕ = Dor. μή, but ΔΗΜΟΣ = Dor. δᾶμος. The two sounds fell together in Attic in the fifth century B. C.

2. Indg. ē became a very open sound (ǣ) in the dialect of Elis, which was often written ā, as μά, πατάρ = μή, πατήρ. In Boeotian, Thessalian and Pamphylian it became long close ē which was written ει (§§ 12, 58) after the introduction of the Ionic alphabet in the fifth century B. C., as Boeot. Thess. ἔθεικα, μεί, Pamph. Μεγάλεις = ἔθηκα, μή, Μεγάλης.

## ī

§ 53. Indg. ī remained in Greek and generally also in the oldest periods of the other languages, as *īmās*, *leathern strap*, Skr. *sīmān-*, *parting of the hair on the top of the head*, OE. *sīma*, *rope, cord*; *ītéā*, *willow*, Lat. *vītis*, *vine*, Lith. *výti*, O.Slav. *viti*, *to wind, plait*; *íos* from \**ϕισος*, Lat. *vīrus*, O.Ir. *fī*, *poison*; *īs* = Lat. *vīs*; *πίθι*, *drink thou*, Skr. *pītáḥ*, *having drunk*, O.Slav. *piti*, *to drink*; *πιί(ϕ)ος*, *πί(ϕ)ων*, Skr. *pīvan-*, *fat, plump*; *κορακίνος*, cp. Skr. *navīnaḥ*, *new*, Lat. *haedīnus*, Goth. *gáiteins*, *belonging to a goat*.

## ō

§ 54. Indg. ō (= Skr. O.Ir. ā, Lat. and Germanic ō, Lith. ū, O.Slav. a) remained in Greek, as acc. sing. Dor. βών = Skr. *gām*; *γνωτός*, Skr. *jñātáḥ*, Lat. (g)nōtus, O.Ir. *gnāth*, *known*; *δίδωμι* = Skr. *dádāmi*; *δῶρον*, Skr. *dānam*, Lat. *dōnum*, O.Ir. *dān*, *gift*, Lith. *dūti*, O.Slav. *dati*, *to give*; *δύω*, Vedic *duvā*, *dvā*, O.Ir. *dā*, *two*; *πέπωκα*, Lat. *pōtāvi*, *I have drunk*, Skr. *pāti*, *he drinks*; *πλωτός*, *swimming*, Goth. *flōdus*, OE. *flōd*, *flood, tide*, cp. Lat. *plōrāre*, *to weep aloud*; Dor. πός (Att. Ion. πούς, the *ou* of which has never been satisfactorily explained), Skr. *pāt*, OE. *fōt*, *foot*; *ώκός*, Skr. *āśūḥ*, *quick*, Lat. *ōcior*, *quicker*; *δώτωρ*, Skr. *dātā*, *giver*; nom. acc. dual of *o*-stems *λύκω* = Vedic *vṛkā*; *τέκτων*, Skr. *tākṣā*, *carpenter*; *φέρω* = Skr. *bhārāmi*; *φερέτω* = Skr. *bhāratād*, cp. O.Lat. *estōd*.

NOTE.—ō became ū (written *ou*) in the Thessalian dialect, as *ἔδουκε*, *γνούμā* = Att. *ἔδωκε*, *γνώμη*.

## ū

§ 55. Indg. ū remained in the oldest Greek and generally also in the oldest periods of the other languages, but already at an early period it became ū̄ in those dialects which changed u to ü (§ 47), as ἔφῦτον, Skr. ábhūtam, *ye two were*, cp. Lith. búti, *to be*; θῦμός, *courage, passion*, Skr. dhūmáh, Lat. fūmus, Lith. dūmai (pl.), *smoke*; σκῦτος, Lat. scūtum, *shield*; μῦς, Skr. múṣ, Lat. OE. mūs, *mouse*; νῦν, Skr. OE. nū, *now*; ὄφρῦς, Skr. brūḥ, OE. brū, *eyebrow*; πύθω, *I make to rot*, Skr. pūyati, *he stinks*, Lith. púti, *to rot*, OE. fūl, *foul, rotten*; ὕς, Lat. sūs, OE. sū, *sow, pig*, Skr. sū-karáḥ, *boar*.

## C. THE SHORT DIPHTHONGS.

## ai

§ 56. Indg. ai (= Skr. ē, Lat. O.Ir. ae (older ai), Goth. ái, OE. ā, Lith. ai, (ë), O.Slav. ě) generally remained in Greek, as αἶθω, *I burn*, Skr. édhaḥ, *firewood*, Lat. aedēs, *sanctuary*, originally *fire-place, hearth*, O.Ir. aed, *fire*, OE. ād, *funeral, pile*; αἰών, Lat. aevum, Goth. áiws, *life-time, eternity*; λαῖός, Lat. laevus, *left*; σκαῖός, Lat. scaevus, *left*; fem. nom. pl. ταί = Skr. té, Lat. is-tae; φέρεται, φέρονται = Skr. bháratē, bhárantē.

NOTE.—In Boeotian ai became ae in the fifth century B. C., which a century later became η, and then still later long close η (written ει).

§ 57. The combination -αιφ- became -ā- before ε- and ι- vowels in Attic and Ionic, as δᾶήρ from \*δαιφήρ, Skr. dēvár-, Lat. lēvir, Lith. dėveris, *brother-in-law*; αἰεί, Cypr. αἰφεί, beside αἰών; κᾶει, κλᾶει from \*καίφει, \*κλαίφει, beside καίω, κλαίω; Ion. αἰσσω, Att. ᾄττω from \*αἰφικῶ. Forms like κᾶω, κλᾶω were new formations due to levelling out the ā in forms like κᾶει, κλᾶει. In Att. αἰεί the ai was due to the influence of αἰών. See §§ 75, 125.

## ei

§ 58. Indg. **ei** (= Skr. **ē**, O.Lat. **ei**, later **ī**, O.Ir. **ē**, (**ia**), O.E. **ī**, Goth. **ī** (written **ei**), Lith. **ei**, (**ë**), O.Slav. **i**) remained in Greek until about the beginning of the fifth century B. C., when it became long close **ē** in Attic, Ionic and the milder Doric dialects, although **ει** was retained in writing. This accounts for the writing of **ει** for older **εε** in such forms as Att. **τρεις** from \***τρέεις** = Skr. **tráyaḥ**. The old diphthongal pronunciation was still preserved at the time when vowel contraction took place in such forms as Att. **ᾔδω** = **αείδω**, **νικᾶς** = **νικάεις**, as compared with **φᾶνός** = **φαινός** from \***φαφεινός**, **νικᾶν** = **νικάειν** from \***νικάειν**. Examples are:—**δείκνυμι**, *I show*, Lat. **dīco**, *I say*, Goth. **ga-teihan**, *to tell, announce*; **εἶσι**, Skr. **éti**, Lith. **eīti**, **eīt**, *he goes*, Lat. **īs**, *thou goest*; **λείπω**, Lith. **lėkù**, *I leave*, Goth. **leihvan**, *to lend*; **πέιθω**, Lat. **fido**, cp. O.E. **bīdan**, *to remain*; **στείχω**, cp. O.E. **stīgan**, *to rise*.

NOTE.—In Boeotian **ei** had become **ī** already in the fifth century B. C., as **αἶδω** = **αείδω**.

## oi

§ 59. Indg. **oi** (= Skr. **ē**, O.Lat. **oi**, **oe**, later **ū**, O.Ir. **oi**, (**oe**), Goth. **ái**, O.E. **ā**, Lith. **ai**, (**ë**), O.Slav. **ě**) remained in Greek, as **οἶδα**, Skr. **vēda**, Goth. **wáit**, O.E. **wāt**, *I know*; **οἶνη**, **οἶνή**, *the one on dice*, Lat. **oinos**, **ūnus**, O.Ir. **oen**, Goth. **áins**, O.E. **ān**, *one*; masc. nom. pl. **τοί**, Skr. **té**, Goth. **pái**, O.E. **pā**, Lith. **tě**, *the, these*; **λέλοιπε**, Skr. **riréca**, *has left*, Goth. **láiþv**, O.E. **lāh**, *he lent*; loc. pl. **λύκοισι** = Skr. **vṛkē-ṣu**.

NOTE.—In Boeotian **oi** became **oe** in the fifth century B. C., which two centuries later became **ū** and then still later **ī** (written **ει**).

## au

§ 60. Indg. **au** (= Skr. **ō**, Lat. Lith. **au**, O.Ir. **ō**, (**ua**), Goth. **áu**, OE. **ēa**, O.Slav. **u**) remained in Greek, as **αὔξω**, **αὐξάνω**, Lat. **augeo**, Goth. **áuka**, Lith. **áugu**, *I grow, increase*, cp. Skr. **ójas-**, *strength*; **αὔος** from **\*σαυσος**, OE. **sēar**, Lith. **saūsas**, *dry, withered*; **καυλός**, Lat. **caulis**, *stalk*; **ταῦρος**, Lat. **taurus**, *bull*; **αὖ**, **αὖ-τε**, *again*, Lat. **au-t**, **au-tem**.

## eu

§ 61. Indg. **eu** (= Skr. **ō**, O.Lat. **ou**, later **ū**, O.Ir. **ō**, (**ua**), Goth. **iu**, OE. **ēo**, Lith. **au**, O.Slav. **u**) remained in Greek, as **εὔω**, Skr. **óṣāmi**, Lat. **ūro**, *I burn*; **γεύω**, *I give a taste of*, Skr. **jóṣati**, *he tastes*, Goth. **kiusan**, OE. **cēosan**, *to choose*; **πεύθομαι**, *I inquire*, Skr. **bódhati**, *he is awake, learns*, Goth. **ana-biudan**, *to order, command*, OE. **bēodan**, *to offer*; **ζεύγμα** = Lat. **jūmentum**, **νεῦμα** = Lat. **nūmen**, voc. **Ζεῦ πάτερ** = Lat. **Jūpiter**.

## ou

§ 62. Indg. **ou** (= Skr. **ō**, O.Lat. **ou**, later **ū**, O.Ir. **ō**, (**ua**), Goth. **áu**, OE. **ēa**, Lith. **au**, O.Slav. **u**) remained in the oldest period of the language, but in Attic and Ionic it became **ū** through the intermediate stage of long close **ō** in the fifth century B.C., although the **ou** was retained in writing. This accounts for the writing of **ou** for older **oo** in such forms as gen. **ἵππου** from older **\*ἵπποο** (§ 325) and in **ἵππους** from older **ἵππωνς** (§ 69). From our knowledge of the other Indg. languages the diphthong **ou** must have been fairly common in the parent language, but in Greek there are only a few words which contain it, as **ἀκούω**, Goth. **háusja**, *I hear*. It occurred originally especially in the perfect active singular of verbs which have **-eu-** in the present stem-forms and in nouns related to such verbs, as

Hom. εἰλήλουθε : fut. ἐλεύσομαι from \*ἐλεύθομαι; σπουδή: σπεύδω; but in verbs like κεύθω, τεύχω, φεύγω the perfect active κέκευθα, τέτευχα, πέφευγα for \*κέκουθα, &c., was formed direct from the present, see § 518.

#### D. THE LONG DIPHTHONGS.

§ 63. The parent language had the same number of long as of short diphthongs, but the history of the former in the separate languages differs materially from that of the latter. The second element of long diphthongs often disappeared medially before consonants (especially **m**), and also finally, as acc. sing. Hom. and Dor. βῶν = Skr. gām beside nom. gāūh; ὀκτώ, Lat. octō, Skr. aṣṭāú beside aṣṭá, Goth. ahtáu, Indg. \*októu. The exact conditions under which the second element remained or disappeared have never been ascertained. When the second element was preserved in the European languages, the first element was regularly shortened before a following consonant, as Ζεύς from \*Ζήύς = Skr. dyāūh, sky; λύκοις, Lat. lupīs, Lith. vilkaĩs, beside Skr. vṛkāih. When the second element of a long diphthong disappeared or when the first element was simply shortened, the resultant long vowel or short diphthong had the same further development in the different languages as the original simple long vowels or short diphthongs.

āi: Opt. δρᾷμεν from \*δρᾷμεν, beside indic. ἔδρᾷμεν; Θηβαιγενής, μεσαιπόλιος; dat. sing. χώρα, θεᾶ, cp. Skr. sēnāyāi, to an army, Lat. mensae, Osc. deívai, divae, Goth. gibái, to a gift, Lith. raĩkai, to a hand.

ēi: Opt. γραφεῖμεν from \*γραφημεν, beside indic. ἐγράφην; aor. ἔλειψα from \*ἔληψα = Skr. árāikṣam, Indg. \*élēiqsm (cp. § 507); θη-λή, θῆσθαι, cp. Lat. fē-mina, fē-lāre, root dhēi-, suckle.

ōi: λύκοις, Lat. lupīs, Lith. vilkaĩs, beside Skr. vṛkāih;

opt. γνοι̅μεν from \*γνοιμεν, beside indic. ἔγνωμεν; dat. sing. λύκω, Lat. lupō, Lith. vil̅kui, beside Skr. vṛ̅kāya (with the enclitic particle -a), cp. Skr. dat. sing. tásmāi, *him*.

āu: ναῦς beside Skr. nāū̅ḥ, *ship*; loc. pl. ναυσί, Skr. nāuṣ̅ú.

ēu: Ζεύς from \*Ζηύς = Skr. dyāū̅ḥ, *sky*; ἔξευξα = Skr. áyāukṣam, Indg. \*éjēuqsm̅ (cp. § 507); acc. Ζῆν = Skr. dyām̅.

ōu: βούς from \*βούς = Skr. gāū̅ḥ; acc. Dor. βῶν = Skr. gām̅; dual of o-stems λύκω = Skr. vṛ̅kāu beside vṛ̅kā; πλωτός, cp. OE. flōd, *flood, tide*, beside Lith. pláuju, *I rinse*.

#### E. THE VOCALIC NASALS AND LIQUIDS.

§ 64. The vocalic nasals and liquids, generally written  $\underset{\circ}{m}$ ,  $\underset{\circ}{n}$ ,  $\underset{\circ}{l}$ ,  $\underset{\circ}{r}$  in order to distinguish them from the corresponding consonants **m**, **n**, **l**, **r**, occurred originally in unaccented syllables only. They arose in the parent Indg. language through the loss of a preceding (rarely following) vowel. This loss was caused by the shifting of the principal accent from the syllable originally containing the vowel to some other syllable in the word. Then consonantal **m**, **n**, **l**, **r** became vocalic just in the same manner as consonantal **i** and **u** in the combinations **ei** and **eu** became vocalic after the loss of **e** in such words as ἔλιπον : λείπω, ἔφυγον : φεύγω, so also φρασί : φρένες, ἔπαθον : πένθος, ἔδρακον : δέρκομαι. But already in the parent language or at least in the prehistoric period of all the Indg. languages, the vocalic nasals and liquids came analogically to have the principal accent in certain words, as ἐπτά, Skr. saptá, Lat. septem, from \*sept̅m̅, older \*sépt̅m̅, *seven*; λύκος, Skr. vṛ̅kaḥ, Lat. lupus, Goth. wulfs, Lith. vil̅kas, from \*w̅l̅qos, older \*w̅l̅qós.



## I. Short Vocalic Nasals.

§ 65. In Greek and Sanskrit  $\text{ṃ}$ ,  $\text{ṅ}$  had a twofold development according to their position in the word :—

1. Finally and before consonants except semivowels they became **a** in these two languages, and in Lat. **em**, **en**, Germanic **um**, **un**, Lith. **iṃ** (**im**), **iñ** (**in**), O.Slav. **ę**, (**im**, **in**), as **δέκα**, Skr. **dāśa**, Lat. **decem**, Goth. **taihun**, from **\*dékṃ**, beside Lith. **dėsimt.**, O.Slav. **desęt.**, from **\*dékṃt.** *ten*; **έ-κατόν**, Skr. **śatám**, Lat. **centum**, Goth. **hund**, from **\*kṃtóm**, *hundred*; **βάσις**, Skr. **gátiḥ**, *gait*, *step*, Goth. **ga-qumþs**, *assembly*, from **\*gṃtis**; **ἄ-παξ**, Skr. **sa-kṛt**, *once*, Lat. **sim-plex** older **\*semplex**, from **\*sm̃**: **έν** from **\*sem**, *one*; acc. sing. of consonantal stems as **πόδα**, **φέροντα**, Lat. **pedem**, **ferentem**; Hom. **ἦα** from **\*ésṃ**, *I was*.

**τατός**, Skr. **tatáḥ**, Lat. **tentus**, from **\*tṅtós**, *stretched*; **δασύς**, Lat. **densus**; **φατός**, Skr. **hatáḥ**, *killed*: **φόνος**; **ἄ-γνωτος**, Skr. **á-jñātaḥ**, Goth. **un-kunþs**, *unknown*, from **\*ṅ**: **\*ne**, *not*; **ὄνομα**, Skr. **nāma**, Lat. **nōmen**, *name*; acc. pl. of consonantal stems, as **πόδας**, Skr. **pádaḥ**, Lat. **pedēs** from **\*pedens**, Goth. **fōtuns**, *feet*; loc. pl. of **n**-stems, as **φρασί**: **φρένες**, in this case the regular development was almost entirely obliterated in Greek by new formations formed after the analogy of the other cases, as **ποιμέσι** for **\*ποιμάσι**, **κυσί** for **\*κυσί** = Skr. **śvásu** (§ 345); **μεμάτω** = Lat. **mementō**; Hom. **ἦαται**, Skr. **ásatē**, from **\*ésṅtai**, *they sit*; **πέφαται**: **φόνος**, and similarly **γέγαμεν**, **μέμαμεν**, **ἐπαθον**: **γέγονα**, **μέμονα**, **πέπονθα**.

2. Before vowels and semivowels  $\text{ṃ}$ ,  $\text{ṅ}$  became **am**, **an** in Greek and Sanskrit, but in Lat. Germanic and Lith. they had the same development as in 1. Some scholars maintain that the original vowel did not entirely disappear in these positions, but that it merely became reduced in quality. Instead of  $\text{ṃ}$ ,  $\text{ṅ}$  they accordingly write **ᵉm**, **ᵉn** and assume that the **ᵉ** became **a** in Greek and Sanskrit

and the consonants **m**, **n** remained. Other scholars write the sounds in question as **mm**, **nn** before vowels and **m̥**, **n̥** before semivowels. The correct interpretation of the development is probably that the off-glide of the nasal remained consonantal, and that this eventually became a full nasal consonant, cp. the consonantal off-glide in NE. *seldm̥ iz*, *seldom is*, *rit̥n̥ it*, *written it*.

ἀμο- (in ἀμόθεν), Skr. *sama-*, Goth. pl. *sumái*, from \**s̥mo-*, *some one, any one*; ταμείν : τέμνω.

τανύ- (in τανύ-δρομος, τανύ-πους), Skr. *tanúh*, Lat. *tenuis*, OHG. *dunni*, from \**t̥nu-*, *stretched, thin*; Boeot. βανά, Vedic *ganá-*, O.Icel. *kona*, from \**g̥nā-* : Goth. *qinō*, *woman*; ἄνυδρος, Skr. *anudráh*, *waterless*; τάννται = Skr. *tanuté*; κτανεῖν : κτείνω from \**κτεν̥j̥w*.

Hom. *ikánw* from \**ik̥anf̥w*; μᾶνός, μανός, from \**μαν̥fós*.

-αμ̥j- and -αν̥j- became -αιν- (§ 75), as βαίνω from \**βαν̥jw*, older \**βαμ̥jw*, Lat. *venio* from \**gwen̥jō*, older \**gwem̥jō*, Indg. \**gm̥jō*, cp. Skr. opt. *gamyât*, *he may go*. καίνω from \**καν̥jw*; and similarly κταίνω, μαίνομαι, ποιμαίνω, ὀνομαίνω, πεπαίνω, σπερμαίνω.

## 2. Short Vocalic Liquids.

§ 66. Many points connected with the development of the Indg. vocalic liquids in the various languages have never been definitely settled. The vowel which was developed before or respectively after liquids in the prehistoric period of the European languages seems to have been unstable in quality, when it was preceded or followed by a labial or guttural. In Greek, Latin, Keltic and the Baltic-Slavonic languages the vowel sometimes appears in this position as **u**, as in Gr. *λύκος*, Lat. *lupus*, O.Slav. *vlūkŭ*, beside Skr. *v̥k̥ah*, Indg. \**wl̥qos*, *wolf*; φύλλον from \**φυλ̥jon*, beside Lat. *folium*; ἄγυρις : ἀγείρω. For further examples, see Brugmann's *Grundriss*, &c., vol. i, second ed., pp. 453-5. It will also be noticed from the normal development of the vocalic

liquids given below that the vowel sometimes appears before and sometimes after the liquid. The reason for this twofold development is unknown. In Greek  $\lambda\alpha$ ,  $\rho\alpha$  beside  $\alpha\lambda$ ,  $\alpha\rho$  only occur before consonants. In all other positions we have  $\alpha\lambda$ ,  $\alpha\rho$ . Various attempts have been made by scholars to account for the difference in the position of the vowel, but they all leave a large residuum of unexplained forms.

§ 67. In several languages  $\text{ɫ}$ ,  $\text{r}$  had a twofold development according to their position in the word:—

1. Before consonants. In this position they became in Gr.  $\alpha\lambda$ ,  $\lambda\alpha$ ;  $\alpha\rho$ ,  $\rho\alpha$ , Skr.  $\text{r}$ , Lat.  $\text{ol}$ ,  $\text{ul}$ ;  $\text{or}$ ,  $\text{ur}$ , prim. Germanic  $\text{ul}$ ,  $\text{ur}$  (rarely  $\text{lu}$ ,  $\text{ru}$ ) = Goth.  $\text{ul}$ ,  $\text{aur}$ , but  $\text{ol}$ ,  $\text{or}$  in the other Germanic languages, Keltic  $\text{li}$ ,  $\text{ri}$ , prim. Baltic-Slavonic  $\text{il}$ ,  $\text{ir}$ , as  $\pi\lambda\alpha\tau\acute{\upsilon}\varsigma$ , Skr.  $\text{pr}\ddot{\text{r}}\text{th}\acute{\text{u}}\text{h}$ , *broad*, OE. *folde*, Skr.  $\text{pr}\ddot{\text{r}}\text{thiv}\acute{\text{i}}$ , *earth*;  $\text{-}\pi\acute{\text{i}}\text{p}\lambda\mu\epsilon\nu$ , Skr.  $\text{pipr}\ddot{\text{r}}\text{m}\acute{\text{a}}\text{h}$ , *we fill*;  $\text{t}\acute{\epsilon}\text{t}\alpha\lambda\mu\alpha\iota$ :  $\text{t}\acute{\epsilon}\lambda\lambda\omega$ ;  $\text{\text{e}}\text{st}\alpha\lambda\mu\alpha\iota$ ,  $\text{st}\acute{\alpha}\lambda\sigma\iota\varsigma$ :  $\text{st}\acute{\epsilon}\lambda\lambda\omega$ ;  $\text{\text{e}}\text{kl}\acute{\alpha}\pi\eta\nu$ :  $\text{k}\acute{\lambda}\acute{\epsilon}\pi\tau\omega$ .  $\text{sk}\acute{\alpha}\lambda\lambda\omega$  from  $\text{*sk}\alpha\lambda\text{j}\omega$ , *I stir up*, Lith. *skiliù*, *I strike fire*, Indg.  $\text{*sq}\text{ɫj}\acute{\text{o}}$ ; and similarly  $\beta\acute{\alpha}\lambda\lambda\omega$ ,  $\pi\acute{\alpha}\lambda\lambda\omega$ , &c.

$\text{k}\alpha\rho\delta\acute{\text{i}}\acute{\alpha}$ , Ion.  $\text{k}\rho\alpha\delta\acute{\text{i}}\eta$ , Lat. *cor* (gen. *cordis*), O.Ir. *cride*, Lith. *szirdis*, *heart*;  $\text{\text{e}}\text{dra}\kappa\omicron\nu$  = Skr.  $\text{\text{a}}\text{d}\text{r}\acute{\text{s}}\text{am}$ :  $\text{\text{e}}\text{r}\kappa\omicron\mu\alpha\iota$ ;  $\text{\text{t}}\alpha\rho\sigma\acute{\upsilon}\varsigma$ ,  $\text{\text{t}}\rho\alpha\sigma\acute{\upsilon}\varsigma$ : Aeol.  $\text{\text{t}}\acute{\epsilon}\rho\sigma\omicron\varsigma$ , cp. Skr.  $\text{dhr}\acute{\text{s}}\text{n}\acute{\text{o}}\text{ti}$ , *he dares*, Goth. *ga-daúr-san*, *to dare*;  $\text{k}\rho\acute{\alpha}\nu\omicron\varsigma$ ,  $\text{k}\rho\acute{\alpha}\nu\omicron\nu$ , Lat. *cornus*, *cornum*, *cornel-tree*;  $\text{t}\acute{\epsilon}\text{t}\alpha\rho\tau\omicron\varsigma$ , Hom.  $\text{t}\acute{\epsilon}\text{t}\rho\alpha\tau\omicron\varsigma$  from  $\text{*t}\acute{\epsilon}\text{t}\text{f}\rho\alpha\tau\omicron\varsigma$ , Lith. *ketviřtas*, *fourth*;  $\text{\text{a}}\text{r}\sigma\eta\nu$ : Ion.  $\text{\text{e}}\text{r}\sigma\eta\nu$ ;  $\text{\text{t}}\acute{\alpha}\rho\sigma\omicron\varsigma$ ,  $\text{k}\rho\acute{\alpha}\tau\omicron\varsigma$ : Aeol.  $\text{\text{t}}\acute{\epsilon}\rho\sigma\omicron\varsigma$ ,  $\text{k}\rho\acute{\epsilon}\tau\omicron\varsigma$ ; loc. pl.  $\text{\text{p}}\alpha\tau\rho\acute{\alpha}\sigma\iota$ , Skr.  $\text{pit}\acute{\text{r}}\text{\text{ṣ}}\text{u}$ , OE. *fæderum*, *to fathers*;  $\text{\text{d}}\alpha\rho\tau\acute{\omicron}\varsigma$ ,  $\text{\text{d}}\rho\alpha\tau\acute{\omicron}\varsigma$ ,  $\text{\text{d}}\epsilon\text{\text{d}}\alpha\rho\mu\acute{\epsilon}\nu\omicron\varsigma$ :  $\text{\text{d}}\acute{\epsilon}\rho\omega$ ; and similarly  $\text{\text{e}}\text{p}\rho\alpha\theta\omicron\nu$ ,  $\text{\text{e}}\text{sp}\alpha\rrho\mu\alpha\iota$ ,  $\text{\text{p}}\acute{\epsilon}\text{p}\alpha\rrho\mu\alpha\iota$ ,  $\text{k}\acute{\alpha}\rho\sigma\iota\varsigma$ ,  $\text{\text{t}}\alpha\rho\sigma\acute{\omicron}\varsigma$ ,  $\text{\text{t}}\rho\alpha\pi\acute{\epsilon}\text{\text{i}}\nu$ ,  $\text{\text{t}}\rho\alpha\phi\acute{\epsilon}\text{\text{i}}\nu$ :  $\text{\text{p}}\acute{\epsilon}\rho\theta\omega$ ,  $\text{\text{sp}}\acute{\epsilon}\text{\text{i}}\rho\omega$ ,  $\text{\text{p}}\acute{\epsilon}\text{\text{i}}\rho\omega$ ,  $\text{k}\acute{\epsilon}\text{\text{i}}\rho\omega$ ,  $\text{\text{t}}\acute{\epsilon}\rho\sigma\omicron\mu\alpha\iota$ ,  $\text{\text{t}}\rho\acute{\epsilon}\text{\text{p}}\omega$ ,  $\text{\text{t}}\rho\acute{\epsilon}\text{\text{f}}\omega$ . The combination  $\text{-}\alpha\rho\text{j}$  became  $\text{-}\alpha\text{i}\rho\text{-}$  (§ 75), as  $\text{\text{sp}}\alpha\acute{\text{i}}\rho\omega$  from  $\text{*sp}\alpha\rho\text{j}\omega$ , *I struggle convulsively*, Lith. *spiriù*, *I push with the foot*; and similarly  $\text{\text{e}}\text{\text{t}}\text{\text{h}}\alpha\acute{\text{i}}\rho\omega$ ,  $\text{\text{p}}\text{\text{t}}\alpha\acute{\text{i}}\rho\omega$ ,  $\text{\text{sk}}\alpha\acute{\text{i}}\rho\omega$ ,  $\text{\text{t}}\text{\text{h}}\alpha\acute{\text{i}}\rho\omega$ ,  $\text{\text{t}}\text{\text{h}}\alpha\text{\text{i}}\rho\acute{\omicron}\varsigma$  from  $\text{*t}\text{\text{h}}\alpha\rho\text{j}\omicron\varsigma$ , Indg.  $\text{*dhw}\text{rj}\omicron\varsigma$ .

2. Before vowels  $\text{ɫ}$ ,  $\text{r}$  (cp. § 65, 2) became in Gr.  $\alpha\lambda$ ,  $\alpha\rho$ ,

Skr. *ul* (= Indg.  $\text{ɹ}$ ), *ur*, *ir* (= Indg.  $\text{ɹ}$ ,  $\text{r}$ ), Lat. *al*, *ar*, Keltic *al*, *ar*, Germanic and Baltic-Slavonic as in *ι*, as *τάλας*, *enduring*, Skr. *tulā*, *balance, scale*, O.Ir. *talla*, *he takes away*, Goth. *þulan*, OE. *þolian*, *to suffer, endure*; *παλύνω*, *I strew*, Lat. *palea*, *chaff*; *καλιᾶ*, Skr. *kulāyam*, *hut, nest*; *βαλεῖν*, *ἐστάλην* : *βέλος*, *στέλλω*.

*βαρύς*, Skr. *gurūh*, Goth. *kaúrus*, Indg. \**grús*, *heavy*; *πάρος*, Skr. *puráh*, Goth. *faúra*, OE. *fore*, *before*; *κάρᾱ*, Skr. *śiras-*, *head*; *ἐδάρην*, *πταρμός* : *δέρω*, *πτόρος*.

Examples of final  $\text{r}$  in Greek are: *ἦπαρ*, Skr. *yakṛt*, Lat. *jecur*, *liver*; *ἦμαρ* : *ἡμέρα*; *ἔαρ* from Indg. \**wésr*.

### 3. Long Vocalic Nasals and Liquids.

§ 68. Whilst all scholars agree that the parent Indg. language possessed short vocalic nasals and liquids, there is considerable difference of opinion as to whether long vocalic nasals and liquids existed in the parent language. Just as *i*, *u*,  $\bar{m}$ ,  $\bar{n}$ ,  $\text{ɹ}$ ,  $\text{r}$  arose from the weakening and eventual loss of *e* in the diphthongs *ei*, *eu*, *em*, *en*, *el*, *er*, and as  $\bar{i}$ ,  $\bar{u}$  arose from the weakening and eventual loss of *e* in the combinations *ejə*, *ewə*, it can be assumed upon theoretical grounds that  $\bar{m}$ ,  $\bar{n}$ ,  $\bar{\text{ɹ}}$ ,  $\bar{\text{r}}$  arose in the parent language from the weakening and eventual loss of *e* in the combinations *emə*, *enə*, *elə*, *erə*, where *ə* represents the weakening of  $\bar{a}$ ,  $\bar{e}$ , or  $\bar{o}$  (§ 87). But whereas  $\bar{i}$  and  $\bar{u}$  regularly appear in the oldest stages of all the Indg. languages, no language has preserved a long vocalic nasal or liquid in historic times. Notwithstanding the above parallels the subject still requires further investigation before it can be established with any degree of certainty that these sounds existed in the parent language. Most of the forms which are supposed to represent a long vocalic nasal or liquid in Greek, Latin and Keltic admit of an entirely different explanation, viz. as being dissyllabic heavy bases with loss of vowel in the first syllable and preservation of an original long vowel in

the second syllable (§ 90), as \*gnātós from the base \*genā-, whence Lat. (g)nātus, *born* : genitor, but this would not account for Skr. jātáḥ, *born, begotten*, which presupposes an original form \*gñtós; \*dhwnātós, whence Dor. θνᾶτός, Att. Ion. θνητός, beside θάνατος from \*dhwnētós; \*grōtér from the base \*gerō-, whence Gr. βρωτήρ, beside βάραθρον from \*grædhrom. But this explanation of the Greek and Latin forms would not account for the equivalents in Sanskrit, Germanic and the Baltic-Slavonic languages. From what has been said above it will be seen that the whole subject is at present beset with unsolved difficulties. Brugmann, *Kurze vergleichende Grammatik*, pp. 121-38, regards the following as the normal development of the long vocalic nasals and liquids in the various languages. For the treatment of the whole subject from an entirely different standpoint, the student should consult Hirt, *Der indogermanische Ablaut*.

Indg.	Gr. (Dor.)	Skr.	Lat.	Keltic	Germanic	Lith.
ṁ	μᾶ	ā, ām	m ā	mā	um	ím
ṅ	νᾶ	ā, ān	nā	nā	un	ín
l̄	λω	īr, ūr	lā	lā	ul, (lu)	íl
r̄	ρω	īr, ūr	rā	rā	ur, (ru)	ír

NOTE.—ṁ, ṅ regularly became ām, ān before a following y in Sanskrit.

Examples are : νεό-δμᾶτος, -δμητος, *new-built*, Lat. mā-teriēs, from \*dmā- : δέμω; δμητήρ, δμητός, from \*δμᾶ-, Skr. dāmyati, *he tames* : Lat. domitor, domitus.

κνήμη, older \*κνάμᾶ, *shin-bone, leg*, O.Ir. pl. cnāmai, *bones*; νήσσα from older \*vāσσα, *duck*, Skr. ātí, *a kind of aquatic bird* : Lat. gen. anatis, Lith. ántis, *duck*; Skr.

**jātáḥ**, Lat. (g)nātus, *born*, Goth. airþa-kunds, *born of the earth* : Lat. genitor.

βλωθρός, *tall*, Skr. mūrdhán-, *height, head* ; Skr. úrnā, Lat. lāna, O.E. wulle, Lith. vīlna, from \*wīnā, *wool* : Gr. οὔλος from \*φολνος, *thick, fleecy* ; Skr. pūrṇáḥ, *filled*, O.Ir. lān, Lith. pílnas, *full*.

βρωτήρ, *devourer*, Skr. gīrṇáḥ, *swallowed up*, Lith. girtas, *drunken* ; στρωτός, Lat. strātus, Skr. stīrṇáḥ, *spread, strewed* ; Dor. Ion. τετρώ-κοντα, Lat. quadrā-gintā ; πρῶτος from \*πρωφατος, Skr. pūrvyáḥ, *first*.

#### THE LENGTHENING OF SHORT VOWELS.

§ 69. Short vowels were often lengthened through the loss of a following consonant. This process is sometimes called compensation lengthening. In Att. and Ion. e became long close ē (written ει, see § 58), and o became ū (written ου, see § 62) through the intermediate stage of long close ὄ. In Dor. they became η and ω. The following are the principal cases in which short vowels were lengthened :—

1. In final or medial syllables in Attic and Ionic through the loss of a nasal before a following s whether original or developed from some other source, the long vowel having passed through the intermediate stage of a long nasalized vowel, as εἶς from \*sems, Cret. ἔνς. Masc. nom. sing. μέλās, τάλās, from \*μέλανς, \*τάλανς. Acc. pl. τῆμάς, Cret. -ανς ; λύκους, Cret. -ονς, Goth. wulfans ; Heracleian τρίς (Att. Ion. τρεῖς was the nom. used for the acc.), Cret. τρίνς, Goth. þrins. Masc. nom. sing. γίγās, τιθείς, χαρίεις (cp. Skr. pad-vānt-, *having feet*), διδούς, from \*γίγαντς, \*τιθέντς, \*χαρίφεντς, \*διδόντς. πᾶσα from \*παντja ; μούσα, Dor. μῶσα, from \*μοντja ; φέρουσι = Dor. φέροντι, Skr. bhāranti, Goth. baírand ; fem. participle φέρουσα, from \*φέρωντja, see § 129, 6. The same lengthening also occurs through the loss of a nasal in the combination Ion. -āσσ-, Att. -āπτ-, from older -αγχj- (§ 156), as Ion. ἄσσον

from \**άνσσον*, older \**άγχσον*, cp. *άγχι*; Ion. *έλάσσων*, Att. *έλάττων*, from \**έλαγχών*; Ion. *θάσπων*, Att. *θάττων*, from \**θαγχών*.

2. **s** in the combination **ms, ns** + vowel became voiced and then became assimilated to the preceding nasal. The long (double) nasal remained in Lesbian, but in the other dialects it was shortened or simplified and the preceding vowel was lengthened by transferring the long quantity of the consonant to the vowel, as gen. Att. Ion. *χηνός*, Dor. *χāνός*, cp. Skr. *hasá-*, Lat. *anser* for older \**hanser*, Germ. *gans*, *goose*; aorist Att. Ion. *έφηνα*, Dor. *έφāνα*, from \**έφανσα*; Att. Ion. *έμεινα*, Dor. *έμηνα*, Lesb. *έμεινα*, from \**έμενσα*; Att. Ion. *ένειμα*, Dor. *ένημα*, Lesb. *ένεμμα*, from \**ένεμσα*; *έκρῖνα* from \**έκρινσα*. *νίσομαι* from \**νίνσομαι*.

3. *vj, rj* became *vv, rr* which remained in Lesbian, but became simplified in Att. Ion. with lengthening of the preceding *ε, ι, υ*, cp. 2, as Att. Ion. *κτέίνω, φθείρω*, Lesb. *κτέννω, φθέρρω*, from \**κτέννω, \*φθέρνω*; *πειρα* from \**περρα*; Att. Ion. *κλίνω, οϊκτίρω, I pity*, Lesb. *κλίννω, οϊκτίρρω*, from \**κλίννω, \*οϊκτίρνω*; *ότρύνω* from \**ότρύννω*. See § 129, 4.

4. **s** in the combination **s** + liquid or nasal became voiced and then became assimilated to the following liquid or nasal. The long (double) consonant remained in Lesbian, but was simplified in the other dialects with lengthening of the preceding vowel, cp. 2, as Ion. *τρήρων* from \**τραῶρων*; Att. Ion. *χείλιοι*, Lesb. *χέλλιοι*, cp. Skr. *sa-hásram*, *thousand*; Att. Ion. *σελήνη*, Dor. *σελάνā*, Lesb. *σελάνā*, from \**σελάσνā*; Att. Ion. *ήμεις*, Dor. *άμές*, Lesb. *άμμες*, from \**άσμε* = Skr. *asmá-*, Indg. \**ḡ-sme-*; *είμί*, Dor. *ήμί*, Lesb. *έμμί* = Skr. *ásmi*, Indg. \**esmi*; Att. *φάνός*, Ion. *φαεινός*, Lesb. *φάεννος*, from \**φαφεινός*; *ίλαος*, Lesb. *ίλλαος*, from \**σισλαφος*.

5. Intervocalic *σφ* disappeared with lengthening of the

preceding vowel, as Dor. *ναός*, Ion. *νηός*, Att. *νεός* (§ 72), from \**νασφός*; Hom. *τελήεις*, *τέλειος*, from \**τελεσφεντς*, \**τελεσφος*; *ἴος* from \**ισφος*.

6. -*λν*- became -*λλ*- by assimilation, which remained in Lesbian and Thessalian, but in the other dialects the long (double) consonant was simplified with lengthening of the preceding vowel, cp. 2, as Att. Ion. *στήλη*, Dor. *στάλα*, Lesb. *στάλλᾱ*, from \**σταλνᾱ*; Hom. *εἶλομαι* from \**φελνομαι*; *ὀφείλω* from \**φοφελνω*; *βουλή*, Lesb. *βόλλᾱ*, from \**βολνᾱ*; *βούλομαι* from \**βολνομαι*. See § 148.

7. Short vowels were lengthened in Ionic, but not in Attic, with the loss of *f* in the combinations *νf*, *λf*, *ρf*, as Ion. *φθάνω*, Att. *φθάνω*, from \**φθάνfw*; Ion. *κᾶλός*, Att. *καλός*, Dor. *καλφός*; Ion. *κούρη*, Att. *κόρη*, Dor. *κόρφᾱ*; and similarly Ion. *εἵνατος*, *στεινός*, *ξεῖνος*, *τίνω*, *φθίνω*, *δουρός*, *οὔρος*, *γούνα*, beside Att. *ἔνατος*, *στενός*, *ξένος*, *τίνω*, *φθίνω*, *δορός*, *ὄρος*, *γόνατα*. See § 124, 6.

#### THE SHORTENING OF LONG VOWELS.

§ 70. Long vowels were shortened in prim. Greek before a following nasal, liquid, or semivowel + consonant, as third pers. plural *ἔβαν* from \**ἔβᾱντ*, *ἔτλαν* from \**ἔτλᾱντ*, *ἔμιγεν* from \**ἐμίγηντ*, *ἔγνον* from \**ἔγνωντ*, *ἔφυν* from \**ἔφῦντ*, beside first pers. sing. *ἔβην*, Dor. *ἔβᾱν*, *ἔτλην*, Dor. *ἔτλᾱν*, *ἐμίγην*, *ἔγνων*, *ἔφῦν*; forms like Hom. *πλήντο*, *ἄηνται*, *ἐμπλήντο* for \**πλαντο*, \**ἀενται*, \**-πλεντο* were new formations with the long vowel levelled out from the other persons; acc. pl. *χώρᾱς* from -*ανς* (§ 69), older -*ᾱνς*; *μείς*, *month*, from \**μένς*, older \**μήνς*, cp. Lesb. gen. *μῆννος* from \**μήνσος*; *πτέρνα* from \**πτηρσνα*, cp. Skr. *pārṣṇih*, *heel*; in participles like *ἀέντ-*, *γνόντ-* from \**ἀφηντ-* (cp. *ἄησι*, Skr. *vāti*, *he blows*), \**γνώντ-*. For examples of the shortening of long vowels before a semivowel + consonant, see § 63.

§ 71. Long vowels were shortened before long vowels especially in Attic and Ionic and partly also in Doric.



There was also a tendency to shorten them before short vowels in Ionic and Doric, but the exact conditions under which the shortening took place are difficult to determine, see Brugmann, *Griech. Grammatik*, pp. 56-7. Examples are:—*ἔως*, Hom. *ἦώς*; Lesb. *αὔως* from \**ἄνσως*, cp. Lat. *aurōra*; *θεᾶ*, Dor. *θάᾶ*; Att. *νεῶν*, Hom. *νηῶν*, Skr. *nāvām*; Att. *βασιλέων*, Hom. *βασιλήων* from *-ηφων*. Ion. Dor. *βασιλέος* beside Hom. *βασιλῆος*.

§ 72. The combinations *ηο*, *ηᾶ* became *εω*, *εᾶ* in prim. Attic and Ionic, but in later Ionic the law was greatly obscured by various new formations due to analogy and by dialectal differences within Ionic itself, as gen. Att. *νεός*, Hom. *νηός*, Skr. *nāvāḥ*; *βασιλέως*, Hom. *-ῆος*, Cyprian *-ῆφος*; *πόλεως*, Hom. *πόληος*; nom. *λεός*, *νεός*, Hom. *λαός*, Dor. *ναός*; acc. *βασιλέᾶ*, Hom. *βασιλῆα*. Hom. *στέωμεν*, *τέως* beside *στήομεν*, *τῆος*.

#### ASSIMILATION OF VOWELS.

§ 73. The vowel in an originally unaccented syllable was often assimilated either partially or entirely in quality to the vowel of the following syllable. The examples occur mostly on inscriptions in the various dialects, and show how valuable inscriptional forms are for philological purposes as compared with the forms in ordinary literature.

*α* to *ε* before a following *ε*, as Att. *ἔρετῆ* beside *ἄρετῆ*; *ἐγγέλυος* from \**ἀγγέλυος*, cp. Lat. *anguilla*; Boeot. *τρέπεδδα*, cp. Att. *τράπεζα*.

*α* to *ε* before a following *ο* and *ω*. This assimilation of *α* to *ε* probably took place in prim. Greek, but owing to levelling the *α* was mostly restored again, cp. *ἠβέω* beside *ἠβάω* with *α* from *ἠβάεις*, &c., and conversely *ἠβέεις*, *ἠβέει* with *ε* from *ἠβέω*, *ἠβέομεν*; Hom. *μενοίνεον* : *μενοινάα*, *ὀμόκλεον* : *ὀμόκλα*, *οὔδεος* : *οὔδας*; Herod. *ὀρέω* : *ὀράς*; and similarly on inscriptions of the Cretan, Elean and North-Western dialects.

*a* to *o* before a following *o* and *ω*, as *δοχμός* from \**δαχμός*; *κοχώνη* from \**καχώνη*; *ὀμόργνημι*, cp. *ἀμέργω*; Att. *ὄρρωδεῖν* beside Ion. *ἄρρωδεῖν*; *σορωνίς* beside *σαρωνίδες*; *σοφός* beside *σάφα*; Arcad. *έκοτόν* from *έκατόν*.

*ε* to *α* before a following *α*, as late Att. *λακάνη* = *λεκάνη*; Att. *Σάραπισ* beside *Σέραπισ*; Corinth. *Φακάβᾶ*, Att. *Ἐκάβη*; Heracl. gen. *χαράδεος*, cp. Hom. nom. *χέραδος*; Arcad. *Μαλαγκόμᾶς* beside *Μελαγκόμᾶς*; *ψακάς* beside *ψεκάς*.

*ε* to *ο* before a following *ο* and *ω*, as *ὀβολός*, *ὄροβος* = *ὀβελός*, \**ἔροβος*; *Ὀρχομενός* beside *Ἐρχομενός*; *Τορώνη*, *Τροφώνιος* beside *Τερώνη*, *Τρεφώνιος*.

*ε* to *ο* before a following *υ*, as *γόργυρα* from \**γέργυρα*; *κρόμμον* beside *κρέμμον* (Hesych.); *ὀρόγυια*, cp. *ὀρέγω*; *ὀδύρομαι* from \**ἐδύρομαι*; *Κόρκυρα* beside *Κέρκυρα*.

*ο* to *α* before a following *α*, as *ἄστακός*, *ἄσταφίς* = *ὄστακός*, *ὄσταφίς*.

*ι* to *υ* before a following *υ*, as Att. inscription *ἡμυσυς* = *ἡμισυς*; *Κυνδυεύς* beside *Κινδυεύς*.

*υ* to *ι* before a following *ι*, as *βιβλίον* from *βυβλίον*.

For a detailed treatment of vowel assimilation in Greek see J. Schmidt, *Kuhn's Zeitschrift*, vol. xxxii, pp. 321-94.

§ 74. The change of *α* to *ε* after *ι* and *υ* is also due to partial assimilation in such double forms as *ιέρός*, *σκιερός*, *σίελον*, *ψιέθος*, *χλιερός*, *φιέλη*, *πιέζω*, *πύελος*, *ὔελος*, beside *ίαρός*, *πύαλος*, &c.

#### EPENTHESIS.

§ 75. In the combinations *α, ο + νj, ρj, fj* the *j* palatalized the preceding consonant and then disappeared. The palatal element in the consonant then combined with the preceding vowel to form a diphthong, as *βαίνω* from \**βανjω* older \**βαμjω*, Indg. \**gṃjō*, cp. Lat. *venio*, Goth. *qima*, *I come*; *φαίνω* from \**φανjω*; fem. *τέκταινα* from \**τεκτανjα*, and similarly *μέλαινα*, *τάλαινα*, *λέαινα*; Att. *ἄγκοινα* from

\*ἀγκονῖα. σπαίρω from \*σπαρῖω, Indg. \*sprjō̯; θαιρός from \*θφαρῖος, Indg. \*dhw̥rjōs, hinge of a door; μοῖρα from \*μορῖα, cp. μόρος, δαίω from \*δαιῖω older \*δαῖῖω, and similarly καίω, κλαίω. See § 129, 3.

§ 76. The combinations ασῖ, οσῖ, εσῖ, υσῖ became αι, οι, ει, υι (through the intermediate stage ahj, &c.), and then the second element of the diphthong partly disappeared in Attic and Ionic before a following ο, as Hom. λιλαίομαι from \*λιλασῖομαι; ναίω from \*νασῖω, cp. aor. νάσ-σαι; Hom. τοῖο, Skr. táśya; Hom. ἐμείω, from \*ἐμεσῖο; opt. εἶην from \*ἔσῖην, Skr. s̥yam; Hom. τελείω, τελέω, Att. τελω̯, from \*τελεσῖω; ἀλήθεια from \*ἀλᾶθεσῖα, cp. ἀληθής, -ές; pf. part. fem. Hom. ἰδνῖα from \*ῖιδυσῖα = Skr. vidúṣī. See § 129, 9.

#### PROTHESIS.

§ 77. It used to be assumed that prothesis took place in Greek before an initial liquid, nasal or *f* + vowel, but most scholars are now generally agreed that a prothetic vowel was only developed in the initial combination Indg. *r* + vowel, as ἔρεβος, Skr. rájah, Goth. riqis, darkness; ἐρυθρός, Skr. rudhiráh, Lat. ruber, OE. rēad, red; ὀρέγω beside Lat. rego. Even in these examples it is not improbable that the initial vowel represents a phase of ablaut which has not been preserved in these and similar words in the other Indg. languages. Forms like ἀλείφω beside λίπος; ἀλίνω beside Lat. lino; ἀμέλγω beside Lat. mulgeo; ἀνήρ beside Skr. nár-, man; ὄνομα beside Lat. nōmen; ἄ(ῖ)ησι beside Skr. vāti, he blows; Hom. ἐ(ῖ)έρση beside ἔρση; which were formerly regarded as containing a prothetic vowel, represent a different grade of ablaut.

#### ANAPTYXIS.

§ 78. By anaptyxis is meant the development of a vowel between a liquid or nasal + a preceding or following consonant. Vowels of this kind are found in the old and

modern periods of most of the Indg. languages. No sure examples occur in classical Greek, but they are not altogether uncommon on inscriptions, &c., as Attic (Vase) 'Ερεμῆς, Τέροπων for 'Ερμηῆς, Τέρπων; βαράγχος (Hipponax) for βράγχος, τόρονος (quoted by Hesychius for Tarentum) beside τόρνος, σκόροδον beside σκόρδον. Cp. Lat. *pōcolum*, *pōculum* beside *pōclum*, French *canif* beside English *knife*, mod. northern dial. *stæræk*, *stāk* beside Old English *styric*, *stycr*, *calf*; *filəm*, *marəbl* beside standard English *film*, *marble*.

#### VOWEL-CONTRACTION.

§ 79. In treating of vowel-contraction it is necessary to distinguish three periods: (1) contractions which took place already in the Indg. parent language, (2) those which took place in primitive Greek, and were accordingly common to all the Greek dialects, and (3) those which took place in the individual dialects.

To treat in detail the question of vowel-contraction in the first period would be beyond the plan and scope of this grammar, because the resultant long vowels or diphthongs were not merely common to Greek, but to all the Indg. languages. It will therefore be sufficient to give here only a few examples of such contractions:—

$e + e > \tilde{e}$ , as ἦα, Skr. *ásam*, from \**ésm̃*, older \**e* (augment) + *esm̃*, *I was*.

$o + a > \tilde{o}$  in the dat. sing. of *o*-stems, as *θεῶ* from \**dhweso* + *ai*, cp. the original ending preserved in infinitives like *ἴδμεναι*, Skr. *vidmánē*, *to know*; Att. *δοῦναι*, Cypr. *δοφεναι*, Skr. *dāvánē*, *to give*.

$o + e > \tilde{o}$  in the nom. pl. of *o*-stems, as Skr. *vṛkāḥ*, Goth. *wulfōs*, from \**wlqōs*, older \**wlqo* + *es*, *wolves*, cp. *πατέρες*.

$\bar{a} + e > \tilde{ā}$  in the nom. pl. of *\bar{a}*-stems, as Skr. *vṛkāḥ*, *she-wolves*, from \**wlqā* + *es*.

$\bar{a} + a > \tilde{a}$  in the dat. sing. of  $\bar{a}$ -stems, as  $\theta\epsilon\tilde{\alpha}$ , cp. Goth. *gibái*, for *a gift*, Indg.  $-\bar{a} + ai$ .

Most of the contractions were due to the loss of intervocalic *s* (through the intermediate stage *h*) and *j* in primitive Greek. After the loss of these consonants the combinations  $\tilde{a}$ ,  $\tilde{e}$ ,  $\tilde{o} + \tilde{i}$  or  $\tilde{u}$  were contracted in certain cases in the prehistoric period of all the dialects. The loss of intervocalic *f* took place at a much later period and accordingly belongs to the history of the separate dialects (§ 122). But the great majority of vowel-contractions took place after primitive Greek became differentiated into the various separate dialects. Vowels were contracted in Attic more extensively than in any of the other dialects, although even in this dialect there were certain combinations which did not undergo contraction in all cases:—

(1) The combinations  $\epsilon o$ ,  $\epsilon \omega$ ,  $\epsilon a$ , where an intervocalic *s* or *j* had disappeared, remained in dissyllables, but underwent contraction in words of more than two syllables, as  $\theta\epsilon\acute{o}s$  from  $*\theta f\epsilon s o s$ , but  $\Theta\acute{o}\upsilon\phi\iota\lambda o s$ ,  $\Theta\acute{o}\upsilon\phi\rho a s t o s$ ;  $\xi\acute{\epsilon}\omega$  from  $*\xi\acute{\epsilon} s \omega$ , but  $\xi\acute{o}\upsilon\mu\epsilon\nu$ ,  $\xi\acute{o}\upsilon s i$ ;  $\acute{\epsilon} a r$  from  $*f\acute{\epsilon} s a r$ , but gen.  $\eta\acute{\rho} o s$  from  $*f\acute{\epsilon} s a r o s$ ;  $\delta\acute{\epsilon} o s$  from  $*\delta f\acute{\epsilon} j o s$ ;  $\delta\acute{\epsilon}\omega$  from  $*\delta\acute{\epsilon} j \omega$ , *I bind*, but  $\delta\acute{o}\upsilon\mu\epsilon\nu$ ,  $\delta\acute{o}\upsilon s i$ . But when the same combinations arose after the loss of *f* they remained uncontracted in older Attic even in words of more than two syllables, as  $\nu\acute{\epsilon}(f) o s$ ,  $\nu\epsilon(f) o \chi\acute{m} o s$ , gen.  $\eta\delta\acute{\epsilon}(f) o s$ ,  $\pi\lambda\acute{\epsilon}(f) o \mu\epsilon\nu$ ;  $\acute{\epsilon}\omega s$ , Hom.  $\eta\acute{\rho} o s$ , Dor.  $\acute{a} s$ , from  $*\acute{a} f o s$ , *until*;  $\beta a s i \lambda\acute{\epsilon}\omega s$ , Hom.  $-\eta\acute{\rho} o s$ , Cypr.  $-\eta f o s$ ;  $\eta\delta\acute{\epsilon}(f) \omega\nu$ ;  $\kappa\rho\acute{\epsilon}(f) a s$ ,  $\acute{\epsilon}\nu\nu\acute{\epsilon}(f) a$ ,  $\nu\epsilon(f) a\rho\acute{o}s$ ,  $\eta\delta\acute{\epsilon}(f) a$ . In like manner the combinations  $a\eta$ ,  $\epsilon o u$ ,  $o a$  remained uncontracted after the loss of *f*, as  $\acute{a}(f) \eta\delta\acute{\omega}\nu$ ,  $\chi\acute{o}(f) a\nu\acute{o}s$ ,  $\chi o(f) \acute{a}\nu\eta$ , gen.  $\Pi\epsilon\rho\iota\kappa\lambda\acute{\epsilon}\omega s$ , from  $*-\kappa\lambda\acute{\epsilon} f\epsilon s o s$ .

(2) The combinations  $\epsilon a$ ,  $\epsilon \omega$  were contracted when preceded by *i*, but remained in other cases, as acc.  $\acute{a}\lambda\iota\hat{a}$ ,  $\acute{a}\lambda\iota\hat{a}s$ , beside  $\beta a s i \lambda\acute{\epsilon}\hat{a}$ ,  $-\acute{\epsilon}\hat{a}s$ ; gen.  $\acute{a}\lambda\iota\hat{\omega}s$ ,  $\acute{a}\lambda\iota\hat{\omega}\nu$ , beside  $\beta a s i \lambda\acute{\epsilon}\omega s$ ,  $-\acute{\epsilon}\omega\nu$ .

§ 80. Below is given a classification of the contractions arranged according to the nature of the first vowel.

- $\alpha + \alpha > \bar{\alpha}$  in all the dialects, as Hom. Ion.  $\acute{\alpha}\tau\eta$  from  $*\acute{\alpha}\phi\acute{\alpha}\tau\bar{\alpha}$  ;  
 Hom.  $\delta\acute{\epsilon}\pi\bar{\alpha}$  from  $*\delta\acute{\epsilon}\pi\alpha\sigma\alpha$  ;  $\tau\acute{\alpha}\lambda\lambda\alpha = \tau\acute{\alpha}\ \acute{\alpha}\lambda\lambda\alpha$ .
- $\alpha + \epsilon > \bar{\alpha}$  in Att. Ion., but  $\eta$  in Dor., as  $\acute{\alpha}\kappa\omega\nu$  from  $\acute{\alpha}\acute{\epsilon}\kappa\omega\nu$  ;  
 $\acute{\alpha}\rho\omega$  from  $\acute{\alpha}\epsilon\rho\omega$  ; Att. Ion.  $\tau\bar{\imath}\mu\acute{\alpha}\tau\epsilon$ , Dor.  $\tau\bar{\imath}\mu\eta\tau\epsilon$  from  
 $\tau\bar{\imath}\mu\acute{\alpha}\epsilon\tau\epsilon$  ; Dor.  $\acute{\omicron}\rho\eta$  from  $\acute{\omicron}\rho\alpha\epsilon$ .
- $\alpha + \iota > \alpha\iota$ , as  $\pi\alpha\iota\varsigma$  from  $*\pi\acute{\alpha}\phi\iota\varsigma$  ;  $\alpha\iota\sigma\theta\acute{\alpha}\nu\omicron\mu\alpha\iota$  from  $*\acute{\alpha}\phi\iota\text{-}$   
 $\sigma\theta\acute{\alpha}\nu\omicron\mu\alpha\iota$  ;  $\gamma\acute{\epsilon}\rho\alpha\iota$  from  $\gamma\acute{\epsilon}\rho\alpha\iota$ .
- $\alpha + \omicron > \omega$  in Att. Ion., but  $\bar{\alpha}$  in Dor. Aeol. and Elean, as  
 $\acute{\alpha}\gamma\eta\rho\omega\varsigma$ , Hom.  $\acute{\alpha}\gamma\eta\rho\alpha\omicron\varsigma$  ;  $\acute{\omicron}\rho\omega$  from  $\acute{\omicron}\rho\acute{\alpha}\omega$  ;  $\tau\bar{\imath}\mu\omega\mu\epsilon\nu$   
 from  $\tau\bar{\imath}\mu\acute{\alpha}\omicron\mu\epsilon\nu$  ; Dor. (Theocritus)  $\acute{\epsilon}\pi\acute{\alpha}\xi\bar{\alpha}$  from  $-\alpha\omicron$  ;  
 Boeot.  $\phi\bar{\upsilon}\sigma\acute{\alpha}\nu\tau\epsilon\varsigma$  from  $-\acute{\alpha}\omicron\nu\tau\epsilon\varsigma$ .
- $\alpha + \upsilon > \alpha\upsilon$ , as  $\delta\alpha\upsilon\lambda\acute{\omicron}\varsigma$  from  $*\delta\alpha\upsilon\sigma\upsilon\lambda\omicron\varsigma$ , Indg.  $*d\eta\sigma\upsilon\lambda\omicron\varsigma$ .
- $\alpha + \bar{\alpha} > \bar{\alpha}$  in all the dialects, as  $\beta\epsilon\beta\acute{\alpha}\sigma\iota$ ,  $\iota\sigma\tau\acute{\alpha}\sigma\iota$ , from  
 $-\alpha\bar{\alpha}\sigma\iota$ .
- $\alpha + \eta > \bar{\alpha}$  in Att. Ion., but  $\eta$  in Dor. Locr., as subj.  $\tau\bar{\imath}\mu\acute{\alpha}\tau\epsilon$ ,  
 Dor.  $\tau\bar{\imath}\mu\eta\tau\epsilon$ , from  $\tau\bar{\imath}\mu\acute{\alpha}\eta\tau\epsilon$  ; Ion.  $\acute{\alpha}\delta\eta\varsigma$  from  $\acute{\alpha}\eta\delta\eta\varsigma$ .
- $\alpha + \eta > \bar{\alpha}$ , as subj.  $\tau\bar{\imath}\mu\acute{\alpha}$  from  $\tau\bar{\imath}\mu\acute{\alpha}\eta$ .
- $\alpha + \omega > \omega$ , as  $\tau\bar{\imath}\mu\omega$  from  $\tau\bar{\imath}\mu\acute{\alpha}\omega$ .
- $\alpha + \epsilon\iota (= \bar{\epsilon}) > \bar{\alpha}$  in Att., as  $\phi\bar{\alpha}\nu\acute{\omicron}\varsigma$ , Ion.  $\phi\alpha\epsilon\iota\nu\acute{\omicron}\varsigma$ , from  $*\phi\alpha\text{-}$   
 $\phi\epsilon\sigma\nu\omicron\varsigma$  ;  $\acute{\alpha}\rho\acute{\alpha}\varsigma$  from  $\acute{\alpha}\epsilon\acute{\iota}\rho\acute{\alpha}\varsigma$ .
- $\alpha + \epsilon\iota (= \text{prim. Gr. } \epsilon\iota) > \bar{\alpha}$  in Att. Ion., but  $\eta$  in Dor., as  
 $\acute{\alpha}\delta\omega$  from  $*\acute{\alpha}(f)\epsilon\acute{\iota}\delta\omega$  ; indic.  $\tau\bar{\imath}\mu\acute{\alpha}$  from  $\tau\bar{\imath}\mu\acute{\alpha}\epsilon\iota$  ; Dor.  $\acute{\omicron}\rho\eta$   
 from  $\acute{\omicron}\rho\acute{\alpha}\epsilon\iota$ .
- $\alpha + \omicron\iota > \phi$ , as  $\acute{\omega}\delta\eta$  from  $\acute{\alpha}(f)\omicron\iota\delta\eta$  ;  $\tau\bar{\imath}\mu\omega$ ,  $\tau\bar{\imath}\mu\omega\mu\epsilon\nu$ , from  
 $\tau\bar{\imath}\mu\acute{\alpha}\omicron\iota$ ,  $\tau\bar{\imath}\mu\acute{\alpha}\omicron\iota\mu\epsilon\nu$ .
- $\alpha + \omicron\upsilon > \omega$ , as  $\acute{\epsilon}\tau\bar{\imath}\mu\omega$ ,  $\tau\bar{\imath}\mu\omega\sigma\iota$ , from  $\acute{\epsilon}\tau\bar{\imath}\mu\acute{\alpha}\omicron\upsilon$ ,  $\tau\bar{\imath}\mu\acute{\alpha}\omicron\upsilon\sigma\iota$ .
- $\epsilon + \alpha > \eta$ , as gen.  $\eta\bar{\rho}\omicron\varsigma$  from  $*\acute{\phi}\acute{\epsilon}\sigma\alpha\rho\omicron\varsigma$  ;  $\gamma\acute{\epsilon}\nu\eta$  from  $*\gamma\acute{\epsilon}\nu\epsilon\sigma\alpha$ .
- $\epsilon + \epsilon > \epsilon\iota (= \text{long close } \bar{\epsilon})$  in Att. Ion. and mild Dor., but  $\eta$   
 in Aeolic and severe Dor., as  $\phi\acute{\iota}\lambda\epsilon\iota$ , severe Dor.  $\phi\acute{\iota}\lambda\eta$ ,  
 from  $\phi\acute{\iota}\lambda\epsilon\epsilon$  ;  $\acute{\epsilon}\acute{\iota}\chi\omicron\nu$ , Lesb. severe Dor.  $\eta\acute{\chi}\omicron\nu$ , from  
 $\acute{\epsilon}\acute{\epsilon}\chi\omicron\nu$  ;  $\tau\rho\acute{\epsilon}\iota\varsigma$ , Lesb.  $\tau\rho\eta\varsigma$ , from  $*\tau\rho\acute{\epsilon}\gamma\epsilon\varsigma$ .
- $\epsilon + \iota > \epsilon\iota$ , as  $\acute{\epsilon}\acute{\iota}$  from  $*\acute{\epsilon}\sigma\iota = \text{Skr. } \acute{\alpha}\sigma\iota$  ;  $\acute{\rho}\acute{\omicron}\lambda\epsilon\iota$  from  $\acute{\rho}\acute{\omicron}\lambda\epsilon\acute{\iota}$  ;  
 $\gamma\acute{\epsilon}\nu\epsilon\iota$  from  $*\gamma\acute{\epsilon}\nu\epsilon\sigma\iota$ .
- $\epsilon + \omicron > \omicron\upsilon (= \bar{\omicron}$ , later  $\bar{\upsilon}$ ) in Att.,  $\omega$  in Dor., and  $\epsilon\upsilon$  in Ion.  
 and Boeot., as Att.  $\gamma\acute{\epsilon}\nu\omicron\upsilon\varsigma$  from  $*\gamma\acute{\epsilon}\nu\epsilon\sigma\omicron\varsigma$  ;  $\delta\omicron\upsilon\mu\epsilon\nu$  from

\*δέχομεν; Θούφιλος beside θεός; Dor. ἐμῶς from ἐμέος; εὐχαριστῶμες from -έομες; Ion. Boeot. βέλεις from βέλειος older \*βέλεισος.

ε +  $\bar{a}$  > εη > η in Ion. (§ 51), as βορῆς, νῆ = βορεᾶς, νέᾶ.

ε +  $\alpha$  > εη > η in Ion., as dat. γενῆ = Att. γενεᾶ.

ε + η > η in all the dialects, as φιλήτε from φιλέητε; Περικλής from -έης.

ε + η > η, as φιλή from φιλέη.

ε + ω > ω in Att., as φιλω, ἀλιῶς, beside Ion. φιλέω, ἀλιέως.

ε + αι > η, as indic. mid. φέρη from φέρε(σ)αι = Skr. bhárasē.

ε + ει (=  $\bar{e}$ , § 58) > ει (= long close  $\bar{e}$ ), as κλεινός from \*κλεινός, older \*κλεφεσνος.

ε + ει (= prim. Gr. ει) > ει, as φιλεῖ from φιλέει.

ε + οι > οι in Att., as φιλοῖ, φιλοῖμεν, from φιλέοι, φιλέοιμεν.

ε + ου > ου, as φιλοῦ, φιλοῦσι, from φιλέου, φιλέουσι.

ι + ι >  $\bar{i}$ , as Δί from Διφί, Att. Δί had its ι from the genitive.

ο + α > ω, as αἰδῶ from αἰδῶα, Indg. \*aidosm; ὦτα from ὄατα; Δημῶναξ from Δημό- + αναξ.

ο + ε > ου in Att. Ion. mild Dor., but ω in severe Dor., as μισθοῦτε, severe Dor. -ῶτε, from -έετε; λουτρόν from λοετρόν; Att. ἐλάττους, Ion. ἐλάσσους, Dor. ἐλάσσως, from -οες, Indg. \*-oses.

ο + ι > οι, as κοῖλος from \*κοφίλος; οἷς from \*ὄφίς = Lat. ovis, Skr. áviḥ.

ο + ο > ου in Att. Ion. and mild Dor., but ω in Aeol. and severe Dor., as νοῦς from νόος; λύκου, Boeot. Lesb. severe Dor. λύκω; μισθοῦντες, severe Dor. -ῶντες, from -όντες.

ο + η > ω, as δηλῶτε from δηλόητε; Ion. βωθέω = βοθηέω.

ο + η > οι, as subj. δηλοῖς, δηλοῖ, from -όη.

ο + ω > ω in all the dialects, as δηλω from δηλώω, δηλωμεν from δηλώωμεν.

ο + φ > φ in all the dialects, as ἀπλω from ἀπλόφ.

- ο + ει (= long close ē) > ου, as δηλοῦν from δηλόειν, οἶνους from οἶνόεις.
- ο + ει (= prim. Gr. ει) > οι, as δηλοῖ from δηλόει; οἶγω beside Lesb. inf. ὀφείγην.
- ο + οι > οι, as δηλοῖς, δηλοῖτε, from δηλόοις, δηλόοιτε; εὔνοι from εὔνοοι.
- ο + ου > ου, as νοῦ from νόου, δηλοῦσι from δηλόουσι; σοῦμαι from σοοῦμαι, older \*σοφόμαι.
- υ + υ > ὕ, as Att. (inscription) ὕς = ὕς.
- ᾱ + α > ᾱ, Att. λαῶς beside Hom. λαᾶς; Dor. γᾱ from \*γαᾶ.
- ᾱ + ε > ᾱ in Dor. and Aeol., as Dor. ᾶλιος, Lesb. ᾶλιος from ᾶέλιος; Dor. φωνᾶντα from φωνᾶεντα.
- ᾱ + ι > α, η, as ῥάτερος, ῥήτερος from ῥαῖτερος, ῥήτερος; θνήσκω from \*θναῖσκω; γράδιον from γραῖ-ίδιον.
- ᾱ + ο > ηο, εω (§ 72) in Att. Ion., but ᾱ in Dor. and Aeol., as Hom. ῆος, Att. ἔως, Dor. Boeot. ᾶς, from ᾶος, *until*; gen. Ἀτρείδεω, Dor. -ᾱ; Dor. Lesb. εὐεργέτᾱ from -ᾶο. See § 323.
- ᾱ + ᾱ > ᾱ in all the dialects, as Ἀθηνᾶ from -ᾶᾶ; gen. Dor. γᾶς from -ᾶᾶς, cp. § 323.
- ᾱ + α > α, as dat. Dor. γᾶ from \*γαᾶ.
- ᾱ + ω > ᾱ in Dor. and Aeol., gen. pl. τᾶν, Att. τῶν, from τᾶων, older \*τάσων = Skr. tāsām.
- η + ε > η in all the dialects, as βασιλῆς from -ῆφες; Ion. acc. τῆμῆντα from τῆμῆεντα.
- η + η > η in all the dialects, as Att. subj. ζῆτε, φανῆτε, from \*ζήητε, \*φανήητε.
- η + η > η in all the dialects, as Att. subj. ζῆ from \*ζηη.
- η + ει (= long close ē) > η in Att. Ion. and mild Dor., as Ion. nom. τῆμῆς from τῆμῆεις.
- η + ει (= prim. Gr. ει) > η in all the dialects, as Att. ζῆ from \*ζήει; ἦδη from \*ῆφειδη.
- ω + α > ω in Att. Lesb., but ᾱ in Dor. and Boeot., as Att. Lesb. πρῶτος, Dor. Boeot. πρᾶτος, from \*πρώφατος; ἦρω from ῆρωα; ὦναξ = ὦ ἀναξ.



$\omega + \epsilon > \omega$ , as ἦρως from ἦρωες; Att. ῥιγῶτε from -ώετε.

$\omega + \iota > \varphi$ , as ἦρφ from ἦρωι.

$\omega + o > \omega$  in all the dialects, as σῶς from σῶος; ῥιγῶντες from -ωντες.

$\omega + \eta > \omega$ , as subj. ῥιγῶτε from -ώητε.

$\omega + \eta > \varphi$ , as subj. ῥιγῶ from -ώη.

$\omega + \omega > \omega$  in all the dialects, as ῥιγῶ from ῥιγῶω; subj. ἀλῶμεν from ἀλώωμεν.

$\omega + \epsilon\iota$  (= prim. Gr.  $\epsilon\iota$ )  $> \varphi$ , as ῥιγῶ from ῥιγῶει.

$\omega + \omicron\iota > \varphi$ , as ῥιγῶεν from \*-ῶοιεν.

$\omega + \omicron\upsilon > \omega$ , as ῥιγῶσα from -ῶουσα.

## CHAPTER IV

### ABLAUT

§ 81. Up to this point we have treated the Indg. vowels and their equivalents in the more important languages without any reference to the manner in which these vowels stand to each other in any one language. It now remains to illustrate and formulate the manner in which they stand to each other, or in other words to discuss the phenomenon of what is called ablaut or vowel gradation. And for this purpose we shall confine our examples almost entirely to Greek, partly because it is the language which concerns us most intimately in this book and partly because, having preserved the Indg. vowels more faithfully than any other language, it is best fitted to illustrate the various phenomena of ablaut.

§ 82. By ablaut or vowel gradation is meant such quantitative, qualitative and accentual differences in the vocalic elements of groups of etymologically and morphologically related words as were caused by sound-laws which operated in the prim. Indg. language before it

became differentiated into the separate languages. Such are e.g. the differences in the root-syllables of *λείπω*: *λέλοιπα*: *ἔλιπον*, *πέτομαι*: *ποτέομαι*: *ἐπτόμην*, *φέρω*: *φόρος*: *φῶρ*: *φαρέτρα*: *δί-φρος*, Lat. *pedem*: *πόδα*: Lat. *pēs*: Dor. *πῶς*: *ἐπί-βδαι*. *ἄγω*: *ὄγμος*. *ρήγνυμι*: *ἔρρωγα*: *ράγηναι*. *δί-δω-μι*: Lat. *datūs*: Skr. *da-d-máh*, *we gīve*. Dor. *φᾶμί*: *φωνή*: *φάμέν*. Examples in other than root-syllables are *λύκε*: *λύκον*: Goth. *wulfōs*, *wolves*, *φέρετε*: Dor. *φέροντι*, *ποιμένα*: *δαίμονα*: *ποιμήν*: *δαίμων*: *ποιόμνη*, *πατέρες*: *εὐ-πάτορες*: *πατήρ*: *εὐ-πάτωρ*: *πατρός*, *δυσμενές*: *δυσμενής*, *πόλις*: *πόλεις* from *\*πολεjes*, *δοτήρ*: *δῶτωρ*.

§ 83. According as the vowels which stand in ablaut relation to each other differ in quality or in quantity only, or both in quality and quantity, we have what is called qualitative, quantitative or qualitative-quantitative ablaut.

Qualitative ablaut only occurs in syllables which have the strong grade of ablaut and is for the most part confined to the interchange of *e*:*o* and of *ē*:*ō* in the *e*-series of ablaut (§ 96), as *φέρω*: *φόρος*, *λείπω*: *λέλοιπα*, *πατήρ*: *εὐ-πάτωρ*. *ἄγω*: *ὄγμος*. *ρήγνυμι*: *ἔρρωγα*. Dor. *φᾶμί*: *φωνή*. It is most difficult to account for this phase of ablaut. The interchange between *e* and *o* and between *ē* and *ō* seems to have been so regulated that *ě* originally stood in the chief-accented syllable and *ǒ* in the next following syllable, as in *φρένες*, *φρήν*: *ἄφρονες*, *ἄφρων*; *πατέρες*, *πατήρ*: *εὐ-πάτορες*, *εὐ-πάτωρ*.

Quantitative and qualitative-quantitative ablaut mostly arose through the loss or weakening of vowels in unaccented syllables, as *ἴ-μεν*: *εἶ-μι* = Skr. *i-máh*: *é-mi*, *λιπεῖν*: *λείπω*, *φυγεῖν*: *φεύγω*, *ἔδρακον*: *δέρκομαι*, *πτέσθαι*: *πέτομαι*, *πατρός*: *πατέρα*, *μίμνω*: *μένω*. Lat. *datūs*: *δί-δω-μι* = Indg. *ə*:*ō*. *ἴσταμεν*: Dor. *ἴστᾶμι* = Indg. *ə*:*ā*. The stress accent must have been more predominant than the pitch accent at the time quantitative ablaut came into

existence, because it is only upon this assumption that we are able to account for the weakening and eventual loss of vowels in unaccented syllables. See § 28.

§ 84. Scholars are now generally agreed that the factors which brought about the phenomenon called ablaut were of various kinds. Although the prime factor was doubtless the system of accentuation which prevailed at different periods in the parent Indg. language, there were also several other factors more or less connected with accent, such as vowel-contraction, lengthening of vowels by compensation for the loss of a vowel in the next syllable, rhythmical lengthening (see Wackernagel, *Das Dehnungsgesetz der griech. Composita*), numerous analogical formations, the mixing up of the various ablaut-series through the influence of analogy, &c. And as all these vowel-changes and probably many others connected with ablaut took place long before the separate languages came into existence, it is practically impossible to determine their chronological order or to be certain about the precise nature of some of the vowel-changes. In the following account of ablaut certain more or less problematical details have been omitted as being beyond the scope of this book. The student who wishes to pursue the subject in greater detail should consult Brugmann's *Grundriss*, vol. i, second ed., pp. 482-505, and *Kurze vergleichende Grammatik*, pp. 138-50; Hirt's *Der indogermanische Ablaut* and the excellent epitome in his *Handbuch der griech. Laut- und Formenlehre*, pp. 84-105.

§ 85. From the examples given above (§§ 82-3) it will be seen that ablaut is not confined to what is generally called root-syllables but that it also occurs equally in other syllables. For practical purposes it is convenient to divide words into root-bases and suffix-bases, as in φέρε-τρο-ν : Skr. *bharí-tra-m*, *arm*, πα-τέρ-α : εὐ-πά-τορ-α : πα-τήρ : εὐ-πά-τωρ : πα-τρ-ός, Dor. φέρο-μεν : Lat. *feri-mus* (older

**-mos**), OHG. **bera-mēs**. In the following paragraphs we shall call root-bases simply bases or ablaut-bases, and suffix-bases simply suffixes. Bases or ablaut-bases are mostly monosyllabic or dissyllabic. The monosyllabic bases are called heavy or light according as they contain a long or a short vowel, as \***dhē**-, \***dō**-, \***bhā**- in *τί-θη-μι*, *δί-δω-μι*, Dor. *φᾶ-μί*; \***es**-, \***ei**- in *ἔσ-τι*, *εἶ-μι*. The dissyllabic bases are called heavy when the first syllable contains a short vowel and the second syllable a long vowel, and light when both syllables contain a short vowel, as \***pelē**-, *fill*, \***genō**-, *know*, \***petā**-, *fly*, see § 458; \***leiqe**-, *leave*, in *λείπε-τε* : *λιπεῖν*. The bases underwent numerous vowel-changes owing to the operation of various sound-laws which took place in the prim. Indg. period. The more important of these changes were:—

#### I. THE WEAKENING OR LOSS OF VOWELS.

§ 86. Vowels were weakened or disappeared in syllables which did not have the chief accent of the word. Such syllables are said to have the weak grade of ablaut. The weak grade is subdivided into weak grade 1 (wg. 1) and weak grade 2 (wg. 2) according as the syllable in which it occurs originally had the secondary accent or was unaccented. In the former case short vowels merely became reduced in quality (generally written *e*, *o*, *a*) and long vowels became reduced in quality and quantity (generally written *ə*, § 49), whereas in the latter case both short and long vowels disappeared through the intermediate stage of reduced vowels. At a later period in the parent Indg. language the reduced short vowels *e*, *o*, *a* regained their full quality again and thus fell together with the original strong grade vowels **e**, **o**, **a**. When the vowel **e** entirely disappeared in diphthongs (**ei**, **eu**, **em**, **en**, **el**, **er**) the second element of the diphthong became vocalic or re-

mained consonantal according as it was followed by a consonant or a vowel in the next syllable.

§ 87. Long vowels were reduced to ə (= Aryan i but a in the other languages) or disappeared in the heavy ablaut-series (§ 49), as *θετός* for \**θατός* (§ 49, note), Skr. *hitáh*, Indg. \**dhētós* : *τί-θη-μι*, *λαγαρός* : *λήγω*, *ραγῆναι* : *ρή-γνῦμι* ; *δοτός* for \**δατός* (§ 49, note), Lat. *datús*, Skr. *á-dita* = *έ-δοτο* : *δί-δω-μι*, Lat. *dōnum* ; *στατός*, Skr. *sthitáh*, Lat. *status*, Indg. \**stētós* : Dor. *ίστᾱ-μι*, Lat. *stāre*, *φάμεν* : Dor. *φᾱμί*, Skr. *bhāvī-tum*, Indg. \**bhēwə-tum*, *to be* : base \**bhewā*-. Skr. pl. *da-dh-máh* : sing. *dá-dhā-mi*, *τί-θη-μι*, pl. *da-d-máh* : sing. *dá-dā-mi*, *δί-δω-μι*, *dēvá-ttaḥ*, *given by the gods*, with *-ttaḥ* from older \**-d-tos* beside Lat. *datús*, *φύσις* beside *έ-φῦ* from \**é-bhwət* : base \**bhewā*-.

§ 88. The first element of the long diphthongs *ēi*, *ōi*, *āi*, *ēu*, *ōu*, *āu* was reduced to ə. The *ei*, *eu* then became contracted to *ī*, *ū* before a following consonant already in the prim. Indg. period. But as the second element of long diphthongs often disappeared in the parent language (§ 63) we thus have the ablaut relation *ī* : *ē*, *ō*, *ā* and *ū* : *ē*, *ō*, *ā* in the earliest historic period of all the languages, as Skr. *dhītáh*, pp., *sucked*, Lat. *fīlius* : *θήσατο*, *he sucked*, Lat. *fēlāre*, *σκίπων* : *σκήπτρον*, *πίθι* : *πῶμα* beside Skr. *pāy-áyati*, *he gives to drink* : inf. *pátum*, *to drink* ; Skr. *mūlam*, *root* : *μῶλυ*, Skr. *ūdhar*, *udder* : *οὔθαρ* from \**ωῦθαρ* (§ 70), *μῦμαρ* : *μῶμαρ*, Skr. *mūráh*, *dull*, *stupid* : *μῶρος*, Lat. *mōrus*. When *ī* and *ū* became unaccented they were shortened to *i* and *u*, as *ῥβριμος* : *βρίθω*, *εὐρί-σκω* : *εὐρή-σω*, *χάρι-ς* : *χαρῆ-ναι*, *άλι-σκομαι* : *άλῶ-ναι*, Lat. *di-rūtus* : *ρῦτός*, *πλύσις* : *πλωτός*.

§ 89. In the light ablaut-series the short vowels *e*, *o*, *a* were reduced to voiceless (?) *e*, *o*, *a* or disappeared through the intermediate stage of *e*, *o*, *a*. At a later period in the parent Indg. language the reduced vowels regained their full quality again and thus fell together with the original

strong grade vowels **e**, **o**, **a**, as *πεπτός*, Indg. \**peqtós*, gen. sing. Lat. *pedis*, Skr. *padáh*, Indg. \**pedés*; *ὀπτέον* from \**oq* : *ὄψομαι*; *-ακτός*, Indg. \**aktós* : *ἄγω*. In Greek there are no sure examples of the loss of **o**, **a** in the light ablaut-series. It should also be noted that the above **o** is not the same as the **o** which stands in ablaut relation to **e**, as in *φόρος* : *φέρω*. Examples of the loss of **e** are *ἐπτόμην* : *πέτομαι*, *ἐσπέσθαι* : *ἔπομαι* from \**σέπομαι*, Skr. pl. *s-máh* : *ás-mi*, *I am* = Indg. \**s-més* : \**és-mi*, *ἐπί-βδαι* : Lat. *pedem*, *ἴζω* from \**σι-σδ-ω* : *ἔδος* from \**σέδος*, *ἴσχω* from \**σί-σχω* : *ἔχω* from \**σέχω*.

When the vowel **e** entirely disappeared in the diphthongs **ei**, **eu**, **em**, **en**, **el**, **er** the second element of the diphthong became vocalic or remained consonantal according as it was followed by a consonant or a vowel in the next syllable, as *ἴμεν* : *εἶμι* = Skr. *imáh* : *émi*, *λιπεῖν*, *ἔλιπον* : *λείπω*; *κέχυται* : *χέ(φ)ω*, *κλυτός* : *κλέ(φ)ος*, *φυγεῖν*, *ἔφυγον* : *φεύγω*; *ἄ-παξ* : *εἶς* from \**σεμς*; *ἄσμενος* from \**ἡσμενος* : *νέομαι*, *ἔπαθον* : *πέ-πονθα*, *μαίνομαι* from \**μηγομαι* : *μέ-μονα*, *μέ-μαμεν* : *μέ-μονα*, *φρασί* : *φρενός*; *ἐκλάπην* : *κλέπτω*; *ἔδρακον* : *δέρκομαι*, *δεδαρμένος* : *δέρω*, *πατράσι*, Skr. *pitṛṣu* : *πατέρα*. Skr. *y-ánti*, *they go* : *i-máh*, *we go* = Indg. \**j-énti* : \**i-més*; Hom. *πεύρατα* from \**περφ-ατα* : *πρυ-μνός*; *γί-γνομαι* : *ἐγένετο*, *μί-μνω* : *μένω*, *νεο-γνός* : *γένος*; *δί-φρος* : *φέρω*, *πατρός* : *πατέρα*.

§ 90. The combinations **emə**, **enə**, **elə**, **erə** had in heavy bases (§ 97) a threefold development in prim. Greek. They became (1) *άμα*, *άνα*, *άλα*, *άρα* when the first element had the secondary accent, (2) *μᾶ*, *νᾶ*, *λᾶ*, *ρᾶ* (see § 68) when the last element had the secondary accent and the first element disappeared, and (3) *μα*, *να*, *λα*, *ρα* when neither the first nor the last element had the secondary accent; and (ε)jə, (ε)wə became *ἱ*, *ῦ*, as *ἐτάλασσα* (Hesych.) : *τλητός*, Lat. *lātus*; *θάνατος* : *θνητός*, Dor. *θνατός*; *κάρηνον* from \**καρασνον* : *κρᾶτός* from \**κρᾶσατος*; *κάματος* : *κμητός*,

Dor. κμᾱτός, νεό-δμᾱτος : δέμας ; γνητός, Lat. (g)nātus ; Dor. λᾱνος, Lat. lāna. ἔ-τμαγον : τέμαχος, τέ-τμηκα ; τέ-θναμεν : θάνατος ; τέ-τλαθι : τελαμών, κα-χλάζω : κέ-χλᾱδα ; στρατός : ἑ-στόρεσα. ἰτέᾱ : base \*wejē- ; ἑ-φῦ : Skr. inf. bhāvítum, to be, base \*bhewā-.

## 2. THE LENGTHENING OF VOWELS.

§ 91. Several kinds of vowel lengthening took place in the prim. Indg. period, as lengthening by compensation for the loss of a syllable, contraction of vowels and rhythmical lengthening. See Streitberg, *Indogermanische Forschungen*, iii, pp. 305-416.

§ 92. With quantitative ablaut is connected the prim. Indg. lengthening of vowels by compensation for the loss of a syllable. The vowels thus lengthened have what is called the lengthened grade of ablaut (lg.). The vowels in nearly all the examples which have this lengthening belong to the e-series of ablaut. And the lengthened vowels ē, ō are respectively called lg. 1 and lg. 2.

(a) A short accented vowel in an originally open syllable became lengthened if the following syllable entirely disappeared. This occurs especially in the nom. singular of nouns, as Lat. pēs, Dor. πώς from prim. Indg. \*péts, \*póts, \*pédes or -os, \*ródes or -os, beside acc. pedem, πόδα, Indg. \*pédm̄, \*ród̄m̄ ; πατήρ from prim. Indg. \*pətére beside πατέρα, Indg. \*pətér̄m̄ ; and similarly θήρ : Lat. ferus, κῆρ : base \*kéred-, cp. καρδίᾱ, ποιμήν : ποιμένα, φρήν : φρένα, βλώψ : βλέπω, δαίμων : δαίμονα, Hom. ἰδρώς : ἰδρόα, κλώψς : κλοπός, φώρ : φόρος, ὄψ : ὄψομαι.

NOTE.—Also when a short vowel disappeared after a long vowel, as in gen. θεᾱς from an original form \*dhwesāso : nom. θεᾱ́.

(b) The e was also lengthened in prim. Indg. in the active singular of the s-aorist, as \*léksm̄ from older

\*legesm, cp. Lat. *lĕxī* : pres. *legit*; Lat. *vĕxī*, Skr. *á-vākṣam* : pres. *vehit*, *váhati*. The s-aorist in Greek was a new formation with the vowel from the present, as *ἔ-λεξα*, *ἔ-λειψα*, but Skr. *á-rāikṣam*, see § 507.

§ 93. Contraction of the augment with a following vowel, as in *ῆα* (§ 79), Skr. *ásam*, Indg. \**ésm* from older \**é-esm*; *ῆα* for \**ῆα*, Skr. *áyam*, Indg. \**éjm* from older \**é-ejm*; *ῆγον*, Dor. *áγον*, Skr. *ájam* : pres. *άγω*, *ájāmi*.

The contraction of case-endings with the stem, as *-ās* from *-ā-es* in the nom. plural of *ā*-stems; *-ōi* from *-o-ai* in the dat. singular of *o*-stems; *-ōs* from *-o-es* in the nom. plural of *o*-stems, see § 79.

§ 94. Rhythmical lengthening in the first elements of compounds and before suffixes so as to avoid a long succession of short vowels, as *πρω-πέρουσι*, *ιερωσύνη* : *ιέρως*, Hom. *έτέρωθι*, *έτέρωσε*, *έτέρωθεν* : *έτερος*.

#### ABLAUT-SERIES.

§ 95. The vowels vary within certain series of related vowels called ablaut-series. The parent Indg. language had six such series, three light and three heavy, viz.

	sg. 1.	sg. 2.	lg. 1.	lg. 2.	wg. 1.	wg. 2.
I. e-series	é	o	ě	ō	e	—
II. o-series	ó	o	ǒ	ō	o	—
III. a-series	á	o	ǎ	ō	a	—
IV. ē-series	é	ō			ə	—
V. ō-series	ǒ	ō			ə	—
VI. ā-series	ǎ	ō			ə	—

Strong grade 1 is taken as the normal grade in all the series. The three light series have three grades, strong grade, lengthened grade, and weak grade, whereas the three heavy series have only the two grades, strong and weak. The origin of the difference between the strong and the weak grade and between the strong and the



lengthened grade have already been explained in the preceding paragraphs. And some indication of the probable origin of the difference between strong grade 1 and strong grade 2 has been given in § 83, but much still remains obscure about the origin of these qualitative differences.

The first ablaut-series is by far the most important. It is found in many monosyllables and always in the first syllable of dissyllabic heavy bases and in the second syllable of dissyllabic light bases and nearly always in the first syllable of dissyllabic light bases. And one or other grade of this series occurs in nearly all suffixes. The second and third series are exceedingly rare. Apart from a few monosyllabic heavy bases the fourth, fifth, and sixth series only occur in the second syllable of dissyllabic heavy bases, and even here the number of examples is not very great. The  $\bar{e}$  in the fourth series often came to be regarded as a formative element in prim. Greek and was then extended by analogy to bases to which it did not originally belong, see §§ 458, 506.

§ 96. Many examples of the various grades of ablaut have been given in the preceding paragraphs. In this and the following paragraph are given examples of the various ablaut-series, and of their application to dissyllabic light and heavy bases.

### I. The e-series.

sg. 1.	sg. 2.	lg. 1.	lg. 2.	wg. 2.
é	ο	έ	ὄ	—
πέδα	πόδα	Lat. pēs	πώς	ἐπί-βδαι
πέτομαι	ποτέομαι		πωτάομαι	ἐπτόμην
ἔπομαι				ἐσπέσθαι
ἔχω				ἴσχω
λόγε	λόγος			
Dor. φέρο-μεσ	Lat. feri-mus	OHG. bera-mēs		

sg. 1.	sg. 2.	lg. 1.	lg. 2.	wg. 2.
φέρε-τε	Dor. φέρο- ντι			
λείπω	λέλοιπα	Skr. á-rāikṣam		λιπεῖν
πείθω	πέποιθα			πιθέσθαι
εἶδομαι	οἶδα			ἴδμεν
εἶμι				ἴμεν
ῥέ(φ)ω	ῥο(φ)ᾶ			ῥυτός
ἐλεύ(θ)σομαι	εἰλήλουθα			ἤλυθον
πεύθομαι				πύστις
φεύγω				ἔφυγον
νέμω	νόμος			
εἶς from *sems	ὄμοῦ			ἄμα, ἄ-παξ
μένος	μέμονα			μέ-μα-μεν
πένθος	πέπονθα			ἔπαθον
ἐ-γένετο	γέγονα			γί-γνο-μαι, γέ-γα-μεν
μένω				μίμνω
ποι-μένα	δαί-μονα	ποι-μήν	δαί-μων	ποί-μνη
φρένα	εὔ-φρονα	φρήν	εὔ-φρων	φρασί
κλέπτω	κέκλοφα			ἐκλάπην
τρέπω	τροπή		τρωπάω	τραπέῖν
δέρκομαι	δέδορκα			ἔδρακον
φέρω	φορέω		φώρ	δί-φρος
πα-τέρ-ες	εὐ-πά-τορ-ες	πα-τήρ	εὐ-πά-τωρ	πα-τρ-ός

## II. The o-series.

sg. 1.	sg. 2.	lg. 1.	lg. 2.	wg. 1.	wg. 2.
ὄ	ο	ὄ	ὄ	ο	—
ὄψομαι		ὄψ		ὄπτέον	
βό(φ)ες		βοῦς from *βωυς			ἐκατόμ-βη

## III. The a-series.

sg. 1.	sg. 2.	lg. 1.	lg. 2.	wg. 1.	wg. 2.
á	o	á	ō	a	
ἄγω	ὄγμος	Lat. amb-āges	ἀγωγή	-ακτός	

## IV. The ē-series.

sg. 1.	sg. 2.	wg. 1.	wg. 2.
é	ō	ə	—
τίθημι	θωμός	θετός for *θατός	
Skr. dá-dhā-mi		hitáh	da-dh-máh
ρήγνυμι	ἔρ-ρωγα	ράγηναι	
λήγω		λαγάρός	
ἦμα	ἀφ-έ-ω-κα	έτός for *átós	

## V. The ō-series.

sg. 1.	sg. 2.	wg. 1.	wg. 2.
ó	ō	ə	—
δίδωμι		δοτός for *δατός	Skr. da-d-máh
Lat. dōnum, δῶρον		Lat. datus, δάνος	

## VI. The ā-series.

sg. 1.	sg. 2.	wg. 1.	wg. 2.
á	ō	ə	—
Dor. φᾱμί	φωνή	φαμέν	
Dor. ἴσᾱμι		ἴσταμεν, στατός	
Dor. ἔ-πτᾱξα	πτωχός	-πτακών	
Dor. τᾱκω		τακερός	

## DISSYLLABIC BASES.

§ 97. In the parent Indg. language either the first or the second syllable of dissyllabic bases always contained the weak grade of ablaut. Both syllables could have the weak, but not the strong grade. From this it follows that forms

of the type φέρε, φέρε-τε, Dor. φέρο-μες, and γί-γνο-μαι cannot be original. The prim. Indg. forms corresponding to the former were \*bhér, \*bhr̥-t(h)é, \*bhr̥-més = prim. Gr. \*φέρ, \*φρατέ, \*φραμές, and to the latter \*gí-gnə-mai = prim. Gr. \*γί-γνα-μαι. φέρε, φέρε-τε, φέρο-μες, γί-γνο-μαι and similar forms contained the thematic vowels, e, o. See §§ 450, 456. And in like manner forms of the type γένος (stem γένεσ-, Skr. jánas-, Lat. gener-), φόρο-s, &c. were new formations which came into existence long after the factors which caused the phenomenon of ablaut had ceased to operate. Such new formations took place partly in the parent Indg. language itself and partly in the pre-historic period of the separate languages.

In the following examples of dissyllabic bases the grade of ablaut before the + refers to the first syllable of the base and the one after the + to the second syllable.

(a) Dissyllabic light bases :—sg. 1 + wg. 2 Lith. lėk-mi, *I leave*, sg. 2 + wg. 2 λέ-λοιπ-α, lg. 1 + wg. 2 Skr. á-rāikṣ-am (§ 507), wg. 2 + sg. 1 ἔ-λιπε-s, wg. 2 + sg. 2 ἔ-λιπο-ν : \*léiq(e)-, \*liq-é-. sg. 1 + wg. 2 φέρ-τρον, φέρ-τε, Lat. fer-tis, lg. 2 + wg. 2 φώρ (§ 92 (a)), wg. 2 + sg. 2 δί-φρο-s : base \*bhere-. sg. 1 + wg. 2 Lat. genu, sg. 2 + wg. 2 γόνυ, wg. 2 + sg. 1 Goth. kniu, lg. 2 + wg. 2 γων-ιά, wg. 2 + wg. 2 Skr. abhi-jñú, *down to the knee*, γνύξ : base \*geneu-. sg. 1 + wg. 2 δέκα-τος, wg. 2 + sg. 2 -κοντα = Indg. \*-dkomtə, wg. 2 + wg. 2 φί-κατι = Indg. \*-dkmti : base \*dekemt-. sg. 1 + wg. 2 αὐξώ, Lat. augēre, wg. 2 + sg. 1 Lat. vegeo, wg. 2 + lg. 2 OE. wōcor, *progeny, usury*, wg. 2 + sg. 2 Goth. wahsjan, *to grow*, wg. 2 + wg. 2 Skr. ugrāḥ, *mighty* : base \*aweg-, *increase*. wg. 2 + sg. 1 ἔαρ from \*wesr̥, wg. 2 + lg. 1 Lat. vēr from \*wēs-, lg. 1 + wg. 2 ἠώς from \*āusōs, wg. 2 + wg. 2 Skr. uśás-, *dawn* : base \*awes-, *shine, flash up*.

(b) Dissyllabic heavy bases. The long vowel (ē, ō, ā) in the second syllable of these bases was weakened to ə

when the accent was on the first syllable (§ 458). When the accent was on the second syllable the long vowel was preserved and the short vowel of the first syllable disappeared, as \**témə*-, \**génə*-, \**pétə*- beside \**tmé*-, \**gnō*-, \**ptá*-. It is therefore impossible to determine to which of the long vowels the *ə* goes back unless forms have been preserved in which the second syllable of the base originally had the accent. The same difficulty also exists with the prim. Indg. combinations *emə*, *enə*, *elə*, *erə*, which became in prim. Greek *μᾶ*, *νᾶ*, *λᾶ*, *ρᾶ* when the last element of the combination had the secondary accent (§ 90). They thus fell together with the base forms of the type \**ptā*- with long *ā*. Examples are—sg. 1 + wg. 1 *τέμα-χος*, wg. 2 + sg. 1 *τέ-τμη-κα* : base \**temē*-, *cut.* sg. 1 + wg. 1 Skr. *véman*- from \**vayiman*-, *loom*, sg. 2 + wg. 2 (F)*οἶσος*, wg. 2 + sg. 1 Lat. *viēre*, wg. 2 + wg. 1 *ἰτέᾶ*, Lat. *vītis*, wg. 2 + wg. 2 *ἴτυς* : base \**wejē*-, *plait, wind.* sg. 1 + wg. 1 Skr. *jáni-tōḥ*, *to beget*, *γένε-σις* for \**γένα-σις*, wg. 2 + sg. 1 *γνωτός*, *ἔ-γνων*, Lat. (g)*nōtus*, OE. *cnāwan* (\**gné*-), *to know*, wg. 2 + wg. 1 Skr. *já-jñih*, *germinating* : base \**genō*-, \**genē*-, *gignere.* sg. 1 + wg. 1 *πέτα-μαι*, sg. 2 + wg. 1 *ποτά-ομαι*, lg. 2 + wg. 1 *πωτά-ομαι*, wg. 2 + sg. 1 *πτῆ-ναι* : base \**petā*-, *spread out, fly.* sg. 1 + wg. 1 Skr. *bhāvi-tum* from \**bhēwi-tum*, *to be*, wg. 2 + sg. 1 Lat. *-bam* from \**bhwām*, wg. 2 + wg. 1 *ἔ-φῦ* from \**é-bhwæt*, wg. 2 + wg. 2 *φύ-σις* : base \**bhewā*-, *be.* sg. 1 + wg. 1 *κέρα-σαι*, wg. 2 + sg. 1 *κέ-κρᾶ-μαι* : base \**kerā*-, *mix.* sg. 1 + wg. 1 *τελα-μών*, wg. 1 + wg. 1 *ἐ-τάλα-σσα* (Hesych.), wg. 2 + sg. 1 *τλητός*, Dor. *τλάτος*, Lat. *lātus* : base \**telā*-, *bear, endure.*

## CHAPTER V

THE PRIMITIVE INDO-GERMANIC  
CONSONANTS

§ 98. The Indo-Germanic parent language had the following system of consonants:—

	LABIAL.	DENTAL.	PALATAL.	VELAR.	
<i>Explosives</i> {	tenues	p	t	k	q, q <sup>w</sup>
	mediae	b	d	g	g, g <sup>w</sup>
	tenues aspiratae	ph	th	kh	qh, q <sup>wh</sup>
	mediae aspiratae	bh	dh	gh	gh, g <sup>wh</sup>
<i>Spirants</i> {	voiceless		s		
	voiced		z	? j	
<i>Nasals</i>	m	n	ñ	ŋ	
<i>Liquids</i>		l, r			
<i>Semivowels</i>	w (u)		j (i)		

NOTE.—I. Explosives are consonants which are formed with complete closure of the mouth passage, and may be pronounced with or without voice, i. e. with or without the vocal cords being set in action; in the former case they are said to be voiced (e. g. the mediae), and in the latter voiceless (e. g. the tenues). The aspirates are pronounced like the simple tenues and mediae followed by an *h*, like the Anglo-Irish pronunciation of *t* in *tell*.

The palatal explosives are formed by the front or middle of the tongue and the roof of the mouth (hard palate), like *g*, *k* (*c*) in English *get*, *good*, *kid*, *could*; whereas the velars are formed by the root of the tongue and the soft palate (velum). The latter do not occur in English, but are common in Hebrew, and are often heard in the Swiss pronunciation of German. In the parent Indo-Germanic language there were two kinds of velars, viz. pure velars and velars with lip rounding. The latter are here indicated by <sup>w</sup>. The palatal and velar nasals

only occurred before their corresponding explosives, **ñk**, **ñg**; **ŋq**, **ŋg**, &c.

2. Spirants are consonants formed by the mouth passage being narrowed at one spot in such a manner that the outgoing breath gives rise to a frictional sound at the narrowed part.

**z** only occurred before voiced explosives, e. g. **\*nizdos** = Lat. **nīdus**, English **nest**; **\*ozdos** = Gr. *ὄζος*, Goth. **asts**, *bough*.

3. The nasals and liquids had the functions both of vowels and consonants (§ 64).

4. The essential difference between the so-called semivowels and full vowels is that the latter always bear the accent of the syllable in which they occur, e. g. in English **ców**, **stáin** the first element of the diphthong is a vowel, the second a consonant; but in words like French **rwá** (written **roi**), **bjér** (written **bière**), the first element of the diphthong is a consonant, the second a vowel. In consequence of this twofold function, a diphthong may be defined as the combination of a sonantal with a consonantal vowel. And it is called a falling or rising diphthong according as the stress is upon the first or second element.

5. From the above system of consonants have been excluded certain rare sounds which only existed in the parent language in combination with other sounds, viz. **sh** and **zh**, **þ** and **đ**, **ph** and **dh**.

**sh** and **zh** only occurred in combination with tenues and mediae and arose from the older combinations, tenues aspiratae and mediae aspiratae + **s**, as **tsh**, **psh**, **dzh**, **bzh** from older **ths**, **phs**, **dhs**, **bhs**.

**þ** and **đ** only occurred after palatals and velars which were originally unaspirated, as **kþ**, **qþ**, **gđ**, **gđ**.

**ph** and **dh** only occurred after palatals and velars which were originally aspirated, as **kph**, **qph**, **gdh**, **gdh** from older **khþ**, **qhþ**, **ghđ**, **ghđ**. In the present state of our knowledge it is impossible to determine how these four spirants were pronounced in the parent language. In Greek they became **t**-sounds, and in Sanskrit, Latin, Germanic and the Baltic-Slavonic languages they became **s**-sounds. See §§ 225-6.

6. The *tenues aspiratae* and the *mediae aspiratae* only occurred before vowels, semivowels, liquids and nasals. When they came to stand before explosives or spirants, they became deaspirated, as **pth**, **bdh**, **tsh**, **dzh** from older **pht**, **bht**, **ths**, **dhs**, see § 109.

7. It is doubtful whether the parent language had a spirant **j**, see § 227.

§ 99. The following tables contain the normal equivalents of the Indg. explosives in Greek, Latin, Old Irish, prim. Germanic, Gothic, Sanskrit and the Baltic-Slavonic languages. For examples see the paragraphs dealing with labial, dental, palatal and velar explosives.

## § 100.

## I. THE TENUES.

Indg.	Gr.	Lat.	O.Ir.	P. Ger- manic.	Goth.	Skr.	Lith.	O.Slav.
<b>p</b>	$\pi$	<b>p</b>	—	<b>f, b, b</b>	<b>f, b, b</b>	<b>p</b>	<b>p</b>	<b>p</b>
<b>t</b>	$\tau$	<b>t</b>	<b>t, th</b>	<b>þ, ð, d</b>	<b>þ, ð, d</b>	<b>t</b>	<b>t</b>	<b>t</b>
<b>k</b>	$\kappa$	<b>c</b>	<b>c</b>	<b>χ, ζ</b>	<b>h, ǰ, g</b>	<b>ś</b>	<b>sz</b>	<b>s</b>
<b>q</b>	$\kappa$	<b>c</b>	<b>c</b>	<b>χ, ζ</b>	<b>h, ǰ, g</b>	<b>k, c</b>	<b>k</b>	<b>k, č</b>
<b>q<sup>w</sup></b>	$\pi, \tau, \kappa$	<b>qu, c</b>	<b>c</b>	<b>χ<sup>w</sup>, ζ<sup>w</sup></b>	<b>hw, ǰ, w</b>	<b>k, c</b>	<b>k</b>	<b>k, č</b>

NOTE.—1. On the development of the Indg. pure and labialized velars in Greek, Sanskrit, Lithuanian and Old Slavonic see §§ 195-210.

2. In Lat. **p** and **c** disappeared medially before **s** + consonant and initially before **s**; **pn**, **tn**, **tsn** > **nn**; **tt**, **ts** > **ss**; **tsl** > **ll**; **t1** > **1** initially and **cl** medially; **cn** > **gn**; and **ncn** > **n** with lengthening of a preceding vowel; **qu** > **c** before **u** and consonants.

3. In O.Ir. **p** disappeared initially and medially between vowels; **sp** > **s**, **f** initially and **sc** medially; **pt**, **ps**, **rp** > **cht**, **ss**,



rr; tt, ts, st > ss; t and c disappeared before nasals and liquids; cs, ct, rct, nc > ss, cht, rt, gg.

4. The Indg. tenues p, t, k, q, q<sup>w</sup> became in prim. Germanic the voiceless spirants f, þ, χ, χ<sup>w</sup> = Goth. f, þ, h, hv. These voiceless spirants as also Indg. s became by Verner's Law the voiced spirants b, d, g, g<sup>w</sup>, z (see § 103, note 2) medially and finally when the vowel next preceding them did not, according to the original Indg. system of accentuation, bear the principal accent of the word. The Indg. tenues remained unshifted in the combination s + tenuis, and t also remained unshifted in the Indg. combinations pt, kt, qt. In some words the Indg. velars, when preceded or followed by a w or another labial in the same word, appear in the Germanic languages as labials by assimilation, as Goth. fimf, *five*, wulfs, *wolf* = Indg. \*peŋq<sup>w</sup>e, \*wlq<sup>w</sup>os.

## § 101.

## 2. THE MEDIAE.

Indg.	Gr.	Lat.	O.Ir.	P. Germanic.	Goth.	Skr.	Lith.	O.Slav.
b	β	b	b	p	p	b	b	b
d	δ	d	d	t	t	d	d	d
g	γ	g	g	k	k	j	ž	z
g	γ	g	g	k	k	g, j	g	g, ž
g <sup>w</sup>	β, δ, γ	v, gu, g	b, g	kw	q	g, j	g	g, ž

NOTE.—1. On the development of the Indg. pure and labialized velars in Gr. Lat. Skr. Lith. and O.Slav. see §§ 195–210.

2. In Lat. bn, dn, dm, dl > mn, nn, mm, ll (but l initially), ld > ll; initial dj, dw, gn > j, b, n.

3. In O.Ir. d, g disappeared before l, n, r; bn > mn; mb, dm > mm; db, gb > bb; dg > gg; gd > dd.

4. The Indg. mediae b, d, g, g, g<sup>w</sup> became in prim. Germanic the tenues p, t, k, kw.

## § 102. 3. THE TENUES ASPIRATAE.

The tenues aspiratae were rare sounds in the Indg. parent language. Sanskrit and Greek were the only languages which preserved them in historic times. In prim. Keltic, Germanic and the Baltic-Slavonic languages they fell together with the original tenues.

Indg.	Gr.	Lat.	O.Ir.	P. Ger- manic.	Goth.	Skr.	Lith.	O.Slav.
ph	φ	f, b	—	f, b, b	f, b, b	ph	p	p
th	θ	f, b, d	t, th	þ, ð, d	þ, ð, d	th	t	t
kh	χ	h, f, g	c	χ, ʒ	h, ʒ, g	? ch	sz	s
qh	χ	h, (f), g	c	χ, ʒ	h, ʒ, g	kh, ch	k	k, č
q <sup>w</sup> h	φ, θ, χ	f, v, gu	c	χw, ʒw	lv, ʒ, w	kh, ch	k	k, č

Examples of the tenues aspiratae in Greek and Sanskrit are :—

ph: σφαραγέομαι, *I crack, crackle*, Skr. sphúrjati, *he cracks*; σφήν, Skr. sphyáh, *wedge*; σφέλας, Skr. phála-kam, *footstool*.

th: οἶσθα, Skr. véttha, *thou knowest*; πλάθανον, *a platter or mould to bake in*, Skr. prthúh, *broad*; μόθος, *battle-din*, Skr. mánthati, *he shakes, twists*. Indg. sth became στ, as ἴστημι, Skr. tíṣṭhāmi, *I stand*; στῦλος, *pillar*, Skr. sthūráh, *strong*; superlative suffix -ιστος = Skr. -iṣṭhaḥ.

kh: σχίζω, Lat. scindo, *I split*, Skr. chinátti from \*skhinátti, *he splits*, OE. scādan, *to divide*; σχάω, *I slit*, Skr. chyáti, *he slits*.

qh: καχάζω, *I laugh*, Skr. kakhati, *he laughs*; κόγχος, Lat. congius, Skr. śaṅkháh, *muscle*.

q<sup>wh</sup>: φάλλη, OE. hwæl, *whale*; σφάλλομαι, *I stumble*,  
Skr. skhalatē, *he stumbles*.

## § 103.

## 4. THE MEDIAE ASPIRATAE.

Indg.	Gr.	Lat.	O.Ir.	P. Ger- manic.	Goth.	Skr.	Lith.	O.Slav.
bh	φ	f, b	b	ḅ, b	ḅ, b	bh	b	b
dh	θ	f, b, d	d	ḍ, d	ḍ, d	dh	d	d
gh	χ	h, f, g	g	ǰ, g	ǰ, g	h	ž	z
gh	χ	h, (f), g	g	ǰ, g	ǰ, g	gh, h	g	g, ž
g <sup>wh</sup>	φ, θ, χ	f, v, gu	g	ǰw, ǰ, w	ǰ, w	gh, h	g	g, ž

NOTE.—1. In prim. Greek and Italic (Lat. Oscan, Umbrian, &c.) the mediae aspiratae became voiceless and thus fell together with the original tenues aspiratae.

2. The mediae aspiratae became in prim. Germanic the voiced spirants, **ḅ**, **ḍ**, **ǰ**, **ǰw**, and thus fell together with the voiced spirants which arose from the Indg. tenues by Verner's Law (§ 100, note 4). These sounds underwent the following changes during the prim. Germanic period:—**ḅ**, **ḍ** initially, and **ḅ**, **ḍ**, **ǰ** medially after their corresponding nasals, became the voiced explosives, **b**, **d**, **g**. **ḅ**, **ḍ**, **ǰ** remained in other positions, and their further development belongs to the history of the separate Germanic languages. In Goth. **ḅ**, **ḍ** (written **b**, **d**) remained medially after vowels, but became explosives (**b**, **d**) after consonants. They became **f**, **þ** finally after vowels and before final **-s**. **ǰ** remained medially between vowels, and medially after vowels before voiced consonants, but became **χ** (written **g**) finally after vowels and before final **-s**. It became **g** initially, and also medially after consonants.

‡ Prim. Germanic **ǰw** became **ǰ** before **u**, in other cases it became **w**.

§ 104. From what has been said in §§ 100-3 it will be seen that several of the Indg. explosives fell together in the various languages. In Keltic, Germanic and the Baltic-Slavonic languages the tenues aspiratae fell together with the original tenues. Sanskrit is the only language which preserved the original mediae aspiratae. In Greek and Latin they fell together with the original tenues aspiratae. In Keltic and the Baltic-Slavonic languages they fell together with the original mediae. In Greek, Latin, Keltic and the Germanic languages the pure velars fell together with the original palatals, but were kept apart in Sanskrit and the Baltic-Slavonic languages. In Sanskrit and the Baltic-Slavonic languages the labialized velars fell together with the pure velars, but were kept apart in Greek, Latin, Germanic and partly also in the Keltic languages.

#### INDG. SOUND-CHANGES.

§ 105. The consonants underwent various sound-changes during the prim. Indg. period, i. e. before the parent language became differentiated into the separate Indo-Germanic languages. The most important of these sound-changes are given in the following paragraphs.

§ 106. Mediae became tenues before voiceless consonants, as ζευκτός, Skr. **yuktáh**, Lat. **jūctus**, Lith. **júntas**, Indg. \***juqtós**, *yoked*, beside ζυγόν, Skr. **yugám**, Lat. **jugum**, Indg. \***jugóm**, *yoke*; οἶθα, Skr. **véttha**, *thou knowest*, beside οἶδα, **véda**, *I know*; loc. pl. ποσσί, ποσί, Skr. **patsú**, beside nom. pl. πόδες, **pádaḥ**; Lat. **nūptum**, **nūpsi** : **nūbere**; **rectum**, **rēxi** : **regere**; Goth. **giban**, *to give*, beside **fra-gifts**, *a giving, espousal*; OE. **bringan**, *to bring*, beside **brōhte**, *I brought*; and similarly in Gr. **αὔξω**, **αὔξάνω** : Lat. **augeo**, Lith. **áugu**, *I increase, grow*; **ἄ-νιπτος**, *unwashed*, Skr. **niktáh**, *washed*, **νίψω** : **νίξω** from \***nijjō**; **λέξω**, **ἔλεκτο** : **λέγω**; **τρίψω**, **τέτριπται** : **τρίβω**.

§ 107. Voiceless consonants became voiced before voiced explosives and **z**, as *ἔβδομος* : *ἑπτά* ; *ἐπί-βδαι* (nom. pl.), *the day after the feast*, where *-βδ-* is the weak form of \**ped-*, *foot*, cp. Skr. *upa-bdá-*, *stamping, trampling* ; Skr. *nīdáḥ*, Lat. *nīdus*, OE. *nest*, from \**ni-zdos*, *nest*, where *ni-* = *down*, and *-zd-* is the weak form of \**sed-*, *sit* ; *βδέω* from \**βzδεω* where *βzδ* is the weak form of \**pezd-* which occurs in Lat. *pēdo* ; and similarly *κύβδην*, *πλέγδην*, *κλέβδην* : *κύπτω*, *πλέκω*, *κλέπτω* ; *γράβδην*, *βρέγδην* : *γέγραπται*, *βέβρεκται* ; Hom. *ὑββάλλω* : *ὑποβάλλω*.

§ 108. When two aspiratae came together the first one became de-aspirated, as imperative *πέπισθι* from \**bhebhidz-dhi*, older \**bhebhidh-dhi* : *πέποιθα*. This combination of consonants was rare in the parent language.

§ 109. When an aspirata came to stand before **s** or before one or more unaspirated explosives, the aspiration became transferred to the last consonant. When the aspirata was voiced the whole group became voiced, as *αἴσχος* from \**aighskos*, Goth. *áiwiki* from \**aizwisk-*, *shame, disgrace* ; *ἔσχατος* from \**eghskatos* : *ἔξ* ; *λέσχη* from \**legzghā*, older \**leghskā* : *λέχος* ; *πάσχω* from \**patskhō*, older \**pnthskō*, Indg. \**qñthskō* : *παθεῖν* ; *ξένος* from \**qzhen-*, older \**ghsen-*, Goth. *gasts*, *guest, stranger*, Lat. *hostis* ; *ψάω* from \**bzhō-*, older \**bhsō-* : Skr. *bá-bhasti*, *he chews, devours*. Cp. § 225.

The sound-law whereby *bht*, *ght* became *bdh*, *gdh* = prim. Greek *πθ*, *κθ* was obliterated by new formations made after the analogy of forms which regularly had **τ**, as in *βλεπτός* : *βλέπω* ; *τέτριπται*, *ἄτριπτος* : *τρίβω* ; *πέπλεκται*, *πλεκτός* : *πλέκω* ; *ἔλεκτο*, *λεκτός* : *λέγω*. And as combinations like *psh*, *bzh*, from older *phs*, *bhs*, regularly became *ps* in prim. Greek (§ 225), the above sound-laws may, so far as historic Greek is concerned, be formulated as follows : **φ**, **χ** appear as **π**, **κ** before a following **τ** or **σ**, as *γέγραπται*, *γράφω* : *γράφω* ; *ἀλείψω* : *ἀλείφω* ; *ρόπτός* :

ροφέω; βέβρεκται, βρέξω : βρέχω; ἀνεκτός : ἀνέχομαι;  
στείξω : στείχω.

Every Indg. dental + s became ts (§ 110) in prim. Greek, for the further development of which see § 166.

§ 110. When two dental explosives came together a spirantal glide was developed between them, which is generally written <sup>s,z</sup>, as **t<sup>s</sup>t**, **t<sup>s</sup>th**, **d<sup>z</sup>d**, **d<sup>z</sup>dh**. These combinations became in prim. Greek **στ** (= Skr. **tt**, Lat. Germanic **ss**), **σθ**, **zd**, **σθ**. Every original dental + t appears in Greek as **στ**. Examples are:—**ἄ-ιστος**, *unseen, unknown*, Skr. **vittáh**, *known*, OE. **ge-wiss**, *sure, certain*, Lat. **vīsus** from \***vīssus**; **ἴστε** : **οἶδα**; **ὑστερος**, Skr. **úttarah**, *latter*; pp. Skr. **sattáh**, *sitten*, OE. **sess**, *seat*, Lat. **ob-sessor** : \***sed-**, *sit*; **ἀνυστός**, **ἄ-παστος** : **ἀνύτω**, **πατέομαι**; **κεστός** from \***κεντ-τός** : **κεντέω**. **κέκασται** : **κεκαδμένος**; **ἔψευσται** : **ψεύδω**. **οἶσθα**, Skr. **vēthha**, *thou knowest* : **οἶδα**, **vēda**, *I know*. **πέπεισται** : **πείθω**. **ἠρείσθην** : **ἐρείδω**. **ἐπείσθην** : **πείθω**. **μαζός**, *breast*, Skr. **mēdah**, *fat*.

§ 111. Tenues often alternated with mediae especially before or after nasals, as **σκαπάνη** : Lat. **scabo**; Skr. **daśát-** : **δεκάδ-**; **πάσσαλος** from \***πάκjaλος** : **πήγνυμι**, Lat. **pango**, **ποικίλος** : Lat. **pingo**, **δίκη**, Lat. **dīco** : **δέδειγμα**, **εἴκοσι** : Lat. **vīgintī**.

The alternation between mediae aspiratae and mediae was also not uncommon, as **ἀστεμφής** : **στέμβω**, **ἀφρός** : **ὄμβρος**; **πλίνθος** : English **flint**, **πυθμήν** : **πύνδαξ**; Skr. **ahám** : **ἐγώ**, Lat. **ego**, Goth. **ik**; Skr. **hānuh**, *jawbone* : **γένυς**, Goth. **kinnus**, *cheek*; Skr. **mahān** : **μέγας**, Goth. **mikils**; and similarly between tenues and tenues aspiratae, as **πλατύς** : Skr. **prthúh**, *broad*, **πλάθανον**, *board*; **πάτος** : Skr. **pánthāh**, *path*. The reasons for these alternations are unknown. For further examples see Brugmann, *Grundriss, &c.*, vol. i, second ed., pp. 629-35.

§ 112. s + consonant often alternated with the simple

consonant, as *στέγος* : *τέγος*, Lat. *tego*; *στένω*, *I groan* : Lat. *tonāre*; *σκαίρω* : *κόρδαξ*; *σμίλη* : Goth. *máitan*, to *cut*, *hew*.

## CHAPTER VI

### THE GREEK DEVELOPMENT OF THE INDG. CONSONANT-SYSTEM.

§ 113. Before entering upon the history of the individual consonants, it will be well to treat here several points concerning the Greek consonants in general.

§ 114. The Indg. mediae aspiratae became tenues aspiratae in prim. Greek as also in prim. Italic, and thus fell together with and underwent all further changes in common with the Indg. tenues aspiratae (§ 103, note 1). For examples see §§ 162, 177, 193, 201, 209.

§ 115. Aspirates became de-aspirated in prim. Greek as also in prim. Sanskrit when the next syllable or the next but one began with an aspirate :—

*παχύς*, *thick, large, stout*, Skr. *bahúh*, *abundant*; *πείθω*, Lat. *fido*, Indg. \**bhéidhō*; *πεύθεται*, *he asks, inquires*, Skr. *bódhati*, *he learns, is awake*; *πυθμήν*, Skr. *budhnáh*, *bottom, depth*; *ἀμπέχω* from \**ἀμφ-έχω*.

*τάχιστος* : *θάσσων, θάττων*; *τίθημι* from \**dhidhēmi*, Skr. *dádhāmi*, *I put, place*; *τρέχω* : *θρέξομαι*; *τρέψω* : *θρέψω*; *τριχός* : *θρίξ*.

*κέχυμαι, κέχυκα* : *χέω*; *κέχρημαι* : *χράομαι*; *κεφαλή* from \**χεφαλά*; *λικριφίς* : *λέχριος*.

And similarly with the spiritus asper, as *ἄμαθος* : Engl. *sand*; *αῖος* from \**aǵhos* older \**havhos*, Lith. *saũsos*, *dry, withered*; *ἔδεθλον* : *ἔδος*, Skr. *sádas*, *seat*; *ἔχω* : *ἔξω*, *σχεῖν*. See § 213, 1.

NOTE.—Forms like *πύσομαι, πείσω, ἐχύθην, ἐφάνθην*, &c. were new formations due to the influence of forms like *πύθομαι, πείθω, χέω, φαίνω*.

§ 116. A tenuis, whether original or from an older media (§ 106), was written tenuis aspirata before a following  $\theta$ . This was not a sound-change but merely a kind of graphic assimilation, as ἐκλέφθην, ἐπέμφθην, ἐρρίφθην, ἐτρέφθην, ἐπλέχθην : κλέπτω, πέμπω, ρίπτω, τρέπω, πλέκω ; ἐτρίφθην, ἐλέχθην, ἐμίχθην : τρίβω, λέγω, μίγνυμι.

#### ASSIMILATION OF CONSONANTS.

§ 117.  $\pi, \beta, \phi + \mu > \mu\mu$ , as βλέμμα : βλέπω ; λέλειμμαι : λείπω ; ὄμμα from \*ὄπμα : Lat. *oculus*, Lith. *akis*, *eye* ; τέτριμμαι : τρίβω ; γράμμα, γέγραμμαι : γράφω ; ψάμμος : ψαφαρός.

$\beta\nu > \mu\nu$ , as ἀμνός from \*ἀβνός : Lat. *agnus* ; ἐρεμνός : ἔρεβος ; σεμνός : σέβομαι.

$\delta, \tau + \pi > \pi\pi$ , as Hom. ὄππως from \*ὄδ-πως ; κάππεσε from \*κατ-πεσε.

$\delta\lambda > \lambda\lambda$ , as Lac. ἐλλά, Lat. *sella*, from \*sedlā : OE. *setl*, *seat* ; πέλλυτρον from \*πέδ-λυτρον.

$\gamma\nu > \eta\nu$ , as γίγνομαι = γήγνομαι. See § 189.

$\lambda\nu > \lambda\lambda$ , as ὄλλυμι from \*ὄλνυμι ; Lesb. βόλλομαι from \*βόλνομαι.

Before explosives  $\nu$  became the corresponding homorganic nasal, as παλίμπαις, συμβάλλω, παλιγγενεσία.

$\nu\lambda > \lambda\lambda$ , as παλίλλογος, σύλλογος.

$\nu\mu > \mu\mu$ , as ἐμμένω, σύμμαχος.

$\nu\rho > \rho\rho$ , as συρράπτω, συρρέω.

Antevocalic  $\mu\sigma > \mu\mu$  in Lesb. and Thess., which became simplified to  $\mu$  in the other dialects with lengthening of the preceding vowel, as Lesb. ἔνεμμα, Att. Ion. ἔνειμα, Dor. ἔνημα : νέμω. See § 216.

Antevocalic  $\nu\sigma > \nu\nu$  in Lesb. and Thess., which became simplified to  $\nu$  in the other dialects with lengthening of the preceding vowel, as Lesb. μῆννος, Thess. μειννός, Dor. Att. Ion. μηνός : Lat. *mēnsis*. See § 216.

Medial  $\sigma\lambda > \lambda\lambda$ , which remained in Lesb., after short



vowels, but became simplified to λ in the other dialects, as Lesb. ἴλλαος, Att. ἴλαος, from \*σισλαφος. See § 215.

Medial σμ > μμ in Lesb. and Thess., which became simplified to μ in the other dialects with lengthening of the preceding vowel, as Lesb. Thess. ἐμμί, Dor. ἡμί, Att. Ion. εἰμί : Skr. ásmi, *I am*. See § 214.

Medial σν > νν in Lesb. and Thess., which became simplified to ν in the other dialects, as Lesb. φαεννός, Ion. φαεινός, Att. φᾶνός, from \*φαφεσνός. See § 214.

On the prim. Gr. assimilation of the combination τσ, see § 166.

τσν > νν, as βλέννος from \*βλετσνος, see § 223.

#### THE SEMIVOWELS.

§ 118. **w** and **j**, generally called **u**- and **i**-consonant, are the consonants corresponding to the vowels **u** and **i** with which they often interchange in different forms of the same word, as Indg. \*swépnos, Skr. svápnaḥ, beside \*supnós, Gr. ὕπνος; Ion. γούνα from \*γονφα beside γόνυ; φεύγω beside ἔφυγον; Indg. \*djéús, Skr. dyāúḥ, *sky*, Gr. Ζεύς beside loc. Skr. diví, Gr. Διφί; Indg. \*jénti, Skr. yánti, *they go*, beside \*imés, Skr. imáḥ, Dor. ἴμες, *we go*; λείπω beside ἔλιπον. In many philological works **u**- and **i**-consonant are written **ụ** and **ị** in order to indicate their close relationship to the vowels **u** and **i**. In this grammar they are written **u** and **i** when they form the second element of a tautosyllabic diphthong, as φεύγω, λείπω, οἴκει, Ζεῦ, in all other positions they are written **w** or respectively **f** and **j**. It should be noted that **u**-consonant remained in the oldest period of the language not only as the second element of diphthongs but also in other positions; whereas **i**-consonant only remained as the second element of tautosyllabic diphthongs, in all other positions it either disappeared or became some other sound.

Beside **i**-consonant it is generally supposed that the Indg.

parent language had a spirant *j* initially which is represented in Greek by ζ, but which fell together with *i*-consonant in all the other Indg. languages, cp. ζυγόν, Skr. *yugám*, Lat. *jugum*, Goth. *juk*, *yoke*, beside ύμείς, Skr. *yūyám*, Goth. *jus*, Lith. *jūs*, *ye*. It is probable however that this distinction is not original, but is due to a sound-change which took place in prim. Greek under conditions that have not yet been discovered. See § 227.

§ 119. In the Indg. parent language postconsonantal *w*, *j* alternated with *uw*, *ij*. The former regularly occurred after short and the latter after long syllables. This original distinction was best preserved in Sanskrit. In the other languages it became greatly obscured owing partly to special sound laws which took place in the separate languages, and partly to numerous analogical formations whereby forms with short syllables were remodelled on the analogy of those with long syllables and vice versa. Regular forms were: Ion. οὔλος, Att. ὄλος, from \*ὄλφος = Skr. *sárvah*, *whole, all*; and similarly δουρός, δορός; μῶνος, μόνος; beside gen. ὀφρύος from \*ὀφρύφος = Skr. *bhruváh*, cp. OE. nom. pl. *brūwa*, *eyebrows*; ἰχθύος from \*ἰχθύφος; δάκρυος from \*δάκρυφος: δάκρυ; βότρυος from \*βότρυφος: βότρυς; ἀγνύασι from \*ἀγνύφᾶσι, cp. Skr. *aśnuvánti*, *they attain*. ἄλλος from \*ἄλjos, Lat. *alius*, Goth. *aljis*, *other*; μέσσος, μέσος, from Indg. \*médhjos = Skr. *mádhyaḥ*, Lat. *medius*, Goth. *midjis*, *middle*; πεζός from \*πεδjός = Skr. *pádjaḥ*, *on foot*; λέαινα from \*λέφανja; beside ἄγριος from \*ἄγριjos = Skr. *ajríyaḥ*; νή(φ)ιος = Skr. *nāvíyaḥ*; πάτριος, Skr. *pítriyaḥ*, Lat. *patrius*, Indg. \*pətrijos, *paternal*; ἄκριος from \*ἄκριjos: ἄκρις; gen. τριῶν = Goth. *prijē*.

#### w

§ 120. Indg. *w*, which probably had the same sound-value as NE. *w* in *win*, remained in the oldest period of all the Greek dialects. It was the sixth letter of the

alphabet and was called digamma by later grammarians. In Att. Ion. it disappeared so early that hardly any trace of it is left, but in the other dialects the sound remained until far into historic times, as is shown by inscriptions in the various dialects. It also began to disappear in these dialects about the end of the fifth century B. C. In all the dialects it began to disappear earlier medially than initially, and initially earlier before *o*, *ω*, *ou* than before other vowels. Upon metrical grounds it can be shown that *F* must have been a living sound at the flourishing period of the Greek epic. It was also still in existence initially among the Boeotians at the time they adopted the Ionic alphabet at the end of the fifth century B. C.

§ 121. Initial *w* disappeared in Att. Ion., but remained in the oldest period of the other dialects. It also remained in Latin and the old Germanic languages, but became the spirant *v* (= NE. *v*) in Sanskrit and the Baltic-Slavonic languages, and *f* in O. Irish, as *oīda*, Hom. *φοῖδα*, Skr. *vēda*, OE. *wāt*, *I know*, Lat. *vidēre*; *εἴκοσι*, Dor. *φέικατι*, Boeot. *φίκατι*, Skr. *viśatī*, Lat. *vīginti*, O. Ir. *fiche*, *twenty*; *οἶκος*, Cypr. *φοῖκος*, Skr. *vēśāḥ*, *house*, Lat. *vīcus*, Goth. *weihs*, *village*; *ἄχος*: Pamph. *φέχω*, Skr. *vāhāmi*, Lat. *veho*, OE. *wege*, *I carry*; *ἔργον*, Cretan *φέργον*, Elean *φάργον*, OE. *weorc*, *work*; and similarly *ἔαρ*, Lat. *vēr*; *ἔπος*, Lat. *vōx*; *ἔσθῆς*, Lat. *vestis*; *ἔτος*, Lat. *vetus*; *ἴος*, Lat. *vīrus*; *ἴς*, *ἴς*, Lat. *vīs*; *ἰτέα*, Lat. *vītis*; *οἶνος*, Lat. *vīnum*. *λάσιος* from *\*φλάτιος*; *λύκος*, Skr. *vḷkaḥ*, OE. *wulf*, Lith. *vilkas*, Indg. *\*wḷqos*, *wolf*. Att. *ρήτρᾱ*, Elean *φράτρᾱ*, *saying, maxim*, Skr. *vratām*, *command*; *ρίζα*, OE. *wyrt*, *root*; Att. *ρήξις* = Lesb. *φρηξις*. Initial *F* before consonants was sometimes written *β* in Lesbian and Boeotian. But as Lesbian inscriptions of the fourth century B. C. have only *ρ* it follows that the *βρ* in earlier Lesbian was merely graphical.

NOTE.—In a few instances we have the spiritus asper where

we should regularly expect the lenis, as Att. *ἐννῦμι* from \**φέσνῦμι* beside *ἔσθῆς*; *ἕσπερος*, Lat. *vesper*; *ἔστια*, Lat. *Vesta*; *ἦλος*, Lat. *vallus*; *ἴστωρ* beside *ἴστωρ*; *ἑκόν*, *willing*, Skr. *vásah*, *will, pleasure*. A satisfactory explanation for the spiritus asper in these words has not yet been found. It is highly probable that it has nothing to do with the *f*, but is due to the unsettled state of the spiritus asper in Attic of the fourth century B. C. Cp. its misuse in words like *ἄπτω*, Lat. *apto*; *ἔως*, Hom. *ἦός*, Dor. *ἄός*; *ἵππος*, Lat. *equus*.

§ 122. Intervocalic *f* disappeared in Att. Ion., but is frequently met with in some of the other dialects, as Att. Ion. *νέος*, Skr. *návah*, Lat. *novus, new*; *ἐν-νέα*, Skr. *náva*, Lat. *novem, nine*; *οἷς*, Skr. *ávih*, Lat. *ovis*, Lith. *avìs, sheep*, Goth. *awistr, sheepfold*; *πίων*, *fat*, Skr. *pívan-*, *swelling*; *ἠ-ίθεος* \**ἠ-φιθεφος*, *bachelor*, Skr. *vidhávā*, O. Ir. *fedb*, OE. *widewe, widow*, cp. Lat. *vidua*; gen. *Δι(φ)ός*, Lat. *Jovis*, cp. Skr. *diváh*, *of the sky*; gen. Att. *βασιλέως*, Hom. *βασιλῆος*, Cypr. *βασιλῆφος*; *κλέος*, dial. of Phocis *κλέφος*, Skr. *śrávah*, *renown*; *φαεινός* from \**φαφεσνος*; *χαρίεις* from \**χαριφεντς* (§ 69, 1); *λέαινα* from \**λέφανια*; *ρέει*, Skr. *srávati*, *it flows*; and similarly *θέω*, *θρέομαι*, *νέω* (aor. *ἔνευσα*), *πλέω*, *πνέω*, *χέω*; *ρόος*, *ρόυς*, Cypr. *ρόφος*, Skr. *srávah*, Lith. *sravà*, *stream*; and similarly *θοός*, *πλόος*, *χόος*. It also disappeared between a diphthong and a following vowel, as *λαιός*, Lat. *laevus*; *οἶος*, Cypr. *οἶφος*; on forms like *δαήρ* from \**δαιφῆρ*, *ἄεί*, Cypr. and dial. of Phocis *αἴφεί*, see § 57.

§ 123. Medial *f* before *ρ* and *λ* regularly combined with a preceding vowel to form a diphthong, as Aeol. *ἀπούρᾱς* from \**ἀποφράς*; *εὐράγη*, *αὔρηκτος*, Att. *ἐρράγη*, *ἄρρηκτος*; *καλαῦροψ*: *ρόπαλον* older \**φρόπαλον*; *ταλαύρινος* = *ταλάφρινος*, cp. Lesb. *φρίνος*, *skin, hide*. Forms like Att. *ἐρράγη*, *ἄρρηκτος*, *ἔρρηξα*, *ἔρρωγα*; *ἐρρήθην*, *ἄρρηκτος* beside *ρήτός* had their *ρρ* from the initial position before *ρρ* became simplified to *ρ*, see § 138.

§ 124. Indg. postconsonantal **w**. In this combination it is necessary to take into consideration the nature of the preceding consonant.

1. *F* disappeared after  $\pi$ ,  $\phi$ ,  $\theta$ ,  $\kappa$  = Indg. **p**, **bh**, **dh** (**gh**), and pure velar **q** (§ 195), as *νήπιος* from \**νη-πιος*, *infans*. *ὑπερφίαλος*, *φίτυ*, from \**ὑπερ-φφιαλος*, \**φφίτυ*, root \***bheu-**, *be*. *θηητός*, *θάνατος* from \**θφνᾱτός*, \**θφάνατος*, cp. Skr. **dhvāntāḥ**, *covered, dark*; *ὀρθός*, Skr. **ūrdhvāḥ**, *straight*; *θαιρός*, *θολός*, *θεός*, *μέθη* from \**θφαρjος*, \**θφολός*, \**θφεσος*, \**μέθφη*; *θήρ*, Lesb. *φήρ*, Lith. *žvėris*, *wild animal*, Lat. *ferus*. *καπνός*, Lat. *vapor*, Lith. **kvāpas**, *smoke, vapour*.

2. **kw** became  $\pi\pi$  which was simplified later to  $\pi$  initially, as *ἵππος*, Skr. **āśvaḥ**, Lat. *equus, horse*, Goth. **aīlva-tundi**, *thornbush*, lit. *horse tooth*; Boeot. *τὰ ππᾶματα* beside Dor. *πᾶμα*, *πᾶσασθαι*, from \***kwā-**, cp. Skr. **śvātrāḥ**, *flourishing, prosperous*.

3. Initial **tw-** became  $\sigma\sigma$ - which was simplified later to  $\sigma$ -, as *σέ*, Skr. **tvā**, **tvām**, *thee*; *σός*, Skr. **tvāḥ**, *thy*; *σάκος* beside *φερε-σακής*, cp. Skr. **tvác-**, *hide, skin, cover*; *σειώ* beside Hom. *ἐπι-σειών*, cp. Skr. **tviṣ-**, *to be excited*; *σορός*, *coffin*, Lith. **tveriù**, *I hold, contain*. Medial **-tw-** became  $-\tau\tau-$  in Att. and Boeot., and  $-\sigma\sigma-$  in the other dialects, as Att. *τέτταρες*, Boeot. *πέτταρες*, Hom. *τέσσαρες*, Skr. **catvāraḥ**, Goth. **fidwōr**, *four*.

4. *F* disappeared after  $\delta$ , as *δός*, Skr. **dvīḥ**, O.Lat. **duis**, later **bis**, *twice*; *δώ-δεκα*, Skr. **dvā-dāsa**, *twelve*, cp. Goth. **twái**, *two*; in Homer sometimes with metrical lengthening of a preceding short vowel or with doubling of the  $\delta$ , as Hom. voc. *ἄδέές, οὐδός, δείδιμεν*, Att. *ἄδέές, ὀδός, δέδιμεν*; Hom. *θεουδής* from \**θεοδφής*, *ἔδδεισεν*, root \***dwei-**, *to fear*.

5. Initial **sw-** became the spiritus asper in Att. Ion., as *ἐκυρός*, Skr. **śvāśuraḥ**, Goth. **swaíhra**, *father-in-law*; *ἡδύς*, Dor. *ἄδύς*, Skr. **svādúḥ**, Lat. *suāvis* from \***swādwis**, OE. **swēte**, *sweet*; *ὄς*, Skr. **svāḥ**, *his*; Hom. *ὄππως* from \**σφοδ-πως*; and similarly *ἔ, οἶ*, Hom. *ὄττι*, from \**σφε*, \**σφοι*, \**σφοδ-τι*.

Intervocalic **·sw·** disappeared with lengthening of the preceding vowel, as Dor. *νᾶός*, Ion. *νηός*, Att. *νεός* (§ 72), from \**νασφος*; *τελήεις* from \**τελεσφεντς* (§ 69, 1); *ἴος* from \**ἴσφος*, *arrow*.

6. The combinations *νf*, *ρf*, *λf* remained unchanged in some dialects until after the beginning of historic times. In Ionic and some of the Doric dialects the *f* disappeared with lengthening of a preceding vowel, and in Attic and the other dialects without such lengthening, as Ion. *τίνω*, Att. *τίνω* from \**τινfw*, cp. Skr. *cinváti*, *cinóti*, *he arranges, piles up*; and similarly Ion. *κιχάνω*, *φθάνω*, *φθίνω*, beside Att. *κιγχάνω*, *φθάνω*, *φθίνω*; Ion. *εἵνατος*, *κεινός*, *μοῦνος*, *ξείνος*, beside Att. *εἵνατος*, *κενός*, *μόνος*, *ξένος*. Ion. *οὔλος*, Att. *όλος*, Skr. *sárvaḥ*, *all*; Ion. *κᾶλός*, Att. *καλός*, Dor. *καλφός*. Ion. *κούρη*, Cret. *κῶρᾶ*, Att. *κόρη*, Arcad. *κόρφᾶ*; Ion. *εἶρομαι*, *δουρός*, *φᾶρος*, *οὔρος*, Att. *εἶρομαι*, *δορός*, *φάρος*, *όρος*.

§ 125. Medial *f* disappeared before *j*, as *δίος* from \**διFjος*, Skr. *divyáḥ*, *divine, celestial*; *τεσσαράβοιος* from \**-βοFjος* = Skr. *gávyah*, *consisting of or relating to cattle*; *δαίω*, *κλαίω*, from \**δαFjω*, \**κλαFjω*. See § 129, 5.

§ 126. *f* disappeared between consonants, as Hom. *τέτρατος* from \**τέτFρατος*, Lith. *ketvīřtas*, *fourth*; Ion. *τετρώκοντα* from \**τετFρω*; fem. *πολλή* from \**πολFjᾶ*, cp. Skr. fem. *pūrvī*, *many*, gen. *pūrvyáḥ*.

## j

§ 127. Initial *j* became in Greek the spiritus asper through the intermediate stage of voiceless *j*. It remained in all the other Indg. languages with the exception of Old Irish where it disappeared, as *ἦπαρ*, Skr. *yákr̥t*, Lat. *jecur*, Lith. pl. *jeknos*, *liver*; *ὄς*, Skr. *yáḥ*, *who*, Goth. *ja-bái*, *if*; *ὕ-μεῖς*, Skr. *yūyám*, Goth. *jus*, Lith. *jūs*, *ye*; *ἄζομαι* from \**jaγjομαι*, *I honour*, Skr. *yájati*, *he honours*.

§ 128. Intervocalic *j* disappeared in Greek, Latin and the Keltic languages, but remained in Sanskrit and the

Baltic-Slavonic languages and also in Gothic between vowels which remained as such in the historic period of the language, as *τρεις*, Cret. *τρέες*, Skr. *tráyah*, Lat. *trēs*, O.Ir. *tri*, Goth. neut. *þrija*, O.Slav. *trije*, Indg. \**tréjes*, *three*; *δέω* from \**δέjω*; *δέος* from \**δφεjos*; gen. *κιός* from \**κιjός* (§ 330); in adjectives denoting the material of which a thing is made, as *λίθος* from \**λίθεjos*; and similarly *ἀργύρεος*, *αἴγεις*, *κύνεις*, *οἰκέϊος*, cp. Lat. *aureus*, *lapideus*; in iterative, causative and denominative verbs, as *ποτέομαι*, Skr. *patáyāmi*, *I hover*; *ὀχέω*, Skr. *vāháyāmi*, *I let drive*, Goth. *wagja*, *I move, shake*; and similarly *τρομέω*, *τροπέω*, *φορέω*, *φοβέω*, cp. verbs like Lat. *doceo*, *moneo*, *noceo*, *torreo*; *τιμάω*, *φιλέω*, from \**τιμάjω*, \**φιλέjω*; and similarly *ὠνέομαι*, *βασιλεύω*, *νομέω* (see however § 489), *κονίω*, *μαστίω*, *ἀχλύω*, *γηρύω*, *μεθύω*, cp. verbs like Skr. *dēvayāti*, *he honours the gods*, from *dēvāh*, *god*; Lat. *planto*, *albeo*, *finio*, *statuo*, from \**plantājō*, \**albejō*, \**fīnijō*, \**statujō*.

§ 129. Indg. postconsonantal *j*. In this combination it is necessary to take into consideration the nature of the preceding consonant.

1. *pj* became *πτ*, as *πτύω* from \**πjυjō*, Lith. *spiauju*, *I spit out*; and similarly *θάπτω*, *κλέπτω*, *πτύσσω*, *χαλέπτω*.

2. *lj* became *λλ*, as *ἄλλος*, Lat. *alius*, Goth. *aljis*, *other*; *φύλλον*, Lat. *folium*; *κάλλος*, *beauty*, Skr. *kalyah*, *healthy*; *βάλλω* from \**qljō* beside *ἔβαλον*; and similarly *ἄλλεσθαι*, *ἀγγέλλω*, *ιάλλω*, *μέλλω*, *πάλλω*, *ποικίλλω*, *σκάλλω*, *στέλλω*, *τέλλω*.

NOTE.—1. In the Cyprian dial. the *j* merely palatalized the *l*, and the *l* thus palatalized was expressed by *ιλ*, as *αἴλων*, Ἀπείλων = ἄλλων, Ἀπέλλων, cp. the similar process in O.Ir. *aile* from \**aljōs*, \**aljā*, *other*.

3. The combinations *α, ο + vj, rj, fj* became *αιν, αιρ, αι, οιν, οιρ*, as *δραίνω* from \**δρανjω*, Indg. \**dr̥njō*; and similarly *κραίνω*, *μαίνομαι*, *μελαίνω*, *ὄνομαίνω*, *ποιμαίνω*,

ξάινω; σπαίρω from \*σπαρjω, Indg. \*sprjǵ; and similarly ἐχθαίρω, σκαίρω; δαίω from \*δαfjω; κοινός from \*κοινjός, older \*κομjός, cp. Lat. cum; μοῖρα from \*μορjα. For further examples see § 75.

4. *vj*, *ρj*, preceded by *ε*, *ι*, *υ*, became *νν*, *ρρ*, which remained in Lesbian, but became simplified in Att. Ion. with lengthening of the vowel, as Att. Ion. κτείνω, φθείρω, Arcad. φθήρω, κλίνω, οἰκτίρω, ὀλοφύρομαι, beside Lesb. κτέννω, φθέρρω, κλίννω, οἰκτίρρω, ὀλοφύρρω; and similarly τείνω, ἐγείρω, κείρω, μείρομαι, πείρω, τείρω, κρίνω, πλύνω, κῦρω, μῦρομαι. See § 69, 3.

5. *f* disappeared in the intervocalic combination *fj* and then the *j* combined with the preceding vowel to form a diphthong, except in the case of *ι* which simply became lengthened, as δαίω, εὐρεῖα, τεσσαράβοιος, from \*δαfjω, \*εὐρέfjα, \*-βοfjος, but δῖος from διfjος. See 3 and 4 above.

6. Indg. *t*, *th*, *dh*+*j* became *τσ* in prim. Greek. *τσ* then became *σ* initially and medially after long vowels, diphthongs, and consonants, but medially between vowels it became *ττ* in Boeotian and Cretan (Cret. also ζ), *σ* in Attic and Ionic, and *σσ*, *σ* in the other dialects, as σοβέω, *I scare away*, Skr. tyājayati, *he expels*; σῆμα, Dor. σᾶμα, from \*θjᾶμα, *sign, token*, Skr. dhyāman-, *thought*; αἴσα, πᾶσα, δόξα, from \*αῖτjα, \*παντjα, \*δοκτjα; nom. acc. neut. pl. Att. ἄττα, Ion. ἄσσα, from \*ᾶ-τjα; τετραξός from \*τετραχθjος: τετραχθά; Ion. διξός, τριξός: διχθά, τριχθά; Lesb. Hom. μέσσος, Att. Ion. μέσος, Skr. mādhyah, Lat. medius, Goth. midjis, *middle*; Hom. νεμεσσάω, Att. νεμεσάω, from \*νεμετjαω; and similarly πόσσος, πρόσσω, τόσσος, Att. Ion. πόσος, πρόσω, τόσος; Boeot. ὀπόττος, Cret. ὀπόττος, Att. ὀπόσος.

NOTE.—2. The presents of verbs in *-jω*, the comparatives in *-jων* and feminines in *-jα*, formed from dental stems, were in all the dialects remodelled on the analogy of those formed from *κ*-stems (see 7 below), as λίσσομαι: aor. λιτέσθαι; ἐρέττω,



ἐρέσσω : ἐρέτης ; κορύσσω : κόρυς, stem κόρυθ-, like πέττω, πέσσω ;  
μαλάττω, μαλάσσω μαλακός. Att. κρείττων, Ion. κρέσσω like  
ἤπτων, ἤσσω : ἤκιστα. κίττα, κίσσα : κοῖται ; μέλιττα, μέλισσα :  
gen. μέλιτος ; θῆσσα : θῆς, gen. θητός, like ἄνασσα : ἄναξ ;  
φοίνισσα : φοῖνιξ.

7. Indg. **k, q, kh, qh, gh, gh+j** became **ττ** in Att. Boeot. Thessal. Cret. (Cret. also **θθ**), but **σσ** in the other dialects, as Att. **πίττα**, Ion. **πίσσα**, from \***πικja**, Lat. **pix**, Lith. **pi̇kis**, *pitch* ; Att. **πέττω**, Ion. **πέσσω**, *I cook, ripen*, Skr. **pácyatē**, *it ripens* ; Att. **θάττω**, Ion. **θάσσω**, cp. **ταχύς** ; and similarly Att. **πράττω**, **πλήττω**, **ἐλάττων**, **ταράττω**, **γλωττα** = Ion. **πρήσσω**, **πλήσσω**, **ἐλάσσω**, **ταράσσω**, **γλωσσα**.

**ττ, σσ** were simplified to **τ, σ** initially, as Hom. **σεῦε** beside **ἔσσευε**, cp. Skr. **cyávatē**, *he moves himself* ; Att. **τῆμερον**, Ion. **σῆμερον**, from \***kjāμερον** ; Att. **τεῦτλον**, Ion. **σεῦτλον**.

8. Indg. **dj** and **g, g+j** became in prim. Greek **dz** and then later **zd** by metathesis. Initial **dz** became **δ** in Boeot. Cret. and Laconian, but **ζ (= zd)** in the other dialects. Medially after consonants it became **δ** in all the dialects. Medially after vowels it became **δδ** in Boeot. and Cretan, but **ζ** (sometimes written **σδ**) in the other dialects, as Att. Ion. **Ζεύς**, Boeot. Cret. and Laconian **Δεύς**, Indg. \***djēus**, cp. Skr. **dyāúh**, *sky* ; Boeot. Cret. **δῶει** = Att. Ion. **ζῶη**. **ἔρδω** from \***ἐργjω**. **πεζός** from \***πεδjός**, Skr. **pádyah**, *on foot* ; **σχίζω**, cp. Skr. **chidyátē**, *it is cut off* ; **ρέζω**, Boeot. **ρέδδω**, from \***ρέγjω** ; **σφάζω**, Boeot. **σφάδδω**, from \***σφάγjω** ; and similarly **ἔζομαι**, **ἐλπίζω**, **μιγάζομαι**, **ἄζομαι**, **ἀρπάζω**, **νίζω**.

9. Initial **σj** became the spiritus asper through the intermediate stage of voiceless **j**, as **ὕμῆν**, *thin skin*, **ὕμνος**, *hymn*, *song*, Skr. **syūman-**, *string, cord*, **syūtāh**, *sewn*.

The medial combinations **ασj, οσj, εσj, υσj** became **αι, οι, ει, υι**, but **ισj** became **ῑ**, as **ναίω** from \***νασjω**, cp. **νάσσαι** ;

λιλαίομαι from \*λιλασjoμαι ; Hom. τοῖο from \*τοσjo = Skr. *tásya* ; Hom. τελείω, τελέω, Att. τελῶ, from \*τελεσjo, εἶην from \*έσjην, Skr. *syām*, *I may be* ; Hom. ἰδυῖα from \*φιδυσja = Skr. *vidúṣī*, gen. *vidúṣyāḥ* ; κονίω from \*κονισjo. For further examples see § 76.

§ 130. *j* disappeared after a consonant + nasal, as ἐλαύνω from \*ἐλαφνjo ; θέρμω from \*θερμjo ; φαείνω from \*φαφесνjo ; and similarly μέριμνα, τόλμα.

#### THE LIQUIDS.

§ 131. The Indg. parent language had two liquids : *l* and *r*. Apart from cases of dissimilation, which are common in most languages, the two sounds were regularly kept apart in Armenian and the European languages, but in Iranian and partly also in the Indian group of dialects they fell together in *r*. According to Whitney, *Sanskrit Grammar*, § 53, ' *r* and *l* are very widely interchangeable in Sanskrit, both in roots and in suffixes, and even in prefixes : there are few roots containing *l* which do not show also forms with *r* ; words written with the one letter are found in other texts, or in other parts of the same text, written with the other. In the later periods of the language they are more separated, and the *l* becomes decidedly more frequent, though always much rarer than the *r*.' From this it may be inferred that where *l* and *r* exist side by side in the same word, it is due to a mixture of dialects, as in *léhmi* beside *réhmi*, *I lick*.

#### 1

§ 132. Indg. *l* generally remained in Greek as also in the other European languages, as ἄλλος, Lat. *alius*, O.Ir. *aile*, Goth. *aljis*, *other* ; ἄλς, Lat. *sāl*, O.Ir. *salann*, OE. *sealt*, *salt* ; ἀμέλγω, Lat. *mulgeo*, OE. *meolce*, *I milk* ; κλέπτω, Lat. *clepo*, Goth. *hlifa*, *I steal* ; κλυτός, Skr. *śrutāḥ*, Lat. *in-clutus*, *renowned*, cp. O.Ir. *cloth*, *renown*, OE. *hlēoþor*, *sound*, *melody* ; λείπω, Lat. *linquo*, Lith.

lëkù, *I leave*, Skr. riṇákti, *he leaves*, Goth. leiwa, *I lend*; pf. λέλοιπα = Skr. riréca; λείχω, Skr. réhmi, léhmi, Lat. lingo, OE. liccie, *I lick*; λέχος, Lat. lectus, O.Ir. lige, *bed, couch*, OE. licgan, *to lie down*; νεφέλη, Lat. nebula, OHG. nebul, *cloud, mist*; Ion. οὔλος, Att. ὄλος, Skr. sárvaḥ, *whole, all*.

§ 133. In some of the Doric dialects λ became ν before τ and θ, as βέντιστος, φίνταται, ἐνθών, ἦνθες = βέλτιστος, φίλταται, ἐλθών, ἦλθες.

§ 134. In the Cretan dialect antecorsonantal λ became u-consonant and then combined with the preceding vowel to form a diphthong, as αὐκά, αὐγεῖν = ἀλκή, ἀλγεῖν; θεύγω, εὐθεῖν, ἀδευφιαί = Hom. θέλγω, ἐλθεῖν, ἀδελφείαι, *sisters*. Cp. Mod. northern dialects aud, oud, *old*; kaud, koud, *cold*.

§ 135. Occasionally λ became ρ and vice versa by dissimilation. This phenomenon is common in all the Indg. languages and especially in Greek and Latin, as ἀργαλέος from \*ἀλγαλέος; κεφαλαργία beside κεφαλαλγία; Lat. Aleria beside Ἀλαλία; Lat. caeruleus : caelum. θηλητήρ beside θηρητήρ; μορμολύττομαι : μόρμωρος; Lat. culter from \*certros; pelegrīnus from peregrīnus; frāglo beside frāgro.

## r

§ 136. Indg. r generally remained in Greek, as ἐρυθρός, Skr. rudhiráḥ, Lat. ruber, O.Ir. ruad, OE. rēad, Lith. raūdas, *red*; ἔρεβος, Skr. rájas-, Goth. riqis, *darkness*; ἔρπω, Skr. sárpāmi, Lat. serpo, *I creep*; φέρω, Skr. bhárāmi, Lat. fero, O.Ir. berim, Goth. baíra, O.Slav. berā, *I bear*; τρεῖς, Skr. tráyaḥ, Lat. trēs, O.Ir. trí, Goth. þreis, O.Slav. trije, *three*; ἀρόω, Lat. aro, Goth. arja, Lith. ariù, *I plough*, O.Ir. arathar, *plough*; ἀγρός, Lat. ager, Goth. akrs, *field*, Skr. ájraḥ, *a plain*; πόρκος, Lat. porcus, OE. fearh, *pig*; πατήρ, Skr. pitár-, Lat. pater, O.Ir. athir, OE. fæder, *father*. See § 77.

§ 137. Indg. **sr** became voiceless  $\rho\rho$  which was later simplified to  $\rho$  initially, as  $\rho\acute{\epsilon}\omega$ , Skr. *srāvāmi*, Lith. *sraviù*, *I flow*, beside *κατα-ρρέω*;  $\rho\acute{o}\phi\acute{\epsilon}\omega$ , Lat. *sorbeo*, Lith. *srebiù*, *I gulp down*. See § 215.

§ 138. Indg. **wr** became  $\rho$  initially (through the intermediate stage of  $\rho\rho$ ) in the course of the individual dialects, as Att.  $\rho\acute{\eta}\tau\rho\acute{\alpha}$ , Elean *φράτρᾶ*, *saying, maxim*, Skr. *vratām*, *command, saying*. See § 121.

#### THE NASALS.

§ 139. The Indg. parent language had four kinds of nasals—labial **m**, dental **n**, palatal **ñ**, and velar **ŋ**, corresponding to the four classes of explosives **p, t, k, q**. Of these the palatal and velar nasals only occurred before their corresponding explosives and underwent in the different languages all changes in the place of articulation in common with these explosives, as Indg. *\*pēŋqe* = *πέντε*, Lesb. *πέμπε*, Skr. *pāñca*, Goth. *fimf*, Lith. *penkì*, *five*; Indg. *\*pēŋqtos* = *πέμπτos*, Lat. *quīntus*, Goth. *fimfta*, Lith. *peñktas*, *fifth*; Indg. *\*añghō* = *ἄγχω*, Lat. *ango*, cp. Goth. *aggwus*, OE. *enge*, *narrow*. The dental and labial nasals occurred also in other positions. All the nasals had in Greek a weak articulation before explosives and  $\sigma$  which accounts for their frequent omission on inscriptions and for nasals of all kinds being expressed by  $\nu$  in archaic Greek orthography.

#### m

§ 140. Indg. **m** generally remained initially and medially in Greek, as Att. Ion. *μήτηρ*, Dor. *μάτηρ*, Skr. *mātár*, Lat. *māter*, O.Ir. *māthir*, OE. *mōdor*, O.Slav. *mati*, *mother*; *μέλι*, Lat. *mel*, O.Ir. *mil*, Goth. *miliþ*, *honey*; *μῦς*, Skr. *mūṣ*, Lat. OE. *mūs*, *mouse*; *γόμφος*, *bolt, nail*, Skr. *jāmbhaḥ*, *tooth*, OE. *camb*, *comb*; *εἰμί*, Skr. *ásmi*,

Lat. *sum*, Lith. *esmì*, *I am*; *ἔμέω*, Skr. *vámāmi*, Lat. *vomo*, *I vomit*; *ἡμι-*, Skr. *sāmí*, Lat. *sēmi-*, OE. *sam-*, *half*; *φέρομεν*, Skr. *bhārāmaḥ*, Lat. *ferimus*, Goth. *baíram*, *we bear*.

§ 141. Final *m* became *n*, as *ἐκατόν*, Skr. *śatám*, Lat. *centum*, *hundred*; *ζυγόν*, Skr. *yugám*, Lat. *jugum*, *yoke*; *ἔφερον* = Skr. *ábharam*, cp. Lat. *eram*; gen. pl. *λύκων* = Skr. *vṛkāṇām*; acc. sing. of vocalic stems, as *λύκον* = Skr. *vṛkam*, Lat. *lupum*; *τόν* = Skr. *tám*, Lat. *is-tum*; Skr. *áśvām* = Lat. *equam*, cp. *χώρᾱν*; *τήν* = Skr. *tám*, Lat. *is-tam*; *βάσιν* = Skr. *gátim*, cp. Lat. *partim*, *sitim*; *ἡδύν* = Skr. *svādúm*. *ἔν*, *χθών*, Skr. *kṣam-*, *earth*; *χιών*, Lat. *hiem-*, *winter*, from *\*ἔμ*, *\*χθώμ*, *\*χιώμ*, with *v* levelled out into the oblique cases: *ένός*, *χθονός*, *χιόνος*, &c.

§ 142. *mj* became *nj*, as *βαίνω* from *\*βανjω*, older *\*βαμjω*, Indg. *\*gmjō*, Lat. *venio*, cp. Goth. *qiman*, *to come*; *κοινός* from *\*κονjος*, older *\*κομjος*, cp. Lat. *cum*, *com-*, and *quoniam* from *\*quom-jam*.

§ 143. *mt* became *nt*, as *ἀντλον*, cp. *ἀμάω*, *I gather in*; *βροντή*, cp. *βρέμω*, *I roar*; *γέντο*, *he grasped*, cp. M.Ir. *gemel*, *fetter*.

§ 144. *ms* became *ns* and then the nasal disappeared in all the dialects in the combination *ns* + consonant without lengthening of the preceding vowel (see § 153), as *δεσπότης* from *\*δεμς*, gen. of *\*δεμ-*, *house*. When the *ns* was not followed by another consonant the nasal disappeared in most of the dialects with lengthening of the preceding vowel, as Att. Ion. *εἷς*, Dor. *ἦς*, but Cret. *ἔνς*, from *\*ἔμς*, cp. Lat. *semel*, *semper*.

§ 145. *ml*, *mr* became *mbl*, *mbr* which were simplified to *bl*, *br* initially, as *βλώσκω*, *μέμβλωκα*, *ἔμολον*; *βλαδαρός*, *flaccid*, Skr. *mrđúḥ*, *soft*; *βλάξ*, *βληχρός*, beside *μαλακός*; *βλωθρός*, *shooting up*, *high growing*, Skr. *mūrdhá*, *head*; *βλίπτω* from *\*μλιπτω*, cp. *μέλι*. *βροτός* = Skr. *mrťáh*, *mortal*, beside *ἄμβροτος* = Skr. *amṛtaḥ*; *μεσημβρία*, *mid-*

*day*, beside *ἡμέρᾱ*. Cp. words like NE. **humble**, **number**, Fr. **humble**, **nombre**, beside Lat. acc. **humilem**, **numerum**.

§ 146. Prim. Greek *-μν-*, the weak grade of *-μεν-*, was simplified to *-ν-* after long vowels, as inf. *γνώναι* from \**γνωμναι* beside *γνώμεναι*; and similarly *ἀήναι*, *δαήναι*, *στῆναι*, &c., cp. § 546.

## n

§ 147. **n** generally remained in Greek, as *νέος*, Skr. *návanḥ*, Lat. *novus*, Goth. *niujis*, Lith. *naũjas*, *new*; *νέφος*, *cloud*, Skr. *nábhas-*, Lat. *nebula*, OHG. *nebul*, *fog*, *mist*; *νύξ*, Skr. *náktiḥ*, Lat. *nox*, Goth. *nahts*, Lith. *naktis*, *night*; *ὄνομα*, Skr. *nāma*, Lat. *nōmen*, OE. *nama*, *name*; *ἔνη*, *the day before the new moon*, Skr. *sánaḥ*, Lat. *senex*, O.Ir. *sen*, Goth. *sineigs*, Lith. *sėnas*, *old*; *γένος*, Skr. *jānas-*, Lat. *genus*, Goth. *kuni*, *race*, *generation*; *γνωτός*, Skr. *jñātáḥ*, *known*; Dor. *φέρωντι*, Skr. *bháranti*, Lat. *ferunt*, Goth. *baírand*, *they bear*; *ὑπνος*, Skr. *svápnaḥ*, *sleep*; voc. *κύον*, Skr. *śván*, *dog*, *hound*.

§ 148. Indg. **ln** became **ll** in prim. Greek, Latin, Keltic and Germanic. In Greek it is necessary to distinguish three categories all of which belong to the prehistoric period of the language.

1. The Indg. **ln** which became **ll** in prim. Greek. This **ll** remained in Lesb. and Thessalian, but in the other dialects it became simplified to **l** with lengthening of the preceding vowel, as Lesb. *ἀπ-έλλω*, Dor. *φήλω*, Hom. *είλω*, from \**φέλνω*; Lesb. *βόλλομαι*, Thess. *βέλλομαι*, Dor. *δήλομαι*, Att. *βούλομαι* from \**βόλνομαι*: Lesb. *βόλλᾱ*, Att. *βουλή*; Hom. *οὔλος* from \**φολνος*, *fleecy*; Lesb. Thess. *στάλλᾱ*, Dor. *στάλᾱ*, Att. Ion. *στήλη*, from \**στάλνᾱ*. See § 69, 6.

2. When *ln* came together at a later period it became *ll* and remained as such in all the dialects, as *πάλλαξ*, *girl*, *Παλλάς*, *Pallas*, epith. of Athena, to stem \**παλεν-*, cp. OE. *folā*, *foal*, gen. *folan* for \**fulen*; *έλλός*, to stem

\*έλεν-, cp. O.Slav. *jelen-*, Lith. *élnis*, *young deer*; ὄλλυμι from \*ὄλνυμι, beside ὀλέσαι.

3. When λν came together at a still later period, it remained, as *πίλναμαι*, *πίλνημι*, *πιλνός*.

§ 149. When νλ came together in composition it became assimilated to λλ, as *ἄλλεγον*, *έλλάμπω*, *σύλλογος*, *παλίλλογος*.

§ 150. νμ became assimilated to μμ, as *έμμένω*, *σύμμετρος*, *σύμμαχος*; pf. ἤσχυμαι : *αἰσχύνω*, *κεκοίλαμαι* : *κοιλαίνω*, *μεμώραμαι* : *μωραίνω*.

§ 151. Before explosives ν became the corresponding homorganic nasal, as *συμβάλλω*, *συμπλέω*, *συμφεύγω*, *παλίμπαις*, *παλιγγενεσία*, *παλιγκαπηλεύω*.

§ 152. nr became ndr which was simplified to dr initially, as *άνδρός* from \**άνρός* : *άνήρ*; *σινδρός* : *συναρός*, *hurt*, *damaged*; Hesychius *δρώψ' άνθρωπος*. Cp. words like NE. *gander*, *thunder*, beside OE. *ganra*, *þunor*.

§ 153. n disappeared in prim. Greek before s or z + consonant without lengthening of the preceding vowel. This sound-change took place both when s, z were original or arose from some other source, as *κεστός* from \**κενστός* : *κεντέω*; *τριᾶκοστός* from \**τριᾶκονστός*; imperative mid. *φερόσθων* from \**-ονσθων*; *ές τουτο* beside *ένς*, *είς αυτό*; *Άθήναζε* from \**Άθᾶνανε-δε*. *πλάζω* from \**πλάνεδω* : *έπλαγξα*; *σαλπίζω* from \**σαλπίνεδω* : *έσάλπιγξα*; *σύζυγος* from \**συν-εδυγος*, see § 155. Here belong also the various dialect forms of the acc. pl. of o- and ā-stems. In prim. Greek the regular endings were: -os, -as when the next word began with a consonant and -ons, -avs in pausa and when the next word began with a vowel, as *τὸς λύκους*, but *τὸνς έλεύθερονς*. This original distinction was fairly well preserved in the dialect of Crete. The other dialects generalized the -ons, -avs, the ν of which then disappeared with lengthening of the preceding vowel, whence Att. Ion. -ous, -ās, Dor. -ws, -ās, Lesb. -ois, -ais. See § 69, 1.

NOTE.—When **n** came to stand in the above combination at a later period it disappeared with lengthening of the preceding vowel in Att. Ion. and in most of the other dialects, as Att. *ἔσπεισται* from \**ἔσπενσται* with *ν* re-introduced from the pres. *σπένδω*, the regular form would have been \**ἔσπεσται*; Ion. *πέισμα* from \**πένσμα* which was a new formation for \**πένθμα*.

§ 154. *ν* remained in Arcad. Arg. Cret. and Thessalian before final *-s* and the medial *-σ-* which arose from the assimilation of consonants, but in the other dialects—except Lesbian—the *ν* disappeared with lengthening of a preceding short vowel. In Lesb. the *νσ* became *ισ*, the *ι* of which combined with a preceding short vowel to form a diphthong, as Att. Ion. *εἶς*, Dor. *ῆς*, Cret. *ἔνς*, Lesb. *εἶς*, *one* (§ 144); Att. Ion. *μέλας*, *τάλας*, from \**μέλανς*, \**τάλανς*; *γίγας*, *τιθείς*, *διδούς*, from \**γίγαντς*, \**τιθεντς*, \**διδοντς*; *πάσα* from \**παντja* beside Lesb. *παῖσα*; *διδούσα*, *τιθείσα* from \**διδοντja*, \**τιθεντja*; Att. Ion. *ἄγουσι*, *ἄγωσι* = Dor. and prim. Gr. *ἄγοντι*, *ἄγωντι*, beside Lesb. *ἄγοισι*, *ἄγωσι*.

### ñ, η

§ 155. The oldest mode of representing these nasals in Greek was by *ν* which is common on inscriptions. They came to be represented by *γ* after the combinations **gn**, **gm** had become assimilated to **ηη**, **ημ** (§ 189), as in Att. *γίγνομαι*, *ἀγμός* = *γίηνομαι*, *ἀημός*. It has already been pointed out that these nasals only occurred in the parent language before their corresponding explosives and underwent in the different languages all changes in the place of articulation in common with these explosives (§ 139). **ñ** : *ἦνεγκα*, *I bore*, Skr. *ānāśa*, *he obtained*, cp. Lat. *nanciscor*; *ἄγχω*, Lat. *ango*, cp. Goth. *aggwus*, *narrow*. **η** : *ἀγκών*, O. Lat. *ancus*, cp. Skr. *aṅkāḥ*, *hook*, OE. *angel*, *fish-hook*; *πέντε*, Lesb. *πέμπε*, Skr. *pāñca*, Lat. *quinque*, O. Welsh *pimp*, Goth. *fimf*, Lith. *penkì*, *five*; *λιμπάνω*, Lat. *linquo*, cp. Skr. *riñcānti*, *they leave*.



§ 156. The nasal disappeared with lengthening of the preceding vowel before Ion. *σσ*, Att. *ττ* from prim. Greek *χj* = Indg. *ghj* (§ 129, 7), as Ion. *ᾶσσον* from \**ἀγχιον*, cp. *ἄγχι*; Ion. *ἐλάσσων*, Att. *ἐλάττων*, from \**ἐλαγχων*; Ion. *θάσσων*, Att. *θάττων*, from \**θαγχων*.

It also disappeared, but without lengthening of the preceding vowel, before ζ from prim. Gr. *γj*, as *κλάζω* from \**κλαγγω* : Lat. *clango*; *πλάζω* from \**πλαγγω* : Lat. *plango*; *σαλπίζω* : gen. *σάλπιγγος*.

## THE LABIALS.

## P

§ 157. Indg. *p* (= Skr. Lat. Lith. O.Slav. *p*, Germanic *f*, *b*. In O.Ir. it disappeared initially and medially between vowels) remained in Greek initially and generally also medially, as *πατήρ*, Skr. *pitár-*, Lat. *pater*, O.Ir. *athir*, OE. *fæder*, *father*; *πούς*, Skr. *pât* (gen. *padáh*), Lat. *pēs*, OE. *fōt*, *foot*; *πρό*, Skr. *prá*, Lat. *pro-*, O.Slav. *pro-*, *before*; *πολύς*, Skr. *purúh*, O.Ir. *il*, Goth. *filu*, *much, many*; *πλέκω*, Lat. *plecto*; *ἐπτά*, Skr. *saptá*, Lat. *septem*, Goth. *sibun*, *seven*; *έρπω*, Skr. *sárpāmi*, Lat. *serpo*, *I creep*; *ὑπέρ*, Lat. *s-uper*, OE. *ofer*, *over*, Skr. *upári*, *above*; *ὑπνος*, Skr. *svápnaḥ*, Lat. *somnus* from \**swepnos*, O.Ir. *sūan*, *sleep*, OE. *swefan*, *to sleep*; *κάπρος*, Lat. *caper*.

§ 158. *πμ* became *μμ*, as *βλέμμα* : *βλέπω* (see § 117). *π* became *β* before *δ*, as *κλέβδην*, *by stealth* : *κλέπτω*; *ἔβδομος* : *ἐπτά*; *ἐπί-βδαι* (nom. pl.), *the day after the feast*, where *-βδ* is the weak form of \**ped-*, *foot*, cp. Skr. *upa-bdá-*, *stamping, trampling*. See § 107.

## B

§ 159. Indg. *b* (= Skr. Lat. O.Ir. Lith. O.Slav. *b*, Germanic *p*) remained in Greek initially and generally also medially, as *βύκτης*, *blustering*, Skr. *buk-kārah*, *the roaring*

of a lion, Lat. *būcina*, trumpet, O.Slav. *bučati*, to roar, bellow; *βάρβαρος*, foreign, Skr. *barbarah*, stammering; *βαλλίζω*, I dance, Skr. *bal-balīti*, he whirls; *λείβω*, Lat. *lībo*; *δμβρος*, Lat. *imber*, cp. Skr. *ámbu*, water. It should be noted that *b* was a rare sound in the parent Indg. language.

§ 160. On the change of *β* to *π* before voiceless sounds, as in *τρίψω*, *τέτριπται* : *τρίβω*, see § 106. *βμ* became *μμ*, as *τέτριμμαι* : *τρίβω*, see § 117.

### ph

§ 161. *ph* was one of the rarest sounds in the parent language. It was preserved in Sanskrit and Greek, but in prim. Latin it fell together with original *bh*, and in prim. Keltic, Germanic and the Baltic-Slavonic languages with original *p*. *σφαραγέομαι*, I crack, crackle, Skr. *sphúrjati*, he cracks; *σφήν*, Skr. *sphyáh*, wedge; *σφέλας*, Skr. *phálakam*, footstool, see § 102.

### bh

§ 162. Indg. *bh* (= Skr. *bh*, Lat. *f* initially and *b* medially, Germanic *b*, *b̄*, Keltic and Baltic-Slavonic *b*) became voiceless *φ* in Greek, as *φέρω*, Skr. *bhárāmi*, Lat. *fero*, O.Ir. *berim*, OE. *bere*, O.Slav. *bera*, I bear; *φράτηρ*, member of a *φράτρᾱ*, Skr. *bhrátar*, Lat. *frāter*, O.Ir. *brāthir*, OE. *brōþor*, brother; *ὄφρῦς*, Skr. *bhrúh*, OE. *brū*, Lith. *bruvis*, eyebrow; *νέφος*, cloud, Skr. *nábhas*, Lat. *nebula*, OHG. *nebul*, mist; *ὀμφαλός*, Lat. *umbilicus*; *γόμφος*, nail, Skr. *jámbhaḥ*, tooth, OE. *camb*, comb.

§ 163. *φμ* became *μμ*, as *γέγραμμαι* : *γράφω*, see § 117.

On the change of *φ* to *π* before voiceless sounds, as in *γράφω*, *γέγραπται* : *γράφω*, see § 109. On the de-aspiration of *φ*, as in *πέφευγα* : *φεύγω*, see § 115.

## THE DENTALS.

## t

§ 164. Indg. **t** (= Skr. Lat. Lith. O.Slav. **t**, O.Ir. **t**, **th**, Germanic **þ**, **ð**, but **t** in the Indg. combinations **pt**, **kt**, **qt**, **st**) generally remained in Greek initially and medially, as *τείνω*, Lat. *tendo*, OE. *þenne*, *I stretch*, Skr. *tanóti*, *he stretches*; Lat. *tenuis*, O.Ir. *tana*, Lith. *tenvas*, OE. *þynne*, *thin*; *τατός*, Skr. *tatáh*, Lat. *tentus*, *stretched*; *τό*, Skr. *tád*, Lat. *is-tud*, OE. *þæt*, *the, that*; *τρεις*, Skr. *tráyah*, Lat. *trēs*, O.Ir. *tri*, OE. *þri*, O.Slav. *trije*, *three*; *τρέμω*, Lat. *tremo*; *πατήρ*, Skr. *pitár-*, Lat. *pater*, O.Ir. *athir*, OE. *fæder*, *father*; *φέρετε*, Skr. *bháratha*, Lat. (imper.) *ferre*, Goth. *baírþ*, O.Slav. *berete*, *ye bear*; *ἔτος*, Lat. *vetus*; *κλυτός*, Skr. *śrutáh*, Lat. *in-clutus*, *renowned*, O.Ir. *cloth*, *renown*; *ἔστι*, Skr. *ásti*, Lat. *est*, Goth. *ist*, Lith. *ēsti*, *he is*; *κλέπτης*, Goth. *hliftus*, *thief*; *ὀκτώ*, Skr. *aṣṭāú*, *aṣṭá*, Lat. *octō*, O.Ir. *ocht*, OE. *eahta*, *eight*.

§ 165. *τπ* became *ππ*, as Hom. *κάππεσον* from *κατέπεσον* : *καταπίπτω*.

§ 166. Prim. Greek *τσ* (§ 109) became a double spirant the precise pronunciation of which is uncertain. Most scholars assume that it was *þþ* (= *th* in Engl. *thin*) or a kind of lisped *ss*. Before and after consonants, and finally it became *σ* through the intermediate stage *σσ* in all the dialects, as Hom. *ἴσος*, Att. *ἴσος*, Cret. *φίσφος* from *\*φισφος*, older *\*widswos*; Att. *βάλλουσι*, Cret. *βάλλουσι*, from *\*βάλλοντσι* : *βάλλων*; *νόσος* from *\*νόσφος*; *πάσχω* from *\*πάσχω* : *παθεῖν*; Att. *ἔσπεια*, Cret. *ἔσπενσα*, from *\*ἔσπεντσα* : *σπένδω*; *ἔπερα* from *\*ἔπερτσα* : *πέρθω*; nom. *νύξ*, *νεότης*, *πούς*, *κόρυς*, *γίγᾱς*, *διδούς*, *τιθείς*, beside stem *νύκτ-*, *νεότητ-*, *ποδ-*, *κόρυθ-*, *γίγαντ-*, *διδόντ-*, *τιθέντ-*.

Medially after long vowels and diphthongs it became *σ* in all the dialects, as dat. pl. *φωσί* from *\*φωσί*; *σπεύσω* from *\*σπεύτσω* : *σπεύδω*; *ἔπεισα* from *\*ἔπειτσα* : *πέιθω*.

Medially between short vowels it became  $\tau\tau$  in Boeot. Cret. (Cret. also  $\zeta$ ),  $\sigma$  in Att. Ion., and  $\sigma\sigma$ ,  $\sigma$  in the other dialects, as aor. Hom.  $\delta\acute{\alpha}\sigma\sigma\alpha\sigma\theta\alpha\iota$ , Att.  $\delta\acute{\alpha}\sigma\alpha\sigma\theta\alpha\iota$ , Cret.  $\delta\acute{\alpha}\tau\tau\alpha\theta\theta\alpha\iota$ ,  $\delta\acute{\alpha}\zeta\alpha\theta\alpha\iota$  :  $\delta\alpha\tau\acute{\epsilon}\omicron\mu\alpha\iota$  ; loc. pl. Hom.  $\pi\omicron\sigma\sigma\acute{\iota}$ , Att.  $\pi\omicron\sigma\acute{\iota}$ , Skr.  $pats\acute{u}$ , beside nom.  $\pi\acute{o}\delta\epsilon\varsigma$ , Skr.  $p\acute{a}d\grave{a}h$ .

§ 167. Indg.  $tj$  became  $ts$  in prim. Greek and then had the same further development as the  $ts$  in § 166, as Hom. Att. Boeot.  $\pi\acute{\alpha}\sigma\alpha$ , Lesb.  $\pi\acute{\alpha}\iota\sigma\alpha$ , Thess. Cret.  $\pi\acute{\alpha}\nu\sigma\alpha$ , from  $*\pi\alpha\nu\tau\jmath\alpha$  ;  $\delta\acute{o}\xi\alpha$  from  $*\delta\acute{o}\kappa\tau\jmath\alpha$  ;  $\alpha\acute{\iota}\sigma\alpha$  from  $*\alpha\acute{\iota}\tau\jmath\alpha$  ; Hom.  $\tau\acute{o}\sigma\sigma\omicron\varsigma$ ,  $\tau\acute{o}\sigma\omicron\varsigma$ , Lesb.  $\tau\acute{o}\sigma\sigma\omicron\varsigma$ , Att.  $\tau\acute{o}\sigma\omicron\varsigma$ , from  $*\tau\acute{o}\tau\jmath\omicron\varsigma$ . See § 129, 6.

§ 168. Initial  $tw$ - became  $\sigma\sigma$ - which was simplified later to  $\sigma$ -, as  $\sigma\acute{\epsilon}$ , Skr.  $tv\bar{a}$ ,  $tv\acute{a}m$ , *thee*. Medial  $tw$ - became  $-\tau\tau-$  in Att. and Boeot., and  $-\sigma\sigma-$  in the other dialects, as Att.  $\tau\acute{\epsilon}\tau\tau\alpha\rho\epsilon\varsigma$ , Boeot.  $\pi\acute{\epsilon}\tau\tau\alpha\rho\epsilon\varsigma$ , Hom.  $\tau\acute{\epsilon}\sigma\sigma\alpha\rho\epsilon\varsigma$ , Skr.  $catv\acute{a}rah$ , *four*. For further examples see § 124, 3.

§ 169.  $\tau\iota$  remained initially and also in the combination  $\sigma\tau\iota$ , as  $\tau\acute{\iota}\sigma\iota\varsigma$ ,  $\acute{\epsilon}\sigma\tau\iota$ ,  $\pi\acute{\iota}\sigma\tau\iota\varsigma$ ,  $\sigma\tau\iota\phi\rho\acute{o}\varsigma$ . Medially it partly became  $\sigma\iota$  and partly remained. The reason for this two-fold treatment has never been satisfactorily explained. P. Kretschmer—*Kuhn's Zeitschrift*, vol. xxx, pp. 565-91—after investigating the subject in great detail, arrives at the following result:  $\tau\iota$  remained medially when the  $\iota$  was accented, and also finally when the accent was on the penultima, but it became  $\sigma\iota$  when the  $\iota$  was unaccented. On the other hand Brugmann—*Grundriss*, vol. i, p. 662—assumes that the  $\iota$  became consonantal before vowels, as in  $\pi\lambda\omicron\upsilon\sigma\iota\omicron\varsigma$  from  $*\pi\lambda\omicron\upsilon\tau\jmath\omicron\varsigma$  ; gen. Ion.  $\beta\acute{\alpha}\sigma\iota\omicron\varsigma$  from  $*\beta\acute{\alpha}\tau\jmath\omicron\varsigma$  and then the  $\sigma$  was levelled out into the nom. and acc. sing.  $\beta\acute{\alpha}\sigma\iota\varsigma$ ,  $\beta\acute{\alpha}\sigma\iota\nu$ . A careful examination of the material collected by Kretschmer shows that both explanations leave a large residuum of unexplained forms, even when due allowance is made for a considerable number of analogical formations. The  $ti$ -stems and likewise the adjectives in  $*\text{-}\tau\iota\omicron\varsigma$  have  $\sigma\iota$ , as  $\beta\acute{\alpha}\sigma\iota\varsigma$ ,  $\pi\acute{o}\sigma\iota\varsigma$ ,  $\delta\acute{o}\sigma\iota\varsigma$ ,  $\phi\acute{\upsilon}\sigma\iota\varsigma$  ;  $\pi\lambda\omicron\upsilon\sigma\iota\omicron\varsigma$ ,

ἐνιαύσιος, ἀμβρόσιος. The pres. third pers. sing. of μι-verbs and the third pers. pl. of ω-verbs have -σι in Att. Ion., but -τι in Dor. and Boeotian, as Att. δίδωσι, τίθησι φέρουσι beside Dor. δίδωτι, τίθητι, φέροντι.

§ 170. τ became σ before a following τ, as ἄπαστος : πατέομαι; κεστός from \*κεντ-τός : κεντέω; ὕστερος, Skr. úttarah, latter. See § 110.

## d

§ 171. Indg. d (= Skr. Lat. O.Ir. Lith. O.Slav. d, Germanic t) generally remained initially and medially in Greek, as δέκα, Skr. dáśa, Lat. decem, O.Ir. deich, Goth. taíhun, OE. tien, Lith. dėzimt-, ten; δίδωμι, Skr. dádamī, Lat. dō, I give, O.Slav. dati, to give; δόμος, Skr. dámaḥ, Lat. domus, O.Slav. domŭ, house; δύο, Skr. dvāú, dvá, Lat. duo, O.Ir. dāu, dō, Lith. dù, OE. twā, two; ἔδω, Skr. ádmi, Lat. edo, OE. ete, I eat; ἔδος, Skr. sádas-, seat, Lat. sedēre, OE. sittan, to sit; καρδίᾱ, κραδίη, Lat. gen. cordis, O.Ir. cride, Lith. szirdis, OE. heorte, heart; οἶδε, Skr. véda, OE. wāt, he knows, Lat. vidēre, to see; acc. πόδα, Skr. pádam, Lat. pedem, OE. fōt, foot.

§ 172. δλ became λλ, as πέλλυτρον from \*πέδ-λυτρον, bandage worn by runners on the ankle; Lac. ἔλλα = Lat. sella, from \*sedlā, OE. setl, seat.

δπ became ππ, as Hom. ὀππῶς from \*ὄδ-πῶς older \*σφόδ-πῶς, quomodo.

§ 173. Indg. dj became ζ, as Ζεύς, cp. Skr. dyāúḥ, sky; πεζός, Skr. padyáḥ, on foot. See § 129, 8.

§ 174. δ became σ before a following voiceless dental, as οἶσθα : οἶδα; ἔψευσται : ψεύδομαι. See § 110.

## th

§ 175. th was a rare sound in the parent language. It was preserved in Sanskrit and Greek, but in prim. Latin it fell together with original dh, and in prim. Keltic,

Germanic and the Baltic-Slavonic languages with original **t**. οἶσθα, Skr. **vēttha**, *thou knowest*; πλάθανον, *a platter or mould to bake in*, Skr. **prthúh**, *broad*; μόθος, *battle-din*, Skr. **mánthati**, *he twists, shakes*, see § 102.

§ 176. Indg. **sth** became **στ**, as ἴστημι, Skr. **tíṣṭhāmi**, *I stand*; στῦλος, *pillar*, Skr. **stūrāh**, *strong*; superlative suffix -ιστος = Skr. **-iṣṭhaḥ**, see § 102.

### dh

§ 177. Indg. **dh** (= Skr. **dh**, Lat. **f** initially, **b** medially before and after **r**, before **l** and after **u** (**w**), in other cases **d**, Keltic and Baltic-Slavonic languages **d**, Germanic **d**, **ḍ**) became voiceless **θ** in Greek, as θήσασθαι, *to suck*, Skr. **dháyanti**, O.Ir. **denait**, *they suck*, Lat. **fēlāre**, Goth. **daddjan**, *to suckle*; θῦμός, *courage, passion*, Skr. **dhūmāh**, Lat. **fūmus**, Lith. pl. **dúmai**, *smoke*; θύρα, OE. **duru**, pl. Lat. **fores**, Lith. **dūrys**, *door*; τίθημι, Skr. **dádhāmi**, *I put, place*, OE. **dæd**, *deed*, Lith. **dėti**, O.Slav. **děti**, *to lay*, cp. Lat. **facio**, **fēcī**; μέθυ, *wine*, Skr. **mádhu**, O.Ir. **mid**, OE. **medu**, **meodu**, Lith. **medūs**, *mead, honey*; ἐρυθρός, Skr. **rudhirāh**, Lat. **ruber**, OE. **rēad**, *red*; αἶθω, *I burn*, Skr. **édhas-**, *fire-wood*, Lat. **aedēs**, *sanctuary*, originally, *fire-place, hearth*, OE. **ād**, *funeral pile*; οὔθαρ, Skr. **údhar**, Lat. **über**, OE. **ūder**, *udder*; πείθω, Lat. **fīdo**; imperative κλῦθι = Skr. **śrudhí**, *hear thou*.

§ 178. Indg. **dhj** became **σσ**, **σ**, as μέσσος, μέσος, Skr. **mádhyah**, *middle*, see § 129, 6.

§ 179. Indg. **dh** appears as **σ** before voiceless dentals, as πέπεισται, ἐπέισθην : πείθω, see § 110.

§ 180. On the de-aspiration of **θ**, as in τίθημι, see § 115.

### THE PALATALS AND THE VELAR GUTTURALS.

§ 181. In treating the history of these consonants in the various languages it is convenient to divide the Indg. family of languages into two great groups according to the

different development which these sounds underwent in the two groups. The palatal explosives **k**, **kh**, **g** and **gh** usually appear in Greek, Italic (Latin, Oscan, Umbrian), Keltic and the Germanic languages as explosives or as sounds which are directly developed from explosives, whereas in the Aryan, Armenian, Albanian and Baltic-Slavonic languages they usually appear as spirants. The former group is generally called the centum- and the latter the satəm-group of languages, where Latin **centum** and Zend **satəm** represent the original Indg. word **\*kṛtóm**, *hundred*. This twofold development of the palatals is probably due to dialectal differences which already existed in the Indg. parent language. In addition to the palatals the parent language also had two kinds of velars, viz. pure velars and labialized velars or velars with lip-rounding. The pure velars fell together with the palatals in the centum-languages, but were kept apart in the satəm-languages. On the other hand the pure velars fell together with the labialized velars in the satəm-languages, but were kept apart in the centum-languages.

The following table contains the normal development of the palatals and velar gutturals in the various languages. The labialized velars are here indicated by **w**. In other parts of this grammar the **w** is almost always omitted as being unnecessary, because the Greek words themselves generally indicate whether they originally contained a pure velar or a labialized velar.

		Centum-Languages.					Satem-Languages.		
Indg.	Gr.	Lat.	O.Ir.	Germanic.	Skr.	Lith.	O.Slav.		
k	κ	c	c	h; g, ʒ	ś	sz	s		
g	γ	g	g	k	j	ž	z		
gh	χ	h, f, g	g	g, ʒ	h	ž	z		
q	κ	c	c	h; g, ʒ	k, c	k	k, č		
g	γ	g	g	k	g, j	g	g, ž		
gh	χ	h, (f), g	g	g, ʒ	gh, h	g	g, ž		
q <sup>w</sup>	π, τ, κ	qu, c	c	hw, h; ʒw, ʒ, w; f, b	k, c	k	k, č		
g <sup>w</sup>	β, δ, γ	v, gu, g	b, g	kw, k	g, j	g	g, ž		
g <sup>w</sup> h	φ, θ, χ	f, v, gu	g	g, ʒw, ʒ, w	gh, h	g	g, ž		

Lab.-Velars. Pure Velars. Palatals.



## I. THE PALATALS.

## k

§ 182. Indg. **k** (= Lat. O.Ir. **c**, Germanic **h** ; **g**, **ǵ**, Skr. **ś**, Lith. **sz**, O.Slav. **s**) remained in Greek initially and generally also medially, as *ἐκατόν*, Lat. **centum**, O.Ir. **cēt**, OE. **hund**, Skr. **śatám**, Lith. **szim̃tas**, *hundred*; *καρδίᾱ*, *κραδίη*, Lat. **cor**, O.Ir. **cride**, OE. **heorte**, Lith. **szirdis**, *heart*; *κλέπτω*, Lat. **clepo**, Goth. **hlifa**, *I steal*; *κλυτός*, Lat. **in-clutus**, Skr. **śrutáh**, *renowned*, O.Ir. **cloth**, *renown*; *κύων*, Lat. **canis**, O.Ir. **cū**, OE. **hund**, Skr. **śvā**, gen. **śúnaḥ**, Lith. **szũ**, gen. **szuñs**, *dog, hound*; *δέκα*, Lat. **decem**, Goth. **taihun**, Skr. **dáśa**, Lith. **dėszimt.**, *ten*; *δέδορκε*, Skr. **dadárśa**, *he has seen*; *οἶκος*, *φοῖκος*, Skr. **věśáh**, *house*, Lat. **vīcus**, *village*; *ὀκτώ*, Lat. **octō**, OE. **eahta**, Skr. **aṣṭāú**, **aṣṭā**, Lith. **asztũnì**, *eight*; *ὠκύς*, Skr. **āśúḥ**, *quick*, Lat. **ōcior**.

§ 183. **kw** became **ππ**, as *ἵππος*, Lat. **equus**, OE. **eoh**, Skr. **áśvaḥ**, *horse*. See § 124, 2.

§ 184. Medial **kj** became **ττ** in Att. and **σσ** in Ion., as *ἥττων*, *ἥσσω* : *ἥκιστος*; *πάτταλος*, *πάσσαλος* : root \***pāk**. **ττ** and **σσ** were simplified to **τ**, and **σ** initially, as Att. *τῆμερον*, Ion. *σῆμερον* from \***kjāμερον**. See § 129, 7.

§ 185. **ks** became **χ** before a liquid or nasal, as *μυχλός* from \***μυκσλος**, *stallion-ass* : Lat. **mīlus**; *λέχριος* : *λοξός*, Lat. **luxus**; *ἀράχνη* from \***ἀρακσνᾱ**, Lat. **arānea**; *λάχνη* from *λάκσνᾱ*; *λύχνος* from \***λυκσνος** : Lat. **lūna** from \***louksnᾱ**; *πάχνη* from \***πακσνᾱ**; *πλοχμός* : *πλόκαμος*. See § 218.

§ 186. **k** disappeared before **sk**, as *δίσκος* from \***δικσκος** : *δικεῖν*; *έίσκω* from \***φεφικσκω** : *έοικα*; *λάσκω* from \***λακσκω** : *λακεῖν*; *διδάσκω* from \***διδασκω**.

§ 187. **κ** became **γ** before voiced sounds, as *πλέγδην* : *πλέκω*. See § 107.

## g

§ 188. Indg. g (= Lat. O.Ir. g, Germanic k, Skr. j, Lith. ž, O.Slav. z) remained in Greek initially and generally also medially, as γένος, Lat. genus, Goth. kuni, Skr. jānas-, race, generation, O.Ir. gein, birth; γεύομαι, Lat. gusto, I taste, OE. cēosan, to choose, Skr. juṣātē, he tastes; γόνυ, Lat. genu, OE. cnēo, Skr. jānu, knee; γνωτός, Lat. (g)nōtus, O.Ir. gnāth, Skr. jñātāḥ, known, OE. cnāwan, O.Slav. znati, to know; άγρός, Lat. ager, Goth. akrs, Skr. ájraḥ, field, acre; άγω, Lat. ago, O.Ir. agim, Skr. ájāmi, I drive; έγώ, Lat. ego, OE. ic, I; έργον, OE. weorc, work; άμέλγω, Lat. mulgeo, M.Ir. bligim, OE. meolce, Lith. mėlzu, I milk, Skr. mrjāti, he wipes, rubs.

§ 189. Medial γν, γμ became ην, ημ, as in γιγνώσκω, γίγνομαι, στυγνός, άγμός. This explains why the guttural nasal came to be expressed by γ in Greek (§ 155). At a later period ην was simplified to ν, as γινώσκω, γίνομαι. The ν occurs on inscriptions in Ion. already in the fifth and in Att. about the end of the fourth century B.C.

§ 190. gj became ζ, as άζομαι from \*άγγομαι, I stand in awe of, Skr. yájatē, he honours; άρπάζω from \*άρπαγγω. See § 129, 8.

§ 191. γ became κ before voiceless consonants, as λέξω, λέλεκται : λέγω. See § 106.

## kh

§ 192. kh was one of the rarest sounds in the parent Indg. language. It was generally preserved in Greek, but in prim. Latin it fell together with original gh, and in the prim. Keltic, Germanic and Baltic-Slavonic languages with original k. It is doubtful what simple kh would have become in Sanskrit, because it only occurs in the original combination skh which became ch initially and cch medially.—σχίζω, Lat. scindo, I split, Skr. chinátti from

\*skhinátti, *he splits*, OE. scādan, *to divide*; σχάω, *I slit*, Skr. chyáti, *he slits*, see § 102.

## gh

§ 193. Indg. gh (= Lat. h medially between vowels and also initially before vowels except u, f initially before u, g before and after consonants, O.Ir. g, Germanic g, ǵ, Skr. h, Lith. ž, O.Slav. z) became voiceless χ in Greek, as χιών, Skr. himáh, *snow*; χειμών, Lat. hiems, O.Ir. gaim, Lith. žemà, O.Slav. zima, *winter*, Skr. héman, *in winter*; χαμαί, *on the ground*, Lat. humus, Lith. žėmė, O.Slav. zemlja, *earth, ground*; χέ(φ)ω, Lat. fundo, OE. gēote, *I pour*, Skr. hutáh, *poured, sacrificed*; χήν, Lat. (h)anser, OE. gōs, Skr. haśáh, *goose*; λείχω, Lat. lingo, O.Ir. ligim, Skr. réhmi, léhmi, Lith. lėžiù, O.Slav. liza, *I lick*; Pamph. Féχω, Lat. veho, OE. wege, Skr. váhāmi, Lith. vezù, O.Slav. veza, *I bear, carry, move*; ἄγχω, Lat. ango, *I press tight*, Skr. āhas-, *need, distress*, OE. enge, *narrow*; πῆχυς, *fore-arm*, Skr. bāhúh, *arm*.

§ 194. ghj became ττ in Att. and σσ in Ion., as Att. θάπτων, Ion. θάσσων : ταχύς, τάχιστος. See § 129, 7.

## 2. THE PURE VELARS.

## q

§ 195. Indg. q (= Lat. O.Ir. c, Germanic h; g, ǵ, Skr. k but c before i, and a = Indg. e, Lith. k, O.Slav. k but č before palatal vowels) became κ in Greek initially and generally also medially, as καρκίνος, Lat. cancer, Skr. karkatah, *crab*; κάλυξ, Skr. kalikā, *flower-bud*; καρπός, *fruit*, Lat. carpo, *I pluck, pick*, OE. hærfest, *autumn*, Skr. kṛpānah, *sword*, Lith. kerpù, *I shear*; καλέω, Lat. calo, *I call, call out*, Lith. kalbà, *speech*; καλός, Skr. kalyānah, *beautiful*; κελαινός, Skr. kālah, *black*, cp. Lat. cāligo; κέλλω, *I drive*, Skr. kāláyati, kaláyati, *he drives*, Lat. celer, *quick*; κολωνός, Lat. collis, *hill*, Lith. kálnas,

mountain; κρέας, *flesh*, OE. hrā(w), *corpse, carrion*, Skr. kravīṣ-, *raw meat*, Lat. cruor, O.Ir. crū, Lith. kraūjas, *blood, gore*; ἀγκών, *āngkos*, O.Lat. ancus, Skr. āṅkas-, *bend, hollow*, Lith. anka, *loop, knot*; ζευκτός, Lat. jūnctus, Skr. yuktāḥ, Lith. júnktas, *yoked*; μείραξ, Skr. maryakāḥ, *boy, young man*.

§ 196. qj became ττ in Att. and σσ in Ion., as Att. πλήττω, Ion. πλήσσω, root \*plāq-. See § 129, 7.

## g

§ 197. Indg. g (= Lat. O.Ir. g, Germanic k, Skr. g but j before i, and a = Indg. e, Lith. g, O.Slav. g but ž before palatal vowels) became γ in Greek initially and generally also medially, as γέρας, Lat. grūs, OE. cran, Lith. gėrvė, *crane*; ἄγος, *guilt*, Skr. āgas-, *offence, crime, sin*; ἀγορά, *assembly*, ἀγείρω, *I assemble*, Lat. grex, *herd, flock*, O.Ir. graig, *herd of horses*, Skr. grāmah, *crowd*; ζυγόν, Lat. jugum, Goth. juk, Skr. yugām, O.Slav. igo, *yoke*; στέγος, τέγος, OE. þæc, Lith. stógas, *roof*, O.Ir. teg, *house*: στέγω, Lat. tego, *I cover*, Skr. sthāgati, sthagayati, *he hides, conceals*.

§ 198. gj became ζ, as στίζω from \*στίγγω: στίγμα, cp. Skr. tigmāḥ, *pointed, sharp*, Lat. in-stigo. See § 129, 8.

§ 199. γ became κ before voiceless consonants, as στέγω: αὐξω, αὐξάνω: Lat. augeo, Goth. áuka, Lith. áugu, *I grow, increase, add*. See § 106.

## qh

§ 200. qh was of rare occurrence in the parent language. It became χ in Greek, kh but ch before i and a = Indg. e in Sanskrit; in prim. Lat. it fell together with original gh, qh, in prim. Keltic and Germanic with original k, q, in Lith. and O.Slav. with original q. καχάζω, *I laugh*, Skr. kakhati, *he laughs*; κόγχος, Lat. congius (*a small liquid measure*), Skr. śaṅkhāḥ, *muscle*, see § 102.

## gh

§ 201. Indg. **gh** (= Skr. **gh** but **h** before **i**, and **a** = Indg. **e**, Lat. **h** initially before and medially between vowels, **g** before and after consonants, O.Ir. **g**, Germanic **g**, **g**, Lith. **g**, O.Slav. **g** but **ž** before palatal vowels) became voiceless **χ** in Greek, as *χαλκός*, *brass*, Lith. *geležis*, *iron*; *χανδάνω*, *I lay hold of*, Lat. *pre-hendo*, *I seize*, Goth. *bi-gita*, *I find*, O.Slav. *gadaja*, *I guess, divine*; *δολιχός*, Lat. *longus*, OE. *lang*, Skr. *dīrgháh*, *long*; *λέχος*, O.Ir. *lige*, *bed*, Goth. *ligan*, O.Slav. *ležati*, *to lie down*; *ὀμίχλη*, Lith. *miglà*, *fog, mist*, Skr. *mēgháh*, *cloud*; *στείχω*, O.Ir. *tīagu*, *I go*, OE. *stige*, *I rise*, O.Slav. *stignā*, *I come*.

## 3. THE LABIALIZED VELARS.

q<sup>w</sup>

§ 202. Indg. **q<sup>w</sup>** (= Lat. **qu** before vowels except **u**, but **c** before **u** and consonants, O.Ir. **c**, Germanic **hw**, **h**; **g<sup>w</sup>**, **g**, **w**; **f**, **b** (§ 181), Skr. **k** but **c** before **i**, and **a** = Indg. **e**, Lith. **k**, O.Slav. **k** but **č** before palatal vowels) had a threefold development in Greek. It became **π** before all sounds except **ι**, **ε**, **υ** and **ι**; **τ** before **ι** and **ε**; **κ** before and after **υ**, as *πό-θεν*, whence, Lat. *quis*, O.Ir. *cīa*, OE. *hwā*, Skr. *káh*, Lith. *kàs*, *who?*; *πότερος*, OE. *hwæper*, Skr. *kataráh*, *which of two?*; *πρίασθαι*, *to buy*, Skr. *kriṇāmi*, *I buy*; *ποινή*: *τίσις*, *penalty*, Skr. *cáyatē*, *he avenges, punishes*; *πάλαι*, *long ago, formerly*, Skr. *caramáh*, *the last*; *λείπω*, Lat. *linquo*, O.Ir. *lēcim*, Lith. *lėkù*, *I leave*, Skr. *riṇákti*, *he leaves*, Goth. *leihvan*, *to lend*; *ἔπομαι*, Lat. *sequor*, Lith. *sekù*, *I follow*, Skr. *sácatē*, *he follows*; *ἥπαρ*, Lat. *jecur*, Skr. *yákr̥t*, Lith. pl. *jeknos*, *liver*; *πεπτός*, Lat. *coctus*, Skr. *paktáh*, *cooked*.

*τίς*, *τί*, Lat. *quis*, *quid*, Oscan *pis*, *pid*, Skr. indef. pronoun *cid*; Hom. *τέο*, Goth. *hvis*, O.Slav. *česo*, *whose?*; *τέτταρες*, *τέσσαρες*, Lat. *quattuor*, O.Ir. *cethir*, Goth.

**fidwōr**, Skr. **catvāraḥ**, Lith. **keturi**, *four*; **τε**, Lat. **-que**, Skr. **ca**, *and*; **τέλος** : **πάλαι**; **τίσις** : **ποινή**; **πέντε**, Lat. **quinque**, O.Ir. **cōic**, Goth. **fimf**, Skr. **pāñca**, Lith. **penkì**, *five*.

**λύκος**, Goth. **wulfs**, Skr. **vṛkaḥ**, *wolf*; **νύξ**, **νυκτός**, Lat. **nox**, **noctis**, Goth. **nahts**, Skr. **nákti-**, Lith. **naktis**, *night*; **κύκλος**, O.E. **hwēol**, Skr. **cakráh**, *wheel*; **θαλυκρός** : **θάλλπος**.

NOTE.—I. Forms derived from the pronominal stem **q<sup>w</sup>o** have **κ** instead of **π**, especially in the Ionic dialect of Herodotus and Herondas, as **κόσος**, **κότερος**, **κοῦ**, **κοῖος**, **κῶς**, **ὄ-κως**, but only the regular forms with **π** are found on Ion. inscriptions; in Thess. **κίς** also occurs beside **τίς**. It is difficult to account for the **κ**-forms unless we may suppose that they first arose in combination with the negative particle, as in **οὔκως**, **οὔκίς**, where the original velar would regularly become **κ** because of the preceding **υ**. In like manner may also be explained **πολλάκίς** a new formation for older **\*πολύκίς**.

2. In the Aeolic dialects **π** occurs beside **τ** before palatal vowels, as Lesb. **πέσσυρες**, Hom. **πίσυρες**, Boeot. **πέτταρες**, beside Att. **τέτταρες**; Lesb. Thess. **πέμπε** beside **πέντε**; Thess. **πεῖσαι** beside Att. **τεῖσαι**.

3. Forms like **λείπεις**, **λείπει**, **λείπετε** were due to levelling out the regular **π**-forms **λείπω**, **λείπομεν**, **λείπουνσι**; and similarly gen. **ἔπεος** for **\*ἔτεος**, with **π** from **ἔπος**.

§ 203. **q<sup>w</sup>j** became **ττ**, **σσ**, as Att. **πέττω**, Ion. **πέσσω** : **πέψω**, **πεπτός**, Lat. **coquo**, O.Slav. **peka**, *I cook, bake*, Skr. **pácati**, *he cooks*. See § 129, 7.

§ 204. **πμ** became **μμ**, as **λέλειμμαί** : **λείπω**; **ὄμμα** from **\*ὄπμα**, cp. Lat. **oculus**, Lith. **akis**, *eye*. See § 117.

### g<sup>w</sup>

§ 205. Indg. **g<sup>w</sup>** (= Lat. **v** but **gu** after **n**, and **g** when the labialized element had been lost, O.Ir. **b** but **g** before old **j**, Germanic **kw**, **k**, Skr. **g** but **j** before **i**, and **a** = Indg. **e**, Lith. **g**, O.Slav. **g** but **ž** before palatal vowels) had

a threefold development in Greek. It became  $\beta$  before all sounds except  $\epsilon$ ,  $\upsilon$  and  $j$ ;  $\delta$  before  $\epsilon$ ;  $\gamma$  before and after  $\upsilon$ , as  $\beta\alpha\acute{\iota}\nu\omega$ , *I go*, Lat. *venio*, Goth. *qima*, *I come*, Skr. *gámati*, *he goes*, *ja-gáma*, *he has gone*;  $\beta\acute{\alpha}\lambda\alpha\nu\omicron\varsigma$ , Lat. *glans*, Lith. *gilé*, *acorn*;  $\beta\acute{\alpha}\lambda\lambda\omega$ , *I throw*, Skr. *gálati*, *he trickles down*; Boeot.  $\beta\alpha\nu\acute{\alpha}$ , O.Ir. *ben*, Goth. *qinō*, O.E. *cwene*, O.Slav. *žena*, *woman*, Skr. *gnā-*, *wife of a god*;  $\beta\alpha\rho\acute{\upsilon}\varsigma$ , Lat. *gravis*, Goth. *kaúrus*, Skr. *gurúh*, *heavy*;  $\beta\omicron\upsilon\varsigma$ , Skr. *gáuh*, *ox*, O.Ir. *bō*, O.E. *cū*, *cow*, Lat. *bōs* for *\*vōs* is an Umbrian-Samnitic loanword; Att.  $\beta\omicron\upsilon\lambda\epsilon\tau\alpha\iota$ : Dor.  $\delta\acute{\eta}\lambda\epsilon\tau\alpha\iota$ ;  $\epsilon\grave{\rho}\epsilon\beta\omicron\varsigma$ , Goth. *riqis*, Skr. *rájas-*, *darkness*;  $\epsilon\beta\eta\nu$ ,  $\epsilon\beta\bar{\alpha}\nu$ , *I went*, Skr. *ágāt*, *he went*;  $\tau\acute{\alpha}\rho\beta\omicron\varsigma$ , *fright*, Lat. *torvos*, *fierce, grim*, Skr. *tárjati*, *he threatens*;  $\phi\acute{\epsilon}\beta\omicron\mu\alpha\iota$ , *I flee from*, Lith. *bėgu*, *I flee, run*.

$\delta\epsilon\lambda\phi\acute{\upsilon}\varsigma$ , Skr. *gárbhah*, *matrix*;  $\acute{\alpha}\delta\acute{\eta}\nu$ , *gland*, Lat. *inguen*, *groin*; Dor.  $\delta\acute{\eta}\lambda\epsilon\tau\alpha\iota$ : Att.  $\beta\omicron\upsilon\lambda\epsilon\tau\alpha\iota$ .

In a few words  $\beta$  occurs before  $\iota$  where we should regularly expect  $\delta$ , as  $\beta\acute{\iota}\bar{\alpha}$ , *bodily strength, force, might*, Skr. *iyá*, *iyá*, *supreme power, upper hand*;  $\beta\acute{\iota}\omicron\varsigma$ , *life*, Lat. *vīvos*, O.Ir. *bīu*, Goth. *qius*, Skr. *jīvāh*, *alive*;  $\beta\acute{\iota}\omicron\varsigma$ , *bow*, Skr. *iyá*, *bow-string*. These forms have never been satisfactorily explained. Some scholars assume that  $g^w\iota$  regularly became  $\beta\iota$  and that  $\delta\iota\epsilon\rho\acute{\omicron}\varsigma$  is not etymologically connected with Skr. *jirāh*.

$\gamma\upsilon\nu\acute{\eta}$ : Boeot.  $\beta\alpha\nu\acute{\alpha}$ ;  $\phi\epsilon\acute{\upsilon}\gamma\omega$ ,  $\epsilon\phi\upsilon\gamma\omicron\nu$ :  $\phi\acute{\epsilon}\beta\omicron\mu\alpha\iota$ ; gen.  $\omicron\iota\nu\acute{\omicron}\text{-}\phi\lambda\upsilon\gamma\omicron\varsigma$ : gen.  $\phi\lambda\epsilon\beta\acute{\omicron}\varsigma$ ;  $\acute{\upsilon}\text{-}\gamma\iota\acute{\eta}\varsigma$ , *sound, healthy*, lit. *well living*:  $\beta\acute{\iota}\omicron\varsigma$ .

NOTE.—1. In the Aeolic dialects  $\beta$  occurs beside  $\delta$  before palatal vowels, as Lesb.  $\beta\acute{\epsilon}\lambda\phi\acute{\iota}\nu\text{-}$ , Boeot.  $\beta\epsilon\lambda\phi\acute{\iota}\nu\text{-}$ : Att.  $\delta\epsilon\lambda\phi\acute{\iota}\nu\text{-}$ ; Boeot.  $\beta\epsilon\iota\lambda\acute{\omicron}\mu\epsilon\nu\omicron\varsigma$ , Thess.  $\beta\acute{\epsilon}\lambda\lambda\epsilon\tau\alpha\iota$ : Dor.  $\delta\acute{\eta}\lambda\epsilon\tau\alpha\iota$ , Att.  $\beta\omicron\upsilon\lambda\epsilon\tau\alpha\iota$ .

2. Forms like  $\phi\omicron\beta\acute{\epsilon}\omega$ ,  $\phi\omicron\beta\acute{\epsilon}\omicron\mu\alpha\iota$  were new formations after the analogy of  $\phi\acute{\epsilon}\beta\omicron\mu\alpha\iota$ ; and similarly gen.  $\epsilon\acute{\rho}\acute{\epsilon}\beta\epsilon\omicron\varsigma$  for  $*\epsilon\acute{\rho}\acute{\epsilon}\delta\epsilon\omicron\varsigma$ , with  $\beta$  from  $\epsilon\grave{\rho}\epsilon\beta\omicron\varsigma$ .

§ 206.  $g^w j$  became  $\zeta$ , as  $\nu\acute{\iota}\zeta\epsilon\iota$ , O.Ir. *nigid*, *he washes*,

Skr. *nij-*, *wash*; *λάξομαι* : *λαμβάνω*, *λαβείν*; *ζήν* : *βιῶναι*, *βίος*. See § 129, 8.

§ 207. *βν* became *μν*, as *ἀμνός* from \**ἄβνός*, Lat. *agnus*; *σεμνός* : *σέβομαι*; *ἐρεμνός* : *ἐρεβος*. See § 117.

### q<sup>w</sup>h

§ 208. q<sup>w</sup>h was a rare sound in the parent language. In Skr. it fell together with original *qh*, in Lat. and Gr. with *g<sup>w</sup>h*, in Celtic and Germanic with *q<sup>w</sup>*, in Lith. and O.Slav. with *q*, *q<sup>w</sup>*. *φάλλη*, OE. *hwæl*, *whale*; *σφάλλομαι*, *I stumble*, Skr. *skhalatē*, *he stumbles*. See § 102.

### g<sup>w</sup>h

§ 209. Indg. g<sup>w</sup>h (= Lat. *f* initially, *v* medially except that after *n* it became *gu*, O.Ir. *g*, Germanic *g<sup>w</sup>*, *g*, *w*, Skr. *gh* but *h* before *i*, and *a* = Indg. *e*, Lith. *g*, O.Slav. *g* but *ž* before palatal vowels) had a threefold development in Greek. It became *φ* before all sounds except *ε*, *υ* and *ι*; *θ* before *ε*; *χ* before and after *υ*, as *φατός*, Skr. *hatáh* for \**ghatáh*, *killed, slain* : *φόνος*, *θείνω*; *φαιδρός*, *beaming, radiant*, Lith. *gaidrūs*, *serene, clear*; *ἐλαφρός* : *ἐλαχύς*; *ἀλφή* older \**ἀλφᾶ*, *produce, gain*, Lith. *algà*, *pay, reward*; *ὄσ-φραίνομαι*, *I smell*, Skr. *ghrāti*, *he smells*; acc. *νίφα*, Lat. *nivem*, nom. Lith. *snėgas*, Goth. *snáiws*, OE. *snāw*, *snow*; *νείφει*, *νίφει* with *φ* for *θ* from forms like *νίφω*, *νιφόμενος*, Lat. *ninguit*, Lith. *sniŋga*, *it snows*, O.Ir. *snigid*, *it rains*; *ὄφης*, Skr. *áhiḥ*, Lith. *angis*, Lat. *anguis*, *snake, serpent*.

*θερμός*, Lat. *formus*, OE. *wearm*, *warm*, Skr. *gharmáh*, *glow, heat*, O.Ir. *guirim*, *I heat*, O.Slav. *gorěti*, *to burn*; *θείνω*, Lat. *of-fendo*, *I strike*, O.Ir. *gonim*, *I wound, kill*, Skr. *hánti*, *he strikes, slays*, *ghnánti*, *they strike*.

*ἐλαχύς*, *small, little*, Skr. *laghúḥ*, *light, quick* : *ἐλαφρός*; *εὔχομαι*, *I pray*, Skr. *vāghát-*, *institutor of a sacrifice*;



ὄνυξ, ὄνυχος, Lat. unguis, O.Ir. ingen, Lith. nāgas, *claw, nail*.

§ 210. g<sup>whj</sup> became ττ, σσ, as ἐλάττων, ἐλάσσων : ἐλαχύς. See § 129, 7.

#### THE SPIRANTS.

§ 211. The Indg. parent language had at least the two spirants **s** and **z**. **s** occurred both initially, medially and finally. **z** only occurred in combination with a following media or media aspirata. In those languages where the mediae and mediae aspiratae became voiceless the **z** also became voiceless at the same time, as Goth. **asts** beside ὄζος, Indg. \*ozdos, *branch, twig*; μισθός beside Goth. mizdō, O.Slav. mǐzda, *pay, reward*. See §§ 224-6.

#### S

§ 212. Indg. **s** remained in the oldest Greek in the following cases:—

1. In combination with voiceless explosives, as σπαίρω, *I struggle convulsively*, Lith. spiriù, *I push with the foot*: Lat. spernere, *to despise*, OE. spornan, spurnan, *to kick*; ἔσπερος, Lat. vesper; στατός, Lat. status; ἐστί, Skr. ásti, Lat. est, Goth. ist, Lith. ėsti, *is*; σκότος, *darkness, gloom*, Goth. skadus, OE. sceadu, *shade, shadow*; γιγνώσκω, Lat. nōsco; σφάλλομαι, *I stumble*, Skr. skhalatē, *he stumbles*; σχίζω, Lat. scindo; λείψω, γράψω : λείβω, γράφω; ἄξων, Lat. axis; λέξω : λέγω. But τσ became σσ, σ, as Hom. ποσσί, Att. ποσί beside Skr. patsú, see § 166.

NOTE.—Forms like τέγος, OE. þæc, *roof*, O.Ir. teg, *house*, beside στέγος, Lith. stógas, *roof*, probably existed already in the parent language, see § 112.

2. Intervocalic σσ became simplified to σ in Attic, as aor. Hom. ζέσσα, Att. ἔζεσα : ζέω, Skr. yásāmi, *I seethe, bubble*; Hom. ἐτέλεσσα, Att. ἐτέλεσα : τελέω from \*τελέσσω; Hom.

ἔπεισι, ἔπεισι, Att. ἔπεισι = Skr. *vácassu*. But before and after consonants *σσ* became simplified to *σ* in all the dialects, as *δύστηνος* from *\*δύσ-σΎάνος*; loc. pl. Att. *μησί*, Cret. *μηνσί* from *\*μηνσ-σι*; late Gr. aor. *τέρσασθαι* from *\*τέρσασσασθαι* : *τέρσομαι*.

3. In combination with a preceding liquid (see however § 217), as *τέλσον* : *τέλος*; *κέλσω*, *ἔκελσα* : *κέλλω*; Hom. *θάρσος*, Lesb. *θέρσος*; Hom. *ἄρσην*, Ion. *ἔρσην*; Ion. *κόρση*. This *ρσ* became *ρρ* in Att., as *θάρρος*, *ἄρρην*, *κόρρη*.

4. Finally, as *λύκος*, Lat. *lupus*, Goth. *wulfs*, *wolf*; *ἡδιστος*, Goth. *sutists*, *sweetest*; *τίς*, Lat. *quis*; *φέροις*, Goth. *baíráis*, *thou mayest bear*.

§ 213. *s* became *h* in prim. Greek initially before vowels and medially between vowels, and then in the latter case the *h* disappeared altogether.

1. Initially: *ἄλλομαι*, Lat. *salio*; *ἄλς*, Lat. *sāl*, OE. *sealt*, *salt*; *ἔδος*, Skr. *sádas-*, Lat. *sēdes*, *seat*; *ἔνος*, Skr. *sánaḥ*, Lat. *sen-ex*, Goth. *sin-eigs*, Lith. *sēnas*, *old*; *ἔρπω*, Skr. *sárpāmi*, Lat. *serpo*, *I creep*; *ἑπτά*, Skr. *saptá*, Lat. *septem*, O.Ir. *secht*, Goth. *sibun*, Lith. *septynì*, *seven*; *ἔπεται*, Skr. *sácatē*, Lat. *sequitur*, *he follows*; *ἡμι-*, Skr. *sāmi*, Lat. *sēmi-*, *half*; *ὄ*, Skr. *sá*, Goth. *sa*, *the*; it is difficult to account for *σῦς* beside *ῥς*, Lat. *sūs*, OE. *sū*, *sow*, *pig*.

Initial *h* disappeared in the prehistoric period of Greek when the next syllable or the next but one began with an aspirate, as *ἔχω* : *ἔξω*, *σχῆσω*; *ἴσχω* from *\*ἴσχω* older *\*σίσχω*; *ἀῦος* from *\*ἀύhos* older *\*havhos*, Lith. *saũsas*, *dry*; *ἔδεθλον*, *bottom* : *ἔδος*, Skr. *sádas-*, *seat*; *ἀμόθεν* : *ἀμῶς*. See § 115.

NOTE.—In the prehistoric period of some of the Doric dialects and in the Lesb., Elean and Asiatic-Ionic dialects the spiritus asper became the spiritus lenis.

2. Medially (= Lat. *r*, Goth. *z* but *r* in the other Germanic languages): Aeol. *αῦως*, Ion. *ῥός*, Att. *ῥως*, from \**āusōs*, Lat. *aurōra*; gen. *γένεος* = Skr. *jánasaḥ*, Lat. *generis*; Hom. *ῥα*, Skr. *āsam*, *I was*; *ῥίδιον* from \**σφᾶδίσων*, Goth. *sutiza*, OE. *swētra*, *sweeter*; *ῥός*, Lat. *vīrus*; gen. *μός*, Lat. *mūris*; *νέομαι*, *I come*, Skr. *násatē*, *he joins*; *οὔατ-*, Lat. *auris*, OE. *ēare*, *ear*; gen. pl. fem. Hom. *τάων*, Skr. *tāsam*, Lat. *is-tārum*, Goth. *þizō*, masc. Goth. *þizē*, OE. *þāra*, *of the*; *φέρεαι*, *φέρη* = Skr. *bhārasē*, Goth. *baíraza*.

See § 129, 9 for initial and medial *sj*; and § 124, 5 for initial and medial *sw*.

§ 214. Initial *sm*, *sn* became *μ*, *ν* through the intermediate stage of *μμ*, *νν*, as *μειδάω*, *I smile*, Skr. *smáyatē*, *he smiles*: Hom. *φιλο-μμειδής*; *μείρομαι*, *I receive as my due*, Skr. *smárati*, *he remembers*: Hom. *ἔ-μμορε*; *μέλδω*, OHG. *smilzu*, *I melt*; *μία* from \**σμια*: *ἔν*, Lat. *sem-el*; *νέω*, *I spin*, O.Ir. *snāthe*, *thread*: Hom. *ἔ-ννεον*; acc. *νίφα*, Lat. *nivem*, nom. OE. *snāw*, Lith. *snėgas*, *snow*: *ἀγά-ννιφος*; *νόος*, *mind*, OE. *snot(t)or*, *prudent, wise*; *νός*, Skr. *snuṣā*, Lat. *nurus*, OE. *snoru*, *daughter-in-law*. It is difficult to account for the *σμ-* in *σμερδαλέος*, *σμερδνός*, *terrible*, OE. *smeortan*, *to smart*; *σμῖλη*, *knife for cutting or carving*, OE. *smiþ*, *smith, carpenter*; *σμῖκρός* beside *μῖκρός*; *σμήχω*, *I burn in a smouldering fire*, OE. *smēocan*, *to smoke*.

Medial *sm*, *sn* became *μμ*, *νν*, which remained in Lesb. and Thess., but became *μ*, *ν* with lengthening of the preceding vowel in the other dialects, as Lesb. Thess. *έμμί*, Att. Ion. *είμί*, Dor. *ήμί*, Skr. *ásmi*, Lith. *esmì*, *I am*; Att. *ῥμεν*, Skr. *ásma*, *we were*; Lesb. *ἄμμες*, Att. Ion. *ήμεις*, Dor. Boeot. *ἄμές*, Skr. *asmá-*, *we*; Lesb. *σελάννᾱ*, Att. *σελήνη*, from \**σελάσνᾱ*; Lesb. *φάεννος*, Ion. *φαινός*, Att. *φᾶνός*, from \**φαφενός*; Ion. *εἴνυμι* from \**φεσνυμι*.

§ 215. Initial *sr*, *sl* became *ρ*, *λ* through the intermediate stage of *ρρ*, *λλ*, as *ρεί*, Skr. *srávati*, *he flows*: Hom. *ἔ-ρρεον*;

ρόφέω, Lith. *srebiù*, *I gulp down*; λείβω, Lat. *libo*, *I pour out*, OHG. *slifan*, *to slide, glide*: Hom. ὄφρα λλείψαντε; λήγω, *I cease*, NE. *slack*: Hom. ἄ-λληκτος.

Medial *sr*, *sl* became *ρρ*, *λλ*, which remained in Lesb. after short vowels, but became *ρ*, *λ* with lengthening of the preceding vowel in the other dialects, as Hom. *τρῆρων* from \**τράσρων*: *τρέ(σ)ω*; *ναύκρᾶρος* from \**ναύκρασρος*; Lesb. *χέλλιοι*, Att. Ion. *χείλιοι*, Skr. *sa-hásram*, *thousand*; Lesb. *ἴλλαος*, Att. *ἴλαος*, from \**σισλαφος*.

Medial *sr*, *sl* became *ρ*, *λ* after long vowels and diphthongs already in prim. Greek, as *αὔριον* from \**αὔσριον*, *to-morrow*, Skr. *usráh*, *matutinal*; *σειρός* from \**σεισρός*: *σέσεισμαι*; *θραυλός* from \**θραυσλός*: *θραυστός*.

§ 216. Antevocalic *ms*, *ns* became *μμ*, *νν*, which remained in Lesbian and Thessalian, but became *μ*, *ν* with lengthening of the preceding vowel in the other dialects, as Lesb. *ἔνεμμα*, Att. Ion. *ἔνειμα*, Dor. *ἔνημα*: *νέμω*; *ὦμος* from \**ὠμσος*, Lat. *umerus*, Goth. *ams*, *shoulder*; *ἔγημα* from \**ἔγαμσα*: *γαμέω*. Gen. Lesb. *μῆννος*, Thess. *μειννός*, Dor. Att. Ion. *μηνός*, Lat. *mēnsis*; gen. *χηνός*: Lat. *anser*, German *gans*, *goose*; Lesb. *ἔμηννα*, Att. Ion. *ἔμεινα*, Dor. *ἔμηνα*: *μένω*; *ἔφηννα*, *ἔφᾶνα* from \**ἔφανσα*: *φαίνω*; and similarly *ἔκτεινα*, *ἔτεινα*, *ἔθεινα*, *ὑφηννα*, *ἐκέρδᾶνα*, Ion. *ἐκέρδηννα*, *ἐξήρᾶνα*, *ὠνόμηνα*.

§ 217. Antevocalic *ls*, *rs*. It is doubtful what is the regular development of these combinations in Greek. Some scholars assume that they regularly remained in prim. Greek when immediately preceded by the accent and that *rs* then became *ρρ* in Attic, but that in other cases they had the same development as antevocalic *ms*, *ns* (§ 216). Other scholars assume that *ls*, *rs* regularly remained except that the latter combination became *ρρ* in Attic, and that aorists like *ἔπηλα*: *πάλλω*, *ἔσφηλα*: *σφάλλω*, *ἔστειλα*: *στέλλω*, *ἠγγεῖλα*: *ἀγγέλλω*, *ἔτιλα*: *τίλλω*, *ἔδειρα*: *δέρω*, *ἔφθειρα*: *φθείρω*, *ἔσῦρα*: *σύρω* were new formations

after the analogy of *ἔνειμα* : *νέμω*, *ἔμεινα* : *μένω*, &c. *ἔκελσα* : *κέλλω*, *ἔκερσα* : *κείρω*, *ῶρσα* : *ῶρνυμι*; Hom. *θάρσος*, Lesb. *θέρσος*, Att. *θάρρος*; *θαρσέω*, Att. *θαρρέω*; Hom. *ἄρσην*, Ion. Cret. *ἔρσην*, Att. *ἄρρην*; *κόρση*, Att. *κόρρη* : *κουρεύς*, *οὐρά* : Att. *ὄρρος*. See however § 212, 3.

§ 218. **s** between a tenuis and a following liquid or nasal became **h** and then combined with the preceding tenuis to form a tenuis aspirata, as *στιφρός* from \**στιπσρός* : *στιβαρός*; *λύχνος* from \**λυκσνος* : Lat. *lūna* from \**louksnā*. For further examples see § 185.

§ 219. When intervocalic **-h-** from **-σ-** belonged to the second vowel it became transposed so as to stand in front of the first vowel, as Hom. *εὔω*, Lat. *ūro*, *I burn, singe*, Skr. *ṛṣati*, *he burns*; Hom. Att. *ιέρως*, Dor. Boeot. Thess. *ιαρός*, *holy*, Skr. *iṣirāh*, *swift, active, strong*; *είπόμην* from \**ἐηεπόμην* : *ἔπομαι*, Lat. *sequor*. But if the first vowel was preceded by a tenuis the tenuis became tenuis aspirata, as *φρουδός* from \**προ-ηodos*; *φρουρά*, Ion. *φρουρή* from \**προ-ηορά*.

§ 220. When a tenuis came to stand before **h**, it combined with the **h** to form a tenuis aspirata, as *καθίζω* : *ἴζω*; *ἔφιστημι* : *ἴστημι*; and similarly in *ἀφήμι* : *ἴημι*; *ἔφιππος*, *τέθριππον* : *ἵππος*.

§ 221. Interconsonantal **s** disappeared when the first consonant was not a nasal and the last consonant was not **w** or **j**, but in the combination **ksk** the first consonant disappeared (§ 186), as *ἄλτο*, *ἄλμενος* : *ἄλλομαι*, *πάλτο* : *ἔπηλα*, *ἔσταλτο* : *στέλλω*, *ἄρμενος* : *ἦρσα*, *ῶρτο* : *ῶρσα*, *πτέρνα* from \**πτέρσνα*; Hom. *λέκτο* : *ἔλεξα*, and similarly *δέκτο*, *ἔμικτο*, *κατέπηκτο*; *ἔκτος* : *ἔξ*, *ἐκτείνω*, *ἐκφέρω* from \**ἐκστείνω*, \**ἐκσφέρω*; *γεγράφθαι* from \**γεγράφσθαι* : *γράφω*, and similarly *δέχθαι*, *πεπλέχθαι*, *λελείφθαι*, *τετράφθαι*, *τετριφθαι*.

§ 222. The prepositional forms *ἐξ*, *ἐκ*, *ἐς* (Boeot. and Thessal.) were due to sandhi relations. *ἐξ* regularly

occurred before a following vowel,  $\acute{\epsilon}\kappa$  before consonants (except  $\kappa$ ), and  $\acute{\epsilon}\varsigma$  before  $\kappa$  (§ 186).

§ 223. **tsn** became **nn** through the intermediate stage **zn**, as  $\beta\lambda\acute{\epsilon}\nu\nu\omicron\varsigma$  from  $^*\beta\lambda\epsilon\tau\sigma\nu\omicron\varsigma$ , *mucous matter*, Skr.  $m\ddot{r}tsn\acute{a}$ , *clay*;  $\delta\acute{\epsilon}\nu\nu\omicron\varsigma$  from  $^*\delta\epsilon\tau\sigma\nu\omicron\varsigma$ , see § 117.

## z

§ 224. Indg. **z** (generally written  $\sigma$  before  $\beta$ ,  $\gamma$ ) remained before voiced mediae, but before voiced aspiratae it became voiceless at the same time the voiced aspiratae became voiceless (§ 103), as  $\acute{\iota}\zeta\omega$  from  $^*s\acute{i}z\delta\omicron$ , Lat.  $s\acute{i}do$ ;  $\acute{\omicron}\zeta\omicron\varsigma$ , Lesb.  $\acute{\upsilon}\sigma\delta\omicron\varsigma$ , Goth. **asts**, from  $^*oz\delta\omicron\varsigma$ , *branch, twig*;  $\mu\acute{\iota}\sigma\gamma\omega$  from  $^*m\acute{i}z\gamma\omicron$ , *I mix*, Lith. **mazg\acute{o}ti**, *to wash*; and similarly  $\pi\rho\acute{\epsilon}\sigma\beta\upsilon\varsigma$ ,  $\sigma\beta\acute{\epsilon}\nu\nu\mu\iota$ .  $\mu\acute{\iota}\sigma\theta\acute{o}\varsigma$  from  $^*m\acute{i}z\delta\eta\omicron\varsigma$ , Goth. **mizd\acute{o}**, *pay, reward*;  $\acute{\iota}\sigma\theta\iota$ , Zend **zd\acute{i}** from  $^*z\delta\eta\iota$ , *be thou*;  $\mu\acute{o}\sigma\chi\omicron\varsigma$  from  $^*moz\chi\eta\omicron\varsigma$ , Lith. **m\acute{a}zgas**, *sprout, bud*;  $\acute{\epsilon}\sigma\chi\omicron\nu$  from  $^*ez\chi\eta\omicron\mu$ .

## sh, zh

§ 225. The spirants **sh**, **zh** only occurred in combination with tenues and mediae and arose in prim. Indo-Germanic from the combinations tenues aspiratae and mediae aspiratae + s, as **tsh**, **psh**, **ksh**, **qsh**; **dzh**, **bzh**, **gzh**, **qzh** from older **ths**, **phs**, **khs**, **qhs**; **dhs**, **bhs**, **ghs**, **qhs**. These combinations had in Greek the same development as the original tenues + s, cp. fut.  $\pi\acute{\epsilon}\acute{\iota}\sigma\omicron\mu\alpha\iota$ :  $\pi\acute{\epsilon}\nu\theta\omicron\varsigma$ , *grief, sorrow*, Lith. **k\acute{e}\acute{s}iu**, *I suffer*, prim. Indg.  $^*qent\text{-}sh\text{-}$  from  $^*qent\text{-}s\text{-}$ ;  $\psi\acute{\omega}\omega$ , *I rub in pieces*: Skr. **ps\acute{a}ti**, *he chews*, prim. Indg.  $^*bzh\acute{o}\text{-}$  from  $^*bhs\acute{o}\text{-}$ ;  $\xi\acute{\epsilon}\nu\omicron\varsigma$ : Lat. **hostis**, prim. Indg.  $^*gzhen\text{-}$ , from  $^*ghsen\text{-}$ .

## þ, þh; ð, ðh

§ 226. **þ** and **ð** only occurred after palatals and velars which were originally unaspirated, as **kþ**, **qþ**, **gð**, **gð**. **þh** and **ðh** only occurred after palatals and velars which were originally aspirated, as **kþh**, **qþh**, **gðh**, **gðh** from older

**khḥ, qhḥ, ghḥ, ghḥ.** In the present state of our knowledge it is impossible to determine how these four spirants were pronounced in the parent language. In Greek they became **t**-sounds, and in Sanskrit, Latin, Germanic and the Baltic-Slavonic languages they became **s**-sounds:—(**khḥ**), κτίσις : Skr. **kṣitih**, *abode*; ἄρκτος : Skr. **ḥkṣah**, *bear*; τέκτων : Skr. **tákṣan-**, *carpenter*; (**qhḥ**), κτείνω : Skr. **kṣanōti**, *he wounds, injures*; (**qhḥ**), φθίνω : Skr. **kṣiṇāti**, *he destroys*; (**ghḥ**), χθών : Skr. **kṣam-**, *earth*.

## j

§ 227. It is doubtful whether the parent Indg. language had a spirant **j** beside **i**-consonant (§ 118). The initial ζ, which occurs in a few Greek words where the other Indg. languages have **i**-consonant, is probably due to a sound-change which took place in prim. Greek under conditions that have not yet been discovered. Examples are:—ζεία, *spelt*, Skr. **yávaḥ**, *grain, corn*; ζέω, Skr. **yásāmi**, *I seethe*, OHG. **jesan**, *to ferment*; ζυγόν, Skr. **yugám**, Lat. **jugum**, Goth. **juk**, *yoke*; ζύμη, *leaven*, Skr. **yūṣam**, *broth*, Lat. **jūs**.

## CHAPTER VII

## SANDHI

§ 228. By sandhi is meant the changes which the initial and final sounds of words undergo when used in a word-group or sentence. The term is borrowed from the Sanskrit grammarians and means *combination*, lit. *putting together*. In dealing with sandhi it is necessary to distinguish between the sounds which begin and end a word-group or sentence and those which occur medially. In the former case the sound-changes are the same as those which take place at the beginning or end of a word when used alone, but in the latter case the changes are subject to the same laws which

obtain for the medial parts of a word. The result of these twofold changes often gives rise to what are called sentence-doublets. At a later period these sentence-doublets not unfrequently come to be used beyond their original sphere and then one of the forms becomes generalized and the other dies out. Greek like all the other Indg. languages has numerous examples of this kind, but for our present purpose two or three examples will suffice. In prim. Indg. *-j* alternated with *-i* in sandhi. The former was used when the next word began with a vowel and the latter when it began with a consonant, as in *πρός* from *\*προτj* (§ 167) beside *προτί*, cp. *προσ-έθηκα* like Skr. *práty adhām*, but *προτι-θήσω* like Skr. *práti dhāsyāmi*. *πρός* then came to be used before consonants and became generalized in Attic, whereas *προτί* survived and *πρός* disappeared in other dialects. Prepositional forms like *άν'*, *άπ'*, *κατ'*, *ύπ'*, regularly arose by elision when the next word began with a vowel, but already in Homer they came to be used before a following consonant and even underwent assimilation with it, as *καββάλλω*, *ύββάλλω* beside *καταβάλλω*, *ύποβάλλω*. The original ending of the acc. plural of *o*-stems was *-ons*. This remained in prim. Greek in pausa and when the next word began with a vowel, but became *-os* when the next word began with a consonant (§ 153). The former became generalized in Att. Ion. mild Dor. *-ous*, Boeot. and severe Dor. *-ως*, Lesb. *-οις*, and the latter in Arcad. and Thess. *-os*, whereas in Cretan the *-ous* and *-os* existed side by side. The nom. singular of *n*-stems originally ended partly in *-ēn*, *-ōn* and partly in *-ē̃*, *-ō̃* (§ 29). The former became generalized in Greek, the latter in Sanskrit, Latin and Lithuanian, whereas in prim. Germanic the two forms were preserved side by side. We have already seen in other parts of the Phonology that the sound-laws, which govern the pausa form of a word, vary considerably in the different languages, but



this is infinitely more so in regard to the laws of sandhi. It would therefore be beyond the plan and scope of this grammar to treat the subject from a comparative point of view. The phenomena of sandhi can be conveniently divided into two categories according as they relate to the end or the beginning of a word.

### I. FINAL SOUNDS.

§ 229. All vowels and diphthongs remained when absolutely final, as *οἶδα*, *ἄγε*, *λύκε*, *ἔστί*, *πρό*, *δάκρυ*, *μέθυ*, Dor. *τιμά*, Att. Ion. *τιμή*, *δύω*, *φέρω*, *φέρεται*, *λύκοι*, *φερόμενοι*, *ἄν*, *Ζεῦ*, *θεᾶ*, *λύκω*, &c.

The vowels -α, -ε, -ο were elided before a following vowel in prim. Greek, and then after the analogy of these -ι was also elided, as *κατ' ἄλλο*, *ἀπ' αὐτῶν*, *τὰ δ' ἄλλα*, *οὐκ ἐγώ* (*οὐ-κί*), *ἐπ' ἀνθρώπῳ*, *ἐπ' αὐτοῦ*, *λέγοιμ' ἄν*. This rule then became extended to the final vowel of the first element of compounds, as *δι-έλαβον*, *πέντ-οζος*, *ἀπ-αγωγή*, *ἀπ-αιτέω*, *ἰππ-αγωγός*, *ἐπ-αρωγός*. The ο in *πρό*, *τό* was never elided. The antevocalic forms of prepositions were sometimes used for the anteconsonantal, cp. Hom. *ἄν*, *κάτ*, *πάρ* for *ἀνά*, *κατά*, *παρά*. Elision also took place before a following ' and after the loss of F-, as *νύχθ' ὄλην* = *νύκτα ὄλην*, *οὐδ' εἶς*, *δ' ἔτος*, *ἀπ' ἔργου*, &c.

Beside elision we also find contraction with a following vowel (crasis). The reason for this twofold treatment is unknown. These contractions originally followed the rules for contraction in medial and final syllables (§§ 79, 80), and then at a later period the product of the contraction was determined by the quality of the initial vowel of the second word, as *τᾶλλα* = *τὰ ἄλλα*, *τᾶγαθά* = *τὰ ἀγαθά*, *τοῦνομα* = *τὸ ὄνομα*, *προὔργου* = *πρὸ ἔργου*, *ἐγῶδα* = *ἐγὼ οἶδα*, *ὠγαθέ* = *ὦ ἀγαθέ*, Ion. Dor. *ὠνήρ* beside Att. *ἄνῆρ* = *ὁ ἀνήρ*, and similarly Att. *τᾶνδρός*, *τᾶνδρί*.

Consonantal -ι in the combinations -αι, -οι regularly dis-

appeared in prim. Greek before a following vowel (§ 128), and then the *-a*, *-o* was either elided or contracted with the following vowel, as Hom. βούλομ' ἐγώ = βούλομαι ἐγώ, ὄς μ' ἔθελεν = ὄς μοι ἔθελεν; κᾶλλως = κα(ι) ἄλλως, καὐτός = κα(ι) αὐτός, κᾶν = κα(ι) ἄν, κᾶπί, Dor. κῆπί = κα(ι) ἐπί, τᾶρα = τοι ἄρα, ἀδελφοί = οἱ ἀδελφοί. At a later period the pausa and anteconsonantal form came to be used before vowels and then the *-ι* = *-j* was preserved and pronounced as the initial of the following word, as καὶ ἐπί = κα-γεπι, Hom. ἄνδρα μοι ἔννεπε = μῶ γεννεπε.

Simple long vowels were shortened when the next word began with a vowel, hence the metrical rule:—'vocalis ante vocalem corripitur,' as Hom. πλάγχθῃ ἐπεὶ Τροίης, Att. αὐτῆ-ί, τουτοῦ-ί, Cret. μὲ ἔνδικον = μῆ ἔνδικον, see § 71.

Long diphthongs were shortened in prim. Greek when the next word began with a consonant (cp. § 70), hence *-οι*, *-αι* beside *-ω*, *-α* in the dat. singular of *o-* and *ā-*stems, the former of which became generalized in some dialects, and the latter in others, see §§ 321, 325.

§ 230. All originally final explosives disappeared, as ἔφερε, Skr. ábharat, εἶη, Skr. syát, O.Lat. siet, μέλι : μέλιτος, voc. γέρον, χαρίεν : γέροντος, χαρίεντος. τί, Lat. quid, ἔστω, O.Lat. estōd, τό, Skr. tād, Lat. is-tud, ἄλλο, Lat. aliud, κῆρ, cp. καρδίᾱ, Lat. cord-is, voc. παῖ : παιδός. κρῖ : κρῖθή. voc. γύναι : γυναικός. γάλα : γάλακτος, ἦ from \*ῆκτ, he spoke, voc. ἄνα : ἀνακτος.

NOTE.—Prepositional forms like ἀπ', ὑπ', κατ' regularly preserved their final consonant after the apocope of the vowel or else became assimilated to the following consonant (§ 228), and similarly with the negative οὐκ, οὐχ (before a rough breathing).

Indg. final *-m* became *-n* in prim. Greek and thus fell together with original *-n*, as ἔφερον, Skr. ábharam, εἶην, Skr. syám, O.Lat. siem, τόν, Skr. tam, Lat. is-tum, λύκον, Skr. vḡkam, Lat. lupum, πατρῶν, Skr. pitṛṇám; on ἔν,

χθών, χιών, see § 141. Original *-n* and the *-n* from older *-m* became *-μ* before labials, *-γ* (= *-η*) before gutturals, and completely assimilated to a following liquid, nasal or *-σ*, although the *-ν* was often retained in writing, as ἐμπίπτω, τῆμ πόλιν, ἐμβάλλω, συμβαίνω, ἐμφέρω; ἔγκυκλος, ἐγγενής, συγχέω; ἐλλείπω, σύλλογος, τὸλ λόγον; συρρέω; ἐμμένω; σύσσωμος. On the so-called *ν* ἐφελκυστικόν, see §§ 306, 316.

In prim. Indg. *-s* alternated with *-z*. The former occurred in pausa and before voiceless explosives, and the latter before voiced explosives. The *-z* was probably preserved in Greek before voiced mediae, although it was not indicated in writing. On forms with and without final *-s*, as in ἀμφίς, πολλάκις, οὕτως beside ἀμφί, πολλάκι, οὕτω, see § 575.

Tenues became aspirates before a rough breathing, as ἀφ' οὐ̄ = ἀπ' οὐ̄, νύχθ' ὄλην = νύκτ' ὄλην, ἀφίημι = ἀπιήμι, καθαιρέω = κατ-αίρέω. *-δ* + rough breathing became θ, as οὐθείς, οὐθέν = οὐδ' εἶς, οὐδ' ἔν.

## 2. INITIAL SOUNDS.

§ 231. On the contraction which took place when one word ended in a vowel and the following word began with a vowel, see § 229. On the development of prothetic vowels, as in ἔρεβος, ἐρυθρός : Skr. rájah, rudhiráh, see § 77.

§ 232. Forms like ξύν : σύν, ξύλινος : σύλινος, ψελλίζω : σελλίζω are probably sentence-doublets, but the conditions under which they arose are unknown.

Geminated consonants, which arose from assimilation, were preserved in prim. Greek, but became mostly simplified already in the prehistoric period of the language when the words containing them were used alone or began the sentence, as ρεῖ, Skr. srávati, beside ἔ-ρρει, Skr. á-sravat, ῥήγνυμι : ἔ-ρρηξα, ἄ-ρρηκτος, μείρομαι : ἔ-μμορε,

λήγω : ἄ-λληκτος, μειδῆσαι : φιλο-μμειδής, νίφα : ἀγά-  
ννιφος, φός (*Fhós*) : Hom. πατέρι FFῶ, Hom. σεῦε : ἔ-σσευε,  
σάκος : φερε-σσακής, Boeot. τὰ ππᾶματα : πᾶμα.

On forms like ἀφίημι = ἀπ-ίημι, see § 230. The rough breathing regularly disappeared after -σ, -ν, -ρ, as in ἔσ-, ἐν-, ὑπερ-άλλομαι beside ἄλλομαι, but it was often restored again after the analogy of the simplex. The initial rough became the smooth breathing in Asiatic Ionic, Lesbian, Elean and in a part of the Cretan dialect.

## CHAPTER VIII

### THE FORMATION OF NOUNS AND ADJECTIVES

§ 233. In the formation of nouns and adjectives it is necessary to distinguish between the so-called root-nouns (§ 234) and nouns and adjectives which contain a suffix or formative element (§§ 235-86). Little is known of the origin of the numerous suffixes in the parent Indg. language and in the oldest periods of the separate languages. It is probable that most of the suffixes had originally an independent meaning and that in some cases they were independent words which sank down to be merely formative elements already in prim. Indo-Germanic. There is no reason to doubt but that many of the Indg. suffixes arose in the same or similar manner as we see them arise in the history of the individual languages, cp. the English suffixes **-dom**, **-hood**, **-ly**, all of which existed as independent words in the oldest period of the language, as **cynedōm**, *kingdom*, **frēodōm**, *freedom*, beside the simplex **dōm**, Goth. **dōms**, *judgment*; **cildhād**, *childhood*, **prēosthād**, *priesthood*, beside the simplex **hād**, *rank, grade*, Goth. **hāidus**, *manner*; **gēarlic**, *yearly*, **mennisclīc**, *human*, beside the simplex **līc**,

Goth. **leik**, *body*. It should be noted that when a suffix is added to a stem which already contains a suffix, it is called a secondary suffix, as in *φέρουσα* from \**φερο-ντ-ια*, *μαντι-κό-ς* : *μάντι-ς*, *περυσι-νός* : *πέρυσι*. Prior to the time when case-endings, personal endings, &c. came into existence, the only difference between nouns and verbs was one of meaning and not merely of form. And this is the reason why so many of the same suffixes occur in the formation both of nouns and verbs, and similarly with reduplication, as in *βάρβαρος*, *γέργερος*, *μόρμορος*, *πάππα*, *τάτα*, *τήθη*, *ὄλολος*, *έδωδή*, *παιπάλη*, *τέτανος*, &c. See § 429.

In the following paragraphs the suffixes are divided into two great classes according as they end in a vowel (§§ 235–68) or a consonant (§§ 269–86).

#### I. ROOT-NOUNS.

§ 234. Root-nouns, that is nouns in which the case-endings are added to the bare root without an intervening suffix or formative element. The root-nouns originally had various ablaut-grades in the different cases, but already in the parent Indg. language the levelling out of one or other of the ablaut-grades began to take place whereby one or more of the grades entirely disappeared. This process of levelling went still further in the prehistoric period of the separate languages with the result that one or other of the grades often became generalized throughout all the case-forms. In Greek the root-nouns may be divided into two categories, viz. those which preserve two or more ablaut-grades, and those which have the same grade throughout all case-forms.

I. Nouns which preserve two or more ablaut-grades, as *πούς*, Dor. *πώς*, Skr. *pāt*, Lat. *pēs*, OE. *fōt*; acc. *πόδα*, Skr. *pādām*, Lat. *pedem* (cp. prep. *πέδα*), OE. *fōt*; gen. *ποδός*, Skr. *padāḥ*, Lat. *pedis*, see § 342.

*βούς* from \**βους*, Skr. *gāuh*; acc. Dor. *βῶν*, Skr. *gām*; gen. *βοός*, see § 339.

*Ζεύς* from \**djéus*, Skr. *dyáuh*; acc. *Ζῆν*, Skr. *dyám*; gen. *Διός*, Skr. *diváh*, see § 337.

*χθών* from \**χθωμ*, *χιών* from \**χιωμ*, gen. *χθονός*, *χιόνος*, see § 346.

2. Nouns which have the same ablaut-grade throughout all case-forms. The strong grade was generalized in *κρέξ*, *φλέψ*, *δόρξ*, *ῥψ*, *φλόξ*; the lengthened grade in *θώς*, *κλώψ*, *ρώξ*, *σκώψ*, *πτώξ*, *τρώξ*, *φώρ*, *ῶψ*, *θήρ*, *κῆρ* from \**κηρδ* (§ 230), *ψήρ*; and the weak grade in *θρίξ*, *ἴς* (§ 330), *νίφα* (acc.), *φρίξ*, *κίς*, gen. *κιός* (§ 330), *στύξ*, *ἰχθύς*, gen. *ἰχθύος* (§ 334), and similarly *μῦς*, *ὄφρῦς*, *ῦς*.

In *ναῦς* from \**νάυς*, Skr. *nāuh* the long diphthong was levelled out into all the cases already in the parent Indg. language, see § 336.

## 2. SUFFIXES ENDING IN A VOWEL.

§ 235. *-jā-*. This suffix was chiefly used in the formation of feminine nouns and adjectives from the masculine of *u*- and consonant-stems, as *ἡδεῖα* from \**σfāδεϑja* : *ἡδύς* = Skr. *svādví* : *svādúh*, *sweet*, and similarly *βαρεῖα*, *γλυκεῖα*, *πλατεῖα*; *τέκταινα* from \**τεκτανja* : *τέκτων* = Skr. *takṣhī* : *takṣan-*, *carpenter*, and similarly *γείταινα*, *θεράπεινα*, *λέαινα*, &c.; *-αινα* became extracted as an independent suffix for the formation of the feminine of the names of persons and animals from *o*-stems, as *ἡμιθέαινα*, *κάπραινα*, *λύκαινα*; *φέρουσα* from \**φεροντja* : *φέροντ-* = Skr. *bhārantī* : *bhārant-*; *χαρίεσσα* from \**-φετja*; *δότειρα* from \**δοτερja* : *δοτήρ* = Skr. *dātrī* : *dātár-*; Att. Dor. *γεγονεῖα* from \**-φεσja*, Ion. *γεγονυῖα* from \**-υσja* : Skr. *-uṣī* (§ 552); *γλώσσα* from \**γλωχja*, *θῆσσα* from \**θητja*, &c.; in this manner was also occasionally formed the feminine from *o*-stems, as *πίτειρα* : *πιερός* = Skr. *pīvarī* : *pīvaráh*; *ἑταῖρα* : *ἕταρος*, *μοῖρα* : *μόρος*.

On the form of the nominative singular in Greek and for further examples see § 322.

§ 236. The suffixes **-o-**, **-ā-**. The **-o-** originally formed the second syllable of dissyllabic light bases and was regular in such words as *λύκος*, Skr. *vṛkaḥ*, Lat. *lupus*, from an original Indg. form *\*wlqós*, *wolf*, and similarly in *ζυγόν*, Skr. *yugám*, Lat. *jugum*, *yoke*. From such words the **-o-** became extracted as a suffix and was extended to bases which had not originally the accent on the second syllable (cp. § 456). The **-o-** stood in ablaut relation to **-e-** just as in the verbal forms *φέρο-μεν* : *φέρε-τε*, cp. *λύκο-ς*, Skr. *vṛka-ḥ*, Lat. *lupu-s* : voc. *λύκε*, *vṛka*, *lupe*. In like manner the **-ā-** probably formed originally the second syllable of dissyllabic heavy bases (cp. § 458) from which the **-ā-** was extracted as a suffix already in the prim. Indg. period and then became used for the formation of the feminine.

With the suffixes **-o-**, **-ā-** were formed a large number of nomina actionis, nomina agentis, verbal abstract nouns, and adjectives, as *βρόμος*, *γόνος*, *δρόμος*, *λόχος*, *πλόος*, *τόκος*, *τρόμος*, *τρόπος*, *τρόχος*, *φθόρος*, *φόβος*, *φόνος*, *χόος*, and with changed meaning, as *δόμος* (Skr. *dāmaḥ*) : *δέμω*, and similarly *αἶθος*, *βόλος*, *γόμφος*, *λόγος*, *νόμος*, *ὄγκος*, *οἶκος* (Skr. *véśaḥ*, Lat. *vīcus*), *πλόκος*, *ρόος*, *στρόφος*, *στοῖχος*, *τοῖχος*, *τόμος*, *τροπός*, *τρόχος*, *φόρος*.

*ἀοιδός*, *ἀρχός*, *κλοπός*, *πομπός*, *τροφός* ; cp. Lat. *procus* : *precāri*.

*ἀμοιβή*, *ἀοιδή*, *βαφή*, *βολή*, *γονή*, *νομή*, *πλοκή*, *πομπή*, *σκοπή*, *σπουδή*, *στέγη*, *στροφή*, *τομή*, *τροπή*, *τροφή*, *τροχή*, *φθορά*, *φορά* ; *δίκη*, *μάχη*, *ρίπη*, *φυγή* (Lat. *fuga*). *βορά*, *ἔρση* (Hom. *ἔέρση*), *ρόή*. *γυνή* (Boeot. *βανά*), *δούλη*, *κόρη*, &c.

*αἶθος*, *βορός*, *λοιπός*, *στραβός*, *τομός*, *φορός*.

With **-o-**, **-ā-**, as secondary suffixes, were formed nouns like *ἰατρός* : *ἰατήρ*, *ὔδρος* (Skr. *udrah*) : *ὔδωρ*, adj. *πῖαρός* : *πῖαρ*. *πέδον* (Skr. *padám*) : *\*ped-*, *foot*, *πέλεκκον* from

\*πέλεκυον : πέλεκυς, ἄστρον : ἀστήρ, ἦτρον : ἦτορ. πτυχή : πτύξ, φράτρᾶ : φράτηρ, φρίκη : φρίξ.

§ 237. **-(i)jo-, -(i)jā-**. These suffixes were chiefly used in the parent Indg. language for the formation of (1) denominative adjectives, (2) verbal adjectives, and (3) adjectives with a comparative meaning. The neuter and feminine of (1) and (2) often became used as nouns in Greek.

1. Denominative adjectives, as ἵππιος, Skr. **áśvyaḥ** : ἵππος, **áśvaḥ**, horse, θεῖος : θεός, τίμιος : τίμη, and similarly ἄγριος, ἄρτιος, γομφίος, δῖος (Skr. **divyáḥ**), δόχμιος, ἡσύχιος, κοινός, κύκλιος, μειλίχιος, ξένιος, ὄμβριος, τεσσαράβοιος from \*-βοϋjos, χείλιοι. θεῖον, ἐνύπνιον. ξενιά, after the analogy of which were formed nouns like ἀγγελιά, σοφιά.

λιμένιος : λιμήν, δαιμόνιος : δαίμων, and similarly ἀγώνιος, αὐχένιος, ποιμένιος, χθόνιος. ἄρνιον, λιμνίον, ποιμνιον.

πάτριος, Skr. **pítṛ(i)yaḥ**, Lat. **patrius** : πατήρ, **pítar-**, **pater**, σωτήριος : σωτήρ, and similarly αἰθέριος, ἀστέριος, ἀνακτόριος, θελκτήριος, μακάριος, φάριος. ἀνδρίον, αὐριον, θελκτήριον. ἀνακτοριά, σωτηριά. From forms like θελκτήριος was extracted the suffix **-τηριο-** which became used in forming words like **δατήριος**, **δηκτήριος**, **διαβατήριος**, **ικετήριος** ; ἀκροατήριον, δειπνητήριον.

πεζός (Skr. **padyáḥ**) from \*πεδjos, ἡμάτιος : ἡμαρ (gen. ἡματος), φιλοτήσιος : φιλότητ-, γερούσιος : γέροντ-, ἐκούσιος : ἐκόντ-, διχθάδιος : διχθάδ-, ληΐδιος : ληΐδ-. χερμάδιον, ὀρνίθιον, παιδίον. From forms like ἀσπίδιον : ἀσπίς (gen. ἀσπίδος) was extracted the suffix **-ίδιο-** which became used in forming neuter diminutives like ἀγρίδιον, ἀδελφίδιον, αἰγίδιον, ξιφίδιον, &c.

γηραιός : γῆρας, ἔτειος : ἔτος (gen. ἔτεος), αἰδοῖος : αἰδώς (gen. αἰδώς), and similarly γεραιός, κνεφαῖος, ἐρκείος, ὄρειος, ἡοῖος ; after the analogy of which were formed δίκαιος, δούλειος, ἵππειος, χρύσειος, &c.

ἀγοραῖος : ἀγορά, and similarly ἀναγκαῖος, ἀντιπέραιος,



πετραῖος, after the analogy of which were formed ὄδαῖος, νησαῖος.

With *-ejo-* (= *-eo-*, Skr. *-aya-*, Lat. *-eo-*) were formed adjectives like αἴγεις, ἀργύρεις, κύνεις, λίθεις, σιδήρεις, φλόγεις, χρύσειος; cp. Lat. *aureus*, *igneus*, *lapideus*. ὄρνειον, ὀστέον.

With *-ew(i)jo-* were formed ἀστεῖος : ἄστν, γένειον : γέννς, χέλειον : χέλνς.

Att. βασιλείος, χάλκειος, Ion. βασιλήιος, χαλκήιος, from *-ηφιος* older *-ηφιός*, after the analogy of which was formed Att. πολέμειος, Ion. πολεμήιος : πόλεμος.

2. Verbal adjectives, as ἄγιος (Skr. *yājñah*) : ἄζομαι, πάγιος, στύγιος, σφάγιος. σφάγιον. *μανιά*, *πενιά*.

3. With originally comparative meaning, as ἄλλος (§ 129, 2), Lat. *alius*, Goth. *aljis*, *other*; μέ(σ)σος from \*μέθιος, Skr. *mādhyah*, Lat. *medius*, Goth. *midjis*, *middle*.

4. From adverbs ending in *-i*, and from the locative in *-i*, as ἀντίος : ἀντί, ἄρτιος : ἄρτι, πρώιος : πρώϊ; ἐνάλιος, ἐπιχθόνιος, καταχθόνιος, ὑποχείριος.

§ 238. *-wo-*, *-wā-*. These suffixes were comparatively rare in the parent Indg. language, and did not become very productive in any of the separate languages. Examples are : ἵππος (§ 124, 2), Skr. *áśvāh*, Lat. *equos*, *horse*, Att. ὄλος, Ion. οὔλος (Skr. *sárvaḥ*) from \*σολφος, Att. στενός, Ion. στείνος from \*στενφος, ὀρθός (Skr. *ūrdhvāh*, Lat. *arduus*), Hom. τέλειος from \*τελεσφος, and similarly βαλιός, δεξίός, ἠίθεος, λαιός (Lat. *laevos*), οἶος, πελιός, πολιός, σκαιός (Lat. *scaevos*), φαιός, φαλιός, κενός, Ion. κεινός, μᾶνός, μόνος, Ion. μῶννος, Att. ξένος, Ion. ξείνος, Att. ὄρος, Ion. οὔρος, Att. κόρος, κόρη, Ion. κοῦρος, κούρη, Hom. ἴσος, Att. ἴσος from \*φιτσφος. ποιά̄.

§ 239. *-mo-*, *-mā-* were chiefly used in the formation of verbal abstract nouns, many of which became concrete in Greek, as ἄνεμος, ἀρδμός, ἀρμός, ἀρπαγμός, θῦμός, θωμός, ἱγμός, κάλαμος, κέραμος, κευθμός, κηρῦγμός, κνημός, κορμός,

κρῦμός, λιμός, λοιμός, μυγμός, ὄγμος (Skr. *ájmaḥ*), ὄδυρμός, οἶμος, ὄρμος, πταρμός, τόρμος, φλογμός, φορμός. Adjectives like δοχμός, θερμός (Skr. *gharmāḥ*, *heat*, Lat. *formus*), σιμός.

ἀκμή, γνώμη, θέρμη, κνήμη, λόχη, μνήμη, ὄδμή, ὄρμή, πυγμή, σκάλμη, τῆμη, φήμη, χάρμη.

Beside **-mo-**, **-mā-** there also occur **-dhmo-**, **-dhmā-**, where **-dh-** is the so-called root-determinative found in verbs like πλήθω (§ 475), and more rarely **-smo-**, **-smā-**, **-tmo-**, **-tmā-**, as ἀρθμός, ἀριθμός, βαθμός, γευθμός, κληθμός, κλαυθμός, κνυζηθμός, μνηθμός, πορθμός, ρυθμός, σταθμός; εἰσίθμη, στάθμη. δασμός: δατέομαι, σχισμός; ὄσμή for older ὄδμή; and with regular loss of interconsonantal **-σ-** (§ 185) in μυχμός, πλοχμός, ῥωχμός; αἰχμή. ἐρετμός: ἐρέτης; ἐφετμή: ἐφέτης.

**-i-mo-**, where **-i-** was of various origin, was used as a secondary suffix in the formation of adjectives like αἰσιμος, ἄλκιμος (Hom. loc. ἀλκί), βάσιμος: βάσις, κάλλιμος, κῦδιμος, λύσιμος, μόριμος, ὄβριμος, ὄψιμος, φαίδιμος, φύξιμος, χρήσιμος.

§ 240. **-meno-**, **-menā-** were used in the formation of the medio-passive participles. The original forms probably were **-méno-** (preserved in the perfect participles, as πεπυσμένος, λελειμμένος), <sup>2</sup> **-mono-** (preserved in Sanskrit in participles like *bódhamānaḥ*), and **-mnó-** (preserved in Greek in forms like στάμνος, βέλεμνον, κρίμνον; cp. Lat. *alumnus*, *autumnus*), see § 553.

§ 241. **-no-**, **-nā-** occur as primary and secondary suffixes in the formation of a large number of nouns and adjectives.

1. Primary in αἶνος, ἄμνος, θρόνος, θῦνος, καπνός, κύκνος, οἶνος, ὄκνος, τόρνος, ὕπνος (Skr. *svāpnaḥ*), φρῦνος, χρόνος, ὦνος; κράνον, στέρνον, τέκνον; αἶνη, ζώνη, ποινή, φερνή, φρῦνη, ὠνή; δάνος.

ἀγνός (Skr. *yajñāḥ*), Hom. ἀλαπαδνός, γυμνός, δεινός, λάγνος, λίχνος, ρικνός, σεμνός, σμερδνός, σπαρνός, στεγνός, στυγνός.

2. Secondary in *ἐαρινός* : loc. *ἔαρι*, *ἐσπερινός*, *ἡμερινός*, *νυκτερινός*, *περυσινός* : *πέρυσι*, *χειμερινός*, &c. *φαιινός* from \**φαφεινος* : *φάος*, and similarly *ἀλγεινός*, *ἐλεεινός*, *κελαδεινός* ; *σελήνη* : *σέλας*.

§ 242. *-ανο-*, *-ανᾶ-* in nouns and adjectives, as *κοίρανος*, *οὐρανόσ*, *ράφανος*, *στέφανος*, *χόδανος* ; *δρέπανον*, *ἔδρανον*, *θήγανον*, *κόπανον*, *πόπανον*, *σκέπανον*, *τύμπανον* ; *δρεπάνη*, *θηγάνη*, *μηχανή*, *στεγάνη*, *στεφάνη*.

*βάσκανος*, *ἐδανός*, *ικανός*, *ὀλίσθανος*, *πιθανός*, *σκεπανός*, *στεγανός*.

§ 243. *-ινο-*, used in forming adjectives denoting material, origin, &c., as *ἄλινος*, *ἄνθινος*, *ἀνθρώπινος*, *βύβλινος*, *γῆϊνος*, *ἰχθυϊνός*, *κέρδινος*, *λάϊνος*, *πύξινος*, *φήγινος* (Lat. *fāginus*), *φλόγινος*, *χύτρινος*.

§ 244. *-ἴνο-*, *-ἴνᾶ-*, used in forming adjectives and nouns, as *ἀγχιστίνος*, *γελασίνοσ*, *ἐρυθρίνοσ*, *κεστρίνοσ*, *κορακίνοσ*, *τυφλίνοσ*, *φοξίνοσ*, *χυτρίνοσ* ; cp. Skr. *navīnaḥ*, *new*, Lat. *dīvīnus*, *equīnus*, *suīnus*.

*δελφακίνη*, *πολυποδίνη*, *χοιρίνη*.

§ 245. *-s-νο-*, *-s-νᾶ-*, used in forming nouns and adjectives, as *ἀράχνη* from \**ἀρακσνᾶ*, *λύχνος* from \**λυκσνος* (§ 185), and similarly *ἄχνη*, *πάχνη* ; *λάχνος*, *μόρφνος*, *συχνός*, *δέννος* from \**δετσνος*.

§ 246. *-συνο-*, *-συνᾶ-*. The origin of these secondary suffixes is unknown. They were used in forming adjectives the feminine of which became used as abstract nouns, as *γηθόσυνοσ*, *δουλόσυνοσ*, *θάρσυνοσ* from \**θαρσο-συνοσ*, *πίσυνοσ* from \**πισο-συνοσ* ; *δικαιοσύνη*, *δουλοσύνη*, *κλεπτοσύνη*, *μνημοσύνη*, *σωφροσύνη* ; after the analogy of these were formed *κερδοσύνη* : *κέρδος* (neut.), *μαντοσύνη* : *μάντις*, &c.

§ 247. *-λο-*, *-λᾶ-*, used both as primary and secondary suffixes, especially the latter, in the formation of nouns and adjectives.

1. Primary, as *βηλόσ*, *γαῦλοσ*, *γαυλόσ*, *καυλόσ*, *στῦλοσ*, *τύλοσ* ; *ξύλον*, *σκῦλον*, *φῦλον*, *πέταλον* ; *ζεύγλη*, *θηλή*,

ὀμίχλη, στρέβλη, τύλη, φῦλή, ἄελλα from \*αφελγα : ἄημι, κεφαλή.

δειλός, ἔκπαγλος, στρεβλός, τυφλός, πέταλος.

2. Secondary, as ἄγγελος, κάπηλος; δείκελον; ἀγέλη, θυμέλη, νεφέλη, πῖμελή, ἀγκύλη, εὐχωλή, παυσωλή, τερπωλή, φειδωλή.

ὀμαλός, πῖαλος, χθαμαλός, ἀ(φ)είδελος, δεελός, στυφελός, ἀγκύλος, δριμύλος, ἠδύλος, παχυλός, ἀπατηλός, σῖγηλός, καταρῖγηλός, μῖμηλός, στροβιλός, φειδωλός. From forms like ἠδύλος, παχυλός with diminutive meaning was extracted the suffix -υλο- which became extended to forms like ἀρκτύλος : ἄρκτος, μικκύλος : μικκός, and similarly with the extensions -υλλο-, -υλλιο-, -υλλιδ-, υλλιδιο-, as καθάρυλλος : καθαρός, ἀνθύλλιον : ἄνθος, ἐπύλλιον : ἔπος, ἀκανθυλλίς (-ίδος) : ἀκανθίς (-ίδος), μειρακυλλίδιον : μειράκιον. πῖαλέος from \*πῖαλεφος : πῖαλος, and similarly αἰμαλέος, ἰκμαλέος, κρῦμαλέος, from which -αλέος was extracted as a suffix and extended to forms like διψαλέος : δίψος, ὑπιναλέος, ψευδαλέος.

§ 248. -ro-, -rā-, used both as primary and secondary suffixes in the formation of nouns and adjectives.

1. Primary, as ἀγρός (Skr. *ágrah*, Lat. *ager*, Goth. *akrs*), ἀφρός, βόθρος, κάπρος (Lat. *caper*), κλῆρος, νεκρός, νεφρός, ὄμβρος, τάλαρος, ταῦρος (Lat. *taurus*), χίμαρος; δῶρον, πλευρόν; ἔδρᾱ, τάφρη, χῶρᾱ.

ἄκρος, ἐρυθρός (Skr. *rudhirāh*, Lat. *ruber*), λαμπρός, λεπρός, λυπρός, μακρός, μικρός (σμικρός), μῶρος, πικρός, σαπρός, σινδρός, σκληρός, τρηρός, φαιδρός, χῆρος, χλωρός, χοῖρος, ψυδρός, ψωρός; βριαρός, γεραρός, ἰαρός, λιπαρός, πῖαρός, ὑδαρός.

2. Secondary, as πενθερός, πτερόν, ἄργυρος, ζέφυρος, μάρτυρος.

βλαβερός, δροσερός, ἐλεύθερος, θαλερός, κρατερός, ξερός, στυγερός, σχερός, φοβερός, γλαφυρός, ἐχυρός, καπυρός, κινυρός, λιγυρός, μωλυρός, ψιθυρός, ἀνιᾶρός, ἀσηρός, ὀδυνηρός, ὀκνηρός, ὀλισθηρός, πονηρός, ἰσχῦρος, οἰζῦρος.

§ 249. The suffixes **·bho-**, **·bhā-** became productive in Greek, especially in the formation of the names of animals, as *ἀσκάλαφος*, *ἔλαφος*, *ἔριφος*, *κιδάφη*, *κίδαφος*, *κίραφος*, *κόραφος*, *κόσσυφος*, Att. *κόττυφος*, *σέρφος*. *ἄλφος*, *ἔδαφος*, *κέραφος*, *κόλαφος*, *κορυφή*, *κρόταφος*, *φλήναφος*. *ἄργυφος*, *στέριφος*. From the nouns in *-αφος* was formed the diminutive suffix *-άφιον*, as in *θηράφιον*, *ξυλάφιον*, *ξυράφιον*.

§ 250. **·dhlo-**, **·dhlā-**. The origin of these suffixes is unknown. Examples are: *γένεθλον*, *ἔδεθλον*, *θέμεθλον*, *θύσθλον*; *γενέθλη*, *ιμάσθλη*; *ἔσθλος*.

§ 251. **·dhro-**, **·dhrā-**, used in forming nouns and adjectives, as *μυλωθρός*, *ὄλεθρος*; *ἄρθρον*, *βάθρον*, *βάραθρον*, *κήληθρον*, *κόρηθρον*, *μέλπηθρον*, *πέλεθρον*, *πλέθρον*, *ρείθρον*, *τέρθρον*; *κοιμήθρᾶ*, *κρεμάθρᾶ*.

*βλωθρός*, *λάληθρος*, *σκεθρός*, *σκυθρός*.

§ 252. **·ko-**, **·kā-**, or **·qo-**, **·qā-**. These secondary suffixes were common in all the languages, especially in the forms **·iko-**, **·ikā-** which started out from *i*-stems (*μαντικός* : *μάντι-s*) and then became extended to other kinds of stems, as *ἀγωνικός*, *ἀνδρικός*, *ἀστικός*, *ἔθνικός*, *θηλυκός*, *ἵππικός*, *κριτικός*, *μαθητικός*, *μερικός*, *νυμφικός*, *πηλίκος*, *τηλίκος*, *τῆμητικός*, *φυσικός*; cp. Lat. *modicus*. *ιέρᾶκος*, *πίθηκος*, Dor. *πίθᾶκος*; *πρόκα* : *πρό*; *θήκη*.

In derivatives of *jo*-formations we have *-ιακος*, as *καρδιακός*, *κῦριακός*, *πλουσιακός*, *σκιακός*.

§ 253. **·sko-**, **·skā-** are related to the presents in **·sko-** (§ 469), as in *ἄρεσκος* : *ἀρέσκω*, *βοσκή* : *βόσκω*, *δίσκος* from *\*δικσκος* (§ 186).

It is doubtful whether the **·sk-** in **·isko-**, **·iskā-** is of the same origin. These suffixes became productive, especially in the formation of diminutives, as *ἀνθρωπίσκος*, *δεσποτίσκος*, *νεανίσκος*, *οἰκίσκος*, *παιδίσκος*, *χοιρίσκος*; *ἀσπιδίσκη*, *οἰκίσκη*, *παιδίσκη*, *ὕδρίσκη*.

§ 254. **·tero-**, **·terā-** were common suffixes in the forma-

tion of comparatives from adjectives, adverbs, nouns and pronouns, as *κουφότερος, σοφότερος, γλυκύτερος, ἀληθέστερος, χαριέστερος, γεραίτερος, μεσαίτερος, πεπαίτερος, σχολαίτερος, δεξιτερός*, see § 376. *άνώτερος, ἀφάρτερος, πρότερος, ὑπέρτερος, παλαιότερος, ὑψίτερος. ἀγρότερος, βασιλεύτερος, δημότερος, θηλύτερος, κύντερος, ὀρέστερος. ἡμέτερος, ὑμέτερος* (see § 406), *ἕτερος*, Dor. *ἄτερος*.

§ 255. *-tewo-, -tewā-*, used in the formation of verbal adjectives, as *γραπτέος, δοτέος, δραστέος, λειπτέος, λυτέος, τῆμητέος*, see § 556.

§ 256. *-tlo-, -tlā-* which are of doubtful origin, as in *ἀντλος; σεῦτλον, χύτλον; ἐχέτλη*.

§ 257. *-tro-*, used especially in the formation of neuter nouns denoting an implement, as *ἄροτρον* (Lat. *arātrum*), *βάκτρον, δέλετρον, ἔλυτρον, ζῶστρον, κέντρον, λέκτρον, λουτρόν, μέτρον, μήνυτρον, νίπτρον, πλήκτρον, στέγαστρον, τέρετρον, φέρετρον* (φέρτρον).

§ 258. *-to-, -tā-*. These suffixes were chiefly used in the parent Indg. language in the formation of verbal adjectives, and of ordinal numerals.

1. The verbal adjectives had originally the accent on the suffix and the base had accordingly the weak grade of ablaut, but in Greek as in other languages the verbal adjective was sometimes formed direct from the present with the strong grade of ablaut, as *ἄ-ιστος, ἄ-κριτος, ἄ-νιπτος, ἄ-πυστος, βατός* (Skr. *gatāḥ*, Lat. *in-ventus*), *δρατός* (*δαρτός*) : *δέρω, κλυτός* (Skr. *śrutāḥ*, Lat. *in-clutus*), *πεπτός* (Lat. *coctus*), *ρύτός* (Skr. *srutāḥ*), *σχετός* : *σχεῖν, τατός* (Lat. *tentus*), *φατός, φθιτός, ἀ-δάματος, ἄ-κράτος, βρωτός, γνωτός* (Skr. *jñātāḥ*, Lat. *nōtus*), *δοτός* (Lat. *datu*), *ἐλατός, ἐμετός* (Lat. *vomitus*), *θετός* (Skr. *hitāḥ*), *θνητός, κμητός, στατός* (Skr. *sthitāḥ*, Lat. *status*), *στρωτός; ζευκτός* beside Skr. *yuktāḥ*, and similarly *γευστός, φερτός, φευκτός, πηκτός*. See § 555.

The masculine, feminine and rarely the neuter of the

verbal adjectives often came to be used as abstract nouns (sometimes with concrete meaning) in Greek as also in other languages, as *ἄμητος*, *βίωτος*, *βλαστός*, *ἔμετος*, *θάνατος*, *κάματος*, *νιφετός*, *νόστος*, *οἶτος*, *παγετός*, *πλούτος*, *φόρτος*, *χόρτος*. *ἀήτη*, *ἀκτή*, *ἀρετή*, *αὐτή*, *βιοτή*, *βλάστη*, *βροντή*, *γενετή*, *ἐν-ετή*, *κοίτη*, *μελέτη*, *πινυτή*, *σπάρτη*, *τελευτή*. *σπάρτον*, *φυτόν*.

The feminine abstract nouns, which came to denote persons, became masculine and then took *-s* in the nominative and formed their gen. singular after the analogy of the *o*-declension (§ 323), and similarly with the denominatives in *-tā-*, as *γενέτης*, *δέκτης*, *δεσμώτης*, *κλέπτης*, *κοσμητής*, *κριτής*, *μαθητής*, *οἰκέτης*, *ποιητής*, *ὕφάντης*, *προφήτης*, *ψάλτης*; *ἀγρότης*, *ἀσπιστής*, *δεσπότης*, *δημότης*, *ιδιώτης*, *ἰππότης*, *κορυστής*, *πολυβούτης*, *στρατιώτης*, *τελεστής*, *τοξότης*, *φῦλέτης*. After the analogy of *ὀφίτης* : *ὄφισ*, *πολίτης* : *πόλις* were formed *ὀδίτης* : *ὀδός*, *ὀπλίτης* : *ὄπλον*, *τεχνίτης* : *τέχνη*.

2. In ordinals, as *τρίτος*, *τέταρτος* (Lat. *quartus*), *πέμπτος* (Lat. *quintus*, Lith. *peñktas*), *ἕκτος* (Lat. *sextus*, Goth. *saīhsta*), *δέκατος*, *εἰκοστός*, &c. See §§ 389-93.

On the superlative ending *-τατο-*, as in *ἀληθέστατος*, *βέλτατος*, *κουφότατος*, *μελάντατος*, *ὀξύτατος*, *σοφώτατος*, *φέρτατος*, *φίλτατος*, &c., see § 377, 4.

§ 259. *-is-to-*, *-is-tā-* (Skr. *-iṣṭha-*, Goth. *-ista-*), used in the formation of the superlative of adjectives, as in *αἰσχιστος*, *ἄριστος*, *βέλτιστος*, *ἐλάχιστος*, *ἔχθιστος*, *ἡδιστος*, *κάλλιστος*, *κράτιστος*, *κύδιστος*, *μέγιστος*, *ὀλίγιστος*, *πάχιστος*, *πλείστος*, *πρώτιστος*, *τάχιστος*, *φέριστος*, *χείριστος*. See § 377, 2.

§ 260. *-i-*. This suffix is probably identical in origin with the *-i-* which occurs in the second syllable of dissyllabic heavy bases (cp. § 481). In Greek it is fairly common in nouns but rare in adjectives, as *ἄρδις*, *δῆρις* : *δέρω*, *ἔρις*, *μῆνις*, *ὄις*, *οἶς* (Skr. *áviḥ*, Lat. *ovis*, Lith. *avìs*),

ὄρχις, ὄφισ (Skr. *áhiḥ*), πόλις, πόρις, στροφήσι : στροφέω, τρόπις, τρόχισ; τρόφισ. On the various grades of ablaut which originally occurred in the different cases see § 328. The oblique cases of some *i*-stems were often formed after the analogy of stems in *-ιδ-* (§ 343), cp. ἔρις (Skr. *áriḥ*, *enemy*), acc. ἔριν beside gen. ἔριδος, &c., μῆνις, τρόπις, gen. μῆνιδος, τρόπιδος.

§ 261. The suffixes *-mi-*, *-ni-*, *-ri-* were very rare in Greek as also in most of the other Indg. languages, as ἔλμις, *worm*, θέμις (gen. θέμιτος, θέμιδος after the analogy of stems ending in a dental), φῆμις; εὐνις; ἄκρις, ὄκρις (Skr. *áśriḥ*, Lat. *ocris*); ἴδρις.

§ 262. The suffix *-ti-* became productive in all the Indg. languages in the formation of primary verbal abstract nouns of the feminine gender. The root-syllable had originally the weak grade of ablaut, as βάσις (Skr. *gátih*), κλίσις, κτίσις, πίστις, πλύσις, πύστις, ρύσις (Skr. *srutih*), σχέσις, σχίσις, τάσις, τίσις, φθίσις, χύσις; δέσις, δόσις, θέσις, στάσις (Skr. *sthítih*), φάσις; ἄησις, βρῶσις, γένεσις, γνῶσις (Skr. *jñātih*), ἔμεσις, κρέμασις, ὄνησις, τάραξις, φράσις, φύσις. Forms with the strong grade of ablaut in the root-syllable were new formations, as ἄμ-πωτις, δεῖξις (cp. Skr. *diṣṭih*), ἐκ-λειψις, ζεύξις (Skr. *yuktiḥ*), λῆξις, πῆξις, ρεύσις beside ρύσις, τέρψις, φεύξις. ἀξίωσις, κόσμησις, ὄρᾱσις, φόρησις. The masculine μάντις was also originally a feminine abstract noun. See § 169.

§ 263. *-ī-* (but *-ij-* before vowels, cp. Skr. *nadíḥ*, *river*, gen. *nadíyah*, &c.), used in forming feminine nouns and adjectives. The nouns and adjectives containing this suffix mostly came to be inflected after the analogy of dental-stems already in prim. Greek (§§ 330, 343), cp. Hom. ἦνις (acc. ἦνιν), κνημίς, gen. κνημίδος, and similarly βλοσυρώπις, εὐπλοκαμίς.

§ 264. *-u-*. This suffix was used in the formation of nouns and adjectives, especially the latter, as βαθύς, βαρύς (Skr.



gurūh, Goth. *kaúrus*), βραδύς, βραχύς, γλυκύς, ἐλαχύς, εὐρύς, ἡδύς (Skr. *svādúh*), θρασύς, κρατύς, λιγύς, παχύς (Skr. *bahúh*), πλατύς, πολύς (Skr. *purúh*), ταρφύς, τρᾶχύς, ὠκύς (Skr. *āśúh*). πῆχυς (Skr. *bāhúh*), ἄρκυς, γένυς (Skr. *hánuh*, Goth. *kinnus*), γῆρυς, στάχυς; γλάφυ, γόνυ (Skr. *jānu*), δόρυ (Skr. *dāru*), μέθυ (Skr. *mádhu*), πῶν. See § 343. On the various grades of ablaut which originally occurred in the different cases see § 331.

§ 265. The suffixes *-lu-*, *-nu-*, *-ru-* were very rare in Greek as also in the other Indg. languages, as θῆλυς (Skr. *dhārúh*); λιγνύς, Hom. θρηῆνυς; βότρυς, δάκρυ (Lat. *lacru-ma*).

§ 266. *-tu-*, especially used in the formation of verbal abstract nouns which are feminine in Greek, but masculine in Latin and mostly also in Aryan and the Germanic languages, as ἀκοντιστύς, ἀλαωτύς, ἀπ-εστύς : ἐστί, ἀρπακτύς, ἀρτύς (Lat. *artus*), ἀσπαστύς, βοητύς, βρωτύς, γραπτύς, δαιτύς, ἐδητύς, ἴτυς (Lat. *vitus*), κλειτύς (κλιτύς), ὀρχηστύς, πίτυς (Skr. *pitúh*), ποθητύς, ῥυστακτύς, φραστύς, χαλεπτύς. This type of noun became very productive in Ionic. The same suffix also occurs in the neuter nouns ἄστυ (Skr. *vástu*, *place*), φῖτυ, and in feminine numerals like τριπτύς, τετρακτύς, πεντηκοστύς, ἑκατοστύς, χίλιοστύς.

§ 267. *-ū-* (but *-uw-* before vowels, cp. Skr. *tanúh*, *body*, gen. *tanúvah*), used in forming feminine nouns, as ἰλύς, ἰσχύς, ὀσφύς, ὀφρῦς, πληθύς, χέλυς. The nouns belonging to this type preserved their original inflexion (§ 334) in Greek, Aryan and the Baltic-Slavonic languages, but in the other languages they went over into the *ū*-declension.

§ 268. Prim. Greek *-ēu-* (but *-ēw-* before vowels) occurs almost exclusively in the formation of nomina agentis, as βασιλεύς, γονεύς, γραφεύς, ἡνιοχεύς, ἱερεύς, ἱππεύς, νομεύς, πομπεύς, τοκεύς, φονεύς, φορεύς. For the inflexion of nouns belonging to this type see § 334. The origin of the *-ēu-*, which is not found in the other Indg. languages, has

never been satisfactorily explained. According to Brugmann, *Griech. Grammatik* (§ 182) it probably started out from verbal adjectives in *-η-φ(ο)-* to verbs in *-έω*, as \**φορηφ(ο)s* (cp. *φορητός*) : *φορέω* which would regularly become *φορεύς* (§ 63).

### 3. SUFFIXES ENDING IN A CONSONANT.

§ 269. *-en-* with the various ablaut-grades *-en-*, *-on-*, *-ēn-*, *-ōn-*, *-n-* but *-ŋ-* before consonants, see § 345. This suffix had various functions. It was especially used in the formation of nouns denoting (1) animate objects, as *ἀρηγών*, *γείτων*, *κύων* (Skr. *śván-*), *στίγων*, *τέκτων* (Skr. *tákṣan-*), *τρῦγών*, *ἀρήν*, *ἄρσην* (*ἄρρην*, Ion. *ἔρσην*); *αἶθων*, *γάστρων*, *γνάθων*, *δρόμων*, *κῦφων*, *στράβων*, *τρίβων*, *τρήρων*, *ψυθών*; *οὐρανίων* : *οὐράνιος*, from this and similar forms the *-ίων* was extracted and extended to *o-*stems, as *δειλακρίων* : *δείλακρος*, *μαλακίων* : *μαλακός*. (2) Parts of the body, as *ἀγκών*, *βουβών*, *πυγών*, *φαγών*, *ἀδήν*, *αὐχήν*, *σπλήν*, *φρήν*.

The origin of the formation of the nouns in *-ών* (Ion. *-έων*) denoting a place is unknown, as *ἀνδρών*, *δαφνών*, *ἵππων*, *λασιών*, *παρθενών* (*παρθενεών*).

§ 270. *-(i)jen-* with the various ablaut-grades *-(i)jen-*, *-(i)jon-*, *-(i)jēn-*, *-(i)jōn-*, *-in-*, *-īn-*, the *-īn-* of which became generalized in Greek, see § 348. This suffix only occurs in the formation of a small number of nouns, as *ἀκτῖν-*, *γλωχῖν-*, *δελφῖν-*, *ὠδῖν-*.

§ 271. The suffix *-wen-* with the same ablaut-grades as *-en-* was rare in Greek, as *πίων* (Skr. *pívan-*), *ἀ-πείρων* from \**ἀπερφων*; *δελέατ-* from \**δελεφατ-* : *δέλεαρ*, Hom. *εἶδατ-* : *εἶδαρ*, *ὄνειατ-* : *ὄνειαρ*, *πείρατ-* : *πεῖραρ*, see § 371. Infinitive Cyp. *δοφεναι*, Att. *δοῦναι* (§ 546).

§ 272. *-d-en-* with the same ablaut-grades as *-en-* occurs in the formation of nouns from verbal stems, as *ἀλγηδών*, *ἀχθηδών*, *κλεηδών*, *μεληδών* (*μελεδών*), *πεμφρη-*

δών, πρηδών, σηπεδών, σπαδών, σχαδών, τηκεδών, τῦφεδών, χαιρηδών, cp. formations like Lat. *frīgēdo, rubēdo*.

§ 273. **-men-** with the various ablaut-grades **-men-**, **-mon-**, **-mēn-**, **-mōn-**, **-mn-** but **-mḡ-** before consonants (§ 345) and **-mḡ** in the nominative and accusative singular of neuter nouns (§ 350). This suffix was used partly in the formation of *nomina actionis* (masculine and neuter) which often came to be used for the names of objects, and partly in the formation of *nomina agentis* and adjectives, as *ἄκμων* (Skr. *áśman-*), *ἀλήμων*, *γνώμων*, *ἡγεμών*, *θημών*, *κευθμών*, *κηδεμών*, *λειμών*, *στήμων*, *τελαμών*, *τέρμων* (Lat. *termo*), *χειμών*, *λιμήν*, *ποιμήν*, *πυθμήν*, *ὑμήν*; used as a secondary suffix in *ἀκρεμών*: *ἄκρος*, *δαιτυμών*: *δαιτύς*. Adjectives like *ἀλήμων*, *ἐλεήμων*, *εὐ-εἰμων*, *εὐ-θήμων*, *ἴδμων*, *τλήμων*. Neuters, as *εἶμα* (Skr. *vásma*, *cover*), *νῆμα* (Lat. *nēmen*), *ὄνομα* (Skr. *nāma*, Lat. *nōmen*, Goth. *namō*), *στρῶμα* (Lat. *strāmen*), and similarly *ἀνά-θημα*, *βῆμα*, *βλήμα*, *γνώμα*, *δεῖμα*, *δέρμα*, *ἐπί-στημα*, *ἔρμα*, *ζευγμα*, *ἦμα*, *λείμμα*, *μίσθωμα*, *μνήμα*, *νεῦμα*, *νόημα*, *ὄραμα*, *ὄρεγμα*, *πνεῦμα*, *πῶμα*, *ρέυμα*, *σέλμα*, *σῆμα*, *στέμμα*, *σχῆμα*, *τέρμα*, *ὑπό-δημα*, *φέρμα*, *φλέγμα*, *φῦμα*, *χεῖμα*, *χεῦμα*, *χρῆμα*. For the inflexion of these nouns see § 350.

The suffix **-men-** also occurs in the Lesbian and Homeric infinitives (dative) like *ἴδμεναι* (Vedic *vidmánē*), *δόμεναι* (Vedic *dāmanē*), *ἔδμεναι*, *γνώμεναι*, *θέμεναι*, *φανήμεναι*, *ζευγνύμεναι*, *ἐστάμεναι*, *τετλάμεναι*, &c., see § 546; and also in infinitives (endingless locative) like *ἴδμεν*, *τιθέμεν*, *θέμεν*, *δόμεν*, *ἐστάμεν*, *ὀρνύμεν*, &c., see § 549.

§ 274. **-t-**, **-dh-**, **-s-** (of various origin) + **-men-**, as in *ἄυτμήν*, *λαῖτμα*; *ἴθμα*; *πλάσμα*: *πλάσσω*, *ἔρεισμα*: *ἐρείδω*, *ἄσπασμα*: *ἀσπάζομαι*, *νόμισμα*: *νομίζω*, *κλώσμα*: *κλώθω*, *ἐπι-λήσμων*: *ἐπι-λήθω*.

§ 275. **-nt-** with the various ablaut-grades **-ént-**, **-ont-**, **-nt-**, **-nt-**. With this suffix were formed the masculine and neuter of all active participles except the perfect. For the

history of the various ablaut-grades in Greek and for the inflexion of the participles see §§ 352–5. Here belong also a number of verbal nomina which became nominal in Greek and a few pure nominal forms, as ἄρχων, γέρων, δράκων, ἐκών, κρείων, μέδων, μέλλων, ὀρίζων, φαέθων, πᾶς, ὀδούς (Skr. *dánt-*, *dat-*, Lat. *dēns*, *dentis*).

§ 276. *-went-* (= *-φεντ-*, Skr. *-vant-*), weak grade *-wnt-* (*-φεντ-* with *-ε-* for *-α-* through the influence of *-φεντ-*, Skr. *-vat-*), see § 356. This suffix was used in Greek and Sanskrit in the formation of denominative adjectives denoting *possessing, endowed with*, as ὀπείεις, *juicy* = Skr. *ápavant-*, *watery*, δολόεις, ἡνεμόεις, οἰνόεις, στονόεις, χαρίεις; from forms like \*στονόφεντ-: στόνος the *-οφεντ-* was extracted and extended to other kinds of stems, as σκίοεις, μητίεις, ἰχθυόεις, νιφόεις, κλωμακόεις, θερόεις, κερόεις, αἱματόεις; αἰγλήεις, λαχνήεις, τιμήεις; from forms like \*τιμάφεντ-: τιμά the *-άφεντ-* was extracted and extended to other kinds of stems, as μεσήεις, φοινήεις, δενδρήεις, οἰστρήεις, τελήεις.

§ 277. *-er-* with the ablaut-grades *-er-*, *-or-*, *-ēr-*, *-ōr-*, *-r-* but *r̥* before consonants, see § 359. In Greek this suffix only occurs in a few nouns, as δᾶήρ (Skr. *dēvár-*), ἀνήρ, ἄήρ, αἰθήρ.

§ 278. *-ter-* with the various ablaut-grades *-ter-*, *-tor-*, *-tēr-*, *-tōr-*, *-tr-* but *-tr̥-* before consonants, see §§ 359–61. This suffix was especially used in the formation of names of relationship and nomina agentis, as πατήρ (Skr. *pitár-*, Lat. *pater*, Goth. *fadar*), μήτηρ (Skr. *mātár-*, Lat. *māter*, OE. *mōdor*), θυγάτηρ (Skr. *duhitár-*, Goth. *daúhtar*), φράτηρ, φράτωρ, *member of a φρατρῖα* (Skr. *bhrátar-*, Lat. *frāter*, Goth. *brōþar*, *brother*), εὐπάτωρ, παμμήτωρ, ἄκτωρ (Lat. *actor*), ἀφ-ήτωρ, βώτωρ, γενέτωρ (Skr. *janítár-*, Lat. *genitor*), δώτωρ (Skr. *dātár-*, Lat. *dator*), ἐπι-βήτωρ, θηράτωρ, ἴστωρ, καλήτωρ, κτίστωρ, μήστωρ, παν-δαμάτωρ (Skr. *damítár-*), ρήτωρ, σημάντωρ, ἀλεξητήρ, ἀροτήρ (Lat. *arātor*), αὐλητήρ, γενετήρ, δημοτήρ, δοτήρ, δωτήρ, ἐλατήρ,

ἐπ-ακτήρ, ζευκτήρ (Skr. *yōktár-*), θηρᾶτήρ, ὀλετήρ, οἰνο-  
ποτήρ (Skr. *pātár-*, Lat. *pōtor*, *drinker*), φυλακτήρ. ἄστήρ,  
γαστήρ.

§ 279. **-es-** with the ablaut-grades **-es-**, **-os-**, **-ēs** (§ 366),  
**-ōs** (§ 368). This suffix was used in the formation of neuter  
nouns (mostly abstract), see § 364, and compound adjectives  
related to such nouns, see § 366, as well as in the formation  
of a few masculine and feminine nouns, see § 368. (a) Neuter nouns, as γένος (Skr. *jānas-*, Lat. *genus*), κλέος  
(Skr. *śrávas-*), μένος (Skr. *mānas-*), νέμος (Lat. *nemus*),  
ρίγος (Lat. *frīgus*), and similarly ἄγκος, ἄγος, αἶθος, ἄκος,  
ἄνθος, ἄχος, βάθος, βέλος, βένθος, δάκος, δέος, ἔδος, εἶδος,  
ἔλεγχος, ἔλκος, ἔλος, ἔπος, ἔρεβος, ἔρκος, ἔτος, εὐρος,  
ξεῦγος, θέρος, θράσος (θάρσος), κῆδος, κράτος (κάρτος),  
κῦδος, λέχος, λῆθος, λίπος, μῆκος, νέφος, πάχος, πέκος,  
πένθος, πλάτος, πύος, σάκος, σθένος, σκέλος, στέγος (τέγος),  
στέρφος (τέρφος), τάφος, τάχος, τεῖχος, τέκος, ψεῦδος. (b) Compound adjectives, as ἀ-κλεής, ἀ-ληθής, ἀν-αιδής,  
ἀ-σθενής, αὐτο-φυής, ἀ-ψευδής, δυσ-κλεής, ἀ-μενής, δυσ-  
μενής (Skr. *dur-manāḥ*), εὐ-μενής, εὐ-γενής, and the back-  
formations ἐλεγχής, φραδής, ψευδής, see § 366. (c) Mascu-  
line and feminine nouns, as γέλως, ἔρως, ἰδρώς, αἰδώς, Hom.  
ἠώς, Att. ἔως, see § 368. This type of noun became  
productive in Latin, cp. O.Lat. *arbōs*, *honōs*, &c.

§ 280. **-n-es-**, **-w-es-**, **-dh-es-**, as in the neuter nouns  
γλῆνος, δάνος, ἔθνος, ἔρνος, ἔχνος, σμῆνος; Hom. εἶρος  
from \*ἔρφος, πῖ(φ)ος (Skr. *pīvas-*), στεῖνος from \*στενφος,  
φᾶρος, Att. φάρος from \*φαρφος; βρῖθος, μέγεθος, πλήθος,  
στῆθος.

§ 281. **-jes-** with the ablaut-grades **-jes-**, **-jos-**, **-jōs**, **-is-**,  
and **-ī-jes-**, **-ī-jōs-**, used in the formation of the comparative  
of adjectives. This mode of forming the comparative was  
only preserved in Greek in the accusative singular masculine  
and feminine, the nominative plural masculine and feminine,  
and the nominative and accusative of the neuter plural

(§ 369). For the formation of the comparative in Greek see §§ 375-6.

§ 282. **-wes-** with the ablaut-grades **-wes-**, **-wos-**, **-wōs-**, **-us-**, and **-wet-**, **-wot-**, used in Greek, Aryan and the Baltic-Slavonic languages in the formation of the perfect active participle, see § 552.

§ 283. **-əs-** (= Gr. **-ας-**, Skr. **-iṣ-**), the **-ə** of which probably belonged originally to the second syllable of dissyllabic heavy bases with the accent on the first syllable. The **-əs-** is the weak grade of the **-ōs** in paragraph 279, and became generalized already in the parent Indg. language. It occurs in a considerable number of neuter nouns, as *βρέτας*, *γέρας*, *γῆρας*, *δέμας*, *δέπας*, *κέρας*, *κρέας* (Skr. *kravīṣ-*, *raṁ flesh*), *οὔδας*, *πέρας*, *σέλας*, *σκέπας*, *σφέλας*, *τέρας*, &c. For the inflexion of these nouns see § 370.

§ 284. **-tāt-** (Skr. and Lat. **-tāt-**), used in the formation of feminine abstract nouns from adjectives, as *νεότης*, Lat. *novitās* : *νέος*, *novos* ; *όλότης*, Skr. *sarvātāt-* : *όλος*, *sárvaḥ*, and similarly *άπλότης*, *ισότης*, *κακότης*, *όρθότης*, *σκαιότης*, *φιλότης*, *βαρύτης*, *βραδυτής*, *γλυκύτης*, *παχύτης*, *ταχυτής*. From forms like *\*νεφοτāt-* the *-οτāt-* (cp. § 51) was extracted as a suffix and extended to consonantal stems *ένότης*, *μελανότης*, *παντότης*, *χαριεντότης*. See § 343.

§ 285. In a considerable number of nouns and adjectives the suffix seems to consist of a simple explosive (**t**, **k** (= Indg. **k** and **q**), **d**, **g**) which in some cases at least was the weak grade form of an explosive + **-o-** or **-ā-**, cp. *ά-γνώς* : *ά-γνωτος*, Lat. *i-gnō-tus* ; *γυμής* : *γυμνήτης* ; *μείραξ* : Skr. *maryaká-h*, *manikin* ; &c.

**-t-**. It occurs especially in the formation of compound verbal adjectives and in masculine nouns, as *ά-γνώς*, *ά-δμής*, *δορι-κμής*, *προ-βλής*, *ώμο-βρώς* ; *γυμής*, *θής*, *κέλης*, *λέβης*, *πένης*, *χέρνης*, *πλώς*, *άναξ* ; *νύξ*. It occurs as a secondary suffix in *θέμις*, *χάρις* ; *γάλα* (*γάλακτος*), *μέλι* (*μέλιτος*).

**-k-**. It occurs in the formation of nouns, as *άλώπηξ*,

δέλφαξ, Ion. θώρηξ, ἴβυξ, κόραξ, λείμαξ, μεῖραξ, ψήληξ ; βέμβιξ, πέρδιξ, cp. Lat. **cornix**, **rādix**, &c.

-d-. It occurs especially in the formation of nouns and adjectives in -ας, gen. -άδος, and in nouns in -ις, gen. -ιδος, as γενειάς, δρομάς, κεμάς, λαμπάς, νιφάς, πελειάς ; μιγάς, νομάς, τεφράς, τοκάς, φυγάς ; άσπίς, γλυφίς, δαίς, έπιγουνίς, έρις (acc. έριν), κάλπις (acc. κάλπιν), κληίς, ληίς, όπις, cp. Lat. **lapis**, gen. **lapidis** ; έμός, πηλαμός.

-g-. It occurs especially in the combination -γγ- in diminutives and in nouns denoting a hollow or a musical instrument, as κύστιγξ, λαϊγξ, λάρυγξ, ραθάμιγξ, σάλπιγξ, σήραγξ, σπήλυγξ, στόρθυγξ, σῦριγξ, φάλαγξ, φάραγξ, φάρυγξ (gen. φάρυγος), φόρμιγξ, ψάλτιγξ. κόκκῦξ, λάταξ, μάστιξ, πέμφιξ, πτέρυξ, τέπτιξ.

§ 286. For the formation and inflexion of nouns belonging to the r- : n-declension see § 371.

#### 4. THE FORMATION OF COMPOUND NOUNS AND ADJECTIVES.

§ 287. Most of the Greek compound nouns and adjectives consist of the compounding of two words each of which had an independent existence in the historic period of the language. The number of compounds, in which the first or last member or both members did not exist as independent words, was comparatively small, as in compounds like ἄ-θεος, ἄν-όμοιος where ἄ-, ἄν- (= Indg. **h-**, Skr. **a-**, **an-**, Lat. **in-**, English **un-**) is the weak grade of the prim. Indg. negative particle \***ne**, *not* ; ἄ-παξ, ἄ-πλόος where ἄ- = Skr. **sa-**, Indg. \***sm-** the weak grade of \***sem-**, *one* ; δά-πεδον where δα- = Indg. \***dm-** the weak grade of δομ- in δόμος ; έκατόμ-βη : βοῦς ; νεο-χμός : χθών ; έν-δον with -δον from \*-δομ in δόμος ; πέρ-υσι where the -υσ- in -υσ-ι from older -υτ-ι is the weak grade of φέτος ; τρα-πέζα where τρα- is the weak grade of τετρα-, *four*, and -πέζα from \*πεδja : πούς ; ἄριστον from \*ἄjερι, *in the morning*, and \*-στον from

\*-δτον, the participle to ἔδω; Ion. *σήμερον*, Att. *τήμερον* from \**κῃ̄αμερον* (§ 129, 7) : \**κιο-*, *this*, and *ἡμέρᾱ*.

§ 288. The compounds may be conveniently divided into four classes. In Class I the first member was the stem of a declinable noun, adjective or pronoun, or an indeclinable numeral. In Class II the first member was an indeclinable particle which only occurred in compounds already in the parent Indg. language. In Class III the first member was an original adverb which also existed as an independent word. In Class IV the first member was a case-form or a form which came to be used as an adverb in Greek.

#### CLASS I.

§ 289. To this class belongs a very large number of compound nouns and adjectives. In such compounds the first member consists merely of the stem. This mode of forming compounds goes back to the prim. Indg. period and arose before the so-called case-endings came into existence. Regular forms were: *ἀκρό-πολις*, *αὐτό-ματος*, *λογο-γράφος*, *ἵππο-μαχίᾱ*, *ἵππο-πόταμος*, *μονο-γενής*, *ταυρο-φόνος*; *ἀγγελιᾱ-φόρος*, *βουλη-φόρος*, *μοιρη-γενής*; *μαντι-πόλος*, *πτολί-πορθος*, *τρί-πους*; *ἄστυ-νόμος*, *ἡδυ-(F)επής*, *πολυ-ανθής*, *ὠκυ-πέτης*; *σύ-αγρος*; *βου-νόμος*, *βού-παις*, *ναύ-αρχος*, *ναυ-πηγός*, *ναυ-κράτης*; *ἄρρεν-ωπός*, *τεκτόν-αρχος*, *κυν-ῶπις*, *ὀνομά-κλυτος*, *πάντ-αρχος*; *ἀνδρ-αχθής*, *πατρ-άδελφος*; *νυκτ-αίετος*, *ὀρνίθ-αρχος*, *ποδ-άρκης*, *πυγ-μάχος*; *ἔπες-βόλος*, *σακεσ-φόρος*, *κερασ-βόλος*, *σελασ-φόρος*, *μῦσ-φόνος*, *ἔωσ-φόρος*. After the analogy of the *o*-stems the *-o* became extended to all kinds of stems, as *ἡμερο-δρόμος*, *Νικό-μαχος*, *ὑλο-τόμος*, *ψῦχο-πομπός*; *φυσιο-λόγος*; *ἰχθυο-φάγος*, *συο-κτόνος*; *βο-ό-κλεψς*; *ἀγωνο-θέτης*, *ἀκμό-θετον*, *ἄρρενό-παις*, *κυνο-κέφαλος*, *φρενο-μανής*, *αἱμο-βαφής*, *σωματο-ειδής*, *παντό-σεμνος*; *αἰθρό-τοκος*, *ἀνδρο-φάγος*, *ἀστερο-ειδής*, *πατρο-φόνος*, *ῥητορο-διδάσκαλος*; *αἰγό-βοτος*, *ἀσπιδο-πηγός*, *νιφό-βολος*, *ὀρνίθο-σκόπος*, *παιδο-φόνος*;



ἐπο-ποιός, εἶρο-κόμος. The -ā-, -η- of the ā-stems was often extended analogically to other stems, especially for metrical purposes in poetry, as ἀκρά-χολος, θανατη-φόρος, νεᾶ-γενής; βο-η-νόμος; ἀσπιδη-φόρος, &c. Regular forms were τετρά-πους, ἐπτά-πους, δεκά-πους, after the analogy of which were formed πεντά-πους, ἑξά-πους, &c. Regularly contracted forms were Dor. στρατᾶγός, κρατερῶνυξ, φιλήρετμος, ὠμη-στής, &c., after the analogy of which were formed κυν-ᾶγός, αἰγ-ῶνυξ, πολυ-ωφελής, βο-ηλασίᾱ, παν-ήγυρις, &c.

The adjectives in -ρο- have -ι- in compounds, as ἀργι-κέραυνος : ἀργός from \*ἀργρος, κῦδι-άνειρα : κῦδρός, λαθι-κήδης : λάθρη, χαλί-φρων : χαλαρός. This formation has never been satisfactorily explained, see Hirt, *Handbuch der griech. Laut- und Formenlehre*, p. 328.

There are numerous Greek compounds in which the first member was either verbal or came to be felt as being verbal, as ἀρχέ-κακος, δακέ-θῦμος, ταλα-πενθής, φερέ-καρπος; ἀρκεσί-γυιός, λῦσί-πονός, ταυσι-πτερός, τερψί-μβροτος, φῦσί-ζοός. These latter formations came to be associated with the s-aorist and then became productive, as φθεισί-μβροτος : ἔφθαισα.

## CLASS II.

§ 290. In this class the first member was an indeclinable particle which only occurred in compounds already in the parent Indg. language, as ἀ-, ἀν- (Skr. a-, an-, Lat. in-, Engl. un-) the weak grade of Indg. \*ne, not (§ 65, 1), cp. ἄ-γνωτός (Skr. á-jñātaḥ), ἄ-θεός, ἄ-τίμος, ἄ-παις, ἀν-υδρός (Skr. an-udráḥ), ἀν-αίτιος, ἀν-όμοιος. ἀ- (Skr. sa-) = Indg. \*sm the weak grade of \*sem-, one, cp. ἄ-παξ, ἀ-πλόος. δυσ- (Skr. dur-), cp. δυσ-αλγής, δύσ-θῦμος, δυσ-μενής (Skr. dur-manāḥ), δυσ-μήτηρ, δυσ-τυχής, δύσ-φατος.

## CLASS III.

§ 291. In this class the first member was an original adverb which also existed as an independent word, as

ἀμφι-δέξιος, ἀμφί-πολος, ἀνά-λογος, ἀνά-μεσος, ἀπό-τισις, ἀπό-φονος, ἐκ-γενής, ἔκ-νομος, ἐπί-γαιος, ἐπί-θετος (Skr. *āpi-hitah*), ἐπί-χαλκος, κατά-χρῦσος, παρά-λογος, παρα-χρῆμα, προ-ηγεμών, πρό-κακος, προσ-έσπερος, πρόσ-ωπον, σύν-δουλος, σύν-τρεις, ὑπερ-άνθρωπος, ὑπερ-δέξιος, ὑπαρχος, ὑπό-θεσις (Skr. *ūpa-hitih*), ὑπό-θετος, ὑπό-ξυλος.

## CLASS IV.

§ 292. In this class the first member was a case-form or a form which came to be used as an adverb in Greek, as δώ-δεκα (Skr. *dvā-daśa*), Νεά-πολις; νουν-εχής, παν-ἡμαρ; Διός-δοτος, Διός-κουροι, κυνός-ουρα, νεώσ-οικος, Πελοπόν-νησος from Πέλοπος νῆσος; Ἀρηϊ-φίλος, δορί-πονος, ἐαρί-δρεπτος, μεσαι-πόλιος, ὄδοι-πόρος, ὄρει-βάτης, πυρί-καυστος; δακρυσί-στακτος, ναυσι-κλυτός, ὄρεσσι-γενής, πᾶσι-φίλος. ἄμα-τροχιᾶ, παλαί-φατος, παν-αίολος, χαμαι-γενής.

# ACCIDENCE

## CHAPTER IX

### DECLENSION OF NOUNS

§ 293. In the parent Indg. language nouns and adjectives were declined alike without any distinction in endings. This system was preserved in Greek, Latin, Sanskrit and most of the other languages. They are divided into two great classes according as the stem ends in a vowel or a consonant. In the former case they belong to the vocalic and in the latter to the consonantal declension.

§ 294. Nouns had originally three numbers: singular, dual and plural. The singular and plural were used in the same manner as in the historic periods of the separate languages. The dual is in form a singular, the formative elements of which originally expressed the idea of what belonged naturally together in a pair or couple, as ὀφθαλμῶ, ὄμματε, ὄσσε, Skr. *akṣī*, both eyes; χεῖρε, Skr. *hástāu*, both hands; πῆχεε, Skr. *bāhū*, both arms; πόδε, Skr. *pādāu*, both feet; and similarly μηρῶ, ὄμω, &c. It then came to be used for two objects which were associated together, as Hom. βόε, Skr. *gāvāu*, a yoke of oxen; Hom. ἵππω, Skr. *áśvā*, a pair of horses; Hom. ἄρνε, a pair of lambs for sacrifice; τῶ θεῶ, the two goddesses (Demeter and Persephone); τῶ ταμῖα, the two treasurers (of Demeter and Persephone). When two different objects were associated together only the first of them was named and put in the dual. This is called the elliptical dual, as Skr. *uṣásā*, morning and night; *áhanī*, day and night; *dyāvā*, heaven and earth; *pitárāu*, father and mother, parents; Hom.

*Αἶαντε, Ajax and Teukros.* In prim. Indo-Germanic the words for *both* (Skr. *ubhāu*, ἄμφω, Lat. *ambo*) and *two* (Skr. *dvāu*, δύο, δύο, Lat. *duo*) were also used along with the dual, the former to express collectivity and the latter separate objects or two out of many, i. e. plurality. At a later stage these two words came to be regarded as expressing the duality and then the noun was often put in the plural. This was the beginning of the loss of the dual in the separate languages. In Greek and Vedic the dual was rarely used without the word for *two* except when the objects referred to were regarded as a pair or couple. But even in prim. Indo-Germanic the dual was not a fully developed number like the singular and plural. Each of the latter numbers had many more case-forms than the dual. The dual had only one form for the nom. voc. and acc. masculine and feminine, one for the nom. voc. and acc. neuter, one for the dat. abl. and instr. all genders, and similarly one for the gen. and one for the locative. It was preserved in Aryan, Greek, Old Irish and also to a great extent in Baltic-Slavonic, but it disappeared almost entirely in the prehistoric period of all the other languages. The dual was fast becoming obsolescent in the oldest historic period of the Greek language. In Homer objects which go in pairs or couples were expressed more frequently by the plural than the dual, and it is remarkable that the word for *parents* is only used once by him in the dual—ἀτὰρ οὐ τί μοι αἴτιος ἄλλος, ἀλλὰ τοκῆε δύο, τὸ μὴ γείνασθαι ὄφελλον, θ 312. In some dialects the dual is not found at all. It occurs in Boeotian, Arcadian and also occasionally in Doric. It survived longest in Attic, in the oldest period of which it was used almost in the same manner as in Homer. After it had become obsolete in the Attic vernacular it was later restored again artificially in literature. By about the end of the fourth century B.C. it had disappeared in the vernacular of all the Greek dialects.

§ 295. It is now a generally accepted theory that nouns had the three genders—masculine, feminine and neuter—at the time the parent Indg. language became differentiated into the separate branches of Aryan, Greek, Italic, Keltic, Germanic, Baltic-Slavonic, &c. But in an earlier period of the parent Indg. language there must have been a stage when there was no characteristic inherent in the form of a noun which indicated whether it belonged to the masculine, feminine or neuter gender; compare for example the *r-*, *n-* and other consonantal-stems in Greek, Latin and Sanskrit. In the consonantal declension nouns denoting males must originally have been masculine and those denoting females must have been feminine, irrespective of their form. But the exact process whereby inanimate objects came to be masculine or feminine in this declension will probably always remain an unsolved problem. And these remarks also apply to the *ī-*, *ū-* and diphthongal-declensions. In all these classes of nouns the gender could not be determined by the form, but only by the meaning or by an accompanying attribute such as a demonstrative pronoun, which in the earliest period of the Indg. language had distinctive forms for the masculine, feminine and neuter gender; cp. Indg. \**so*, \**sā*, \**tod* = *ὁ*, *ἡ*, *τό*, Skr. *sá*, *sā́*, *tát*, Goth. *sa*, *sō*, *þat-a*. Even in the *ā-*declension the *-ā* of the nominative had originally nothing to do either with gender or case, it was simply the bare stem-ending of a dissyllabic heavy base. It is probable that in this declension a certain number of nouns ending in *-ā* originally denoted females, as Vedic *ganā́-*, *wife of a god*, Boeot. *βανᾶ*, Att. *γυνή*, *woman*, and that then by analogy all nouns ending in *-ā* became feminine. The dem. pronoun may also have been an important factor in bringing it about that all nouns belonging to this declension became feminine. The Greek, Latin and Baltic-Slavonic masculines belonging to this declension were all nouns which had changed their gender

in these languages separately (§ 323). After the *ā*-declension had become fully established as being the only declension which contained exclusively feminine nouns, it then came to be regarded as specially characteristic of the feminine gender in general. And from this declension or rather a sub-division of it (§ 322) there was formed the grammatical feminine to those classes of nouns which did not originally distinguish the masculine and feminine in form, viz. the *i*-, *u*-, *r*-, *n*-, *nt*-, *-s*- and other consonantal-stems. And it even sometimes was used to form the feminine from *o*-stems, cp. Skr. *vṛkī*, *she-wolf*, *dēvī*, *goddess* : to the masculine *vṛkaḥ*, *dēvāḥ* beside *áśvā*, *mare*, masculine *áśvaḥ*. And in like manner, apart from the neuter nouns about which we shall speak presently, it is also probable that a certain number of nouns whose stems ended in *-o* originally denoted males, as Skr. *áśvaḥ*, Lat. *equus*, *horse* ; *λύκος*, Skr. *vṛkaḥ*, Lat. *lupus*, Goth. *wulfs*, Lith. *vilkas*, *he-wolf*, and that then by analogy all nouns whose stems ended in *-o* became masculine. See § 324. By comparing the oldest periods of the separate languages, it is clear that this development of grammatical gender in the *ā*- and *o*-declensions must have taken place during the prim. Indg. period. Through causes which it is now impossible to determine grammatical gender was further developed during this period whereby *ī*- and *ū*-stems, monosyllabic abstract nouns, abstract nouns with the stem-endings *-ti*, *-ni*, *-den*, *-don*, *-(ij)ōn*, *-in*, *-t*, *-tāt* and *-tūt* all became feminine ; and abstract nouns with the stem-endings *-tu*, *-nu* and nouns with the stem-endings *-en*, *-on* denoting parts of the body, all became masculine (Brugmann, *Grundriss*, &c., vol. ii, part 2, second ed., pp. 99-101). From the above account of the masculine and feminine genders we have generally left out of consideration the change of gender which took place in the individual languages, such as that in Greek and Latin

grammatical gender sometimes became subordinate to natural gender, as ἡ ἄνθρωπος, ἡ θεός, **haec lupus** after the analogy of nouns like ἡ γυνή, **haec fēmina**; or that in Greek and the Germanic languages natural gender often became subordinate to grammatical gender, as in words like ἡ δάμαρ, ἡ ὄαρ, in diminutives like γύναιον, πατρίδιον, παιδίον, or in OE. neuters like **cild**, *child*; **folc**, *folk*; **hors**, *horse*; **lamb**, *lamb*; **wif**, *wife*; or that **o**-stems denoting the names of trees are feminine in Greek and Latin and the names of rivers masculine, whereas in the Germanic and several other languages the latter are mostly feminine.

The neuter gender differed from the masculine and feminine insomuch that it only had one form for the nominative and accusative singular. As we have seen above, there was originally no characteristic inherent in the form of a noun to indicate whether it belonged to the masculine, feminine or neuter gender. The grammatical neuter gender, as such, only came into existence after the masculine and feminine had become fully established. In its earliest stage it was only used to represent inanimate objects and these only in the nominative and accusative singular, for which the bare stem was used in the **i**-, **u**- and all consonantal-stems, and the accusative in the **o**-stems. The other cases of the singular were formed at a later period after the analogy of the masculines. The **i**-, **u**- and consonantal-stems mostly denoted the names of material, inert mass, or substance of being or action. The form in **-om**, as compared with the masculine nominative in **-os**, expressed the passive or inactive recipient, that is the accusative, which practically agrees with the meanings of the former classes of nouns. But as in the **i**-, **u**- and consonantal-stems there was no distinction in form between the nominative and accusative, the accusative in **-om** also came to be used for the nominative. Here as in the mas-

culines and feminines natural gender was often made subordinate to the grammatical gender in the individual languages, cp. ἡ δάμαρ, τὸ γύναιον or OE. *wif*, *wife*, *cild*, *child*.

What is called the neuter plural in the oldest periods of the separate Indg. languages was originally a feminine collective singular. This applies not only to the *o*-stems (§ 326) but also to the *i*-, *u*- and consonantal-stems. The nominative and accusative ending *-ā* of the *o*-stems agrees with the nominative singular ending of the *ā*-stems. *-ə* (Skr. *-i*, Gr. *-a*), the ending of the nominative and accusative of the consonantal stems, was in all probability the weak grade ablaut of the above *-ā*. The nominative and accusative endings of the *i*- and *u*-stems were *-ī* and *-ū*, which may also be a contraction of *-i*, *-u + ə*. The *-ī* however can also be the *-ī* of the nominative singular of the *jā*-stems (§ 322). During the prim. Indg. period these feminine collective singulars ceased to be felt as such and came to be regarded as plurals, and then the other cases of the plural were formed after the analogy of the masculines just as had previously been done in the singular. This accounts for the fact that in Greek and Sanskrit the nominative plural takes the verb in the singular, see § 326.

§ 296. The parent Indg. language had at least eight cases—probably more—if we call the vocative a case, which strictly speaking it is not because it does not stand in any syntactical relation to the other members of the sentence. These were: the Nominative, Vocative, Accusative, Genitive, Ablative, Dative, Locative and Instrumental, all of which were preserved in Sanskrit. The original functions and uses of these cases belong to comparative syntax. Of the origin of the case-endings practically nothing is known. Although much has been written upon the subject, it is all mere guess-work without any solid foundation. It is reasonable to suppose that the



case-endings were originally independent words, but what their precise meaning was in each particular case it is impossible to determine. It is remarkable that Greek, which in other respects is so archaic, should have lost so many of the original case-forms. In the following brief description of the formation of the case-endings in the parent Indg. language many details are omitted, especially such as relate to analogical formations in the individual languages. For details of this kind the student should consult the declensions themselves.

§ 297. In order not to have to repeat in each case the meanings of the Sanskrit, Gothic and Lithuanian words used to illustrate the various case-endings, a list of the words is given here for easy reference. Sanskrit : *agnīḥ*, fire ; *ákṣi*, eye ; *áśvā*, mare ; *áviḥ*, sheep ; *bháran* (stem *bhárant-*, *bhárat-*), bearing ; *bhūḥ*, earth ; *dātá*, giver ; *dāvánē*, to give ; *dēví*, goddess ; *dhárā*, stream ; *dhíḥ*, thought ; *durmanāḥ* (stem *durmanas-*), dispirited ; *dyáuḥ*, sky, day ; *gāuḥ*, cow, ox ; *jánaḥ* (stem *jānas-*), race ; loc. *mūrdhán*, on the head ; *nadíḥ*, river ; *nāma* (stem *nāman-*), name ; *nāuḥ*, ship ; *páśu*, cattle ; *pát* (stem *pād-*, *pad-*), foot ; *pitá* (stem *pitár-*), father ; *purú*, much, many ; *rájā* (stem *rājan-*), king ; *sūnúḥ*, son ; *tanúḥ*, body ; neut. *trí*, three ; *vāri*, water ; *vidmánē*, to know ; *vṛkaḥ*, wolf ; *yugám*, yoke. Gothic : *ansts*, favour ; *baírands*, bearing ; *brōþar*, brother ; *fadar*, father ; *faihu*, cattle ; *giba*, gift ; *guma*, man ; *juk*, yoke ; *mawi*, girl ; *sunus*, son ; *tuggō*, tongue ; *wulfs*, wolf. Lithuanian : *avis*, sheep ; *rankà*, hand ; *vilkas*, wolf.

## SINGULAR.

§ 298. The nominative of the masculine and feminine was formed in four ways. (a) In the *ā-* and *jā-*declensions by the bare stem without case-ending, as *χόρᾱ* ; Skr. *áśvā*, Lat. *equa*, mare, Goth. *giba*, gift (§ 321) ; *-ī* beside *-(i)jē*,

the former occurs in Skr. *dēvī*, *goddess*, Goth. *mawi*, *girl*, and the latter in *φέρουσα* from \**φέρουτja* (§ 322). (b) In the *n*-, *r*- and *s*-stems by simply lengthening the vowel of the stem-ending, as *ποιμήν*, *δαίμων*; Goth. *guma*, *man*, Skr. *rājā*, *king*, Lat. *homo*, *sermo*; Goth. *tuggō*, *tongue* (§ 345); *πατήρ*, Lat. *pater*, Goth. *fadar*, Skr. *pitā*, *father* (§ 360); *δῶτωρ*, Lat. *dator*, Skr. *dātā*, *giver* (§ 361); *δυσμενής*, *hostile*, Skr. *durmanāh*, *dispirited* (§ 366); *γέλως*, *αἰδώς* (§ 368). (c) The *o*-, *i*-, *u*-, *ī*- and *ū*-stems and also stems ending in an explosive (except monosyllabic or root nouns) had simply the case-ending *-s*, as *λύκος*, Skr. *vṛkaḥ*, Lat. *lupus*, Goth. *wulfs*, Lith. *vilkas*, *wolf* (§ 325); *πόλις*, *ὄις*, Skr. *āvih*, Lat. *ovis*, Lith. *avīs*, *sheep* (§ 328); *πῆχυς*, *arm*, Skr. *sūnūh*, Goth. *sunus*, *son*, Lat. *fructus* (§ 331); *κῆς*, *weevil*, Skr. *dhīh*, *thought* (§ 330); *ἰχθύς*, *fish*, Skr. *tanūh*, *body* (§ 334); *φύλαξ*, *μάστιξ*, *κατῆλιψ*, *λαμπάς*, *κόρυς*, *νεότης* from \**νεφοτᾶτς* (§§ 342-3); Skr. *bhāran* from \**bhārants*, Lat. *ferēns*, Goth. *baírands*, *bearing* (§ 352); *διδούς* from \**διδοντς*, and similarly *δαμνάς*, *δεικνύς*, *τιθείς*, &c. (§ 354); *χαρίεις* from \**χαριφεντς* (§ 356). (d) The diphthongal stems and the monosyllabic consonantal stems had the case-ending *-s* and lengthening of the stem-ending, as *ναῦς*, Skr. *nāuḥ*, *ship* (§ 336); *Ζεύς*, cp. Skr. *dyāuḥ*, *sky* (§ 337); *βασιλεύς* (§ 338); *βοῦς*, Skr. *gāuḥ*, *cow*, *ox* (§ 339); *πούς*, Skr. *pāt*, Lat. *pēs*, OE. *fōt*, *foot* (§ 342).

§ 299. The vocative of the masculine and feminine had no special case-ending. In the *ā*- and *o*-declensions it ended respectively in *-ā* and *-e* which stood in ablaut relation to the *-ā* and *-o* of the nominative, as Hom. *νύμφᾶ*, *δέσποτᾶ* (§ 321); *λύκε*, Skr. *vṛka*, Lat. *lupe*, Goth. *wulf*, *wolf* (§ 325). The original ending of the *i*-stems was *-i* when the preceding syllable had the chief accent of the word, and *-ei* or *-oi* when the accent was on the ending. Greek and the Germanic languages generalized the former and Sanskrit the latter, as *πόλι*; Goth. *anst*, *favour*, beside

Skr. *ágnē* : nom. *agníḥ*, *fire* (§ 328). And similarly *-u* beside *-eu* or *-ou* in the *u*-declension, as *πηχυ*, Goth. *sunu*, beside Skr. *súnō* (§ 331). The long *ī*- and *ū*-stems originally ended in *-i*, *-u* beside *-ī*, *ū*, the former became generalized in Sanskrit and the latter in Greek, as Skr. *nádi* : nom. *nadíḥ*, *river*, *tānu* : nom. *tanúḥ*, *body*, *σῦ*, *ἰχθύς*. In the monosyllabic *ī*-stems the nom. was used for the vocative in both languages, as *κίς*, *dhíḥ* (§ 330); and similarly with the monosyllabic *ū*-stems in Sanskrit, as *bhúḥ*, *earth* (§ 334). The diphthongal and the *n*-, *nt*-, *went*-, *r*- and *s*-stems had the bare stem-ending, as *βοῦ* (§ 339), *Zεῦ*, Lat. *Jū-piter* (§ 337), *βασιλεῦ* (§ 338); *δαῖμον*, cp. Skr. *rājan* (§ 345); *γέρον*, cp. Skr. *bhāran* from *\*bhārant* (§ 352); *χαρίεν* from *\*χαριφεντ* (§ 356); *πάτερ*, Skr. *pítar* (§ 360), *δῶτορ*, Skr. *dātar* (§ 361); *δυσμενές*, Skr. *durmanah* (§ 366). The nominative was used for the vocative of stems ending in a simple explosive (§ 342).

§ 300. The case-ending of the masculine and feminine accusative was *-m* or *-ḡ* (= *a*, Skr. *-a*, Lat. *-em*, § 65, 1) according as the stem ended in a vowel or a consonant, as *χώραν*, Skr. *áśvām*, Lat. *equam*, Goth. *giba*; *λύκον*, Skr. *vḡkam*, Lat. *lupum*; *πόλιν*, cp. Skr. *agním*, *fire*, Lat. *sitim*, *partim*; *πηχυν*, cp. Skr. *sūnúm*, Lat. *fructum*; *Zῆν*, cp. Skr. *dyám*, *sky*, from *\*djé(u)m*; *βῶν*, Skr. *gám*, *cow*, *ox*, from *\*gó(u)m*; the long *ī*- and *ū*-stems had *-īm*, *-ūm* beside *-ijḡ*, *-uwḡ*, as *κῖν*, *ἰχθύν*, Skr. *dhíyam*, *tanúvam*; Hom. *νηα*, Skr. *návam*, Lat. *nāvem*, *ship*, from *\*nāwḡ*; *βασιλῆα*, *-éā*, from *\*-ηφα*; *πόδα*, Skr. *pádam*, Lat. *pedem*; *ποιμένα*, *δαίμονα*, Skr. *rājānam*; *φέροντα*, Skr. *bhārantam*, Lat. *ferentem*; *χαρίεντα* from *\*χαριφεντα*; *πατέρα*, Skr. *pítāram*, Lat. *patrem*; *δώτορα*, Skr. *dātāram*, Lat. *datōrem*; *δυσμενέα*, *-ῆ*, Skr. *durmanasam*; *αἰδῶ* from *\*αἰδοσα*. The Sanskrit ending *-am* of the consonantal stems had the *-m* from the accusative of the vocalic

stems ; and similarly *-av* for *-a* in the Cyprian dialect and also occasionally in other dialects.

§ 301. The case-ending of the nom. voc. and acc. neuter was *-m* in the *o*-declension, as ζυγόν, Skr. *yugám*, Lat. *jugum*, *yoke* (§ 326). All other neuters had the bare stem-ending, as ἵδρι, cp. Skr. *vári*, *water*; ἄστν, ἡδύ, cp. Skr. *páśu*, Lat. *pecu*, Goth. *faíhu*, *cattle*; κῆρ, γάλα, μέλι, from \*κηρδ, \*γαλακτ, \*μελιτ; ὄνομα, Skr. *nāma*, Lat. *nōmen*, *name*; φέρον from \*φεροντ, cp. Skr. *bhárat* (§ 353), *bearing*; and similarly *δαμνάν*, *δεικνύν*, *διδόν*, *τιθέν*, &c., *χαρίεν*; *ἀπάτορ*; *γένος*, Skr. *jánaḥ*, Lat. *genus*, *race*; *δυσμενές*, Skr. *durmanah*.

§ 302. The original genitive case-ending was *-es*, *-os* and *-s*, which stand in ablaut relation to each other. *-s* occurred after vowels and *-es*, *-os* after consonants. *-es* was originally used when it had the chief accent of the word, and *-os* when the accent preceded the case-ending. Latin generalized the former and Greek the latter. It cannot be determined whether the Sanskrit ending *-ah* represents *-es* or *-os* because *e* and *o* regularly fell together in *a*. Examples are: *χώρās*, *σκιās*, *τίμης*, cp. Skr. *áśvāy-āḥ*, *of a mare*, Goth. *gibōs*, *of a gift*, Lat. *familiās*, all from *-ās*; Skr. *agnēḥ*, *of fire*, Goth. *anstáis*, from *-eīs* or *oīs*; Skr. *sūnóḥ*, Goth. *sunáus*, *of a son*, from *-eūs* or *-oūs*; on the Greek forms, see §§ 328, 331; *κίός* from \*κιγος, cp. Skr. *dhiyáḥ*; *ἰχθύος* from \*ἰχθυφος, cp. Skr. *tanúvah*; Ion. *γουνός*, *δουρός* from \*γουνφος, \*δουρφος, cp. Skr. *paśváḥ*, *of cattle*; Ion. *νηός*, Att. *νεώς*, Skr. *nāváḥ*, Lat. *nāvis*; *Διός*, Skr. *diváḥ*; *βοός*, Vedic *gávaḥ*; *ποδός*, Skr. *padáḥ*, Lat. *pedis*; *ποιμένος*, *δαίμονος*, cp. Skr. *rájñah*; *φέροντος*, Skr. *bhárataḥ*, Lat. *ferentis*; *πατρός*, *δώτορος*, Lat. *patris*, *datōris*; *γένεος*, *γένους*, Skr. *jánasaḥ*, Lat. *generis*; *δυσμενέος*, *-οῦς*, Skr. *durmanasaḥ*; *αἰδοῦς* from \*αἰδοσος; *ἥπατος*.

The genitive of the *o*-stems was formed after the analogy

of the genitive of the demonstrative pronoun in prim. Indo-Germanic, cp. Hom. *λύκοιο* = Skr. *vṛkasya*, beside *τοῖο*, Skr. *tásya*, Indg. \**tosjo*; and also prim. Greek \**φλυκοσο* = Att. Ion. and mild Dor. *λύκου*, Boeot. Lesb. and severe Dor. *λύκω*, beside *τοῦ*, *τῶ* from Indg. \**toso*.

§ 303. The ablative case-ending was originally the same as that of the genitive in all stems, but during the prim. Indg. period special case-endings for the ablative (*-ēd*, *-ōd*) and the genitive (*-sjo*) of the *o*-stems were formed after the analogy of the pronominal endings (§ 408). This ablative case-ending was preserved in Sanskrit and Old Latin, as *vṛkāt* : nom. *vṛkaḥ*, *yugāt* : nom. *yugám*, O. Lat. *Gnaivōd*, *meritōd*, inscrip. *facilumed* = *facillumēd*. But it disappeared in Greek except in isolated forms, as Delph. *φοίκω*, *domo*, Cret. *τῶ-δε*, *hinc*, *ὦ*, *ὅπω*, *unde*. Its disappearance was doubtless due to the analogy of the other declensions in which the genitive and ablative were alike in form. The adverbial particle *-θεν*, which originally belonged to words like *πόθεν*, came to be used to express the ablative, as *οἴκοθεν*, *οὐρανόθεν*.

§ 304. The dative case-ending was originally *-ai* for all stems. In the *ā*- and *o*-declensions it became contracted in prim. Indo-Germanic with the stem-ending whereby *-ā + ai* became *-āi* and *-o + ai* became *-ōi*, as *χώρα*, *τιμῆ*, Skr. *áśvāy-āi*, Lat. *equae*, Goth. *gibái*; *θεῶ*, *λύκω*, Skr. *vṛkāy-a*, Lat. *lupō* (O. Lat. *populoi*). In the other stems the old dative was supplanted by the locative in Greek, but the original dative was preserved in isolated forms, such as inf. Att. *δοῦναι*, Cypr. *δοφεναι* = Skr. *dāvánē*, Hom. *ἴδμεναι* = Skr. *vidmánē*, adv. *χαμαί*, Lat. *humī*. It was regularly preserved in Sanskrit and Latin, as *agnáy-ē*, *hostī*; *sūn-ávē*, *fructuī*; *gávē*, *bovī*; *nāvé*, *nāvī*; *padé*, *pedī*; *rājñē*, *hominī*; *nāmnē*, *nōminī*; *bháratē*, *ferentī*; *pitré*, *dātré*, *patri*, *datōrī*; *jánasē*, *generī*.

§ 305. The locative case-ending was *-i* in the *ā*-, *o*-, *i*-, *ū*-

and consonantal-stems (but see below). In the *i*- and *u*-stems the locative ended in *-ēi* (*-ē*, § 63) and *-ēu* which were the lengthened form of the full stems. The *n*-, *r*- and *s*-stems had *-i* beside no special case-ending. Forms of the latter have only been preserved in isolated forms, as *αἰέν*, *αἰές*, inf. *δόμεν*, *ἴδμεν*; Skr. *mūrdhán*, *on the head*.

In the *ā*- and *o*-declensions the *-i* combined with the stem-endings to form the diphthongs *-āi* and *-oi*, *-ēi* beside *-oi* and *-ei*. The locative of the *ā*-declension thus fell together with the original dative. In Greek the locative of the *o*-declension only occurs in isolated forms. Examples are: *χώρα*, *θεᾶ*, *τιμῆ*, Lat. *Rōmae*, O.Lat. *Rōmai*; *Ἰσθμοῖ* and in adverbs like *ποῖ*, *πεῖ*, *ἐκεῖ* beside *οἴκοι*, *οἴκει*, cp. Skr. *vṛkē*, Lat. *bellī*, *domī*. *κί* from *\*κij*, Skr. *dhiyī*; *ἰχθύῖ* from *\*ἰχθυφι*, Skr. *tanūvi*; Att. Ion. *νηῖ*, Skr. *nāvi*, Lat. *nāve*; *βασιλῆι* from *\*βασιληφι*; *βοῖ*, Skr. *gāvi*, Lat. *bove*; *ποδί*, Skr. *padī*, Lat. *pede*; *ποιμένι*, *δαίμονι*, Skr. *rājani*, Lat. *homine*; *φέροντι*, Skr. *bhārati*, Lat. *ferente*; *πατέρι*, Skr. *pitāri*, Lat. *patre*; *γένει*, Skr. *jānasi*, Lat. *genere*; *δυσμενεῖ*, Skr. *durmanasi*; *αἰδοῖ* from *\*αἰδοσι*. The adverbial particle *-θι* also came to be used to express the locative, as *ἄλλοθι*, *οὐρανόθι*.

The locative of the *i*- and *u*-stems was remodelled in prim. Greek after the analogy of the consonantal and other stems where *-i* was regular (§§ 328, 331). The regular forms were preserved in Sanskrit, Latin and Gothic, as Vedic *agnā* (see above), Lat. *hostī*, Goth. *anstái*; Skr. *sūnāu*, Goth. *sunáu*, Lat. *senatū*, *fructū*. In the *i*-stems the dative and locative regularly fell together in Latin.

§ 306. The instrumental was not preserved in Greek except in isolated forms. It is doubtful what was its original ending in most of the stems, because there is no clear agreement in its formation among the languages which have an instrumental in historic times. In the *ā*-, *o*-, *i*- and *u*-declensions it ended in *-ā*, *-ō* (*-ē*), *-ī* and *-ū*, as Vedic *áśvā*,

with a mare; *dhārā*, with the stream; *κρυφή*, *λάθρα*, -η; Vedic *vṛkā*, Goth. *wulfa*, Lith. *vilkù*, *πόποτε*, Hom. *ἐπισχερώ*, *ἀμαρτηῆ*. In the other stems it probably ended in **-a** beside **-bhi** and **-mi** which resulted from the endings of three originally different cases being used for the instrumental. The **-bhi** is the same as the instrumental plural ending in Sanskrit **-bhi-h**. In Greek it only occurs in the epic language of Homer and his imitators, and there mostly with the **ā**- and **o**-stems, rarely with other stems. In Homer it had more frequently a plural than a singular meaning, and it was used to express both the instrumental, ablative and locative, seldom the genitive and dative. The **-mi** occurs in the Baltic-Slavonic languages in the singular and the plural and in the Germanic languages only in the latter. The **-a** occurs in adverbs like *ἄμα*, *παρά*, *πεδά*, and possibly also in the Latin consonantal stems, **homine**, **patre**, &c., but as the locative (**-i**) and instrumental (**-a**) endings regularly fell together, the **-e** can represent either case. Examples of **-bhi** are: *ἀγέληφι*, *βίηφι(ν)*, *κεφαλήφι(ν)*; *θεόφι(ν)*, *ζυγόφι(ν)*, *Ἰλιόφι(ν)*, *ἴφι*, *ναῦφι(ν)*, *ἐρέβεισφι*, *ὄρεισφι(ν)*. The **-ν** was of the same origin as in the locative plural (§ 316).

#### DUAL.

§ 307. For an account of the original case-forms and uses of the dual in the parent Indg. language see § 294.

§ 308. The nominative, vocative and accusative of the masculine and feminine was formed differently in the different stems. In the **ā**-stems the ending was **-ai**, as Skr. *áśvē*, on Gr. *χώρα*, *τιμά*, see § 321. In the **o**-stems it was **-ōu** beside **-ō**, Greek generalized the latter, as *λύκω*, Lith. *vilkù*, Vedic *vṛkāu* beside *vṛkā*. In Sanskrit the **-āu**, **-ā** was extended by analogy to the **ī**-, **ū**- and all consonantal-stems. In the **i**- and **u**-stems it was **-ī** and **-ū**, as Skr. *agní*, *sūnú*, on Gr. *πόλλε*, *πόλλει*, see § 328, and on *πήχεε*, *πήχει*,

§ 331. In the *ī*-, *ū*-, diphthongal and consonantal-stems Greek has *-ε* which seems to be the original case-ending in all these stems, but it is not certain because just as the *-āu*, *-ā* of the *o*-stems was extended by analogy to the *ī*-, *ū*- and consonantal-stems in Sanskrit, so also the Greek *-ε* may be a new formation after the relation of the old nom. plural ending *\*-ωσ* (§ 324) : to the nom. plural ending *-εσ* so to the dual ending *-ω* an *-ε* may have been formed. Examples are : *κίε, ἰχθύε, νῆε, βόε, πόδε, ποιμένε, φέροντε, χαρίεντε, πατέρε, δυσμενέε, -εῖ*.

§ 309. The nominative, vocative and accusative neuter ending was *-oi* in the *o*-stems, as Vedic *yugé*, on Gr. *ζυγώ*, see § 326. In all the other stems the ending was probably *-ī*, which was supplanted by the *-ε* of the masculine and feminine in Greek, as Skr. *akṣī, nāmanī, jānasī = ὄσσε, ὀνόματε, γένεε*.

§ 310. It is impossible to determine what was the original case-ending of the genitive and locative in the various declensions because there is no agreement among the languages which have preserved the dual in historic times. Some scholars assume that it was *-oūs* = the Skr. *-ōḥ* in *áśvayōḥ, vṛkayōḥ, agnyōḥ, sūnōḥ, padōḥ, rājñōḥ, pitrōḥ, &c.* The dative, ablative and instrumental ending contained the element *-bh-* (Skr. *-bhyām*) beside *-m-*, but what the Indg. vocalism was it is impossible to determine. In Greek Hom. *-οιυ*, Att. Ion. &c. *-οιυ* became used in all stems except the *ā*-stems to express the functions of all the five cases. On the origin of *-οιυ*, *-οιυ* and *-αιυ*, *-αιυ*, see §§ 321, 325.

#### PLURAL.

§ 311. The separate languages show that the nominative was used for the vocative already in prim. Indo-Germanic. The original case-ending of the masculine and feminine nominative and vocative was *-es* in all stems. The *-es*



became contracted with the stem-endings of the *ā*- and *o*-stems in prim. Indg. whereby *-ā + es* became *-ās* and *-o + es* became *-ōs*, as Skr. *áśvāḥ*, Osc. *sciftas*, *scriptae*, Umbr. *urtas*, *ortae*, Goth. *gibōs*. Skr. *vṛkāḥ*, Goth. *wulfōs*, Osc. *Núvlanús*, *Nolani*. On the endings in Greek and Latin see §§ 321, 325. *πόλεις*, Skr. *agnáyāḥ*, Lat. *hostēs*, Goth. *ansteis*, all from *-ejes*; Ion. *πήχες*, Att. *πήχεις*, Skr. *sūnávaḥ*, from *-ewes*; *κίες*, Skr. *dhíyāḥ*, from *-ijes*; *ἰχθύες*, Skr. *tanúvaḥ*, from *-uwes*; Dor. *νᾶες*, Att. Ion. *νῆες*, Skr. *návāḥ*; *βόες*, Skr. *gávāḥ*; *πόδες*, Skr. *pádāḥ*; *ποιμένες*, Skr. *rājānaḥ*; *φέροντες*, Skr. *bhárantaḥ*; *πατέρες*, Skr. *pitáraḥ*; *δυσμενέες*, *-εῖς*, Skr. *durmanasaḥ*.

§ 312. The case-ending of the masculine and feminine accusative was *-ns* or *-ṅs* (= *-as*, Skr. *-aḥ*, Lat. *-ēs*, Goth. *-uns*) according as the stem ended in a vowel or a consonant, as Cret. *τιμᾶνς*, Att. Ion. Dor. *τιμᾶς*, Lat. *equās*; on the endings in Skr. *áśvāḥ* and Goth. *gibōs* see § 321; Cret. *λύκωνς*, Att. Ion. and mild Dor. *-ους*, Boeot. and severe Dor. *-ως*, Lesb. *-οις*, Lat. *lupōs*, Goth. *wulfans*; Cret. *πόλινς*, Ion. *πόλῖς*, Lat. *hostīs*, Goth. *anstins*; Cret. *υῖυνς*, Goth. *sununs*, Lat. *fructūs*. *κίας*, Skr. *dhíyāḥ*; *ἰχθύας*, Skr. *tanúvaḥ*; Ion. *νῆας*, Skr. *návāḥ*, Lat. *nāvēs*; *βόας*, Lat. *bovēs*; *πόδας*, Skr. *padāḥ*, Lat. *pedēs*; *ποιμένας*, Skr. *rājñāḥ*, Lat. *hominēs*; *φέροντας*, Skr. *bhárataḥ*, Lat. *ferentēs*; *πατέρας*, Lat. *patrēs*, cp. Goth. *brōþrunς*, *brothers*; *δυσμενέας*, Skr. *durmanasaḥ*. The Cret. dialect had *-ανς* after the analogy of the vocalic stems.

§ 313. The ending of the nominative, vocative and accusative neuter was *-ā* in the *o*-stems, *-ī* in the *i*-stems, *-ū* in the *u*-stems, and *ə* (= *-a*, Skr. *-i*) in the consonantal stems, see § 295. Vedic *yugā*, Lat. *juga*, Goth. *juka*, *yokes*, on *ζυγά*, see § 326; Vedic *trī*, *tria*, on *τρία*, *ἴδρια*, see § 329; Vedic *purū*, *much*, *many*, on *ἄσθη*, *ἡδέα*, see § 333. *ὀνόματα*, Skr. *nāmāni*; *φέροντα*, Skr. *bháranti*.

§ 314. The original genitive ending was probably **-ãm**, a contraction of **-ã + õm̃**, in the **ã**-stems, and **-õm̃** (= **-õṽ**, Skr. **-ãm**, Lat. **-om**, **-um**) in all other stems. In prim. Greek and Latin the genitive of the **ã**-stems was remodelled after the analogy of the pronouns, cp. Hom. *τάων* from *\*τάσων*, Skr. *tásām*, Lat. *is-tārum*, Indg. *\*tásõm*, whence Hom. (Aeolic) *θεάων*, Boeot. *-άων*, Ion. *-έων* from older *-ήων*, Att. *-ὠν*, Dor. *-άν* Lesb. *-āv*, Lat. *equārum*. *λύκων*, *θεῶν*, O.Lat. **Rōmānom**, **deum**, class. Lat. **lupōrum** with pronominal ending; *πολίων*, *τριῶν*, Lat. **hostium**, **trium**; Lat. **fructuom**, **-uum**, **-um**, on *πήχεων*, see § 331; *κιῶν*, Skr. *dhiyām*; *ιχθύων*; Hom. *νηῶν*, Skr. *nāvām*; *βοῶν*, Skr. *gāvām*, Lat. **bovom**, **boum**; *ποδῶν*, Skr. **padām**, Lat. **pedum**; *ποιμένων*, Skr. *rājñām*, Lat. **hominum**; *φερόντων*, Skr. *bhāratām*; *πατρῶν*, Lat. **patrum**; *γενέων*, *γενῶν*, Skr. *jānasām*, Lat. **generum**; *δυσμενέων*, *-ῶν*, Skr. **durmanasām**.

§ 315. The dative and ablative ending contained the element **-bh-** (Skr. **-bhyaḥ**, Lat. **-bos**, **-bus**) beside **-m-**, but it is uncertain what was the Indg. vocalism.

§ 316. It is doubtful what was the original case-ending of the locative. Sanskrit and Lithuanian (dial.) has **-su** and Old Slavonic **-chŭ = su**. Greek has **-si**. Most scholars assume that **-su** is the original ending and that **-si** was a new formation with the substitution of **-i** for **-u** after the analogy of the **-i** of the locative singular. It is however possible that the original ending was simply **-s** and that **-u** and **-i** were deictic locative particles, the latter of which became generalized in Greek and the former in the other languages. In the vocalic and **n-** and **r-**stems the intervocalic **-s-** would regularly have disappeared in Greek (§ 213, 2), but it was restored again after the analogy of stems ending in an explosive or **-s**, as in *ποσσί*, *ποσί*, Skr. *patsú*, *φύλαξι*, *φλεψί*, *γένεσσι*, *γένεσι*, Skr. *jānaḥsu*. Such new formations are: *θύρᾱσι* (§ 321), Skr. *áśvāsu*;

λύκοισι, Skr. *vṛkēṣu*; τρισί, Skr. *triṣú*; πήχεσι, Skr. *sūnúṣu*; κισί, Skr. *dhiṣú*; ἰχθύσι, Skr. *tanúṣu*; ναυσί, Skr. *nāuṣú*; βουσί, Skr. *gōṣu*; ποιμέσι, Skr. *rājasu*; πατράσι, Skr. *pitṛṣu*. In the Aeolic dialect including Homer the ending *-εσσι* later *-εσι* of the *s*-stems was extended by analogy to all stems except the *ā*-, *jā*- and *o*-stems, as *πολίεσσι*, *ταχέεσσι*, *συέεσσι*, *νηέεσσι*, *βούεσσι*, *βασιλήεσσι*, *ποδέεσσι*, *ἀγώνεσσι*, *πάντεσσι*, *ἀνδρεσσι*, *θυγατέρεσσι*. The ending *-σιν* had its *-ν* from pronouns like *ἡμίν*, *ἡμῖν*, Lesb. *ἄμμιν(ν)*; *ὑμίν*, *ὑμῖν*, Lesb. *ὑμμιν(ν)*.

§ 317. The case-ending of the instrumental was *-bhis* (Skr. *-bhiḥ*) beside *-mīs* except in the *o*-stems which had *-ōīs*, as *θεοῖς*, *λύκοις*, Skr. *vṛkāiḥ*, Lat. *lupīs*, Lith. *vilkaiš*. On the *-bh*- and *-m*- forms, see the instrumental singular (§ 306). And on *χώραις*, *σκιαῖς*, see § 321.

§ 318. Few Indg. languages preserved the eight cases described in the foregoing paragraphs. They were all preserved in Sanskrit as also in the Baltic-Slavonic languages with the exception of the ablative. Through syncretism it arose in Greek that in the place of several case-forms with different meanings one case-form became used which united the functions of these. Thus the case which we call the dative in Greek grammar embraces both a dative, locative and instrumental meaning. But the dative forms of Greek grammar were originally partly old dative forms as *λύκῳ*, partly locative forms, as *ποδί*, *ποσί*, and partly instrumental forms as *λύκοις*. Hence it arose in Greek that certain dative forms had at the same time the functions of the locative and instrumental; certain locative forms at the same time the functions of the dative and instrumental; and certain instrumental forms at the same time the functions of the dative and locative. Also what is called the genitive and dative dual in Greek grammar was used to express the functions of both the genitive, locative, dative, ablative, and instrumental. By syncretism it also

arose in Greek that the genitive acquired both the functions of the old genitive and ablative. And similarly the case, which we call the ablative singular in Latin grammar, embraces both an ablative, locative and instrumental meaning. But the Latin ablative forms were originally partly old ablative forms, as *equō(d)*, and partly old locative and instrumental forms, as *pede, patre, homine*. And in like manner what is called the dative singular in Gothic is originally the instrumental in the *a*- and masculine *i*-stems, the locative in the feminine *i*-, the *u*-, and all consonantal-stems; and the dative only in the *ō*-stems. And what is called the dative plural is in form the instrumental.

§ 319. In the declension of nouns and adjectives it is not only necessary to take into consideration the case-endings, but also the stem-endings which often formed an important factor especially in the declension of the *i*-, *u*- and diphthongal stems as well as in most of the consonantal stems. These classes of nouns and adjectives originally contained various grades of ablaut either in the root-syllable, as in the monosyllabic consonantal stems and in some of the diphthongal stems, which contained no suffix or formative element, cp. *πῶς*, Lat. *pēs* : *ποδ-*, *ped-* (§ 342); nom. \**djéus*, *Ζεύς* : loc. \**djéwi*, Vedic *dyávi* : gen. \**diwós*, Skr. *diváh* (§ 337); or in the stem-ending, as in the *i*-, *u*-, *n*-, *r*- and *s*-stems, cp. nom. sing. *-i-s*, *-u-s* : nom. pl. *-ej-es*, *-ew-es* : loc. sing. *-ēi*, *-ei*, *-ēu*, *-eu* (§§ 328, 331); *ποι-μήν* : *ποι-μέν-α* : \**ποι-μν-ος*, \**ποι-μα-σι* (§ 345); *πα-τήρ* : *πα-τέρ-α* : *πα-τρ-ός*, *πα-τρά-σι* (§ 360); *γένος*, Hom. *ιδρόα* from \**ιδρόσ-α* : *γένεσ-* : *ιδρώς*. According as the stem-ending in the diphthongal and consonantal stems originally contained the strong or weak grade of ablaut, the various cases are divided into strong or weak case-forms. The strong case-forms were: the nominative, vocative and accusative singular and dual, the locative singular and nominative plural, and possibly also the accusative plural (§ 345).

All the rest were weak case-forms. This original distinction between strong and weak case-forms was most faithfully preserved in Sanskrit, but in most of the other Indg. languages it became considerably obliterated through new formations caused by levelling out one or other of the stem-forms, cp. the *n*-declension in Greek (§ 345).

## A. THE VOCALIC DECLENSION

### I. THE *ā*-DECLENSION.

§ 320. The *ā*-declension originally contained only feminine nouns as in Sanskrit and the Germanic languages, but in Greek, Latin and the Baltic-Slavonic languages a certain number of original abstract nouns acquired a concrete meaning and then became masculine (§ 323). The *ā*-declension is divided into *ā*-stems and *jā*-stems. On the change of *ā* to *ē* in Attic and Ionic see § 51.

#### § 321. a. FEMININE *ā*-STEMS.

		<i>Singular.</i>			
		Indg.			
Nom.	- <i>ā</i>	χώρ <i>ā</i>	σκιά	τίμη	
Voc.	- <i>ā</i>	χώρ <i>ā</i>	σκιά	τίμη	
Acc.	- <i>ām</i>	χώρ <i>āν</i>	σκιά <i>ν</i>	τίμη <i>ν</i>	
Gen.	- <i>ās</i>	χώρ <i>ās</i>	σκιά <i>ς</i>	τίμη <i>ς</i>	
Dat.	- <i>ai</i>	χώρ <i>αι</i>	σκιά <i>ι</i>	τίμη <i>ι</i>	
		<i>Dual.</i>			
Nom. Voc. Acc.	- <i>ai</i>	χώρ <i>ā</i>	σκιά	τίμη <i>ά</i>	
Gen. Dat.	-?	χώρ <i>αιν</i>	σκιά <i>ιν</i>	τίμη <i>αιν</i>	
		<i>Plural.</i>			
Nom. Voc.	- <i>ās</i>	χώρ <i>αι</i>	σκιά <i>ί</i>	τίμη <i>αί</i>	
Acc.	- <i>ans</i>	χώρ <i>ās</i>	σκιά <i>ς</i>	τίμη <i>ās</i>	
Gen.	- <i>ām</i>	χώρ <i>ων</i>	σκιά <i>ων</i>	τίμη <i>ων</i>	
Dat.	- <i>asu</i> (loc.)	χώρ <i>αις</i>	σκιά <i>ις</i>	τίμη <i>αίς</i>	

*Singular*: The  $-\bar{a}$ ,  $-\eta$  corresponds to the nom. endings in Skr.  $\acute{a}\acute{s}\bar{v}\bar{a}$ , *mare*, Lat. *equa*; Goth. *giba*, *gift*, Lith. *rankà*, O.Slav. *raċa*, *hand*, with regular shortening of the  $-\bar{a}$  in all these languages except Sanskrit.

$-\bar{a}$ , the original voc. ending was preserved in Homeric  $\nu\acute{\upsilon}\mu\phi\alpha$  and in Homeric masculines like  $\acute{\alpha}\tau\tau\alpha$ ,  $\pi\acute{\alpha}\pi\pi\alpha$ ,  $\sigma\upsilon\beta\acute{\omega}\tau\alpha$ , Att.  $\delta\acute{\epsilon}\sigma\pi\omicron\tau\alpha$ ,  $\tau\omicron\xi\acute{\omicron}\tau\alpha$ ,  $\Pi\acute{\epsilon}\rho\sigma\alpha$ , and in O.Slav. *raċo* beside nom. *raċa*. In Greek and Goth. the nom. came to be used for the voc. already in the prehistoric period of these languages, probably owing to the fact that these two cases were alike in the plural in the parent Indg. language. The regular voc. would have been \**gif* in Gothic. As final Indg.  $-\bar{a}$  and  $-\mathbf{a}$  regularly fell together in Lat. and Lith. it cannot be determined whether *equa*, *rankà* represent the original voc. or whether they are the nom. used for the vocative.

The  $-\bar{a}\nu$ ,  $-\eta\nu$  (§ 141) regularly corresponds to the acc. endings in Skr.  $\acute{a}\acute{s}\bar{v}\bar{a}\mathbf{m}$ , Lat. *equam*, Goth. *giba*, Lith. *rañċa*, O.Slav. *raċa*.

The  $-\bar{a}s$ ,  $-\hat{a}s$ ,  $-\hat{\eta}s$  regularly corresponds to the gen. endings in Skr.  $\acute{a}\acute{s}\bar{v}\bar{a}\mathbf{y}\bar{a}\mathbf{h}$ , O.Lat. *familiās*, *fortunās*, *viās*, &c., Goth. *gibōs*, Lith. *rañċos*; Arcad.  $\gamma\alpha\upsilon$ ,  $\zeta\bar{a}\mu\acute{\iota}\bar{a}\upsilon$ ,  $\omicron\acute{\iota}\kappa\acute{\iota}\bar{a}\upsilon$ , &c., beside  $-\bar{a}s$ ,  $-\hat{a}s$ , with  $-\bar{a}\nu$  from the masc.  $\bar{a}$ -stems (§ 323).

The  $-\mathbf{a}$ ,  $-\hat{a}$ ,  $-\hat{\eta}$  = Indg.  $-\bar{a}\mathbf{i}$  and the dat. endings in Skr.  $\acute{a}\acute{s}\bar{v}\bar{a}\mathbf{y}\bar{a}\mathbf{i}$ , Lat. *equae*, Goth. *gibái*, Lith. *rañċai*.

By contraction of the original case-endings with the stem-vowel, the dat. ( $-\bar{a} + \mathbf{ai}$ ) and loc. ( $-\bar{a} + \mathbf{i}$ ) fell together in  $-\bar{a}\mathbf{i}$  in the parent Indg. language (§ 79). The long diphthong  $-\bar{a}\mathbf{i}$  was shortened to  $-\mathbf{ai}$  before consonants in prim. Greek (§ 63), as in  $\mu\epsilon\sigma\alpha\mathbf{i}\text{-}\pi\acute{\omicron}\lambda\acute{\iota}\omicron\mathbf{s}$ ,  $\Theta\eta\beta\alpha\mathbf{i}\text{-}$ ,  $\pi\alpha\lambda\alpha\mathbf{i}\text{-}$ ,  $\chi\alpha\mu\alpha\mathbf{i}\text{-}\gamma\epsilon\nu\acute{\eta}\mathbf{s}$ . In some dialects, e.g. the Arcadian, Boeotian, Elean, the  $-\mathbf{ai}$  became generalized for the dat. and loc. (cp. § 325), whereas the other dialects, with the exception of a few isolated forms, generalized the antevocalic or pausa form for both cases.

The original ending of the instrumental was  $\bar{a}$  which was preserved in Vedic  $\acute{a}\check{s}v\bar{a}$ . In Greek the case-form disappeared except in adverbs like Att.  $\pi\eta$ ,  $\tau\acute{\alpha}\upsilon\tau\eta$ , Dor.  $\tau\alpha\upsilon\tau\acute{\alpha}$ , Att.  $\kappa\rho\upsilon\phi\eta$ , Dor.  $\kappa\rho\upsilon\phi\acute{\alpha}$ , Att.  $\lambda\acute{\alpha}\theta\rho\bar{\alpha}$ , Ion.  $\lambda\acute{\alpha}\theta\rho\eta$ , Lesb.  $\acute{\alpha}\lambda\lambda\bar{\alpha}$ ,  $\acute{\omicron}\pi\pi\bar{\alpha}$ .

*Dual*: The original ending of the nom. voc. and acc. was  $\bar{a}i$  as in Skr.  $\acute{a}\check{s}v\bar{e}$  = Indg.  $*\acute{e}k\bar{w}ai$ . Some scholars assume that the Gr. nom. pl. represents the old dual form, but it is highly improbable that the old dual should have become used for the plural and that then a new dual was created. The ending  $\bar{a}$  is doubtless a new formation because it does not correspond to the dual ending in any of the other Indg. languages. It must also have come into existence in late prehistoric Greek, otherwise it would have become  $-\eta$  in Ionic and partly also in Attic (§ 51). The nom. voc. and acc. dual of this declension does not occur in Homer except in a few masculines like  $\acute{\Lambda}\tau\rho\acute{\epsilon}i\delta\bar{\alpha}$ ,  $\acute{\omega}\kappa\upsilon\pi\acute{\epsilon}\tau\bar{\alpha}$ . It is probable that the ending  $\bar{a}$  was an analogical formation due to the influence of the  $\bar{\omega}$  of the  $\sigma$ -declension, cp. the similar new formations in the endings  $\bar{a}iv$ ,  $\bar{a}i$ ,  $\bar{a}is$ . The fact that the Gr.  $\sigma$ -declension contained both masculine and feminine nouns (§ 324) might have helped to bring about the new formations in the dual and in the nom. and dat. plural.

It is quite uncertain what were the original endings of the gen. dat. loc. abl. and instr. cases, as there is no agreement among the Aryan, Greek, Irish and Baltic-Slavonic languages which preserved the dual in historic times. The Greek gen. and dat. ending  $\bar{a}iv$ ,  $\bar{a}iuv$  was a new formation made after the analogy of  $\bar{\omega}iv$ ,  $\bar{\omega}iuv$  of the  $\sigma$ -declension.

*Plural*: The Indg. ending of the nom. and voc. pl. was  $\bar{a}s$  from older  $\bar{a} + es$ , which regularly corresponds to the endings in Skr.  $\acute{a}\check{s}v\bar{a}ḥ$ , Oscan *scriptas*, *scriptae*, Umbrian *urtas*, *ortae*, Goth. *gibōs*, Lith. *rañkos*. The Gr. nom.

pl. was remodelled after the analogy of the *-oi* of the *o*-declension, cp. the similar process in Lat. *equae* from older *\*equai* beside *equī* from older *\*equoi*.

*-āns* the original ending of the acc. corresponds to the endings in Att. Ion. Dor. *τιμάς*, Cret. *τιμάνς*, Lesb. *-αις* (§ 153), Lat. *equās*, Osc. *viāss*, *viās*, Lith. *rankàs*. *-āns* was shortened to *-ans* in the prehistoric period of these languages and then became *-ās* in Att. Ion. Dor. Lat. Osc. and Lith. through the intermediate stage of a long nasal vowel. This change of *-ans* to *-ās* was later than that of Indg. *ā* to *η* in Att. and Ion., otherwise we should have *\*τιμής* in these dialects. The *n* in *-ans* regularly disappeared in prim. Greek before consonants without lengthening of the preceding vowel, as in *Ἀθήναζε* from *\*Ἀθάνανζ-δε*, *θύραζε* (§ 153). Some scholars regard *-ās* as the original ending of the acc. in order to account for Skr. *áśvāḥ*, Goth. *gibōs*, but it is far more reasonable to assume that the Skr. and Goth. forms are the nom. used for the acc. than to suppose that *-āns* was a new formation in the other languages with *n* from the *o*-, *i*- and *u*-declensions.

The original Indg. gen. ending was probably *-ām*, a contraction of older *-ā + ōm̄*. Skr. *áśvā-nām* for *\*áśvām* was a new formation with *-nām* from the *n*-declension (§ 345). In prim. Greek and Italic the gen. was remodelled after the analogy of the pronominal declension, cp. the Homeric fem. gen. pl. *τᾶων* from *\*τᾶσων* = Skr. *tāsām*, Lat. *is-tārum* = Indg. *\*tāsōm*, whence Hom. (Aeolic) *θεᾶων*, Boeot. *-ᾶων*, Ion. *-έων* from older *-ήων* (§ 72), Att. *-ών*, Dor. *-ᾶν*, Lesb. *-ᾶν* (§ 80). And similarly Lat. *equārum*, Osc. *-azum*, Umbr. *-arum* from *\*-āzōm* older *\*-āsōm*.

It is uncertain what was the ending of the loc. of this declension in the parent Indg. language. Skr. has *-āsu* (*áśvāsu*), Lith. *-osu* (*rañkosu*), and Gr. *-ᾶσι*, *-ησι*; *-ασι*, *-ησι*; and *-αισι*, *-αις* (Hom. *-ης*). It is possible that the



original ending was *-āsu* and that it was changed to *-āsi* in early prim. Greek through the influence of the *-i* in the loc. singular (§ 305). This *-āsi* would regularly have become *-η* in Ion., *-η, -α* in Att. and *-α* in the other dialects (§ 213, 2), but no such endings have been preserved in the historic period of any of the dialects. After the law had ceased to operate whereby intervocalic *-σ-* disappeared, a new loc. was formed by adding *-σι* from the loc. of the consonantal stems direct to the stem, as in the inscriptional forms Ion. *δεσπώνησι*, Att. *δίκησι, δραχμήσι, ταμῖάσι*, preserved later only in adverbial forms like *Ἀθήνησι, Θήβησι, θύρᾱσι, ὄρᾱσι*. It is generally assumed that the endings Ion. *-ησι*, Att. *-ησι, -ασι* were new formations after the analogy of *-οισι* of the *o*-declension, but it is also possible that they really represent double loc. endings formed by adding *-σι* to *-η, -α* (see above). The endings *-ησι, -ησι* (Att. also *-āσι, -ασι*) disappeared on Att. inscriptions after about 420 B. C. and on Ion. inscriptions after about the beginning of the fourth century B. C., and their place was taken by *-αις*. The endings *-αις* (Hom. *-ης*), *-αισι* were formed on analogy with the *-οις, -οισι* of the *o*-declension. Cp. the similar formation in Lat. *-īs*, Osc. *-ais*.

#### b. *jā*-STEMS.

§ 322. In Greek the *jā*-stems only differ from the declension of the *ā*-stems in the nom. voc. and acc. singular. The suffix *·jā·* was chiefly used in the parent Indg. language to form feminine nouns and adjectives from the masculine of *u*- and consonant-stems, as *ἡδεῖα* from *\*σFādεFja* : *ἡδύς* = Skr. *svādvī* : *svādúh*, *sweet*; *τέκταινα* from *\*τεκτανja*, older *\*τεκτηja* : *τέκτων* = Skr. *takṣṇī* : *tákṣan*-, *carpenter*; *δότειρα* from *\*δοτερja* : *δοτήρ* = Skr. *dātrī* : *dātár*-, *giver*; *φέρουσα* from *\*φεροντja* : *φέρωντ*- = Skr. *bhārantī* : *bhārant*-, *bearing*; and similarly *βαρεῖα, γλυκεῖα, πλατεῖα*;

δέσποινα, θεράπεινα, λέαινα, μέλαινα, τέρεινα; γενέτειρα, μοῖρα, πείρα, σφαῖρα; δεικνύσα, διδοῦσα, τιθείσα, ἰστᾶσα, λύσᾶσα, μούσα, πᾶσα, χαρίεσσα. Pf. part. act. πεφυνῖα from \*πεφυνσja : πεφυνῶς = Skr. *babhūnūṣī* : *babhūnṵs-* for older \**-vās-*, *having been*; εἰδυῖα, Hom. ἰδυῖα : εἰδῶς = Skr. *vidūṣī* : *vidvās-*, *knowing*. γλῶσσα from \*γλωχja, δόξα from \*δοκja, θῆσσα from \*θητja, ρίζα from \*Φριδja, φύζα from \*φυγja, ἄμαξα, δίψα, θάλασσα, σχίζα. The *j* disappeared after a consonant + nasal (§ 130), as ἔχιδνα, μέριμνα, πτέρνα, τόλμα. Some scholars assume that these words had simply the ending *-ə* in prim. Indg., whilst others regard them as being new formations from original stems in *-ā*. πότνια : πόσις = Skr. *pātnī* : *pātih*, *master, husband*; ψάλτρια, μία from \*σμία.

The nom. sing. originally ended in *-ī* beside *-(i)jə*. The reason for this difference is unknown. The various Indg. languages generalized one or other of the two forms in prehistoric times. The former occurs in Sanskrit, Gothic and Lithuanian, as Skr. *dēvī*, *goddess*, *br̥hatī*, *great*, *svād-*vī**, *sweet*; Goth. *mawi*, *girl*, *frijōndi*, *friend*; Lith. *vežantī*, *vehens*, and the latter in Greek. In prim. Greek *-(i)jə* regularly became *-ja* after short and *-ia* after long syllables, but this differentiation was greatly obscured at a later period owing to numerous analogical formations whereby forms with long syllables were remodelled on the analogy of those with short syllables and vice versa (§ 119).

It is uncertain what was the original ending of the vocative. In the Aryan branch it is *-i*, as Skr. *dēvi*, *br̥hati*, *svādvi*, but in the other languages the nom. was used for the voc., as in Gr. ἡδεῖα, πότνια, Goth. *mawi*, *frijōndi*.

There is not sufficient agreement among the different branches of the Indg. languages to enable us to determine what was the original ending of the accusative. It was probably *-(i)jām* beside *-(i)jəm*, the former of which is represented by Goth. *máuja*, *frijōndja*, Lith. *vėžanczā*,

O.Slav. *vezašťa*, *vehentem*, and the latter by Gr. *ἠδεῖαν*, *τέκταιναν*, *φέρουσαν*, *πότνιαν*, &c. The Aryan ending *-īm*, as in Skr. *dēvīm*, *brhatīm*, *svādīm* would then be a new formation with *-ī-* from the nominative.

Gen. *-ης*, *-ās* = Indg. *-(i)jās* and corresponding to the endings in Skr. *dēvyāḥ*, *svādyāḥ*, Goth. *máujōs*, *frijōndjōs*, Lith. *vežanczōs*.

Dat. *-η*, *-α* = Indg. *-(i)jāi* and corresponding to the endings in Skr. *dēvyāí*, *svādyāí*, Goth. *máujái*, *frijōndjái*, Lith. *vėžanczai*.

### c. MASCULINE *ā*-STEMS.

§ 323. As we have seen above (§ 320) the nouns belonging to this class were originally feminine abstract nouns which acquired a concrete meaning and then became masculine. In declension they only differ from the feminine *ā*-stems in the nom. voc. and gen. singular. The masculine nouns of this type were declined in Latin exactly like the feminine *ā*-stems. It is however possible that in the oldest Latin, as in Greek, the nominative took *-s* after the analogy of the *o*-declension, and that this ending is preserved in the two isolated O.Latin forms *hosticapas*, *hostium captor*; *paricidas*, *parricide*.

After the change of gender had taken place the nouns of this class took *-s* in the nom. after the analogy of the *o*-declension, as *veānīās*, *πολίτης*, *Πέρσης*.

In the vocative two forms are to be distinguished, viz. *-α* and *-ā*, *-η*. The former is the original voc. ending of *ā*-stems and occurs in nouns which have *-της* in the nominative, in names of peoples, and in compound nouns, as *πολίτα*, *δέσποτα* beside nom. *δεσπότης*, *Σκύθα*, *Πέρσα*, *γεω-μέτρα*; and the latter is the original nominative used for the vocative (§ 321) and generally occurs in all other nouns, as *veānīā*, *Κρονίδη*. Forms like *ἰππότα* (*Νέστωρ*), *νεφεληγερέτα* (*Ζεός*), *μητίετα* (*Ζεός*), which are common in

epic poetry and occur almost exclusively in combination with proper names, are probably old vocatives which came to be used attributively as nominatives. And similarly it is probably more correct to regard the Boeot. nominatives *Νεστίδᾶ*, *Πυθιονίκᾶ*, &c. as vocatives which came to be used as nominatives than to assume that the original asigmatic nominative was preserved in this dialect. The genitive originally ended in *-ās*, as in the feminine *ā*-stems. To *-ās* was added *-o* from the old genitive (\**λύκοο*, *λύκοιο*) of the *o*-declension. \**-āσο* regularly became *-āo* in Boeot., Thess. and Hom. (*Ἄτρείδᾶο*), *-āv* in Arcad., Cypr., and Pamphylian, *-εω* from older *-ηο* (§ 72), *-ω* in Ionic, *-ā* by contraction of *-āo* in Dor. (*Ἄτρείδᾶ*), Lesb. and Elean. Att. *πολίτου*, &c. had *-ου* direct from the *o*-declension. Boeot. *-ās* beside *-āo* was a new formation due to the influence of the nominatives in *-ā*, see the voc. above. Beside Ion. *-εω*, *-ω* there also occurs *-ευ* from older \**-εο* with *-o* for *-ω* re-introduced from \**λύκοο*.

NOTE.—In some dialects and especially in Ionic the accusative and genitive singular were often formed after the analogy of the masculine *es*-stems (§ 366) owing to the nominative singular being alike in both declensions.

## 2. THE *o*-DECLENSION.

§ 324. Greek and Latin are the only Indg. languages in which the *o*-declension contains masculine, feminine and neuter nouns. It is far more probable that a number of originally masculine nouns became feminine in these two languages than that the feminine was lost in the prehistoric period of all the other languages. The masculines and the feminines are declined alike in Greek and Latin.

## § 325. a. MASCULINE AND FEMININE O-STEMS.

*Singular.*

	Indg.	
Nom.	-os	λύκος
Voc.	-e	λύκε
Acc.	-om	λύκον
Gen.	-osjo, -so	λύκοιο, λύκου
Dat.	-ōi	λύκῳ, θεῶ
Loc.	{ -oi, -ei	οἴκοι, οἴκει
	{ -oĩ, -eĩ	Ἴσθμοῖ, ἐκεῖ

*Dual.*

Nom. Voc. Acc.	-ōu, -ō	λύκῳ
Gen. Dat.	-?	λύκοιν, λύκουν

*Plural.*

Nom. Voc.	-ōs	λύκοι
Acc.	-ons	λύκους, λύκους
Gen.	-ōm̃	λύκων, θεῶν
Dat.	-ōis, -ōĩs (instr.)	λύκοις, θεοῖς
Loc.	-oisu	λύκοισι

*Singular*: The Indg. endings were remarkably well preserved in Greek. Nom. λύκος = Skr. *vṛkaḥ*, Lat. *lupus*, Goth. *wulfs*, Lith. *vilkas*, *wolf*. Voc. λύκε = Skr. *vṛka*, Lat. *lupe*, Goth. *wulf*, Lith. *vilkè*. Acc. λύκον = Skr. *vṛkam*, Lat. *lupum*, Lith. *vilka*.

It is impossible to determine what was the original Indg. ending of the genitive. In the declension of all other stems the genitive and ablative were originally alike, but in the o-declension the form of these two cases seems to have been partly differentiated during the prim. Indg. period, whereby a special genitive form with pronominal ending was created, cp. Indg. \**tosjo* = *τοῖο*, Skr. *tásya*: *λύκοιο*, Skr. *vṛkasya*, beside Indg. \**toso* = *τοῦ*, *τῶ*: prim. Gr. \**φλύκοσο*, whence Att. Ion. and mild Dor. *λύκου*,

Boeot. Lesb. and severe Dor. *λύκω*, Goth. **wulfis** with **-is** from **pis**, of *the*. The Greek, Aryan and Germanic languages accordingly have pronominal endings. What corresponds to the ablative in the other languages is used for the genitive and ablative in Baltic-Slavonic, as Lith. **viľko**, O.Slav. **vlůka**. The Latin ending **-ī**, which must also have existed in prim. Keltic, is of unknown origin. **-οιο** and **-ου**, the latter of which can often be read as **-οο**, exist side by side in Homer. The ending **-οιο** was however archaic already in Homer, but through imitation of him it is found in the language of poets of all periods. In Thessalian the ending **-οι** occurs beside **-ου**, **-ω**, **-οιο**. It is difficult to account for the **-οι** unless we may suppose that it arose from **-οιο** by elision of **-ο**. Some scholars regard it as the locative ending used for the genitive, and others as being of the same origin as the Latin genitive ending **-ī**, but both these proposed explanations are very doubtful.

The Indg. ending of the dative was **-ōi**, from older **-ο + ai**, corresponding to the endings in *θεῶν*, *λύκων*, Lat. *lupō*, O.Lat. **populoi Romanoī**, **Numasioi**, *Numerio*, Lith. **viľkui**, Skr. **vṛkāy-a** for older **\*vṛkāi**. **-ōi** was shortened to **-oi** before consonants in prim. Greek (§ 63). Anteconsontantal **-oi** then became generalized for the dative in Arcadian, Boeotian, Elean, Thessalian and the North-West group of dialects. The locative and dative thus fell together in these dialects (cp. § 321). On the other hand what is called the dative in these dialects may simply be the original locative used for the dative.

In the parent Indg. language the locative seems to have ended in **-oi**, **-ei** beside **-ōi**, **-ēi**. The former occur in *οἴκοι*, *οἴκει*, Lat. **bellī**, **domī**, **humī**, **Corinthī**, and Skr. **vṛkē**, and the latter in *Ἰσθμοῖ* and in adverbs like *ποῖ*, *whither*; *ἐκεῖ*, *there*; Dor. *τεῖ-δε*, *here*; *τηνεῖ*, *there*; *πεῖ*, *where*.

The original ending of the ablative was **-ōd**, **-ēd**, which was preserved in Skr. **vṛkād**, **vṛkāt**, O.Lat. inscriptions

**Gnaivōd, meritōd, facillumēd** = later Lat. **Gnaeō, meritō, facillimē**. This case-form disappeared in Greek except in a few isolated adverbial forms, as Delph. *φοίκω, domo*; Cret. *τῶ-δε, hinc*; Cret. *ὦ, ὄπω, unde*. It probably also occurs in adverbs like *οὔτω, οὔτω-ς, σοφῶ-ς*. In the Germanic languages the old ablative of adjectives came to be used adverbially, as **sinteinō, continually**, nom. **sinteins, continual**.

The original ending of the instrumental was **-ō, -ē**, which is found in Vedic **वृक़ा**, Goth. **wulfa** (used for the dative), Lith. **vilkū**. The case-form disappeared in Greek except in a few isolated adverbial forms, as *πῶ-ποτε, οὔ-πω, ἄφνω, ἀμαρτη, ὄπη*, Laconian *πή-ποκα, usquam or unquam*.

*Dual*: The original ending of the nom. voc. and acc. was **-ōu** beside **-ō** (§ 323), the latter of which was generalized in Greek and Baltic-Slavonic, as *λύκω*, Lith. **vilkū**, O.Slav. **vlūka**. Both endings occur in Vedic **वृक़ाṁ, वृक़ा**, but only the former in classical Sanskrit.

It is impossible to determine what were the original endings of the gen. dat. loc. abl. and instrumental, as there is no agreement among the languages which preserved the dual in historic times (cp. § 321). Greek **-οιῦν, -οιῦν**, which came to be used in all kinds of stems except the **ā**-stems, has never been satisfactorily explained. The most probable explanation is that it arose from **-οι**, the original ending of the nom. voc. acc. neuter (§ 326), to which was added the dual pronominal ending **-ιῦν** from *νῶϊῦν, σφῶϊῦν* = Att. *νῶϊν, σφῶϊν* (§§ 402, 404). It may possibly also have arisen from **-οι** + the ending **-σι(ν)** from the loc. plural of consonantal stems, but this would presuppose that *ν ἐφέλκυστικόν* became a fixture in this form at a very early period. **-οιῦν** is the regular ending in Homer and **-οιῦν** in Attic.

*Plural*: The Indg. ending of the nom. and voc. was **-ōs** from older **-o + es**, which corresponds to the endings in Skr. **वृक़ाḥ**, Goth. **wulfōs**, Osc. **Núvlanús, Nolani**. Greek,

Latin and Baltic-Slavonic have the pronominal ending. The Germanic languages also have it in the adjectives, cp. nom. *τοί*, Lat. *is-tī*, Goth. *þái*, O.Slav. *ti*, Skr. *té*, Indg. \**toi*, *the* : *λύκοι*, Lat. *lupī*, O.Slav. *vlūci*, *wolves*; Goth. *blindái wulfōs*, *blind wolves*.

The original ending of the accusative was *-ons* which corresponds to the endings in Lat. *lupōs*, Goth. *wulfans*, Cret. *λύκους* beside *-ος*, Att. Ion. and mild Dor. *-ους*, Boeot. and severe Dor. *-ως*, Lesb. *-οις*, Arcadian and Thessalian *-ος*. *-ους* remained in prim. Greek in pausa and when the next word began with a vowel, but became *-ος* when the next word began with a consonant (§ 153). The different dialects mostly generalized one or other of the sandhi forms, as Att. Ion. *-ους*, Boeot. *-ως*, Lesb. *-οις* from older *-ους* through the intermediate stage of a long nasal vowel.

The Indg. ending of the genitive was *-ōm̄* which corresponds to the endings in *θεῶν*, *λύκων*, Skr. *vṛkāṇ-ām* (with *-āṇ-* from the *n*-stems), O.Lat. *Rōmānom*, *deum*, *modium*, classical Lat. *lupōrum* with pronominal ending, cp. *istōrum*, Osc. *Núvlanúm*, *Nolanorum*, OE. *wulfa*, Lith. *vilkū* with regular loss of the final nasal in the last two languages.

*θεοῖς*, *λύκοις* and Lat. *lupīs* were originally the instrumental which came to be used for the dative. The Indg. ending of the instrumental was *-ōis* corresponding to the endings in Skr. *vṛkāiḥ*, Lith. *vilkaĩs*. On the shortening of the long diphthong in Greek see § 63.

The original ending of the locative was probably *-oisu* which corresponds to the ending in the Skr. loc. *vṛkēṣu*. *-oisu* may have become *-oisi* in prim. Greek through the influence of the *-i* in the loc. singular (§ 305), and then *-oisi* would have become *\*-oii* during the same period. *λύκοισι* admits of a twofold explanation. Either the ending *-οις* (see above) was changed to *-οισι* through the influence of the *-σι* of the consonantal stems or else it was formed direct from the nom. pl. *λύκοι* with *-σι* from the consonantal



stems. In either case the *-οισι* must have come into existence after the law had ceased to operate whereby intervocalic *-σ-* disappeared (§ 213, 2). *-οισι* is the regular form in Homer (and then later imitated by other poets), Herodotus, Lesbian and O. Attic. Until 444 B. C. *-οισι* beside *-οις* was equally common on Attic inscriptions, but the longer form had disappeared by the end of the century. And in like manner *-οισι* beside *-οις* was common on Ionic inscriptions in the fifth century B. C., but the longer form had disappeared by about the beginning of the fourth century. *λύκοισι* like *λύκοις* was used for the dative.

#### b. NEUTER *ο*-STEMS.

§ 326. In Greek the declension of the neuter *ο*-stems only differs from the masculine in the nom. voc. singular and the nom. voc. and acc. plural.

The original ending of the nom. voc. and acc. singular was *-om* which corresponds to the endings in *ζυγόν*, Skr. *yugám*, Lat. *jugum*, *yoke*. The ending regularly disappeared in the Germanic languages, as Goth. *juk*, *yoke*.

The Indg. ending of the nom. voc. and acc. dual was *-oi* which occurs in Skr. *yugé*, and in *dvé*, Vedic *duvé* = OE. *twā*, *two*. In Greek the regular form would have been *\*ζυγοί* which was changed to *ζυγώ* after the analogy of the masculines.

What is called the nom. voc. and acc. plural was originally a feminine collective singular which accounts for the fact that in Greek and Sanskrit the nom. pl. neuter takes the verb in the singular. It also accounts for the double plurals like *δεσμοί*, *κύκλοι*, *στάδιοι* beside *δεσμά*, *κύκλα*, *στάδια*, Lat. *jocī*, *locī* beside *joca*, *loca*, the former of which originally meant separate objects and the latter the objects taken collectively. The original ending was *-ā* which corresponds to the endings in Vedic *yugá* beside classical Skr. *yugá-ni* with *-ni* from the *n*-stems, Lat. *juga*,

Goth. *juka* with regular shortening of the final vowel in these two languages. ζυγά was formed after the analogy of the consonantal stems. This new formation must have taken place in prim. Greek, otherwise we should have had the regular ending \*-ή in Attic and Ionic, and \*-ᾶ in the other dialects.

§ 327. The so-called Attic declension had in prim. Greek the same case-endings as the ordinary *o*-declension. The prim. Greek forms of a noun like νεός (Dor. νᾶός, Ion. νηός) were: sing. \*νᾶος, \*νᾶον, \*νᾶοο, \*νᾶωι; dual \*νᾶω, \*νᾶοιυ; pl. \*νᾶοι, \*νᾶονς, \*νᾶων, \*νᾶωις, which with the regular change of -ᾶ- to -η- (§ 51) together with shortening (§ 71) and quantitative metathesis (§ 72) became in Attic νεός, νεών (sometimes also νεώ after the analogy of ἦρω from \*ἦρωα, see § 340), νεώ or νεῶ from \*νεωο older \*νηοο, νεῶ; νεῶ, νεῶν; νεῶ, νεός, νεών, νεῶς.

### 3. THE *ī*-DECLENSION.

#### § 328. a. MASCULINE AND FEMININE SHORT *i*-STEMS.

		Indg.	Singular.
Nom.	-is		πόλις
Voc.	-i, -ei or -oi		πόλι
Acc.	-im		πόλιν
Gen.	-eīś, -oīś		πόλεως, πόλῆος, πόλεος, πόλιος
Dat.	-ēi (loc.), -ei (loc.)		πόλει, πόλει, πόλῆϊ, πόλι
			Dual.
Nom. Voc. Acc.	-ī		πόλεε, πόλει
Gen. Dat.	?		πολέοιυ
			Plural.
Nom. Voc.	-ejes		πόλεις, πόλιες, πόλῆες
Acc.	-ins		πόλεις, πόλιας, πόλῆας, πόλις, πόλινς
Gen.	(i)jōīñ		πόλεων, πολίων
Dat.	-isu (loc.)		πόλεσι, πόλισι, πολίεσσι

In the original Indg. declension the stem-forms contained various grades of ablaut nearly all of which disappeared in Greek owing to various new formations in several of the cases.

*Singular* : The Greek nominative ending corresponds to the endings in the other languages, as Skr. **agníḥ**, *fire* ; Skr. **áviḥ**, *ῶις*, Lat. **ovis**, Lith. **avis**, *sheep* ; Goth. **anst**, *favour*.

The original ending of the vocative was **-i** when the preceding syllable had the chief accent of the word, and **-ei** or **-oi** when the accent was on the ending. Greek and the Germanic languages generalized the former and Sanskrit the latter form, as **πόλι**, Goth. **anst**, beside Skr. **agné**. In Latin the nom. was used for the vocative.

**-iv** from Indg. **-im** (§ 141) corresponds to the accusative endings in Skr. **agním**, **ávim**, Lat. **sitim**, **partim**. Forms like Lat. **ovem**, **hostem** were new formations with **-em** from the acc. of the consonantal stems. The ending **-im** regularly disappeared in Gothic, as **anst**.

The endings in Skr. **agnéḥ**, Goth. **anstáis**, Lith. **naktės** (nom. **naktis**, *night*) were regularly developed from the original endings of the genitive, which disappeared entirely in Greek and their place was taken by various new formations after the analogy of the **u**- and **i**-declensions. **πόλιος**, which occurs in all the dialects except Attic, had **-ios** from forms like **κίος** (§ 330). Att. **πόλεος** from **\*πόλεφος** with **-εφ-** from the **u**-declension. Hom. **πόληος** with **-η-** from the dative. Attic **πόλεως** from older **\*ποληος** by quantitative metathesis (§ 72). Lat. **ovis**, **partis**, **hostis** had **-is** from the genitive of the consonantal stems.

The original locative ending **-ēi** became **ái** in Gothic, as **anstái**. The **-ī** in Lat. **ovī**, **hostī** can represent both Indg. **-ēi** and **-ei**. All the Greek forms were new formations. Att. and Hom. **πόλει**, Hom. **πόλει** from **\*πόλεγι** with **-ι** from the dative of the consonantal stems in all the

Greek forms of the dative. Hom. and Att. (inscriptions 410-335 B. C.) *πόλῃ* is difficult to explain. Two solutions of the difficulty have been proposed, but neither of them is quite satisfactory. Some scholars assume that a locative ending *-ē* existed beside *-ēi* in the parent Indg. language (cp. § 63), and that the former occurs in the Vedic locative *agnā* beside *agnāu* (a new formation after the analogy of the *u*-declension) and in Greek *πόλη + i* with *-i* from the dative of the consonantal stems. If this explanation is right *πόλῃ* must have been formed in fairly late prehistoric Greek, otherwise it would not have remained trisyllabic. Others assume that *πόλῃ* stands for an older *\*πόληf + i* with *-ηf-* from the *u*-declension like the *-āu* in *agnāu*, but no trace of *-ηf-* exists in any of the dialects (§ 331). Ion. Cret. Boeot. Lesb., &c. *πόλι* from *\*πολι*.

*Dual*: The nom. voc. and acc. originally ended in *-ī*, as in Skr. *agnī*. *πόλεε*, *πόλει* were from *\*πόλεje* with *-εj-* from the nom. plural and *-ε* from the dual of the consonantal stems. On the ending *-οιυ* in the genitive and dative see § 325.

*Plural*: The endings in *πόλεις*, Skr. *agnāyah*, Lat. *ovēs*, *hostēs*, Goth. *ansteis* were all regularly developed from the Indg. nominative ending *-ejes*. Ion. Cret., &c. *πόλιες* was from forms like *κίες*, Hom. *πόληες* had the same *-η-* as in *πόλῃ*.

The original ending of the accusative was preserved in Cret. *πόλιυς* and Goth. *anstins*. Ion. *πόλις* like Lat. *ovīs*, *turrīs* had regular loss of the nasal and lengthening of the preceding vowel (§ 69, 1). Lat. *ovēs*, *hostēs* may be either the nom. used for the acc. or else have *-ēs* from the acc. of the consonantal stems. Att. Ion. *πόλεις* was the nom. used for the accusative. Hom. Dor. and Lesb. *πόλιας* had *-ιας* from forms like *κίας*. Hom. *πόληας* (see *πόλῃ*) with *-ας* from *κίας*.

The endings in *τριῶν*, Lat. *trium*, Ion. Dor. and Lesb.

πολίων, Lat. **ovium**, **hostium** correspond to the original Indg. genitive ending **-(i)jōm̃**. Att. πόλεων had **-ε** from the nominative.

The original locative ending was preserved in Skr. **triṣú**, *tribus*, **agnīṣu**. τρισί, Ion. πόλισι had **-σι** from the dat. of the consonantal stems, and similarly πόλεσι but with **-ε** from the nominative. Hom. πολίεσσι had **-εσσι** from the dat. of the **s**-stems (§ 364). πολέοις in the North-West group of dialects was a new formation after the analogy of the dative of the **o**-declension.

#### b. NEUTER SHORT **i**-STEMS.

§ 329. In Greek the declension of the neuters only differed from the masculines and feminines in the nom. and acc. singular, and the nom. voc. and acc. plural. The nom. voc. and acc. singular originally ended in **-i** which was preserved in Skr. **vāri**, *water*, ἵδρι, but became **-e** in Latin, as **mare**, **leve**. The nom. voc. and acc. plural originally ended in **-ī** which was preserved in Vedic **trī**, *tria*. τρία, ἵδρια had **-α** from the plural of the consonantal stems, whereas Lat. **tria**, Goth. þrija, *three* were new formations after the analogy of the **o**-declension.

#### c. THE LONG **ī**-STEMS.

§ 330. The long **ī**-stems originally contained monosyllabic nouns like Skr. **dhīḥ**, *thought*, κίς, λίς, ἴς, Lat. **vīs**, and nouns of more than one syllable like Vedic **nadīḥ**, *river*. The latter class of nouns went over into the consonantal declension in prim. Greek (§ 343).

	Indg.	Singular.		
Nom.	<b>-īs</b>	κίς	dhīḥ	nadīḥ
Voc.	<b>-i, -ī</b>	κίς	dhīḥ	nádi
Acc.	<b>-ijm̃, -īm</b>	κῖν	dhíyam	nadíyam
Gen.	<b>-ijos</b>	κίός	dhiyáḥ	nadíyah
Dat.	<b>-iji (= loc.)</b>	κί	dhiyí	(nadiyám)

*Dual.*

Nom. Voc. Acc.	-ije	κίε
Gen. Dat.	?	κιοῖν

*Plural.*

Nom. Voc.	-ijes	κίες	dhíyah	nadíyah
Acc.	-ijns	κίας	dhíyah	nadíyah
Gen.	-ijōm̄	κιοῶν	dhiyām	(nadīnām)
Dat.	-īsu (=loc.)	κισί	dhiśú	nadíśu

-ij- = Skr. -iy- alternated with -ī-. The former was regular before vowels and the latter before consonants. In Greek the -ij- regularly became -i- (§ 128).

All the Greek forms, except the voc. singular, gen. and dat. dual, and dat. plural, were regularly developed from the original Indg. forms. The nom. was used for the voc. in Greek and in Skr. *dhíh̄*. The regular ending of the acc. singular would have been \**íya* in Skr. (§ 65, 1), but -m, which originally belonged only to the ā-, o-, i- and u-declensions, was extended to the masc. and fem. acc. sing. of all declensions. Acc. *ίνα* for \**ίν*, *vim*, with -a added from the acc. of the consonantal stems. From *ίνα* was then formed a new gen. *ίνος*, pl. *ίνες*, cp. the similar new formations in Ζήνα : Ζήν (§ 337), τίνα : \*τίν. The gen. and dat. dual κιοῖν from \*κίjoῖν had -οῖν from the o-declension. The dat. plural κισί had -ι- from the other cases of the plural and -σι from the dat. of the consonantal stems.

## 4. THE ũ-DECLENSION.

## § 331. a. MASCULINE AND FEMININE SHORT u-STEMS.

	Indg.	<i>Singular.</i>	
Nom.	-us	πῆχυσ	ἡδύς
Voc.	-u, -eu or -ou	πῆχυ	ἡδύ
Acc.	-um	πῆχυν	ἡδύν
Gen.	-eūs, -oūs	πῆχεως, πῆχεος	ἡδέος
Dat.	-ēu (loc.), -eu (loc.)	πῆχει, πῆχεῖ	ἡδεῖ, ἡδέεῖ

*Dual.*

Nom. Voc. Acc.	-ū	πήχ <sup>εε</sup> , πήχ <sup>ει</sup>	ήδέ <sup>εε</sup> , ήδέ <sup>ει</sup>
Gen. Dat.	?	πηχ <sup>έοι</sup>	ήδέ <sup>οι</sup>

*Plural.*

Nom. Voc.	-ewes	πήχ <sup>εις</sup> , πήχ <sup>εες</sup>	ήδέ <sup>εις</sup> , ήδέ <sup>εες</sup>
Acc.	-uns	πήχ <sup>εις</sup> , πήχ <sup>εας</sup>	ήδέ <sup>εις</sup>
Gen.	-(u)wōm̃	πήχ <sup>εων</sup>	ήδέ <sup>ων</sup>
Dat.	-usu (= loc.)	πήχ <sup>εσι</sup>	ήδέ <sup>εσι</sup>

The stem-forms of the *u*- like the *i*-declension originally contained various grades of ablaut nearly all of which disappeared in Greek owing to various new formations in several of the cases.

*Singular*: The Greek nominative ending corresponds to the endings in the other languages, as Skr. *sūnūh*, Goth. *sunus*, Lith. *sūnūs*, *son*, Lat. *fructus*, *manus*.

The original ending of the vocative was *-u* when the preceding syllable had the chief accent of the word and *-eu* or *-ou* when the accent was on the ending. Greek and the Germanic languages generalized the former and Sanskrit and Lithuanian the latter, as *πήχ<sup>υ</sup>*, *ήδ<sup>ύ</sup>*, Goth. *sunu*, beside Skr. *sūnō*, Lith. *sūnaũ*. In Latin the nom. was used for the vocative.

*-uv* from Indg. *-um* (§ 141) corresponds to the accusative endings in Skr. *sūnūm*, Lat. *fructum*, Lith. *sūnu*, Goth. *sunu* with regular loss of the *-m*. Hom. *ε<sup>υ</sup>ρέα* for *ε<sup>υ</sup>ρύν* was formed after the analogy of the acc. plural.

The endings in Skr. *sūnōh*, Goth. *sunáus*, Lith. *sūnaũs*, Lat. *fructūs* were regularly developed from the original endings of the genitive, which disappeared entirely in Greek and their place was taken by new formations. The ending in *πήχ<sup>εως</sup>*, which only occurs in the nouns, was formed after the analogy of *πόλ<sup>εως</sup>* of the *i*-declension. The cause of the new formation was probably due to the fact that in Greek the endings of the dat. sing. *-ε(j)ι*, *-ε(F)ι*

and nom. pl.  $-(j)\epsilon\varsigma$ ,  $-(f)\epsilon\varsigma$  fell together in these two declensions. ἡδέος, Hom. πῆχεος, older  $*-\epsilon f\omicron\varsigma$  with  $-\epsilon f-$  from the dative.

The endings in Skr. *sūnāu*, Goth. *sunāu* were regularly developed from the original locative ending  $-\bar{e}u$ . The  $-\bar{u}$  in Lat. *fructū* can represent both  $-\bar{e}u$  and  $-\bar{e}u$ . The Gr. endings  $-\epsilon\iota$ ,  $-\epsilon\ddot{i}$  are from older  $*-\epsilon f\iota$  with  $-\iota$  from the dative of the consonantal stems, cp. the similar new formation in Vedic *sūnāvi* beside *sūnāu*.

*Dual*: The original ending of the nom. voc. and acc. was preserved in Skr. *sūnū*. πῆχεε, πῆχει was from older  $*-\epsilon f\epsilon$  with  $-\epsilon f-$  from the nom. plural and  $-\epsilon$  from the dual of the consonantal stems. On the ending  $-\omicron\iota\nu$  in the gen. and dat. see § 325.

*Plural*: The endings in Att. πῆχεις, Ion. πῆχεες, and Skr. *sūnāvah* were regularly developed from the Indg. nominative ending  $-\bar{e}w\epsilon\varsigma$ . Lat. *fructūs* was the acc. used for the nominative.

The original ending of the accusative was preserved in Cret. *υῖύς*, *sons* and Goth. *sununs*. πῆχεις, ἡδέις were the nom. used for the accusative. Ion. πῆχεας, εὔρέας were new formations after the analogy of the  $\bar{u}$ -stems (§ 334). Lat. *fructūs* was from older  $*fructuns$  with regular loss of the  $-\bar{n}$  and lengthening of the preceding vowel.

πῆχεων from older  $*\pi\eta\chi\epsilon f\omega\nu$  was a new formation with  $-\epsilon f-$  from the nom. plural. The normal development of the original genitive ending occurs in Lat. *fructuom*,  $-\bar{u}um$ ,  $-\bar{u}m$ .

The original ending of the locative was preserved in Skr. *sūnūṣu*. πῆχεσι, ἡδέσι for older  $*-\nu\omicron\iota$  with  $-\epsilon-$  from the nom. plural and  $-\sigma\iota$  from the dative of the consonantal stems. The Hom. ending  $-\epsilon\sigma\sigma\iota$  was from the  $s$ -stems (§ 364).

§ 332. In the declension of the word for *son* two stems



are to be taken into consideration, viz. prim. Greek \**sūijos* = *viós* which was declined like an ordinary o-stem (§ 325); and prim. Greek \**sūijus* = *viús*, Cret. *viús*, acc. Arcadian *viún*, Cret. *viún*, acc. pl. Cret. *viúns*. The remaining cases of the singular, dual and plural were formed from the generalized stem form *viεf-*, as *viéos*, *viéi* (*viéi*); *viéε*, *viéiou*; *viéiς* (*viéees*), *viéων*, *viéσι*. The Hom. accusatives *viéa*, *viéas* were new formations after the analogy of the consonantal stems. At a later stage *vi-* came to be regarded as the stem-form, from which was made a new declension after the analogy of the inflected forms of *πατήρ* (§ 360), as \**viς*, *viá*, *viós*, *vií*; *viε*; *viες*, *viás*, \**viów*, *viási*.

#### b. NEUTER SHORT u-STEMS.

§ 333. In Greek the declension of the neuters only differed from the masculines and feminines in the nom. and acc. singular, and the nom. voc. and acc. plural. The nom. voc. and acc. singular originally ended in *-u* which was preserved in Skr. *mádhu*, *mead*; Skr. *pásu* = Goth. *faíhu*, *cattle*; *ἄστν*, *ἡδύ*. The origin of the ending in Lat. *cornū*, *genū*, *pecū* is obscure. The nom. voc. and acc. plural originally ended in *-ū* which was preserved in Vedic *purú*, *much*, *many*; *mádhū*, beside *purúṇi*, *mádhūni*. Lat. *cornua*, *genua* was a new formation after the analogy of the o-declension. In Greek the nouns and adjectives differed in the formation of the nom. plural. The former had *-η*, as *ἄσση*, from older \**-εσα*, the ending of the neuter s-stems (§ 364), and the latter had *-εα*, as *ἡδέα*, from older \**-εφα* with *-εf-* from the masc. and fem. nom. plural, and *-α* from the nom. plural of consonantal stems.

#### c. THE LONG ū-STEMS.

§ 334. The long *ū*-stems contain monosyllabic nouns like *σῦς*, *ῦς*, Lat. *sūs*, OE. *sū*, *pig*, *sow*; and *μῦς* which

originally belonged to the s-declension ; Skr. **bhūḥ**, *earth* ; and nouns of more than one syllable like *ἰχθύς*, *ἰθύς* ; Vedic **tanūḥ**, *body*.

	Indg.	<i>Singular.</i>			
Nom.	-ūs	σῦς	bhūḥ	ἰχθύς	tanūḥ
Voc.	-u, -ū	σῦ	bhūḥ	ἰχθύ	tānu
Acc.	-uwm̄, -ūm	σῦν	bhúvam	ἰχθύν	tanúvam
Gen.	-uwos	σῦος	bhuvāḥ	ἰχθύος	tanúvaḥ
Dat.	-uwi (= loc.)	σῦί	bhuví	ἰχθύϊ	tanúvi
<i>Dual.</i>					
Nom. Voc. Acc.	-uwe	σύε		ἰχθύε	
Gen. Dat.	?	συοῖν		ἰχθύοιν	
<i>Plural.</i>					
Nom. Voc.	-uwes	σύες	bhúvaḥ	ἰχθύες	tanúvaḥ
Acc.	-uwṅs	σύας	bhúvaḥ	ἰχθύας	tanúvaḥ
Gen.	-uwōm̄	σῦων	bhuvām	ἰχθύων	(tanūṅām)
Dat.	-ūsu (= loc.)	σῦσί	bhūṣú	ἰχθύσι	tanúṣu

**-uw-** = *-vf-*, Skr. **-uv-** alternated with **-ū-**. The former was regular before vowels and the latter before consonants. In Greek the *-vf-* regularly became *-v-* (§ 119).

All the Greek forms except the gen. and dat. dual, and the dat. plural were regularly developed from the original Indg. forms. *συοῖν*, *ἰχθύοιν* from *\*συφοῖν*, *\*ἰχθύφοιν* had *-οιν* from the o-declension. *σῦσί*, *ἰχθύσι* had *v* for *ū* from the other cases of the plural and *-σι* from the dative of the consonantal stems. Hom. *σῦέσσι* with *-έσσι* from the s-stems. In the Sanskrit monosyllabic nouns the nom. was used for the vocative. Beside the regular acc. sing. *ἰχθύν* there also occurs in later Greek *ἰχθύα* formed after the analogy of the acc. plural. On the ending in Sanskrit **bhúvam**, **tanúvam**, see § 330. Beside the regular acc. pl. *σύας*, *ἰχθύας* there also occurs in Attic and Ionic *σῦς*,

*ἰχθῦς* from older *-νυς* which was formed after the analogy of the acc. singular. This new formation was also occasionally used for the nominative. For nouns which have *-v*-throughout all cases see §§ 265-6.

5. THE DIPHTHONGAL DECLENSION.

§ 335. This declension contains monosyllabic nouns and nouns of more than one syllable. It is subdivided into four categories according as the stem ends in *-āu-*, *-ēu-*, *-ōu-* or *-ōi-*. The stem-forms of each category originally contained various grades of ablaut, but in Greek as in the other Indg. languages one or other of the stem-forms was generally extended to all the cases by levelling.

*a. āu-STEMS.*

§ 336.

*Singular.*

*Indg.*

Nom. Voc.	* <i>nāus</i>	<i>ναῦς, νηῦς</i>
Acc.	* <i>nāwṃ</i>	<i>ναῦν, νῆα, νέα</i>
Gen.	* <i>nāwós</i>	<i>νεώς, νηός, νεός, νᾶός</i>
Dat. (=loc.)	* <i>nāwí</i>	<i>νηί, νᾶί</i>

*Dual.*

Nom. Voc. Acc.	* <i>nāwe</i>	<i>νηε</i>
Gen. Dat.	?	<i>νεοῖν</i>

*Plural.*

Nom. Voc.	* <i>nāwes</i>	<i>νηες, νέες, νᾶες</i>
Acc.	* <i>nāwṃs</i>	<i>ναῦς, νῆας, νέας, νᾶας</i>
Gen.	* <i>nāwóm̃</i>	<i>νεῶν, νηῶν, νᾶῶν</i>
Dat. (=loc.)	* <i>nāusú</i>	<i>ναυσί, νηυσί, νηέσσι, νέεσσι, νᾶέσσι</i>

*-āw-* = prim. Gr. *-āf-*, Skr. and Lat. *-āv-* regularly alternated with *-āu-*. The former occurred before vowels and the latter before consonants. The *āu*-stems seem to have levelled out the *-ā-* of *-āw-*, *-āu-* already in the parent

Indg. language. Intervocalic *-f-* regularly disappeared in Greek (§ 122). The *-ε-* in forms like *véα*, *véός*, *véας*, &c. which occur in Homer and Herodotus was due to the shortening of older *-η-* before the following vowel (§ 71).

*Singular*: In the nominative *ναῦς* the first element of the diphthong was shortened in prim. Greek (§ 63), cp. Skr. *nāuḥ*, Lat. *nāvis* with the ending of the *i*-declension in all its cases. The *η* in Hom. *νηῦς* and also in the dat. pl. *νηυσί* was due to levelling out the *η* of the other cases where it was regular.

The accusative form *ναῦν* was a new formation from the nominative. Hom. *νηα* from older *\*νηφα*, *\*ναφα* corresponds to Indg. *\*nāwṃ*, Skr. *nāvam* (see § 330), Lat. *nāvem*.

The original genitive *\*nāwós* corresponds to Dor. *ναός*, Ion. *νηός* and Att. *νεός* with quantitative metathesis (§ 72), Skr. *nāváh*, Lat. *nāvis*.

The dative Dor. *ναῖ*, Lesb. *ναῖι*, Att. Ion. *νηῖ* were all from prim. Greek *\*ναφι* = Indg. *\*nāwí*, Skr. *nāví*, cp. Lat. *nāví*.

*Dual*: Nom. voc. and acc. *νηε* from prim. Greek *ναφε* = Indg. *\*nāwe*, Skr. *nāvāu* probably had its ending from the *u*-declension. Gen. dat. *νεοῖν* from older *\*νηφοῖν*, *\*ναφοῖν* (§ 325), see *véα*, &c. above.

*Plural*: The nominative Dor. *ναες*, Att. Ion. *νηες* were from prim. Greek *\*ναφες* = Indg. *\*nāwes*, Skr. *nāvah*, Lat. *nāvēs*.

The Attic accusative *ναῦς* was a new formation after the analogy of the accusative singular. Dor. *ναας*, Ion. *νηας* = prim. Greek *\*ναφας*, Skr. *nāvah*, Lat. *nāvēs*.

The Att. Ion. genitive *νεῶν* was from older *νηῶν* with shortening of *η* to *ε* (§ 71). Dor. *ναῶν*, Hom. *νηῶν* from prim. Greek *\*ναφῶν* = Indg. *\*nāwóm*, Skr. *nāvām*, Lat. *nāvium*.

The dative *\*ναυσί* was shortened to *ναυσί* in prim. Greek (§ 63), cp. the nom. singular. Ion. *νηυσί* like *νηῦς* had *η*

from the other cases. The ending *-σι* was from the dat. of the consonantal stems. Dor. *νᾶεσσι*, Hom. *νῆεσσι* with *-εσσι* from the *s*-stems.

b. ēu-STEMS.

§ 337. Some of the original ablaut-grades were preserved in the declension of *Ζεύς*; Skr. *dyāuḥ*, *sky*, *day*, Lat. *diēs*, *Jov.*, viz. *djēu-* in *Ζεύς*, Skr. *dyāuḥ*, Lat. *diēs*, and O.Lat. *Diēspiter*; *djeu-* in *Ζεῦ*, Lat. *Jū-piter*, *Jov.*; and *diw-* in *Δίος*, Skr. *diváh*.

	Indg.			
Nom.	* <i>djéus</i>	<i>Ζεύς</i>	<i>dyāuḥ</i>	( <i>diēs</i> )
Voc.	* <i>djéu</i>	<i>Ζεῦ</i>	( <i>dyāuḥ</i> )	<i>Jū-piter</i>
Acc.	* <i>djé(u)m</i>	<i>Ζῆν</i>	<i>dyām</i>	<i>diem</i> , ( <i>Jovem</i> )
Gen.	* <i>diwós</i>	<i>Δίος</i>	<i>diváh</i>	( <i>Jovis</i> )
Dat. (=loc.)	* <i>djéwi</i>	<i>Δίϊ, Δί</i>	<i>dyávi</i>	<i>Jove</i>

The nominative *Ζεύς* was regularly developed from the original form \**djéus* (§§ 63, 129, 8). Latin *diēs* was a new formation from the acc. before \**diēm* was shortened to *diem*.

*Ζεῦ* corresponds to the original vocative \**djéu* and to the *Jū-* in *Jūpiter* = *Ζεῦ πάτερ*. *Jūpiter* then came to be used as a nominative.

The accusative *Ζῆν* corresponds to Vedic *dyām*, Lat. *diem*, Indg. \**djé(u)m* (§ 63). From *Ζῆν* a new acc. *Ζῆνα* was formed with *-α* from the acc. of consonantal stems. From *Ζῆνα* was then formed a new gen. *Ζηνός*, dat. *Ζηνί*.

*Δία* from \**Δίφα*, like classical Skr. *dívam* beside Vedic *dyām*, was a new formation from the gen. with *-α* from the acc. of consonantal stems. And similarly Lat. *Jovem*, gen. *Jovis* were formed after the analogy of *Jove*.

The genitive *Δίος* from \**Διφός*, Skr. *diváh* was regularly developed from the original form \**diwós*.

The dative  $\Delta\acute{\iota}$ ,  $\Delta\acute{\iota}$  from  $*\Delta\iota\acute{\nu}\acute{\iota}$ , like classical Skr. *diví* beside Vedic  $\text{dyávi}$  = Lat. *Jove*, was formed after the analogy of the genitive.

§ 338. In the declension of *βασιλεύς* and similar words the ablaut-grade  $\bar{e}u$  originally belonged only to the stem of the nom. singular. The  $\bar{e}u$  (=  $\bar{e}w$  before vowels) was in prim. Greek levelled out into all the cases except the voc. singular which retained the old ablaut-grade  $eu$ . To this declension belonged also the Hom. proper names like *Ἄτρεύς*, *Πηλεύς* which generalized the ablaut-grade  $eu$  (=  $ew$  before vowels) in the oblique cases, as voc.  $\bar{e}u$ , acc.  $\bar{e}(f)\alpha$ , gen.  $\bar{e}(f)os$ , dat.  $\bar{e}(f)u$ . The nom. ending  $\bar{e}ús$  was a shortening of older  $*\etaús$  (§ 63).

### Singular.

#### Prim. Greek.

Nom.	-ηυς	βασιλεύς
Voc.	-ευ	βασιλεῦ
Acc.	-ηφα	βασιλέα, βασιλῆα, βασιλέα
Gen.	-ηφος	βασιλέως, βασιλῆος, βασιλέος
Dat.	-ηφι	βασιλεῖ, βασιλῆι, βασιλέϊ

#### Dual.

Nom. Voc. Acc.	-ηφε	βασιλέε, βασιλῆε
Gen. Dat.	-ηφου	βασιλέοι

#### Plural.

Nom. Voc.	-ηφες	βασιλείς, βασιλῆς, βασιλῆες, βασιλέες
Acc.	-ηφας	βασιλέας, βασιλῆας, βασιλέας
Gen.	-ηφων	βασιλέων, βασιλῆων
Dat.	-ηφσι	βασιλεῦσι

In the nom. singular and dat. plural the  $\etaυ$ - was shortened to  $eu$ - in prim. Greek. In the Arcadian and Cyprian dialects a new nom. singular in  $\etaς$  was formed with  $\eta$ -

from the gen. and dative. The endings  $-\eta\acute{\alpha}$ ,  $-\eta\acute{\sigma}$ ,  $-\eta\acute{\alpha}\sigma$  regularly became  $-\epsilon\bar{\alpha}$ ,  $-\epsilon\omega\sigma$ ,  $-\epsilon\bar{\alpha}\sigma$  in Attic by loss of  $-f-$  and quantitative metathesis (§ 72). The  $-\epsilon-$  in the Ionic and Doric endings  $-\epsilon\alpha$ ,  $-\epsilon\sigma$ ,  $-\epsilon\acute{\iota}$ ,  $-\epsilon\epsilon\sigma$ ,  $-\epsilon\alpha\sigma$  was due to the shortening of  $-\eta-$  before the following vowel (§ 71); and similarly in the Attic endings  $-\epsilon\hat{\iota}$ ,  $-\epsilon\epsilon$  (nom. dual),  $-\epsilon\omicron\iota\nu$ ,  $-\epsilon\omega\nu$ . The forms with  $-\eta-$  belong to the Hom. Cypr. Lesb. and Boeotian (written  $-\epsilon\hat{\iota}$  in Boeot.) dialects.  $-\hat{\eta}\sigma$  contracted from  $-\eta\epsilon\sigma$  (on inscriptions) was the regular ending of the nom. plural in Attic until after the middle of the fourth century B.C. At about this time a new nom. ending  $-\epsilon\hat{\iota}\sigma$  was formed after the analogy of the nom. of the **u**-declension owing to the gen. plural being alike in both declensions. From about the end of the fourth century  $\beta\alpha\sigma\iota\lambda\epsilon\hat{\iota}\sigma$  came to be used also for the accusative. The older nom.  $\beta\alpha\sigma\iota\lambda\hat{\eta}\sigma$  was used for the accusative at a much earlier period. See § 268.

### c. $\bar{o}u$ -STEMS.

§ 339. In the original declension of the word for *cow*, *ox* the stem-forms had the three ablaut-grades  $g\bar{o}u$ ·,  $gou$ · (=  $gow$ · before vowels) and  $gu$ ·. The form  $gu$ · does not occur in the declension of  $*g\acute{o}us$  (§ 205) in any of the languages. It is therefore probable that it disappeared already in the parent Indg. language and that its place was taken by the stem-form  $gou$ · in the gen. singular, gen. and dat. dual, and in the gen. and loc. plural. In writing down the hypothetical Indg. forms the accent has been omitted in the gen. and dat. of the singular and plural, because of the difference in the accentuation of the Greek and Sanskrit forms. The Greek doubtless represents the original accentuation except in the dat. singular.

*Singular.*

	Indg.			
Nom.	*gós	βoûs, βôws	gáuh	bōs
Voc.	*góu	βoû	(gáuh)	(bōs)
Acc.	*gó(u)m	βoûv, βôwv	gám	(bovem)
Gen.	*gowos	βoós	(góh)	bovis
Dat. (=loc.)	*gowi	βoí	gávi	bove

*Dual.*

Nom. Voc. Acc.	*gówe	βóε	gávāu
Gen. Dat.	?	βooîv	

*Plural.*

Nom. Voc.	*gówes	βóεs	gávaḥ	bovēs
Acc.	*gówṅs	βoûs, βóas, βôws	(gáh)	bovēs
Gen.	*gowōm̃	βoôv	gávām	bovom, boum
Dat. (=loc.)	*gousu	βουσί, βóεεσι	góṣu	

*Singular:* The prim. Greek nominative \*βows was regularly shortened to βoûs (§ 63). Dor. βôws was a new formation from the original accusative, and probably also Lat. bōs (a loan word from one of the other Italic dialects).

The accusative βoûv was a new formation after the analogy of the nominative. Dor. βôw = Skr. gám and Indg. \*gó(u)m. Lat. **bovem** was a new formation after the analogy of **bovis**, **bove**.

The genitive βoós corresponds to Vedic gávaḥ beside classical Sanskrit góh, Lat. **bovis**, Indg. \*gowos.

The dative βoí, Skr. gávi and Lat. **bove** were all regularly developed from the original form \*gowi.

*Dual:* The Greek dual forms were new formations with βo-, older \*βof-, from forms where it was regular, as in βoós, βóεs. The original stem \*gōw- occurs in Skr. gávāu with the ending -āu from the u-declension.



*Plural*: The nominative βόες was from the original form \*gówes. Skr. gāvah can represent a prim. Aryan form \*gávas (= \*gówes) or \*gāvas in which case the latter would be a new formation. Lat. bovēs was the acc. used for the nominative.

βῶς, βῶς and Skr. gāḥ were new formations after the analogy of the acc. singular. Some scholars assume that there existed in the parent Indg. language an acc. form \*gó(u)ms beside \*gówṅs, and that the former occurs in Dor. βῶς, Skr. gāḥ and the latter in Hom. βόας, older Skr. gāvah, and Lat. bovēs.

βῶν, Skr. gāvām and Lat. bovom, boum were all regularly developed from the original genitive form \*gowōm̄.

The stem in the dative βοσί corresponds to the original stem \*gou- and to the gó- in Skr. góṣu; -σι was from the dat. ending of the consonantal stems. Hom. βέσσι was a new formation with βο-, older \*βοf-, from the other cases of the plural and -εσσι from the dat. plural of the s-stems.

§ 340. It cannot be determined with certainty whether nouns like δμός, ἥρως, μήτρως, πάτρως, Τρώς were originally ōu-stems or whether they were o-stems which underwent contraction after the loss of intervocalic -f-, as πάτρως from \*πατρωφος, and then became declined like consonantal stems. If they were originally ōu-stems we must assume that the ablaut-grade -ōu- (= -ōw- before vowels), which belonged properly to the stem of the nom. singular only, was levelled out into all the cases in prim. Greek, and that then there were formed a new nom. singular πάτρως for \*πατρως, and dat. plural πάτρωσι for \*πατρωνσι, the -ω- of which would have been shortened to -ου, cp. βασιλεύς, βασιλεύσι.

## Singular.

## Prim. Greek.

Nom. Voc.	-ους or -ως	πάτρως
Acc.	-ωφα	πάτρωα, πάτρω, πάτρων
Gen.	-ωφος	πάτρωος
Dat. (=loc.)	-ωφι	πάτρωϊ, πάτρω

## Dual.

Nom. Voc. Acc.	-ωφε	πάτρωε
Gen. Dat.	-ωφοιν	πατρώοιν

## Plural.

Nom. Voc.	-ωφες	πάτρωες, πάτρωσ
Acc.	-ωφας	πάτρωας, πάτρωσ
Gen.	-ωφων	πατρώων
Dat. (=loc.)	-ωυσι or -ωσι	πάτρωσι

In Attic *πάτρωα, πάτρωες, πάτρωας* were generally contracted into *πάτρω, πάτρωσ*. Att. Ion. *πάτρων, πάτρω* were formed after the analogy of *νεών, νεφ̄ : νεώς* (§ 327); and similarly a gen. *πάτρω* beside the regular form *πάτρωος* also occurs. The Cretan acc. plural *πάτρωανς* was formed after the analogy of the acc. plural of *ā-, o-, i-* and *u-*stems.

d. *ōi*-STEMS.

§ 341. To this declension belong the feminine nouns *εὔεστώ, ἡχώ, λεχώ, πειθώ* and proper names like *Καλυψώ, Δητώ*. It is doubtful whether nouns like *ἀηδῶ, εἰκῶ* beside *ἀηδών, εἰκών* originally belonged to this class or to the *n*-declension. The stem-forms originally had the three ablaut-grades *-ōi-, -oi-* and *-i-* with regular change of *-i-* to *-j-* before case-endings beginning with a vowel. All three grades occur in the Sanskrit declension of *sákhā, friend*, as singular acc. *sákhāyam*, voc. *sákhē*, gen. *sákhuyḥ*; plural nom. *sákhāyaḥ*, loc. *sákhīṣu*. In Greek the *-oi-* grade was generalized in the oblique cases. The nom. singular may have ended in *-ōi* beside *-ō* (nom. Skr. *sákhā*,

Gr. *πειθῶ*) in the parent Indg. language (§ 63), and it is possible that the ending *-ωι*, which occurs on old Corinthian inscriptions, represents the original *-ōi*. The *-ι* however may have come from the vocative. Skr. *sákhā* and similar nouns were declined in the singular, dual and plural, but few of the words belonging to this declension admit of a plural in Greek. Those which do have a plural form it after the analogy of the *o-* or *n-*declension.

## Prim. Greek.

Nom.	-ω or -ωι	<i>πειθῶ, πειθῶι</i>
Voc.	-οι	<i>πειθοῖ</i>
Acc.	-οῖα	<i>πειθῶ</i>
Gen.	-οῖος	<i>πειθοῦς</i>
Dat. (=loc.)	-οῖι	<i>πειθοῖ</i>

The Dor. Boeot. and Lesb. dialects had the case-endings *-ω, -ων, -ως, -φ* after the analogy of the similar quantitative endings of the *ā-*declension. The origin of the Ion. acc. ending *-οῦν* (Herodotus *Ἀητοῦν*, &c.) is obscure. Ion. had the gen. ending *-όος* beside Att. Ion. *-οῦς*. If nouns like *ἀηδών* originally belonged to this class the *-ν* was first added in the nom. singular and then they passed over into the *n-*declension.

## B. THE CONSONANTAL DECLENSION

## I. STEMS ENDING IN AN EXPLOSIVE.

§ 342. The stems of nouns belonging to this class end in a dental, labial or guttural. The stem of the monosyllabic nouns had originally various grades of ablaut in the different cases, but in Greek as in the other languages one or other of the grades was generally levelled out into all the cases, thus the ablaut-grade *ō*, which originally belonged only to the nom. singular, was generalized in Sanskrit *vāk* = Lat. *vōx*, *ὄψ*, *voice*; acc. *vācam*, *vōcem*, *ὄπα*; gen. *vācāh*, *vōcis*, *ὀπός*; loc. *vācī*, *vōce*, *ὀπί*, whereas in Greek

the grade **o**, which originally belonged to the oblique cases, was levelled out into the nominative; and similarly Lat. **lĕx**, **rĕx** beside *φλέψ*, *φλόξ*; and conversely *κλώψ*, *σκώψ*, *ώψ* beside Lat. **nex**, **ops**. The original ablaut-grades were better preserved in the declension of the Indg. word \***pōts**, \***pēts**, *foot*. See § 234, 1.

*Singular.*

	Indg.			
Nom. Voc.	-s	<i>πούς, πός, πός</i>	<b>pāt</b>	<b>pēs</b>
Acc.	-m̄	<i>πόδα</i>	<b>pādām</b>	<b>pedem</b>
Gen.	-os, -es	<i>ποδός</i>	<b>padáh</b>	<b>pedis</b>
Dat. (=loc.)	-i	<i>ποδί</i>	<b>padí</b>	<b>pede</b>

*Dual.*

Nom. Voc. Acc.	-e	<i>πόδε</i>	( <b>pādāu</b> )
Gen. Dat.	?	<i>ποδοῖν</i>	

*Plural.*

Nom. Voc.	-es	<i>πόδες</i>	<b>pādaḥ</b>	( <b>pedēs</b> )
Acc.	-ns	<i>πόδας</i>	<b>padáh</b>	<b>pedēs</b>
Gen.	-ōm̄	<i>ποδῶν</i>	<b>padām</b>	<b>pedum</b>
Dat. (=loc.)	-su	<i>ποοσί, ποσί</i>	<b>patsú</b>	

Dor. *πός* from \***pōts** represents the original form. *πός* was a new formation with **-o-** from the oblique cases. It is difficult to account for *πούς* which seems to be merely a lengthening of *πός*. Hom. *ποοσί* beside *ποσί* (§ 212). Hom. *πόδεσσι* was formed from the stem *ποδ-* with the dat. ending of the **s**-stems. In Lat. the acc. **pedēs** from \***pedens** was used for the nominative. The **e** grade of ablaut occurs in *πέδον* and in the Boeot. Lesb. Cret. and Arcadian preposition *πεδά*, *with, after*.

§ 343. The stem-endings **-d**, **-b**, **-g** became **-t**, **-p**, **-k** before the case-endings **-s**, **-su** in prim. Indo-Germanic (§ 106). The original stem-endings **-dh**, **-th**, **-bh**, **-ph**, **-gh**, **-kh** likewise became **-t**, **-p**, **-k** before these case-endings in prim.

Greek (§ 109). Prim. Greek **ps** and **ks** remained in the historic period of the language. **ts** became **ss**, which was simplified to **s** finally. Medial **ss** remained in the oldest Greek, but already in Homer **s** existed beside **ss** (§ 166). Examples are: κλώψ, κλωψί : κλωπ-, φλέψ : φλεβ-, κατήλιψ : κατηλιφ-, φύλαξ, φύλαξι : φυλακ-, μάστιξ : μαστίγ-, σάλπιγξ : σαλπιγγ-, θρίξ, θριξί : τριχ-, νεότης from \*νεφοτᾶτς, Lat. novitās : νεοτητ-, novitāt-, νύξ : νυκτ-, cp. Lat. nox : noct-, ἄναξ : ἀνακτ-, πούς, ποσσί, ποσί : ποδ-, λαμπάς : λαμπαδ-, κόρυς : κορυθ-, ὄρνις : ὄρνιθ-.

The nom. singular of stems ending in -ιτ, -ιδ, -ιθ, -υδ, -υθ regularly fell together with the nominative of the **i**- and **u**-declensions which gave rise to various new formations especially in the voc. and acc. singular, as voc. Ἄρτεμι, ἐλπί, ἔρι, παῖ, τυραννί : Ἄρτεμιδ-, ἐλπιδ-, ἐριδ-, πα(F)ιδ-, τυραννιδ-. Acc. χάριν, ἔριν, κλειῖν, νῆιν, ὄπιν, ὄρνιν, φύλοπιν, κόρυν : χάριτα, ἔριδα, κλειῖδα, νήιδα, ὄπιδα, ὄρνιθα, φυλόπιδα, κόρυθα. And similarly accusatives like πολύπουν, τρίπουν (Hom. τρίποδα) were formed after the analogy of εὔνου : εὔνους.

It is improbable that the vocatives ἄνα, γύναι from \*ἀνακτ, \*γυναικ represent an original distinction between the nom. and voc. in this class of nouns.

§ 344. The bare stem was originally used for the nom. voc. and acc. neuter. In Greek the operation of the laws of final consonants has to be taken into consideration (§ 230), as κῆρ from \*κηρδ; the gen. κῆρος was a new formation from the nominative, cp. Lat. cor, cordis; γάλα from \*γαλακτ, cp. Lat. lac, lactis; μέλι from \*μελιτ.

## 2. THE **n**-DECLENSION.

§ 345. The stems in -μον-, -μεν- (δαίμων : δαιμον-, τέρμων : τερμον-, ποιμήν : ποιμεν-) and in -ον-, -εν- (πέπων : πεπον-, τέκτων : τεκτον-, τέρην : τερεν-, φρήν : φρεν-) originally had various grades of ablaut in the stem-endings of the different

cases, as **-mōn**, **-mēn** ; **-mon-**, **-men-** ; **-mn-** before vowels, but **-mŋ-** before consonants ; **-ōn**, **-ēn** ; **-on-**, **-en-** ; **-n-** before vowels, but **-ŋ-** before consonants. The alternation between **ě** and **ō** originally depended upon the position of the accent of the word. The former stood in the syllable containing the chief accent and the latter in the next syllable following it, as *ποιμήν, ποιμένες* : *τλήμων, τλήμονες* ; *φρήν, φρένες* : *ἄφρων, ἄφρονες* (cp. § 83). When the accent was shifted to the case-ending the vowel disappeared and then the **n** remained consonantal or became vocalic according as the next syllable began with a vowel or a consonant, as *ἀρήν, κύων*, gen. *ἀρνός*, dat. pl. *\*ἀρασί, \*κνασί*. In the parent Indg. language **e** alternated with **o** in the declension of the same word. This distinction was preserved in Gothic, as *guma, man*, dat. *gumin*, acc. *guman* where the endings **-in**, **-an** represent original **-eni**, **-onŋ** ; and similarly in the Baltic-Slavonic languages. In Sanskrit Indg. **e** and **o** fell together in **a** (§ 42) whereby the original distinction became obliterated. It may be however that the two vowels only regularly fell together in closed syllables, but that in open syllables the former vowel became **a** and the latter **ā**. This would account for the long **ā** in the acc. sing. *rājānam*, *king*, nom. pl. *rājānaḥ*, beside loc. sing. *rāj-ani* = Indg. **-eni**. In Greek the distinction became entirely obliterated by the levelling out of one or other of the two vowels. Then those stems which levelled out the **e** came to have **η** in the nom. singular and those which levelled out the **o** came to have **ω**. In the present state of our knowledge it cannot be determined with any degree of certainty which of the strong cases originally had **e** and which had **o**. In reconstructing the primitive stem-forms we shall therefore not attempt to distinguish between **e** and **o** in the declension of the same word. **-mōn**, **-mēn**, **-ōn**, **-ēn** regularly belonged to the nom. singular only ; **-mon-**, **-men-**, **-on-**, **-en-** to the voc, acc. and

dat. (= loc.) singular, the nom. plural, and the nom. voc. and acc. dual; **-mn-**, **-n-** to the gen. singular and plural, gen. and dat. dual, and acc. plural; and **-mḡ-**, **-ḡ-** to the dat. (= loc.) plural (§ 319). In Greek **ē** or **ō** regularly appears in the nom. singular. The oblique cases have generally levelled out the **e** or **o**, but in some words the **ē** or **ō** of the nominative was levelled out into the oblique cases, and in others the stem-form of the weak cases became generalized, as *ποιμήν, ποιμένα, ποιμένος* for \**ποιμνος*; *δαίμων, δαίμονα, δαίμονος* for \**δαιμνος*; *πευθήν, πευθῆνος, κλύδων, κλύδωνος; κύων, κύνα, κυνί* for \**κυνονα, \*κυνοι*; *ἔρσην* regular gen. *ἄρσνός* to which was formed a new nominative *ἄρσην*, gen. *ἄρσενος*. Cp. the similar levellings in Lat. **homo, hominem, hominis, homine, hominēs, hominum, hominibus; sermo, sermōnem, sermōnis, sermōne; caro, carnem, carnis, carne**; and in Goth. **tuggō, tongue, acc. tuggōn, gen. tuggōns, dat. tuggōn**.

## Singular.

	Indg.			
Nom.	<b>-ēn, -ōn</b> <b>-ē, -ō</b> }	<i>ποιμήν</i>	<i>δαίμων</i>	<i>rājā, king</i>
Voc.	<b>-en, -on</b>	<i>ποιμήν</i>	<i>δαῖμον</i>	<i>rājan</i>
Acc.	<b>-en-ḡ, -on-ḡ</b>	<i>ποιμένα</i>	<i>δαίμονα</i>	<i>rājānam</i>
Gen.	<b>-n-os, -n-es</b>	<i>ποιμένος</i>	<i>δαίμονος</i>	<i>rājñah</i>
Dat. (= loc.)	<b>-en-i, -on-i</b>	<i>ποιμένι</i>	<i>δαίμονι</i>	<i>rājani,</i> <i>rājñi</i>

## Dual.

Nom. Voc. Acc.	<b>-en-e, -on-e</b>	<i>ποιμένε</i>	<i>δαίμονε</i>	<i>(rājānāu)</i>
Gen. Dat.	?	<i>ποιμένοι</i>	<i>δαίμόνοι</i>	

## Plural.

Nom. Voc.	<b>-en-es, -on-es</b>	<i>ποιμένες</i>	<i>δαίμονες</i>	<i>rājānah</i>
Acc.	<b>-n-ḡs</b>	<i>ποιμένας</i>	<i>δαίμονας</i>	<i>rājñah</i>
Gen.	<b>-n-ōm</b>	<i>ποιμένων</i>	<i>δαίμόνων</i>	<i>rājñām</i>
Dat. (= loc.)	<b>-ḡ-su</b>	<i>ποιμέσι</i>	<i>δαίμοσι</i>	<i>rājasu</i>

*Singular*: The nominative ended in the parent Indg. language in *-ēn*, *-ōn* beside *-ē̃*, *-ō̃*. The reason for this difference is unknown (cp. § 29). The former was generalized in Greek (but see § 341) and also in the Gothic masculines, as *guma*, *man*, with *-a* from older *-ēn* or *-ōn*; and the latter in Sanskrit, Latin and also in the Gothic feminines and neuters, as *homo*, *sermo*; *tuggō*, *tongue*, *hairtō*, *heart*.

The vocative originally ended in *-en*, *-on*, which occurs in Skr. *rājan* and in Gr. barytones with nominatives in *-ων*, as *δαίμων*, *κύον*, *πέπον*. In the oxytones with nominatives in *-ών* and in all *-μεν*-, *-εν*-stems the nominative came to be used for the vocative, as *ἡγεμόν*, *ποιμήν*, &c. In Latin and Gothic the nominative was also used for the vocative.

The accusatives *ποιμένα*, *δαίμονα*, Lat. *hominem*, Goth. *guman* regularly correspond to the original stem- and case-ending. Forms like *ἄρνα* for *\*ἀρένα*, *κύνα* for *\*κύονα* = Skr. *svānam* were new formations after the analogy of the gen. singular and plural; and similarly Lat. *carnem* for *\*carinem*.

Regular forms of the genitive were *ἀρνός*, *κυνός* (= Skr. *śúnah*), Skr. *rājñah*, Lat. *carnis*. The stem-forms *ἀρν-*, *κυν-* then became levelled out into all the cases except the nom. singular and dat. plural; and similarly with the Lat. stem *carn-*. *ποιμένος*, *δαίμονος*, &c. were new formations with *-εν*-, *-ον*- from cases like the accusative; and similarly Lat. *hominis*, Goth. *gumins*.

Regular forms of the original locative were *ποιμένι*, *δαίμονι*, &c., Skr. *rājani*, Lat. *homine*, Goth. *gumin*. Skr. *rājñi* was a new formation with *-ñ-* from the genitive.

*Dual*: The genitive and dative had *-en*-, *-on*- from the strong stem-forms. On the ending *-οιν* see § 325.

*Plural*: It has been assumed above that the accusative had originally the weak stem-ending *-n-* corresponding to *ἄρνας*, *κύνας* and Skr. *rājñah*, but the Greek forms prove



nothing because the weak stem-ending of these two words was generalized in prim. Greek (see gen. singular). And Skr. *rājñah* may be a new formation after the analogy of the genitive. It is therefore not improbable that the accusative originally had the strong stem-ending **-en-**, **-on-** as in *ποιμένας, δαίμονας*, Lat. *hominēs* and in other languages. Goth. *gumans* is the nom. used for the accusative.

The regularly developed forms of the genitive were *ἀρνῶν, κυνῶν*, Skr. *rājñām*. *ποιμένων, δαιμόνων*, Lat. *hominum*, Goth. *gumanē* were new formations after the analogy of the nominative.

Skr. *rājasu* with **-asu** from **-ṅsu** represents the original locative. The **-a-** = Indg. **-ṅ-** was preserved in *φρασί* (beside the later new formation *φρεσί*) which occurs in Pindar and on an Attic inscription belonging to the beginning of the sixth century B. C., and also in *ἀρνάσι* for *\*ἀρασί* with **-ν-** from *\*ἀρνός*, &c. But in other words the dative was a new formation with the substitution of the vowel in the generalized stem-form for **-a-**, and with **-σι** from the dat. of consonantal stems where the **-σ-** was not originally intervocalic, as in *ποσσί, ποσί* from *\*ποτοσί* (§ 343), as *ποιμέσι, δαίμοσι, κλύδωσι* with **-εσι, -οσι, -ωσι** for **-ασι**; *κυσί* for *\*κυσί* after the analogy of *κυνός*, &c.

§ 346. Here may conveniently be placed: *χθών* from *\*χθώμ*, cp. *χαμαί*, Skr. *kṣāmi*, *on the ground*, *χιών* from *\*χιώμ*, cp. Lat. *hiems*, neut. *ἔν* from *\*σέμ*, cp. Lat. *sem-per*, where final **-μ** regularly became **-ν** (§ 141) and then the **-ν** was levelled out into the oblique cases, as gen. *χθονός, χιόνος, ἐνός* for older *\*χθομός, \*χιόμος, \*έμός*.

§ 347. Att. *μήν, χήν* were originally **s-**stems. Nom. Ion. *μείς*, Dor. *μής* from *\*μενς*, older *\*μηνς* (§ 70), gen. Lesb. *μηῆνος*, Att. Ion. Dor. *μηνός* from *\*μηνσος* (§ 216), from which was formed a new Attic nom. *μήν* after the analogy of the **n-**declension; and similarly prim. Greek *\*χᾶς* from

\**χανς*, gen. *χᾶνός*, *χηνός* from \**χανσος* (§ 69, 2), from which was formed a new nom. Dor. *χᾶν*, Att. *χῆν*.

§ 348. Beside the stems **-men-**, **-mon-**, **-en-**, **-on-** there also existed in the parent Indg. language stems in **-(i)jen-**, **-(i)jon-** with the ablaut-grades **-(i)jēn-**, **-(i)jōn-**; **-(i)jen-**, **-(i)jon-**; **-in-**, **-īn-** and with the same distribution of the grades as in the **-men-**, **-mon-** stems (§ 345). The original type of inflection was preserved in the Gothic **jan-** stems, as nom. *arbja*, *heir*, acc. *arbjan*, gen. *arbjin*, dat. *arbjin*. In Sanskrit the weak stem-ending **-in-** became generalized, as masc. nom. *balī* for \**balyā*, *strong*, voc. *bálin*, acc. *balínam*, gen. *balínaḥ*, loc. *balíni*. In Latin the **-(i)jōn** grade became generalized, as in *legio*, *legiōnem*, *legiōnis*, *legiōne*; and similarly in Greek words like *ἰθυπτίων*, *μαλακίων*, *οὐρανίων*, gen. *-ίωνος*. But the weak stem-ending **-īn-** became generalized in stems like *ἀκτῖν-*, *γλωχῖν-*, *δελφῖν-*, *θῖν-*, *ρῖν-*, gen. *-ῖνος*; and similarly in Gothic feminine nouns like *managei*, *multitude*, gen. *manageins*. From the stem-form in **-īn-** a new nominative was formed in prim. Greek after the analogy of the nominatives in **-s**. And then the **-ν** disappeared (§ 154). At a later period new nominatives in **-ν** were formed after the analogy of the nominative of the **-men-**, **-mon-**, **-en-**, **-on-** stems, as *γλωχῖν*, *δελφῖν*, *θῖν*, *ρῖν* beside *γλωχῖς*, *δελφῖς*, *θῖς*, *ρῖς*.

§ 349. From the generalized stem *μέλαν-* (gen. *μέλανος*) was formed the nom. *μέλᾶς* older \**μέλανς* (§ 154) after the analogy of the nominatives in **-s**. It is probable that this word originally belonged to the **o**-declension, cp. Skr. *malináh*, Indg. \**melənos*, Gr. \**μέλανος*, *black*, *dirty*, and *μελανό-χροος* beside *μελάγ-χροος*. *μέλαν-* may have come to be regarded as the stem in prim. Greek through the influence of the feminine *μέλαινα* from \**μέλανja* (§ 322).

§ 350. The neuter nouns and adjectives were originally declined alike as in Sanskrit and Gothic, but in prim. Greek the generalized stem-form of the masculine became

used for the nom. voc. and acc. singular of the adjectives, as *τέρεν*, *ἄρσεν*, *πέπον*, *σῶφρον*, *μέλαν*. Nom. voc. and acc. plural *τέρενα*, *πέπονα*, *μέλινα*, &c. with *-α* = Skr. *-i*, Indg. *-ə* (§ 353).

The original declension of the nouns was preserved in Sanskrit and Latin, but in Greek all the inflected forms were new formations.

*Singular.*

	Indg.			
Nom. Voc. Acc.	<b>·mṅ</b>	<i>ὄνομα</i>	<b>nāma</b>	<b>nōmen</b>
Gen.	<b>·mn-os, -es</b>	<i>ὀνόματος</i>	<b>nāmnaḥ</b>	<b>nōminis</b>
Dat. (=loc.)	<b>·men-i, ·mon-i</b>	<i>ὀνόματι</i>	<b>nāmani</b>	<b>nōmine</b>

*Dual.*

Nom. Voc. Acc.	<b>·en-i, ·ī</b>	<i>ὀνόματε</i>	<b>nāmanī</b>
Gen. Dat.	<b>?</b>	<i>ὀνομάτοι</i>	

*Plural.*

Nom. Voc. Acc.	<b>·mēn-ə, ·mōn-ə</b>	} <i>ὀνόματα</i>	<b>nāmāni</b>	
	<b>·men-ə, ·mon-ə</b>			<b>nōmina</b>
Gen.	<b>·mn-ōm</b>	<i>ὀνομάτων</i>	<b>nāmnām</b>	<b>nōminum</b>
Dat. (=loc.)	<b>·mṅ-su</b>	<i>ὀνόμασι</i>	<b>nāmasu</b>	

The endings in *ὄνομα*, **nāma**, **nōmen**, *name* correspond to the original ending of the nom. acc. singular. Latin generalized the stem-form **nōmen-**. The Sanskrit ending of the nom. plural corresponds to Indg. **·mōn-ə**, and the Latin ending to Indg. **·men-ə**, except that the **-a** for **-e** was from the nom. pl. of the neuter **o**-stems. The dual *ὀνόματε* had **-ε** from the masculines.

Prim. Greek probably had the generalized stem-form *\*ὀνομαν-* except in the dat. plural, as *ὄνομα*, *\*ὀνόματος* for *\*ὀνομνος* = Skr. **nāmnaḥ**, *\*ὀνόμανι*; *\*ὀνόματα*, *\*ὀνομάτων*, *ὀνόμασι* which can also be from *\*ὀνόμασι* (§ 166). It is difficult to account satisfactorily for the **-τ-** in historic Greek. It may have arisen from the Indg. adverbial particle **·tos** which occurs in *ἐκ-τός*, *ἐν-τός* = Lat. **in-tus**,

cp. also Skr. *i-tāḥ*, *inde*. In Sanskrit *-taḥ* came to have the meaning of the ablative, as *nāma-taḥ*, *by name*, with which the gen. *ὄνομα-τος* corresponds in form. *ὄνοματος* may then have come to be used for the gen. instead of the regular form *\*ὄνομος* = Skr. *nāmaḥ*, and the *-τ-* of the gen. have become levelled out into all the inflected forms. But Brugmann's explanation (*Grundriss*, &c., vol. ii, second ed., p. 237) is probably the right one. He assumes that it probably arose from the blending of *-men-* and *-mṅto-* into one paradigm, as Lat. *strāmen* : *strāmina*, *strāminum* = *\*στρώματα*, *\*στρωμάτων* beside *strāmentum* : *strāmenta*, *strāmentōrum* = *στρώματα*, *στρωμάτων*. After the analogy of *στρώματα*, *στρωμάτων* beside *\*στρώματα*, *\*στρωμάτων* there were formed *στρώματος*, *στρώματι* beside *\*στρώματος*, *\*στρώμανι* and then all the forms with the stem *\*στρωμαν-* eventually disappeared. There is however a third possible explanation which has much in its favour, viz. that in the parent Indg. language consonantal and *o*-stems of the same word often existed side by side, as *τέρην* : *τέρενος*, *πίαρ* : *πίαρός*, *πούς* : *πέδον*, *cognōmen*, *strāmen* : *cognōmentum*, *strāmentum*. A large number of similar examples in the various languages has been collected by Brugmann in *Indogermanische Forschungen*, vol. ix, pp. 366-8. It is therefore quite possible that *-mṅt-* existed beside *-mṅt-o-* and that some of the Greek neuters in *-μα* originally ended in *-mṅt* which became generalized, whereas Latin generalized *-mṅt-o-*. *ὄνομα* may therefore stand for older *\*ὄνοματ* (§ 230) with *-τ-* regularly preserved in the inflected forms. Cp. *ὄνομα*, *στρωῶμα*, *ζέδγμα* beside *cognōmentum*, *strāmentum*, *jūmentum* from *\*jouxmentom*.

### 3. STEMS ENDING IN *-nt*.

§ 351. To this class belong the masculine and neuter of all active participles except the perfect (§ 552).

## a. THEMATIC PARTICIPLES.

§ 352. These comprise the participles of the present and second aorist together with a few isolated participles which were no longer used as such in the oldest Greek, as γέρων, ἐκών, κρείων (κρέων), μέδων, μέλλων. λέων was originally an n-stem which passed into this class owing to the nom. and voc. singular being alike in both declensions, cp. the feminine λέαινα, and Lat. leo, leōnis.

*Singular.*

	Indg.			
Nom.	-ont-s	φέρων	bháran	ferēns
Voc.	-ont	φέρων	bháran	(ferēns)
Acc.	-ont-m	φέροντα	bhárantam	ferentem
Gen.	-nt-os, -es	φέροντος	bhárataḥ	ferentis
Dat. (=loc.)	-nt-i	φέροντι	bhárati	ferente

*Dual.*

Nom. Voc. Acc.	-ont-e	φέροντε	(bhárantāu)
Gen. Dat.	?	φερόντοι	

*Plural.*

Nom. Voc.	-ont-es	φέροντες	bhárantaḥ	(ferentēs)
Acc.	-nt-ns	φέροντας	bhárataḥ	ferentēs
Gen.	-nt-ōm	φερόντων	bháratām	(ferentium)
Dat. (=loc.)	-nt-su	φέρουσι	bháratsu	

The strong form **-ont-** originally belonged to the nom. voc. and acc. singular and dual and the nom. plural, and the weak form **-nt-** to all the other cases. The original distinction between the strong and weak forms of the suffix was preserved in Sanskrit. But Greek generalized the **-ont-** and Latin the **-nt-** form. Some scholars assume that this class of words had **-ont-** in all the cases in the parent Indg. language, and that the Sanskrit forms with **-at-** =

Indg. **-nt-** were new formations after the analogy of the stems in **-went-** (§ 356), but this would not account for the Latin forms all of which point to the ablaut-grade **-nt-**.

The original nom. singular was **\*bhéronts**, *bearing*, which corresponds to Skr. **bháran** with regular loss of the final **-ts**, and Goth. **baírands**. Lat. **ferēns** was from **\*ferents** with **-ent-** from the gen., &c. **φέρων** was a new formation after the analogy of the **n-**stems. The new formation first took place in words like **έκών, μέλλων** where the neuter **έκόν, μέλλον** from **\*έκόντ, \*μέλλοντ** was like an **n-**stem. To **έκόν, μέλλον** a new masc. nom. **έκών, μέλλων** was formed after the analogy of **πίον : πίων**. And then to the neuter **φέρων** a new masc. nom. **φέρων** was formed.

The vocative **φέρων** like Lat. **ferēns** was the nom. used for the vocative. The old voc. was preserved in forms like **γέρον, έκόν, &c.** and in Skr. **bháran**. Dat. pl. **φέρουσι** from **\*φέροντσι**.

§ 353. The Indg. form of the nom. voc. and acc. singular neuter was **\*bhérnt** which became **bhárat** in Sanskrit. Lat. **ferēns** can also be from **\*bhérnt**, because **-nt** would regularly become **-ēns** in Latin. Or it may simply be the masc. used for the neuter. **φέρων** from older **\*φέροντ** with **-οντ** from forms where it was regular.

The original form of the nom. voc. and acc. plural was **\*bhérontə = φέροντα**, Skr. **bháranti**. Lat. **ferentia** like **ferentium** was a new formation after the analogy of the **i-**declension.

#### b. ATHEMATIC PARTICIPLES.

§ 354. Three categories are to be distinguished in the participles belonging to this class. (1) Participles which originally had **-ént-** in the strong and **-nt-** in the weak cases (§ 319). (2) Those which had **-nt-** in all cases. (3) Those which had **-nt-** in all cases. The first and second categories were preserved in Sanskrit, but the third was

remodelled after the analogy of the first. The original distinctions in the three categories were almost entirely obliterated in prim. Greek by analogical formations. The **-nt-**, which originally belonged only to the third category, was extended by analogy to all participles. And then the vowel preceding the **-nt-** was made the same as the vowel in the plural of the corresponding indicative. Examples are : (1) Skr. **krīṅ-ánt-** with **-ánt-** from **\*-ént-**, **krīṅ-at-** with **-at-** from **-ṅt-** : **krīṅāmi**, *I buy*, **krīṅānti**, *they buy*, but Gr. **δαμνάς** from **\*δαμναντς** for **\*δαμνευτς**, gen. **δαμνάντος** for **\*δαμνατος** : **δάμνημι**, **δάμναμεν** ; Skr. **sunv-ánt-**, **sunv-at-** : **sunómi**, *I press out*, **sunvānti**, *they press out* ; **δεικνύς** from **\*δεικνυντς** for **\*δεικνυευτς**, gen. **δεικνύντος** for **\*δεικνυατος** : **δείκνυμι**, **δείκνυμεν**. The only certain trace of the original ablaut-grade **-ént-** occurs in the Doric nom. pl. **έντες** from **\*sentes**, *being*, with **έ** for **\*έ** after the analogy of other parts of the verb ; and similarly with the smooth breathing in Ion. **έών**, Att. **ών**. **έών**, **ών**, stem **\*sont-**, Skr. **sánt-**, **sat-**, *being*, and **ίών**, stem **\*iont-** for **\*jont-** (with **i-** for **j-** after the analogy of **ίμεν**, **ίτε**), Skr. **yánt-**, **yat-**, *going*, went over into the thematic declension in prim. Greek. This **-ont-** grade of ablaut was also preserved in the old isolated participle **ό-δούς** from **\*ό-δοντς**, gen. **ό-δόντος**, Skr. **dánt-**, **dat-**, *tooth*.

(2) Skr. **dádat**, gen. **dádataḥ** with **-at-** from **-ṅt-** : **dādāmi**, *I give*, **dádati**, *they give*, but Gr. **διδούς** from **\*διδοντς** for **\*διδατς**, gen. **διδόντος** for **\*διδατος** : **δίδωμι**, **δίδομεν** ; Skr. **dádhat**, gen. **dádhataḥ** : **dádhāmi**, *I put, place*, **dádhati**, *they put, place*, but **τιθείς** from **\*τιθεντς** for **\*τιθατς**, gen. **τιθέντος** for **\*τιθατος** : **τίθημι**, **τίθεμεν** ; and similarly **ιστάς**, **ιστάντος** : **ίσταμεν**, and aorists active like **λύσας**, **λύσαντος** : **έλύσαμεν**, **έλυσαν** ; **φήνας**, **φήναντος** : **έφήναμεν**, **έφηναν**.

(3) In this category the **-nt-** was originally preceded either by a long vowel in all the cases or by a long vowel in the

strong cases and by -ə- (= Gr. α, Skr. i, § 49) in the weak cases. To the former belong aorist active participles like γούς from \*γνοντς older \*γνωντς (§ 70), gen. γνότος : ἔγνων ; δρᾶς from \*δραντς older \*δρᾶντς, gen. δράντος : ἔδρᾶν ; and similarly the aorist passive participles in -εις, as φανείς : ἐφάνην, φανθείς : ἐφάνθη, λυθείς : ἐλύθη. And to the latter belong the aorist active participles δούς, θείς (Cret. κατα-θέης), στᾶς, from \*δοντς, \*θεντς, \*σταντς, gen. δόντος, θέντος, στάντος : ἔδομεν, ἔθεμεν, ἔστημεν older \*ἔστᾶμεν. The original inflection of these participles was nom. \*dónts, \*dhéntς, \*stántς, gen. \*dántós, \*dhántós, \*stántós, and it is possible that δούς, θείς, gen. δόντος, θέντος represent the generalized forms \*dónt-, \*dhént- which would regularly become δοντ-, θεντ- (§ 70). στᾶς, στάντος can be from the strong stem \*stánt- or the weak stem \*stánt- (§ 49) ; and similarly with the old isolated participial form πᾶς from \*παντς older \*πάντς, gen. παντός, Indg. \*kwántς, gen. \*kwántós. The neuter πᾶν had â from πᾶς, cp. πρόπᾶν.

§ 355. The nom. voc. and acc. neuter singular has the bare stem with regular loss of the final -τ (§ 230), as δαμνάν, δεικνύν, διδόν, τιθέν, ιστάν, λῦσαν, γνόν, δόν, θέν, στάν, πᾶν with â from πᾶς. The prim. Greek ending -ντ and the vowel preceding it were of the same origin as in the stem of the corresponding masculines.

The nom. voc. and acc. plural originally ended in -ə = -α, Skr. -i, as διδόντα, Skr. dáda(n)ti, giving.

#### 4. STEMS ENDING IN -went.

§ 356. The suffix of the adjectives belonging to this class had originally two grades of ablaut. The strong form -went-, Skr. -vant-, Gr. -φεντ- belonged to the nom. voc. and acc. singular and dual, and the nom. plural. The weak form -wnt-, Skr. -vat-, Gr. \*-φατ- belonged to all the other cases. Sanskrit preserved the original distinction



between the strong and weak form of the suffix, as acc. sing. **bhágavantam**, *blessed*, gen. **bhágavataḥ**. But in Greek the strong form *-φεντ-* was levelled out into all the cases except the dat. plural.

*Singular.*

	Indg.		
Nom.	<b>-went-s</b>	χαρίεις	bhágavān
Voc.	<b>-went</b>	χαρίεν	bhágavan
Acc.	<b>-went-m̄</b>	χαρίεντα	bhágavantam
Gen.	<b>-wnt-os, -es</b>	χαρίεντος	bhágavataḥ
Dat. (=loc.)	<b>-wnt-i</b>	χαρίεντι	bhágavati

*Dual.*

Nom. Voc. Acc.	<b>-went-e</b>	χαρίεντε	(bhágavantāu)
Gen. Dat.		χαρίέντοι	

*Plural.*

Nom. Voc.	<b>-went-es</b>	χαρίεντες	bhágavantaḥ
Acc.	<b>-wnt-ns</b>	χαρίεντας	bhágavataḥ
Gen.	<b>-wnt-ōm̄</b>	χαρίέντων	bhágavatām
Dat. (=loc.)	<b>-wnt-su</b>	χαρίεσι	bhágavatsu

The nom. singular may originally have ended in **-wēnt-s** corresponding to the Sanskrit ending **-vān**. The ending **-eis** can be from either prim. Gr. **-φηντ-s** (§ 70) or **-φεντ-s** (§ 69, 1). The prim. Greek dat. pl. was \*χαριφατσι which became \*χαριφετσι through the influence of the *ε* in **-φεντ-**. Then \*χαριφετσι regularly became χαρίεσι through the intermediate stage \*χαρι(φ)εσσι (§ 166). Of like origin is the *ε* in the fem. χαρίεσσα, prim. Gr. \*χαριφατja, and in χαρίεστερος, χαρίεστατος.

§ 357. The regular form of the nom. voc. and acc. neuter singular would have been \*χαρία from \*χαριφατ, cp. Skr. **bhágavat**. χαρίεν from \*χαριφεντ was a new formation with **-φεντ** for **-φατ** as in the gen. singular, &c.

The nom. voc. and acc. plural *χαρίεντα* was from \**χαρι-φεντα*, cp. Skr. *bhágavanti*, with *-φεντα*, Skr. *-vanti* from Indg. *-wentə*.

### 5. STEMS ENDING IN A LIQUID.

§ 358. The only stem ending in *-l* is *ἄλς* (*ἄλα*, *ἄλός*, &c.) which regularly has *-s* in the nominative.

### STEMS ENDING IN *-r*.

§ 359. To this class belong : (1) The nouns of relationship *πατήρ*, *μήτηρ*, *θυγάτηρ* and *δᾶήρ* from \**δαιφῆρ* (§ 57); *φράτηρ*, *φράτωρ* = Skr. *bhrátar-*, *brother*, became isolated from this category owing to their change in meaning. (2) The nomina agentis, as *δοτήρ*, *δώτωρ*, *γενετήρ*, *γενέτωρ*, *ρήτήρ*, *ρήτωρ*, &c. (3) A few other nouns which belong to neither of these two categories, as *ἄήρ*, *αἰθήρ*, *ἄθήρ*, *ἄστηρ*, *γαστήρ*, *ἀνήρ*, and the monosyllables *θήρ*, *φώρ*.

The stem-endings originally had various grades of ablaut in the different cases, as *·tēr*, *·tōr*; *·ter-*, *·tor-*; *·tr-* before vowels, but *·tr̥-* before consonants, and similarly *·ēr*, *·er-*, *·r-*, *·r̥-*. The alternation between *ě* and *ō* was the same as in the *n*-declension (§ 345). In the weak case-forms the vowel disappeared and then the *·r-* remained consonantal or became vocalic according as the next syllable began with a vowel or a consonant, as *πατρός*, *πατρῶν*, *πατράσι*, cp. Skr. *pitṛ̥ṣu*. *·tēr*, *·tōr*, *·ēr* regularly belonged to the nom. singular only; *·ter-*, *·tor-*, *·er-* to the voc. acc. and dat. (= loc.) singular, the nom. plural, and the nom. voc. and acc. dual; *·tr-*, *·r-* to the gen. singular and plural, gen. and dat. dual, and acc. plural; and *·tr̥-*, *·r̥-* to the dat. (= loc.) plural. In Greek *ē* or *ō* regularly appears in the nom. singular. In the nouns of relationship the original distinction between *·tēr*, *·ter-*, *·tr-*, *·tr̥-* was preserved in Sanskrit and also in Greek apart from the new formations

explained below, but in Latin the weak stem-ending **-tr-** became generalized in the oblique cases.

The *nomina agentis* were originally declined like the nouns of relationship as in Sanskrit, but in Latin **-tōr-** became generalized. In Greek the **-η-** of the nom. of nouns ending in **-τηρ** was levelled out into all the cases, as *δοτήρ, ῥητήρ, σωτήρ*, gen. *δοτήρος, ῥητήρος, σωτήρος* except that the voc. of *σωτήρ* was *σῶτερ*; and similarly the monosyllable *θήρ, θηρός*. Those ending in **-τωρ** generalized the ablaut-grade **-τορ-**, as *δώτωρ, ῥήτωρ*, gen. *δώτορος, ῥήτορος*; and similarly *φράτωρ, φράτορος*. In *μήστωρ, μήστωρος* and the monosyllable *φῶρ, φωρός* the **-ω-** of the nom. was generalized.

## § 360.

*Singular.*

	Indg.			
Nom.	<b>-tēr, -tē</b>	<i>πατήρ</i>	<i>pitá</i>	<i>pater</i>
Voc.	<b>-ter</b>	<i>πάτερ</i>	<i>pitár</i>	<i>pater</i>
Acc.	<b>-ter-m</b>	<i>πατέρα</i>	<i>pitáram</i>	<i>patrem</i>
Gen.	<b>-tr-os, -es</b>	<i>πατρός</i>	<i>pitúr</i>	<i>patris</i>
Dat. (=loc.)	<b>-ter-i</b>	<i>πατέρι</i>	<i>pitári</i>	<i>patre</i>

*Dual.*

Nom. Voc. Acc.	<b>-ter-e</b>	<i>πατέρε</i>	( <i>pitárāu</i> )
Gen. Dat.	?	<i>πατέροιν</i>	

*Plural.*

Nom. Voc.	<b>-ter-es</b>	<i>πατέρες</i>	<i>pitárah</i>	( <i>patrēs</i> )
Acc.	<b>-tr-ns</b>	<i>πατέρας</i>	( <i>pitṛn</i> )	<i>patrēs</i>
Gen.	<b>-tr-ōm</b>	<i>πατρῶν</i>	( <i>pitṛṇám</i> )	<i>patrum</i>
Dat.	<b>-tr-su</b>	<i>πατράσι</i>	<i>pitṛṣu</i>	

The nom. singular ended in the parent Indg. language in **-tēr** beside **-tē** (cp. § 29). The reason for this difference is unknown. The former was generalized in Greek, Latin and the Germanic languages and the latter in Sanskrit and

the Baltic-Slavonic languages. The Greek stem- and case-endings of the inflected forms given above correspond to the Indg. stem- and case-endings except the acc. and dat. plural. It is possible that the accusative originally had the stem-ending *-ter-* corresponding to *πατέρας*. *πατράσι* had *-σι* from the dat. of consonantal stems where the *-σ-* was not originally intervocalic as in *ποσσί, ποσί* (§ 342). On the final *-ι* see § 316. Beside the regular forms the nouns of relationship often have analogical formations in the oblique cases, especially in the gen. and dat. singular and gen. plural, as Hom. *πατέρος, μητέρος*, Hom. and Att. *πατέρων, θυγατέρος* with the substitution of *-τερ-* for *-τρ-* after the analogy of the strong stem-endings and vice versa *πατρί, θύγατρα, θύγατρες*.

Like *πατήρ* was also declined *γαστήρ*. The regular inflection of *άνήρ* was *άνήρ, άνερ, άνέρα, άνδρός, άνέρι; άνέρε, άνδροίν; άνέρες, άνδρας* or *άνερας, άνδρῶν, άνδράσι*. *-νρ-* regularly became *-νδρ-* (§ 152) in the weak stem-forms. *άνέρος* for *άνδρός* was formed after the analogy of forms like *άνερ, άνέρα*; and similarly *άνδρα, άνδρί, άνδρε, άνδρες* after forms like *άνδρός, άνδρῶν*.

*δαήρ* (voc. *δαερ*), *φράττηρ, άήρ, αιθήρ, άθήρ* and *άστηρ* generalized the strong stem-endings *-τερ-, -ερ-* in all the oblique cases, as gen. *δαέρος, φράτερος, άέρος, αιθέρος, άθέρος, άστέρος*, but dat. pl. *άστρασι*.

## § 361.

## Singular.

	Indg.				
Nom.	<i>-tēr, -tōr</i> <i>-tē, -tō</i> }	<i>δοτήρ</i>	<i>δώτωρ</i>		dator
Voc.	<i>-ter, -tor</i>	<i>δοτήρ</i>	<i>δῶτωρ</i>	<i>dātá</i>	dator
Acc.	<i>-ter-ḡ, -tor-ḡ</i>	<i>δοτήρα</i>	<i>δώτορα</i>	<i>dātáram</i>	datōrem
Gen.	<i>-tr-os, -es</i>	<i>δοτήρος</i>	<i>δώτορος</i>	<i>dātúr</i>	datōris
Dat. (=loc.)	<i>-ter-i, -tor-i</i>	<i>δοτήρι</i>	<i>δώτορι</i>	<i>dātári</i>	datōre

## Dual.

Nom. Voc. Acc.

-ter-e, -tor-e    δοτῆρε    δώτορε    (dātārāu)

Gen. Dat.

?                    δοτήροι    δωτόροι

## Plural.

Nom. Voc. -ter-es, -tor-es

δοτῆρες    δώτορες    dātārah    datōrēs

Acc. -tr-ṅs

δοτήρας    δώτορας    (dātṛṅ)    datōrēs

Gen. -tr-ōm̄

δοτήρων    δωτόρων    (dātṛṅām)    datōrum

Dat. (=loc.)

-tr-su            δοτήρσι    δώτορσι    dātṛṣu

On the levelling out of the ablaut-grades -τηρ-, -τορ- see § 359. On the ending of the nom. singular in Sanskrit see § 360. The -ā- in Skr. *dātāram*, *giver*, *dātārāu*, *dātārah* is of the same origin as in *rājānam* (§ 345). Beside the gen. case-endings -os, -es the parent Indg. language had also -s (§ 302) which occurs in *dātūr*, *pitūr*; -ṛs regularly became -ur through the intermediate stages -ṛš, -ṛž, -ṛr. The acc. and gen. plural *dātṛṅ*, *pitṛṅ*, *dātṛṅām*, *pitṛṅām* were new formations after the analogy of the i- and u-declensions (Thumb, *Handbuch des Sanskrit*, § 302). The regular forms would have been \**dātrāh*, \**pitṛāh*, \**dātrām*, \**pitṛām*. The old gen. was preserved in Vedic *narām* = *ἀνδρῶν*.

§ 362. It is difficult to account satisfactorily for Att. Ion. *χείρ* and the inflected forms, because it is not certain what was the original stem: The most probable explanation is that beside the stem *χερ-* there once existed a stem *χερι-* with nom. acc. dual *χείρε* from \**χερjē*. From the dual a new nominative singular Att. Ion. *χείρ* was formed. Att. then generalized the -ει-, as *χείρα*, *χειρός*, *χειρί*; *χείρες*, *χείρας*, *χειρῶν*, but *χεροῖν*, *χερσί* from stem *χερ-*. And Ion. generalized the stem *χερ-*, as *χέρα*, *χερός*, *χερί*;

χέρεις, χέρας, χερῶν, χερσί, but Hom. χείρεσι, -εσσι from χεῖρ-. The nom. χέρς in Timocreon 9 was, like Att. μάρτυς from \*μάρτυρς, a new formation after the analogy of the nominatives in -s.

### 6. S-STEMS.

§ 363. The s-stems contain masculine, feminine and neuter nouns and adjectives. They can be conveniently divided into five sub-divisions: (a) The large class of neuter nouns with the ablaut-grades -es-, -os-. (b) Nouns and adjectives of the type *δυσμενής*. (c) Nouns with the ablaut-grades -ōs-, -os-. (d) The comparative of adjectives with the ablaut-grades -jes-, -jos-, -jōs-. (e) Neuter nouns with the stem-ending -əs.

#### a. NEUTER STEMS IN -es-, -os-.

§ 364. To this sub-division belongs a large number of nouns in Greek, Sanskrit and Latin. In the Germanic languages nearly all of them went over into other declensions. They originally had either the strong grade of ablaut in the root and the weak in the stem-ending or the weak grade in the root and the strong in the stem-ending. A comparison of the forms in the various languages shows that this original distinction must have become obliterated during the prim. Indg. period by the ablaut-grade -es- being levelled out into all the inflected forms.

#### Singular.

	Indg.			
Nom. Voc. Acc.	-os	γένος	jánaḥ, race	genus
Gen.	-es-os, -es	γένεος, γένους	jánasaḥ	generis
Dat. (=loc.)	-es-i	γένει, γένει	jánasi	genere

#### Dual.

Nom. Voc. Acc.	-es-i, -ī	γένει, γένεε	jánasī
Gen. Dat.	?	γενοίν, γενέοιν	

## Plural.

Nom. Voc. Acc.	-es-ə, -ōs-ə	γένεα, γένη	(jánāsi)	genera
Gen.	-es-ōm̄	γένέων, γενῶν	jánasām	generum
Dat. (=loc.)	-es-su	γένεσσι, γένεσι	jánaḥsu	

Intervocalic **-s-** disappeared in prim. Greek (§ 213, 2), but became **-r-** in Latin. In Sanskrit **-es-** and **-os-** regularly fell together in **-as-** (§ 42). The Ionic uncontracted and the Attic contracted forms correspond to the Indg. stem- and case-endings except γένεϊ and γένεε. The **-i** in the Ionic trisyllabic form γένεϊ was due to the influence of datives like ποδί. The dual γένει represents an older γένεε which is common in manuscripts. γένεε from older \*γένεσε had **-ε** after the analogy of forms like δυσμενέε, πόδε. Hom. has γένεσσι beside γένεσι (§ 212, 2). After the analogy of γένεσσι the ending **-εσσι** became used to form the dative plural of **i-**, **u-**, and of all kinds of consonantal-stems. In Homer even forms like ἐπέεσσι occur owing to the stem being regarded as ἐπέ-. Sanskrit jánāsi (with nasalized **-ā-**) was a new formation after the analogy of the **nt-**stems. The regular form would have been \*jánāsi or \*jánasi. jánaḥsu = jánassu.

§ 365. Att. φῶς, *light* = Hom., &c. φάος from \*φαφος, gen. φάους from \*φαφοσος, Hom. dat. φάει from \*φαφεσι, nom. pl. φάεα from \*φαφεσα. The other cases were formed after the analogy of the dental stems, as φωτός, φωτί, pl. φῶτα, φῶτων.

There seems to have been in prim. Greek two forms for the word *ear*, οὖς from \*ῶος, older \*ούσος and Dor. Ion. ὠς from Indg. \*ō(u)s (§ 63). Hom. οὐατος, οὐατα, οὐασι, from \*ούσατος, &c. after the analogy of the stems in **-μα** (§ 350), and Attic, &c. ὠτός, ὠτί, pl. ὠτα, ὠτων, ὠσί (also Hom.) from the form ὠς after the analogy of the dental stems. οὖς, οὐατος, &c. had the smooth for the rough breathing after the analogy of ὠς, ὠτός, &c. See § 219.

b. *δυσμενής*.

§ 366. Nouns and adjectives of the type *δυσμενής*, *ill-affected*, *hostile*, Skr. *durmanāḥ*, *dispirited*, only exist in Greek and Sanskrit. And originally they occurred only in compounds. Simple forms like *μιγής*, *φραδής*, *ψευδής* beside *συμμιγής*, *ἀφραδής*, *φιλοψευδής* were back-formations made direct from the compounds. These compounds are closely related to the neuter stems in *-es-*, *-os-*, the *-es-* having become generalized in the parent Indg. language, cp. *ἀμενής*, *δυσμενής*, *εὐμενής* : *μένος*, *εὐγενής* : *γένος*, *ἀψευδής* : *ψεῦδος*.

*Singular.*

	Indg.		
Nom.	-ēs	<i>δυσμενής</i>	<i>durmanāḥ</i>
Voc.	-es	<i>δυσμενές</i>	<i>durmanah</i>
Acc.	-es-ṃ	<i>δυσμενέα, -ῆ</i>	<i>durmanasam</i>
Gen.	-es-os, -es	<i>δυσμενέος, -οῦς</i>	<i>durmanasaḥ</i>
Dat. (=loc.)	-es-i	<i>δυσμενεῖ, -εῖ</i>	<i>durmanasi</i>

*Dual.*

Nom. Voc. Acc.	-es-e	<i>δυσμενέε, -εῖ</i>	( <i>durmanasāu</i> )
Gen. Dat.	?	<i>δυσμενέοιν, -οῖν</i>	

*Plural.*

Nom. Voc.	-es-es	<i>δυσμενέες, -εῖς</i>	<i>durmanasaḥ</i>
Acc.	-es-ṃs	<i>δυσμενέας</i>	<i>durmanasaḥ</i>
Gen.	-es-ōṃ	<i>δυσμενέων, -ῶν</i>	<i>durmanasām</i>
Dat. (=loc.)	-es-su	<i>δυσμενέσι</i>	<i>durmanahsu</i>

The intervocalic *-s-* regularly disappeared (§ 213, 2). The *-ής* of the nom. singular is a lengthening of the stem-ending *-es-*. It is improbable that the original ending was *-ēs-s-*. The *ī* in *δυσμενεῖ* is of the same origin as in *γενεῖ* (§ 364). Apart from the dat. plural all the other forms



both contracted and uncontracted represent the original stem- and case-endings. *δυσμενέσι*, older *δυσμενέσσι*, on the final *-ι* of which see § 316. In Attic the nom. plural was used for the accusative. In Attic the compounded proper names in *-κράτης*, *-μένης*, *-σθένης*, *-φάνης* and also other compounds often had *-ην* in the accusative after the analogy of the masculine *ā*-declension. This also occurred occasionally in the Ionic, Aeolic, Cretan, Arcadian and Cyprian dialects. And in like manner the Attic genitive, and more rarely the dative, were sometimes formed after the analogy of the *ā*-declension. The Lesbian voc. gen. and dat. endings *-ε*, *-η*, *-η* were also similar analogical formations.

§ 367. The original ending of the nom. voc. and acc. neuter singular was *-es*, as in *δυσμενές* = Skr. *durmanah*; and of the plural *-es-ə* as in *δυσμενέα*, *-ῆ*.

### c. STEMS IN *-ōs*, *-os*.

§ 368. These nouns had originally the ablaut-grades *-ōs*, *-os*, but the *-os* became generalized in prim. Greek in the inflected forms. Nouns of this type occur only in Greek, Latin and Sanskrit.

Nom. *γέλως*, *ἔρως*, *ιδρώς*, *αἰδώς*, voc. *αἰδοῖ* for *\*αἰδος* after the analogy of *πειθοῖ* (§ 341), acc. *αἰδῶ* from *\*αἰδοσα*, Hom. *ιδρῶ*, gen. *αἰδοῦς* from *\*αἰδοσος*, dat. *αἰδοῖ* from *\*αἰδοσι*; and similarly acc. *αἰῶ* from *\*αἰφοσα* beside *αἰῶνα*: nom. *αἰών*, gen. *αἰῶνος*. Cp. O.Lat. *arbōs*, *arbōrem* beside *honōs*, *honōrem* with *-ō* of the nom. levelled out into the oblique cases. *γέλως*, *ἔρως* and *ιδρώς* were generally declined after the analogy of the dental stems (§ 342), gen. *γέλωτος*, *ἔρωτος*, *ιδρῶτος*; also Att. acc. *γέλων*, Hom. dat. *γέλῳ*, *ιδρῶ* after the analogy of the *o*-stems (§ 327), acc. *γέλῳ* after the analogy of the *ōu*-stems (§ 340).

Hom. *ἠώς* from *\*āusōs*, cp. Skr. *uśāḥ*, *dawn*, Lat. *aurōr-a* from *\*āusōs-ā* with *-ā* from the *ā*-declension, voc.

ῥοῖ after the analogy of *πειθοῖ* (§ 341), acc. ῥῶ from \*ῥοσα, Skr. uṣṣāsam, gen. ῥοῦς from \*ῥοσος, Skr. uṣṣasaḥ, dat. ῥοῖ from \*ῥοσι, Skr. uṣṣasi. Attic ἕως from ῥῶς (§ 71) went over into the so-called Attic second declension (§ 327).

d. THE COMPARATIVE OF ADJECTIVES.

§ 369. One of the numerous ways of forming the comparative of adjectives in the parent Indg. language was by means of a suffix with the ablaut-grades *-jes-*, *-jos-*, *-jōs-*, *-is-*. The grades *-jes-* and *-jos-* regularly fell together in *-jas-* (§ 42) in Sanskrit. In Latin *-jos-* only occurs in the nom. voc. and acc. neuter, as O.Lat. *majos*, later *majus*. In all the other forms of the masculine, feminine and neuter *-jōs-*, which originally belonged only to the masculine nom. singular, became generalized, as O.Lat. *majōs*, *noviōs*, acc. *majōrem*, *noviōrem*. In Greek *-jes-*, *-jōs-* do not occur at all, and *-jos-* only occurs in three forms, viz. in the acc. singular masculine and feminine, as *μείζω*, Ion. *μέζω* from \*μέγιοσα, Indg. \*mégjosm, masc. and fem. nom. plural *μείζους*, *μέζους* from \*μέγιοςες, neut. nom. acc. plural *μείζω*, *μέζω* from \*μέγιοσα with *-a* = Indg. *ə*. See § 375.

e. NEUTER STEMS IN *-əs-*.

§ 370. Nouns of this type are found only in Greek and Sanskrit. *-əs-*, Gr. *-ας-*, Skr. *-iṣ-* is the weak grade of the *-ōs* in paragraph 368, but the *-əs-* grade became generalized already in the parent Indg. language.

*Singular.*

	Indg.		
Nom. Voc. Acc.	<i>-əs</i>	<i>γέρας</i>	<i>havīḥ</i> , <i>oblation</i>
Gen.	<i>-əs-os</i> , <i>-es</i>	<i>γέραος</i> , <i>γέρως</i>	<i>havīṣaḥ</i>
Dat. (= loc.)	<i>-əs-i</i>	<i>γέραϊ</i> , <i>γέραι</i>	<i>havīṣi</i>

*Dual.*

Nom. Voc. Acc.	-əs-i, -ī	γέραε, γέρᾱ	havīṣī
Gen. Dat.	?	γεράοιν, γερῶν	

*Plural.*

Nom. Voc. Acc.	-əs-ə	γέραα, γέρᾱ	(havīṣi)
Gen.	-əs-ōñ	γεράων, γερῶν	havīṣām
Dat. (=loc.)	-əs-su	γέρασσι, γέρασι	havīḥṣu

The dat. γέραϊ and dual γέραε, γέρᾱ were new formations of the same kind as in γένει and γένει, γένει (§ 364). On the -i in γέρασσι see § 316. The remaining Ionic uncontracted and the Attic contracted forms are normally developed from the corresponding Indg. stem- and case-endings. But most of the nouns belonging to this class were also declined after the analogy of the stems in -μα (§ 350), as πέρατος, τέρατος, κέρᾱτος from \*κέραατος, pl. πέρατα, τέρατα, κέρᾱτα. Poetic forms like Hom. οὔδεος, οὔδει, οὔδει; κέρεος, κέρει, pl. κέρεα; Att. βρέτεος, pl. βρέτη, βρετέων were formed after the analogy of the corresponding cases of γένος (§ 364). The -ᾶ in the nom. acc. plural of forms like γέρᾶ, κρέᾶ beside the regular forms γέρᾱ, κρέᾱ was due to the analogy of the nom. acc. of other consonantal stems. It is difficult to explain datives like κρέᾶ, γήρᾶ which occur in Attic texts. They seem to be new formations after the analogy of the dat. of the ā-declension, but it is not clear how the change could have come about.

## THE r : n-DECLENSION.

§ 371. The parent Indg. language had a declension of neuter nouns which consisted of the blending of two stems. The stem of the nom. and acc. singular generally ended in one of the ablaut-grades -er (Skr. -ar, Lat. -er); -ōr (Gr. -ωρ); and -r (Gr. -αρ, Lat. -ur), but also occasionally in -r + a consonant, as Skr. áhar, day, údhar, udder, Lat. iter; ἔλωρ, πέλωρ, ὕδωρ; ἦπαρ, οὔθαρ, Lat. femur, jecur; Skr.

**yákr̥t**, *heart*, **ásr̥k**, *blood*. The stem of the oblique cases ended in **-n** or **-ṅ**, as gen. Skr. **áhn-aḥ**, **údhn-aḥ**, **udn-áh**, *of water*, Gr. *ἤπα-τος*, *ὔδα-τος*, Lat. **feminis**, **\*itinis**, **\*jecinīs** (**femoris**, **iteris**, **itineris**, **jecoris**, **jecinoris** were analogical formations through the mixing of the two stems); Skr. **jakn-áh**, **asn-áh**.

This declension was best preserved in Sanskrit and Greek, in the other languages one or other of the stems mostly became generalized, as in Lat. **über**, OE. **ūder**, *udder*; OE. **wæter** beside Goth. **watō** (dat. **watin** = Skr. **udáni**), *water*; and similarly in the three Greek words *ἕαρ* from *\*φεσαρ* (gen. *ἕαρος*), Lat. **vēr**; *πῦρ*, gen. *πυρός* beside Goth. **fōn**, *fire*, gen. **funins**; *θέναρ*, gen. *θέναρος*.

Many of the words belonging to this declension are found in Greek only in the nom. and acc. singular, as *ἄλκαρ*, *εἶλαρ*, *ἔλωρ*, *ὄναρ*, *πέλωρ*, *πίαρ*, *τέκμαρ*, *τέκμωρ*, *ὔπαρ*. Inflected forms of the following nouns occur, all of which were formed after the analogy of the stems in **-μα** (§ 350): *ἄλεαρ*, from *\*άλεφαρ*, *ἄλειφαρ*, *δέλεαρ* from *\*δελεφαρ*, *εἶδαρ* from *\*έδφαρ*, *ἦμαρ*, *ἦπαρ*, Hom. *ὄνειαρ* read *ὄνηαρ* from *\*ὄνᾱφαρ*, *οὔθαρ*, *πεῖραρ* from *\*περφαρ*, *σκῶρ*, *στέαρ*, *ὔδωρ*, *φρέᾱρ* from *\*φρηφαρ* (cp. § 72).

Many attempts have been made to explain the origin of this declension, but none of them are satisfactory. The original inflexions were better preserved in Vedic than in classical Sanskrit. The declension of Vedic **áhar**, *day* and Greek *ἦπαρ* will serve as models for all nouns belonging to this class. The stem- and case-endings of the inflected forms in both languages correspond to those of the neuter **n**-declension (§ 350).

*Singular.*

Nom. Voc. Acc.	ἦπαρ	áhar
Gen.	ἦπατος	áhnah
Dat. (= loc.)	ἦπατι	áhani, áhan

	<i>Dual.</i>	
Nom. Voc. Acc.	ἦπατε	áhanī
Gen. Dat.	ἦπάτων	
	<i>Plural.</i>	
Nom. Voc. Acc.	ἦπατα	áhāni
Gen.	ἦπάτων	áhnām
Dat. (= loc.)	ἦπασι	áhasu

## CHAPTER X

## ADJECTIVES

## A. THE DECLENSION OF ADJECTIVES

§ 372. The development of grammatical gender in nouns was older than in adjectives, but adjectives had before the close of the prim. Indg. period come to be inflected for number, gender and case like nouns. At an earlier period there must however have been a stage when the bare stem of the adjective was used along with the noun without anything to indicate its number, gender and case, something like Modern English which has got rid of the superfluous luxury of inflexion and gender. After the *ā*-stems of nouns had become characteristic of the feminine gender, and the *o*-stems of the masculine and neuter genders (§ 295), the adjectival *o*-stems began to have inflexions for number, gender and case after the analogy of such nouns when used along with them as attributes. Nouns of the type γόνος : γονή, τόμος : τομή with like meaning in both genders, and words like \*ékws, Lat. equus : \*ékwā, Lat. equa, were probably also an important factor in the development. At a still later period the adjectives of the type -os, -ā, -om (-os, -ā, -η ; -ον, Skr. -ah, -ā, -am, Lat. -us, -a, -um) came to be used along with nouns belonging to the *i*-, *u*-, diphthongal- and consonantal-declensions. The

development of the feminine gender in the other adjectival stems went parallel with the formation of the feminine gender in the corresponding substantival stems, i. e. they were formed after the analogy of the *jā*-stems (§ 322). The adjectives of this type then acquired the gender and inflexion of the corresponding masculine and neuter nouns and became used along with all kinds of nouns.

§ 373. In Greek the adjectives are declined like the corresponding nouns, but as we have seen above the feminine of the *u*-, *n*- and *nt*-stems is declined like a *jā*-stem. There is however a large number of adjectives in Greek, which has only one ending (*-os*) for the masculine and feminine. The adjectives of this type are partly compound and partly simple. They were originally nouns, denoting living beings possessing the characteristic implied in the word, which later came to be used as adjectives, as *ρόδοδάκτυλος*, lit. *a man with rosy fingers*; *θῦμοβόρος*, lit. *soul-devourer*; *λάλος*, lit. *a chatterer, babbler*; *ἤσυχος*, lit. *a quiet, gentle kind of man*; and similarly *ἔκηλος*, *ἡμερος*, *ἴλαος*, *λάβρος*, *λοίδωρος*, &c. After the analogy of such adjectives, simple adjectives which were not originally nouns denoting living beings came to have only the two endings, *-os*, *-on*, as *ἔωλος*, *νύκτερος*, *χέρσος*, &c. The gender of compound nouns was determined by the second element. When such compound nouns came to be used attributively in apposition to other nouns (cp. John Lackland) they became adjectival and were inflected like ordinary adjectives, except that they preserved their original masculine ending when used along with a feminine noun, as *ρόδοδάκτυλος ἡώς*; and similarly neuter compounds like *\*καλλίσφυρον*, *beautiful ankle*, when they became adjectives, had *-os* for both the masculine and feminine. But when the second element of the compound was originally an adjective, it regularly had the three endings. The adjectives of this type had sometimes however only two endings after the analogy of

the first type. The compound adjectives in *-ής* like *δυσμενής* (§ 366) never had different forms for the masculine and feminine. On the simple adjectives like *μυγής*, *φραδής*, *ψευδής*, see § 366.

NOTE.—The inflexion of contracted adjectives like *ἀπλοῦς* from *ἀπλόος* was regular in the masculine and neuter except in the nominative and accusative neuter plural. The feminine *ἀπλή* (for *\*ἀπλω* from *ἀπλόη*), &c. and *ἀπλά* (for *\*ἀπλω* from *ἀπλόα*) were formed after the analogy of forms like *σοφή*, &c. and *σοφά*.

§ 374. In the following adjectives the declension is made up of the blending together of two different stems: nom. acc. masc. sing. *πολύς*, *πολύν*, neut. *πολύ*, stem *πολύ-*, and fem. nom. sing. *πολλή* from *\*πολ(F)jā*, gen. *πολλῆς* from *\*πολ(F)jās*, from which was formed a masc. and neut. stem *\*πολ(F)jo-* = *πολλο-* for all the other forms of the masculine and neuter. The old forms of the *u*-stem were preserved in Hom., as *πολέος*, *πολέες*, *πολέας*, *πολέσι*. And similarly nom. acc. masc. sing. *μέγας*, *μέγαν*, neut. *μέγα*, and fem. nom. sing. *μεγάλη* from which was formed a masc. and stem *μεγάλο-* for all the other forms of the masculine and neuter.

## B. THE COMPARISON OF ADJECTIVES

### I. THE COMPARATIVE DEGREE.

§ 375. The parent Indg. language had several suffixes by means of which the comparative degree was formed. But in the individual branches of the parent language one of the suffixes generally became more productive than the rest, and in course of time came to be the principal one from which the comparative was formed, the other suffixes only being preserved in isolated forms.

The oldest and most original mode of forming the comparative of adjectives in prim. Indo-Germanic was by

means of the suffix **-jes-** with the ablaut-grades **-jos-**, **-jōs-** and **-is-**, which was added direct to the root-syllable. The root-syllable originally had the strong grade of ablaut. This suffix became the normal one in Latin for the formation of the comparative (§ 369), but in Greek and the Germanic languages it practically remained unproductive. In the oldest Sanskrit it was more productive than in the later language. In classical Sanskrit only a limited number of comparatives occur with this suffix. **-is-** the weak grade form of the suffix occurs in Latin adverbs like **magis**, **nimis**, **satis**, and in Gothic adverbs like **mins**, *less*, **waírs**, *worse*, from **\*minniz**, **\*wirsiz**. **-jes-**, **-jōs-** do not occur at all in Greek, and **-jos-** only occurs in three forms of the declension, viz. in the masc. and fem. acc. singular, as **μείζω**, Ion. **μέζω** from **\*μέγγοσα**, Indg. **\*mégjosm**, masc. and fem. nom. plural **μείζους**, **μέζους** from **\*μέγγοσες**, and neut. nom. acc. plural **μείζω**, **μέζω** from **\*μέγγοσα**. And similarly **βάσσω**, **βράσσω**, **γλύσσω**, **έλάσσω**, **ήττω** (**ήσσω**), **θάσσω**, **κρέσσω**, **μάσσω**, **πάσσω**. From these and similar forms a new nom. **μέζων**, **μέζον**, **βάσσων**, **βάσσον** was formed after the analogy of **ήδιών**, **ήδιον** : **ήδίω**, which then came to be declined like **ήδιών**. Why the stem-vowel was long in Att. **μείζω**, **κρείττω**, **έλάττω**, **θάττω**, but short in the corresponding Ionic forms, is still an unsolved problem. Beside the suffix form **-jes-**, **-jōs-** there was also in prim. Indg. the suffix form **-ĵes-**, **-ĵōs-**, the **ī**, **ĩ** of which stood in ablaut relation to each other. The **-ĵ-** was preserved in Greek, but Sanskrit generalized the **-ī-**, as Skr. **svádīyas-**, *sweeter*; masc. and fem. acc. singular **ήδίω**, masc. and fem. nom. plural **ήδίους** (also used for the acc.), neut. nom. acc. plural **ήδίω**, from **\*σφάδιγγοσα**, **\*σφάδιγγοσες**, **\*σφάδιγγοσα**, beside **καλλίω** from **\*καλλιγγοσα**, **έχθίω**, **ρήίω**. All the other forms of the declension in Greek were formed from the weak grade **-is-** + an **n-** suffix with the ablaut-grades **-en-**, **-on-**, **-ōn** (§ 345), as **ήδιών**, **ήδιονα**, **ήδιονος**, neut. **ήδιον**,



from \*σφᾶδισων, \*σφᾶδισονα, \*σφᾶδισονος, \*σφᾶδισον, pl. ἡδιόνες, neut. ἡδιόνα, from \*σφᾶδισονες, \*σφᾶδισονα; and similarly in Goth. masc. nom. sūt-iz-a, *sweeter*, acc. sūt-iz-an, gen. sūt-iz-ins. The -i- was generally long in Attic poetry and short in Doric and the old epic poetry. This fluctuation between the long and short -i- was due to the levelling out of ī or ĭ in the forms where it was regular, as in ἡδίω, ἡδιούς beside ἡδιών, ἡδιόνα, &c., ἐχθίω, καλλίω, ῥήϊω. The feminine of this type of comparative was originally formed as a jā-stem (§ 322), as Skr. nāv-jas-ī, *newer*, gár-iyas-ī, *heavier*, but in Greek and Latin the masculine became also used for the feminine.

NOTE.—From what has been said above it will be seen that the Greek declension of words of the type ἡδιών is made up of the two different stem-forms \*σφᾶδ-ῖjos- and \*σφᾶδ-ισ-on-, which originally had different meanings. The former denoted the adjectival form of the comparative, *sweeter*, and the latter the substantival, *the sweeter*. But this original distinction in the meaning of the two stem-forms was obliterated in prim. Greek whereby the substantival form became adjectival. And similarly in the Germanic languages, as Goth. sūt-iz-a (acc. sūt-iz-an, gen. sūt-iz-ins) which originally meant *the sweeter*.

§ 376. The secondary suffixes -ero-, -tero- were originally confined to words relating to place and to certain pronominal forms, as Skr. úparah, ádharah, *lower*, Lat. s-uperus, inferus; Goth. unsar, *our*, izwar, *your*. Skr. kataráh, πότερος, Goth. hvapar, *which of two*; ἡμέτερος, ὑμέτερος, Lat. noster, vester; Lat. exterus, dexterus. The suffix -ero- remained unproductive in all the languages. The suffix -tero- remained unproductive in Latin and the Germanic languages, but in Greek and Sanskrit it had become in the prehistoric periods of these languages the ordinary suffix for the formation of the comparative of adjectives. The -tero- was originally added to the ad-

verbial form, which in the *i*-, *u*- and consonantal-stems was identical with the neuter singular, as *ρήϊ-τερος*, *ὕψι-τερος*; *γλυκύ-τερος*, *ὀξύ-τερος*; *μελάν-τερος*, *χαριέσ-τερος* from \**χαριφεντ-τερος*; *πενέσ-τερος* from \**πενετ-τερος*; *μακάρ-τερος*; *ἀληθέσ-τερος*, *εὐμενέσ-τερος*; Skr. *śūci-tarah*, *purer*; *cāru-tarah*, *dearer*; *bhāgavat-tarah* (stem *bhagavant-*), *more blessed*; *tavās-tarah*, *stronger*; *παλαί-τερος*, *μυσαί-τερος* which at a later period came to be felt as being formed from *παλαιός*, *μέσος*, and then after the analogy of these were formed such comparatives as *γεραί-τερος*, *ἡσυχαί-τερος*, *ισαί-τερος*, *μυχαί-τερος*, *σχολαί-τερος*, *πλησιαί-τερος*. And in like manner from such comparatives as *χαριέσ-τερος*, *ἀληθέσ-τερος*, the *-εσ-τερος* was abstracted and used for forming comparatives like *σωφρον-έσ-τερος*, *εὐδαιμον-έσ-τερος*, *ἀσμεν-έσ-τερος* : *ἄσμενος*, *εὐνούστερος* from \**εὐνο-εσ-τερος* : *εὐνοῦς*. And similarly from comparatives like *ἀχαρίσ-τερος* : *ἄχαρις*, *-ιτος*, *γαστρίσ-τερος* : *γάστρις*, was extracted the *-ίσ-τερος*, which became used for forming comparatives like *λαλί-ίσ-τερος* : *λάλος*, *πτωχ-ίσ-τερος* : *πτωχός*, *βλᾶκ-ίσ-τερος* : gen. *βλᾶκός*, *κλεπτ-ίσ-τερος* : *κλέπτῃς*.

In the ordinary formation of the comparative of *o*-stems, as in *ἀξιό-τερος*, *σοφώ-τερος* beside *κουφό-τερος*, *πικρό-τερος*, *πονηρό-τερος*, *σεμνό-τερος*, *κενό-τερος*, *στενό-τερος* from older \**κενφό-τερος*, \**στενφό-τερος*, there is a difference of opinion among scholars about the explanation of the *-ω*- beside *-ο-*. Some scholars assume that the *-ο-* became *-ω*- in prim. Greek by rhythmic lengthening when the preceding syllable was short, but that it remained short when the preceding syllable was long by nature or position. Other scholars maintain, and probably rightly, that the comparative of *o*-stems was formed precisely in the same manner as in the other stems, that is, from the adverbial form which in the *o*-stems was originally the ablative (§ 303) of the adjective used adverbially and accordingly

ended in *-ω*. This explanation agrees with the formation of the comparative in the Germanic languages (cp. Goth. *swinþō-z-a* : *swinþs*, *strong*), where the *-ō* can have no connexion with what is called rhythmic lengthening. It is therefore probable that all comparatives of *o*-stems had originally *-ω* irrespective of the quantity of the preceding syllable. The *-ω* only remained in those comparatives in which a succession of short syllables would have arisen by the substitution of *-o*. In other cases the comparative came to be formed direct from the *o*-stem of the adjective after the analogy of the *i*-, *u*- and consonantal-stems. Then the relation of *-ω* to *-o* gave rise to what is improperly called rhythmic lengthening.

## 2. THE SUPERLATIVE DEGREE.

§ 377. The superlative, like the comparative degree, was formed in the parent Indg. language by means of several suffixes. But in the individual branches of the parent language one of the suffixes generally became more productive than the rest, and in the course of time came to be the principal one from which the superlative was formed, the other suffixes only being preserved in isolated forms. The principal suffixes were :

1. *-to* which was only preserved in the formation of ordinal numerals, as *ἕκτος*, Skr. *ṣaṣṭhāḥ*, Lat. *sextus*, Goth. *saiḥsta*, *sixth* ; *δέκατος* from *\*dekmtos*.

2. *-is-to*. This suffix is made up of *-is* the weak grade of the comparative suffix *-jes* (§ 375), as in Lat. *magis*, and the *-to* which occurs in ordinal numerals like *ἕκτος*, &c. In the comparative the root-syllable originally had the strong grade of ablaut, but in the superlative the weak grade with the accent on the ending of the suffix *-is-tó*, cp. *κρείσσων*, *ὀλείζων* (inscriptional form) beside *κράτ-ιστος*, *ὀλίγ-ιστος*. This original distinction became almost entirely obliterated in Greek and Sanskrit by analogical formations.

The suffix disappeared completely in Latin, but became productive in the Germanic languages, and also in Greek and Sanskrit for those adjectives which had *-ων, -ίων, -ī(y)as-* in the comparative, as *μείζων, μέζων : μέγ-ιστος = Skr. máhīyas- : máh-iṣṭhaḥ ; ἡδιών : ἡδ-ιστος = Skr. svādīyas- : svād-iṣṭhaḥ, Goth. sūt-ists, sweetest.*

3. *-ῃο-, -ῃο-*, which like *-το-* appears chiefly in ordinal numerals, as Skr. *daśamáh*, Lat. *decimus*, from *\*dekῃο-s, tenth*; Lat. *summus* from *\*sup-mos, infimus*; Skr. *upamáh*, *uppermost*; *adhamáh*, *lowest*; Goth. *fruma, first*; *innuma, innermost*. It remained unproductive in Greek, and almost so in Latin, Sanskrit and the Germanic languages. *-ῃο-* would have become *-αμο-* (§ 65, 2) in Greek, but it was supplanted by the *-ατος* in *ἑνατος, δέκατος*, from *\*newῃο-s, \*dekῃο-s*, as *ἔσχατος, μέσσατος, νέατος, ὑπατος*. This change of *-αμο-* to *-ατο-* was doubtless also partly due to the influence of the suffixal ending *-το-*.

4. *-τῃο-* which appears in ordinal numbers, as Skr. *saptamáh*, Lat. *septimus*, from *\*septῃο-s, seventh*. Skr. *ántamáh, next*; *uttamáh, highest, best*. In Latin and the Germanic languages it was only preserved in isolated forms, as Lat. *intimus, extimus, ultimus, optimus, dextimus*; Goth. *aftuma, next, posterus*; *iftuma, the following, next*. In Sanskrit it was productive and became the regular superlative ending *-tama-ḥ* to adjectives which formed their comparative in *-tara-ḥ* (§ 376), as *cārutaraḥ, dearer*; *cārutamaḥ*; *tavástarah, stronger*; *tavás-tamaḥ*. *-τῃο-* would have become *-ταμο-* in Greek, but *-ταμο-* became *-τατο-* in the prehistoric period of the language through the influence of forms like *ἑνατος, δέκατος* and the *-τος* in the superlative ending *-ιστος*. *-τατο-* then became the ordinary superlative suffix for adjectives which had *-τερο-* in the comparative.

## 3. IRREGULAR COMPARISON.

§ 378. It is a peculiarity of all the Indg. languages that certain adjectives, especially those denoting *good*, *bad*, *great*, *small*, *much*, *little*, do not admit of a comparative and a superlative being formed directly from them. It is usually said that such adjectives are defective or that they form their comparatives and superlatives from a different root than the positive or that the comparatives and superlatives have no positives with which they are etymologically related. The real explanation is that such adjectives escaped from being brought into the grammatical system of comparison. In the early prim. Indg. period the comparative and superlative stood in no grammatical relation to the so-called positive. It was not until a relatively late period of the prim. Indg. language that the comparative and superlative came to be associated grammatically with what we call the positive. The forms in **-jes-** (§ 375) and **-is-to-** (§ 377, 2) originally partook of the nature of participles or verbal adjectives and denoted that the verbal action was especially prominent in the object with which they stood attributively, as Vedic **táriyas-**, *easily piercing through*, Gr. *φέριστος*, lit. *bringing best*. After such forms had also become purely nominal they were brought into relation with adjectives which were not comparative in form and which in regard to the comparative forms were called the positive. The forms in **-ero-**, **-tero-** (§ 376) were originally confined to words relating to place and to certain pronominal forms, and were primarily used to express contrast of comparison, as **\*upero-s**, *above and not below*, **\*ndhero-s**, *below and not above*, *δεξιτερό-s*, *the right and not the left* (*ἀριστερό-s*), *ἡμέτερο-s*, *our and not your* (*ὑμέτερο-s*), *θηλυτερο-s*, *feminine and not masculine* (Arcad. *ἀρρέντερο-s*). Then e. g. forms like **\*newotero-s** (*νεώτερος*), *new*, became used not only in contrast with **\*senotero-s**, *old*, but also

with the contrasted meaning *not so new, less new*, and then *older*. At this stage \***senotero-s** became associated to \***seno-s** (ἔνος). These formations thus came into the sphere of gradation which the **-jes-** forms already possessed and entered into competition with them. Although the two pairs of suffixes had originally different meanings, the difference entirely disappeared already in prim. Greek so far as the comparison of adjectives was concerned. After the three-membered series of gradation had been established in which the positive was regarded as the fundamental form, comparative and superlative forms began to be created from all kinds of adjectives, see Brugmann, *Grundriss*, §c., vol. ii (second ed.), pp. 654-60, and Delbrück in vol. iii, pp. 411-15.

ἀγαθός : ἀμείνων, ἀρείων, βελτίων, βέλτερος, κρείττων, κρείσσω, Ion. κρέσσω, φέρτερος, λφών, λωίων, λωίτερος : ἄριστος, βέλτιστος, βέλτατος, κράτιστος, κάρτιστος (: κρατύς), φέρτατος, φέριστος, λῶστος. ἀμείνων has the pure diphthong *-ει-* and therefore cannot be from \*ἀμενίων. It is probably not a comparative in form. κρείττων, κρείσσω probably had *-ει-* from ἀμείνων.

κακός : χείρων from \*χερσίων, χερείων from stem χερεσ-, cp. χέρηες, χειρότερος, χερείότερος, ἥττων, ἥσσω : χείριστος, ἥκιστος.

πολύς : πλείων with *-ει-* from the superlative, πλέων from stem πλε-, Att. πλεῖν (neut.) was a remodelling of \*πλεις from \*plēis : πλείστος from \*plēis-to-s.

μικρός : μείων, ἐλάττων, ἐλάσσω (: ἐλαχύς) : μείστος, ἐλάχιστος.

## C. NUMERALS

### I. CARDINAL.

§ 379. The cardinal numbers one to nineteen were adjectival, one to four being declinable and five to nineteen indeclinable, but in eleven to fourteen the units were

originally declined. The decades and the words for hundred and thousand were originally substantives.

§ 380. The parent Indg. language had several words with slightly different meanings to express the idea of *one*. In the ordinary Greek word for *one* four stem-forms are to be distinguished :

(a) \*sem-. Masc. nom. Att. Ion. εἷς, Dor. ἦς, Cret. ἔνς, from \*σεμς, neut. ἔν from \*σεμ; masc. and neut. gen. ἐνός for \*έμός with -ν- from the nominative (§ 346), and similarly, ἐνί, cp. Lat. sem-per.

(b) \*som-. όμός, *one and the same*, Skr. sama-, Goth. sama, *same*.

(c) \*sm̥o-. ἄμα; ἄ-παξ, Lat. sem-el, Skr. sa-kṣt, *once*; ἄ-πλοῦς, Dor. ἄ-τερος; ἐ-κατόν and Att. ἔ-τερος for \*ἄ-κατόν, \*ἄ-τερος with ἐ- for ἄ- from ἔν. See § 290.

(d) \*sm-. Fem. nom. sing. μία from \*σμία (§ 322), cp. μῶνυξ for \*σμῶνυξ, *having one hoof*.

Indg. \*oinos, οἶνός, οἶνή, οἶνη, *the ace on dice*, O.Lat. oinos, later ūnus, Goth. áins, OE. ān, *one*.

Indg. \*oiwos, O.Pers. aiva-, *one*, οἶος, *alone*, by *oneself*, Cypr. οἶφος, *alone*.

Fem. Hom. Lesb. and Thessalian ἴα, Hom. gen. ἰῆς, dat. ἰῆ, and Hom. neut. dat. ἰῶ were probably of pronominal origin; cp. § 411.

§ 381. Indg. \*duwō(u), \*dwō(u) was inflected like a dual. Hom. δύω (indeclinable) from \*δύρω = Vedic दुव्रा́(u) beside \*δρω = Skr. dvā́, in δώδεκα; gen. dat. δυοῖν probably from a plural form \*δυοῖσιν. The original nom. acc. neuter was \*duwoi = Vedic दुव्रे́, prim. Gr. \*δυφοι which became δύο when the next word began with a vowel (§ 229). δύο then became generalized and indeclinable for all genders in Att. Dor. &c. and often also in Homer. In some dialects, e. g. in Herodotus, it became inflected like a plural just as in Latin and the Germanic languages, as Herod. δυῶν, δυοῖσι, Ion. also δυῶν, δυσί after the analogy of τριῶν, τρισί.

Indg. \***dwi-**, \***di-** in compounds with **-i-** after the analogy of \***tri-**, as in *δί-πους*, Skr. *dvi-pád-*, Lat. *bi-pēs*, OE. *twi-fēte*, *two-footed*.

§ 382. Masc. and fem. nom. Att. &c. *τρῆις*, Cret. *τρέες*, Skr. *tráyah*, Lat. *trēs*, from \**trejes*; acc. Cret. *τρίνς*, Ion. Dor. Boeot. *τρίς*, Goth. *þrins*, from \**trins*, Att. *τρῆις* like Lat. *trēs* was the nom. used for the accusative; nom. acc. neut. Indg. \**trī*, Vedic *trī*, on *τρία*, Lat. *tria*, Goth. *þrija*, see § 329; gen. *τριῶν*, Lat. *trium*, from \**trijōm*; dat. *τρισί*, Skr. *triśú*, Lith. *trisė*.

Indg. \***tri-** in compounds, as *τρί-πους*, Skr. *tri-pád-*, Lat. *tri-pēs*, OE. *þri-fēte*, *three-footed*.

§ 383. The Indg. word for *four* had various grades of ablaut in the stem-ending of the different cases, as masc. nom. \**qetwores*, Skr. *catvārah*, Lat. *quattuor*, Goth. *fidwōr*, Dor. and North-West Gr. *τέτορες* with **-τ-** from *τετράκοντα* (§ 386), Att. *τέτταρες*, Hom. *τέσσαρες*, Boeot. *πέτταρες* with **-α-** from the dative, Ion. *τέσσερες* for **-ορες** by assimilation, Hom. *πίσυρες* with **-υ-** from the acc. and genitive; acc. masc. \**qeturns*, Skr. *catúrah*, Hom. *πίσυρας*; Att. *τέτταρας* with the first **-α-** from the dative; nom. acc. neut. \**qetworə*, Skr. *catvári*, Att. *τέτταρα*, Hom. *τέσσαρα*, Boeot. *πέτταρα* with **-α-** from the dative, Lesb. *πέσσυρα*, *πίσυρα* with **-υ-** from the genitive; gen. \**qeturōm*, Lesb. *πισύρων*; Att. *τεττάρων* with **-α-** from the dative; dat. = (loc.) \**qetwrsu*, poet. *τέτρασι* from \**τέτφρασι*, Att. *τέτταρσι*.

Indg. \***q(e)twr̥-** beside \***q(e)tru-** in compounds, as in *τετρά-ζυγος* from \**τετφρα-*, *τρά-πεζα*, beside *τρυ-φάλεια*.

§ 384. Indg. \***péhqe**, *πέντε*, Skr. *pañca*; Aeol. *πέμπε*, Lat. *quinque*, O.Ir. *cōic*, Goth. *fimf*, OE. *fif*, all with assimilation of consonants. In compounds *πεντε-* beside *πεντα-* with **-α-** from forms like *έπτά*, *δέκα*.

Indg. \***s(w)eks** = prim. Gr. \**σφέξ*, Lac. *φέξ*, beside \**σέξ* = Att. Ion. Dor. Boeot. &c. *έξ*, Lat. *sex*, O.Ir. *sē*, Goth.



sañs, Skr. śáś with unexplained initial ś-. In compounds éξ- beside ἐξ- with -α- from ἐπτά, &c.

Indg. \*septm̄, ἐπτά, Vedic saptá, classical Skr. sápta, Lat. septem, O.Ir. secht, Goth. sibun.

Indg. \*októ(u), which is dual in form, ὀκτώ, Elean ὀπτῶ after the analogy of ἐπτά, Lesb. Boeot. ὀκτό, probably like δύο the old neut. form, Skr. aṣṭá(u), Lat. octō, Goth. ahtáu.

Indg. \*néwn̄ beside \*énwn̄, the former occurs in Skr. náva, Lat. novem with -m for -n after the analogy of septem, decem, cp. nōnus, Goth. niun, and the latter in Ion. εἰνά-νυχες, εἰνά-ετες, εἰνα-κόσιοι, from \*ένφα-. ἐννέα has never been satisfactorily explained. Some scholars assume that it stands for \*έν νεφα, lit. *nine in all*, and others that it arose from a contamination of \*ένφα and \*νεφα = Skr. náva. In compounds εἰνα- beside ἐννεα-, as in εἰνά-νυχες beside ἐννεά-μηνος.

Indg. \*dek̄m̄, δέκα, Skr. dáśa, Lat. decem, O.Ir. deich, Goth. taíhun.

§ 385. In the cardinals eleven to nineteen the units originally preceded the decade, as in ἑν-δεκα where ἐν- is the nom. acc. neuter, Lat. ūn-decim from \*oinom-decem, Skr. ékā-dáśa; δύο-δεκα (Hom. δυῶ-δεκα) where δω- is the masc. form beside Hom. δύο καὶ δέκα (δυο-καί-δεκα), Lat. duo-decim, Skr. dvá-daśa; Lat. trē-decim from \*trēs-decem, Skr. tráyō-daśa, but from thirteen onwards only with καί in Greek, as τρεῖς or τρία καὶ δέκα. But in Greek and Latin the units could follow the decade, as δέκα εἶς, δέκα δύο, δέκα τρεῖς, Lat. decem et ūnus, decem et trēs, decem trēs, decem novem. δέκα δύο, δέκα τρεῖς, &c. were used when the substantive or a larger number preceded, but δυο-καί-δεκα, τρεῖς καὶ δέκα when the substantive followed, as δραχμαὶ δέκα τρεῖς, but τρεῖς καὶ δέκα δραχμαί. The units in eleven to fourteen ceased to be inflected in the prehistoric period of most languages. A remnant

of the inflected forms of the units occurs in *τρισκαίδεκα* where *τρεις*-, prim. Gr. \**τρεις*-, is the masc. accusative.

§ 386. The Indg. word for *twenty* was a dual form \**wī-kṃti*, lit. *both decades*. The expressions for *thirty* to *ninety* originally meant *three decades*, *four decades*, &c. The unit and the word for *decade*, a neuter substantive \**komt*- from \**dkomt*- and related to \**dékṃ*, *ten*, were both inflected so far as the units were declinable and governed the following substantive in the genitive case. Regular forms were: \**trī komtə*, *thirty*; \**qetworə komtə*, *forty*; \**peṅqe komtə*, *fifty*. Various new formations seem to have taken place already in the parent language, thus after the analogy of \**trī komtə* were formed \**qetwṛḡ komtə* = Ion. Dor. *τετρώκοντα* (§ 68), Lat. *quadrā-gintā*; \**peṅqē komtə* = *πεντήκοντα*, Skr. *pañcā-śāt*-, the *-ṅ-* of which was extended in Greek to *έξήκοντα*, *έβδομήκοντα*, Att. *όγδοήκοντα* (but Hom. *όγδώ-κοντα* = Lat. *octō-gintā*), Hom. *έννήκοντα*, Att. Ion. also Hom. *ένενήκοντα*; and similarly in Lat. *quīnquā-gintā*, *sexā-gintā*, *nōnā-gintā* with medial *-ā-* from *quadrā-gintā*.

Indg. \**wī-kṃti*, Dor. Boeot. Elean, Pamphylian and Arcadian *ἑῖ-κατι*, Skr. *vi-śatīḥ*, Lat. *vī-gintī*, O.Ir. *fiche*, *twenty*; Att. Ion. &c. *εί-κοσι* from \**εῖ-κοσι* with prothetic *ε-* and *-o-* for *-a-* after the analogy of the other decades. Att. &c. *τριᾶ-κοντα*, Ion. *τριή-κοντα*, for \**τριᾶ-κοντα* after the analogy of *τετρώ-*, *πεντή-κοντα*. The original form of the unit was preserved in Lat. *trī-gintā*. The old neuter of the unit occurs in *τεσσαρά-*, *τετταρά-*, Boeot. *πετταρά-κοντα*. It is difficult to explain why the Greek first element of the decades for seventy to ninety should contain the ordinal instead of the cardinal form of the unit. With *έννή-κοντα*, *ένενή-κοντα*, cp. Lat. *nōnā-gintā* beside masc. *nōnus* from \**nowenos*. All the decades became adjectival in construction in prim. Greek.

§ 387. The Indg. word for *hundred* was \**kṃtóm*, lit.

a decade of tens, corresponding to Skr. śatám, Lat. centum, O.Ir. cēt, Goth. hund, and -κατόν in ἐ-κατόν, lit. one hundred, with ἐ- for ἄ- after the analogy of ἔν. It was a neuter substantive, related to \*dékṃ, ten, and governed the gen. case as in Sanskrit and the Germanic languages, but in Greek and Latin it had become adjectival in construction in the prehistoric period of the languages.

The hundreds from two to nine hundred were originally expressed in two ways. (a) Either both members were inflected for two, three and four hundred, and the second member only for the others, as in Skr. dvé śaté = Indg. dual \*dwoi kṃtoi, Goth. twa hunda, two hundred; Skr. páñca śatáni, Goth. fimf hunda, five hundred; and similarly in the Keltic and the Baltic-Slavonic languages. (b) Or both members formed a compound without either of them being inflected, as in Skr. dvi-śatám, two hundred, tri-śatám, three hundred; O.Lat. du-centum aurī, argenti ses-centum, but already at an early period the hundreds became plural adjectives and were inflected as such, as ducentī homines, ducentae mulieres. To this manner of forming the hundreds also belong the prim. Greek compound forms: \*δι-κατον, \*τρι-κατον, \*τετρα-κατον, \*πεντα-κατον, \*ἑξα-κατον, \*ἑπτα-κατον, \*ὀκτω-κατον, \*ἐνφα-κατον. When the second element of these compound nouns became adjectival in meaning there was formed beside \*-κατον an adjectival form -κατιοι, -αι, -α = Dor. Boeot. -κατιοι, Arcad. -κασιοι, Att. Ion. Lesb. -κοσιοι with -ο- from -κοντα, and then various analogical formations took place in the first element of the compounds. τρι- became τριᾶ-, Ion. τριη- after the analogy of τριᾶ-κοντα; δι- became διᾶ-, Ion. διη- after τριᾶ-; and ὀκτω- became ὀκτα- after ἑπτα-, &c. The forms thus became Att. διᾶ-κόσιοι, τριᾶκόσιοι, Ion. διηκόσιοι, τριηκόσιοι, τετρακόσιοι, πεντακόσιοι, ἑξακόσιοι, ἑπτακόσιοι, ὀκτακόσιοι, ἑνα-, εἰνα-κόσιοι.

§ 388. If we compare the word for *thousand* in the various languages we see that it is practically impossible to determine what was the original form of the word for *thousand* in the parent Indg. language, cp. Lat. neut. **mille**, O.Ir. fem. **míle**, Goth. fem. **pūsundi**, Lith. masc. **túkstantis**, O.Slav. fem. **tysęšta**, Skr. neut. **sa-hásram**, lit. *one thousand*, where **sa-** = Indg. **sm-** (§ 380), prim. Gr. neut. \***χεςλον** = Skr. **-hásram**, Indg. \***gheslom**. \***χεςλον** became adjectival in meaning in prim. Greek, and then from it was formed the adjectival form \***χεςλιοι**, **-αι**, **-α** = Ion. Boeot. **χείλιοι**, Lesb. **χέλλιοι**, Dor. **χήλιοι**, Att. **χίλιοι**, which corresponds in form to the Sanskrit adjective **sa-hasríya-**.

## 2. ORDINAL.

§ 389. The ordinal numbers in the various languages were with few exceptions superlatives in form and were formed from the cardinal numbers with the same suffixes which we have already had in the formation of the superlative of adjectives (§ 377).

§ 390. The word for *first* was not related to the word for *one* in any of the languages, as **πρῶτος**, Dor. **πρᾶτος** either from \***πρω-ατος** with **-ατος** from forms like **τέτρατος**, **δέκατος** and related to Skr. **pūrvah**, **pūrvyáh**, *prior, first*, or from \***προ-ατος** : **πρό**, Skr. **prá**, *before, in front of* ; Lat. **p̄rimus** from \***p̄rīs-mos** : adv. \***p̄rīs**, *p̄rius*, Goth. **fruma**, *p̄rius, first*. Hom. **πρώτιστος** like Goth. **frumists** was a double superlative.

**δεύτερος** denoted originally *standing off from anything, at a distance from, inferior in rank* and is related to the verb **δύομαι** and to Skr. **dávīyah**, *farther* ; Skr. **dvi-tīyah** : **dvi-**, *two* ; Lat. **secundus** : **sequor** ; Lat. **alter**, Goth. **anþar**, Lith. **añtras** all lit. meaning *the other* as compared with *one who is first*. **δύτατος** with **-ατος** as in **τέτρατος**.

**τρίτος**, Lesb. **τέρτος** = Lat. **tertius**, Goth. **þridja**. Hom.

τρίτ-ατος after the analogy of τέτρατος, δέκατος, and similarly Hom. ἐβδόματος, ὀγδόατος.

τέταρτος from \*τέτφαρτος, Hom. τέτρατος, Boeot. πέτρατος, Skr. caturthāḥ, OE. fēo(we)rþa, Indg. \*qetwrtós.

πέμπτος (Cret. πέντος from \*πενττος, older πέμπτος, cp. ἑπτά = ἐπτά), Lat. quintus, OE. fifta, Lith. penktas, Indg. \*penqtós; Skr. pañcathāḥ beside pañcamāḥ.

ἕκτος, Skr. ṣaṣṭhāḥ, Indg. \*s(w)ektós; Lat. sextus and Goth. saihsta were formed direct from sex, saihš.

ἕβδομος (§ 107) probably for older \*ἕβδαμος, Skr. sapta-māḥ, Lat. septimus, Indg. \*septm-ós, \*?sebdmós, Hom. ἐβδόματος, see τρίτος.

ὀγδοος from \*ὀγδοφος with the mediae -γδ- after the analogy of ? ἕβδομος, Skr. aṣṭamāḥ; Hom. ὀγδόατος, see τρίτος.

ἕνατος, Hom. εἷνατος from \*ένφατος, Indg. \*enwntós beside Lat. nōnus, Skr. navamāḥ with -m- from daśamāḥ, Indg. \*newn-ós.

δέκατος (Lesb. Arcad. δέκοτος with -ο- from -κοντα), Goth. taihunda, Indg. \*dekmtós beside Skr. daśamāḥ, Lat. decimus, Indg. \*dekṃ-ós.

§ 391. The ordinals from eleventh to nineteenth could be formed in two ways: (a) Either with the cardinal units + the ordinal for *tenth*, as ἐνδέκατος, δωδέκατος (Hom. δυωδέκατος), these two forms were used in all the dialects; and similarly in Lat. undecimus, duodecimus, Skr. ēkā-daśāḥ, dvā-daśāḥ or -daśamāḥ. In this way were also formed the other ordinals in Ion. and Boeotian, as τρισκαιδέκατος, τεσσερες-, τεσσαρακαιδέκατος, πεντεκαιδέκατος, ἑκκαιδέκατος, ἑπτακαιδέκατος, ὀκτωκαιδέκατος, ἔννεακαιδέκατος; and similarly Skr. trayō-daśāḥ, *thirteenth*, catur-daśāḥ, *fourteenth*, pañca-daśāḥ or -daśamāḥ, *fifteenth*, &c. (b) Or with ordinals in both components, as τρίτος καὶ δέκατος, τέταρτος καὶ δέκατος, &c.; and similarly Lat. tertius decimus, quartus decimus, &c.; Goth. fimfta-taihunda, *fifteenth*, with the first element uninflected.

§ 392. The original second element of the ordinals of the tens was *\*-kmt-tós* beside *\*-kmt-tm-ós*, the former occurs in Boeot. *ἑκακαστός* (§ 110), Att. *εἰκοστός* from *\*ἑφικαστός* with the first *-o-* for *-a-* after the analogy of *τριακαστός, -κοντα*. The other ordinals were formed in prim. Greek either direct from the stem of the corresponding cardinal + *-τός*, thus *\*τριακοντ + τός* became *\*τριακονστός* (§ 110) and then later *τριακαστός* (§ 153), or else with *-καστός* for *\*-καστός* = Indg. *\*kmt-tós*, with the first *-o-* for *-a-* after the analogy of *-κοντα*; and similarly *τεσσαρα-, τετταρα-, τετρωκοστός, πεντηκοστός, ἑξηκοστός, ἑβδομηκοστός, ὀγδοηκοστός, ἑνενηκοστός*; beside Lat. *vīcēsīmus, vīgēsīmus, tricēsīmus, trīgēsīmus, quadrāgēsīmus, quīnquāgēsīmus, &c.* = Skr. *vṣ̥ṣatitamāḥ, trīṣ̥ṣattamāḥ, catvārīṣ̥ṣattamāḥ, pañcāśatta-māḥ, &c.*, from Indg. *\*-kmt-tm-ós*.

§ 393. The ordinals of the hundreds were formed in prim. Greek from the corresponding cardinals with *-οστός* from the ordinals of the tens, as *ἑκατ-οστός, διακοσι-οστός, τριακοσι-οστός, &c.*; and similarly in Latin, *cent-ēsīmus, ducent-ēsīmus, trecent-ēsīmus, &c.* In like manner were also formed the ordinals of the thousands, as *χιλι-οστός, δισχιλι-οστός, &c.*, cp. also Lat. *mill-ēsīmus*.

### 3. OTHER NUMERALS.

§ 394. The multiplicative numeral adverbs were formed differently in the different languages. Greek, Latin and Sanskrit have similar words for *twice* and *thrice*, as *δῖς, τρίς*, Lat. *bis, ter* from *\*tris*, Skr. *dvīḥ, trīḥ*, but for the other numerals they had different formations, as *ἄ-παξ*: *πήγνυμι*, Lat. *sem-el*, Skr. *sa-kṛt* (§ 380); *τετράκις*, Lat. *quater*, Skr. *catūḥ*; *πεντάκις*, Lat. *quīnquīēs*, Skr. *pañcākṛtvah, &c.* From *four times* onwards the Greek numerals were formed from the cardinals by means of the suffix *-κῖς* in Attic beside *-κι* in various other dialects. *-κῖς* had its *-s* from *δῖς* and *τρίς*, and *-κι-* corresponds to the

Sanskrit adverbial particle *cid* which was originally the neuter of the interrogative pronoun, Indg. \**qid*, Lat. *quid* (§ 202, note 1), cp. Hom. *πολλά-κι* for older \**πολλύ-κι* = Skr. *pūru cid*, *many times* (cp. § 202, note 2). From forms like *τετρά-κισ*, *έπτά-κισ*, *ένα-κισ*, *δεκά-κισ*, *τριᾶκοντά-κισ* the *-άκισ* became extended by analogy to all the other numerals, as *πεντάκισ*, *έξάκισ*, *όκτάκισ*, *είκοσάκισ*; *έκατον-τάκισ* with *-τάκισ* after the analogy of *τριᾶκοντάκισ*, *τεσσαρακοντάκισ*, &c.; *διακοσι-άκισ*, *χιλι-άκισ*.

§ 395. The multiplicative adjectives were formed by adding *-πλός*, *-πλοῦς*: *πλέω* to the forms of the cardinal numerals as they appear in the multiplicative adverbs, as *ἀ-πλοῦς*, *δι-πλοῦς*, *τρι-πλοῦς*, *τετρα-πλοῦς*, *πεντα-πλοῦς*, &c. And similarly *ἀ-πλός*, *δι-πλός*, the *-πλός* of which corresponds to the *-plus* in Lat. *sim-plus*, *du-plus*. With *-πλός* is also related the *-πλάσιος* from \**πλατιγος* in *δι-πλάσιος*, *τρι-πλάσιος*, *τετρα-πλάσιος*, &c.

*δισσός*, *τρισσός*, Att. *διττός*, *τριττός* from \**διχγος*, \**τριχγος* were formed from the stems *διχ-*, *τριχ-* in the adverbs *δίχα*, *τρίχα*; and similarly Ion. *διξός*, *τριξός*, *τετραξός*, *πενταξός*, from \**διχθγος*, &c. were formed from the adverbs *διχθά*, *τριχθά*, &c. The formation of these adverbs in *-χα*, *-χθα* has never been satisfactorily explained.

§ 396. The feminine nouns of number in *-άς* gen. *-άδος* with *-ά-* from *-ῃ-*, *-ῆ-*, which was original in *έπτάς*, *έννεάς* (*είνάς*) and *δεκάς*. After the analogy of these were then formed, *μονάς*, *ένάς*, *δυάς*, *τριάς*, *τετράς*, *πεντάς* (*πεμπάς*), *έξάς*, *έβδομάς*, *όκτάς*, *όγδοάς*. It is difficult to account for the *-δ-* suffix in the above forms unless we may suppose that *-d-* stood beside *-t-* in prim. Indg., cp. the stem *δεκάδ-* beside Skr. *daśát-*, Lith. *deszimt-*, O.Slav. *desęt-* (§ 111). It is probable however that the suffix was originally *-t-*, as it certainly was in *είκάς*, &c. and that the new formation in the inflected forms went out from the nom. singular where *t-* and *d-* stems regularly fell together (§ 343). In *ικάς*,

εἰκάς, τριᾶκάς with *-ā-* after the analogy of τριᾶκοντα, *-κάς* represents Indg. *\*kmt-s* and the Sanskrit stem *-śāt-*.  
 ἑκατοντάς with the second *-τ-* from the ordinal ἑκατοστός.

For feminine numerals like τριπτύς, τετρακτύς, &c. see § 266.

## CHAPTER XI

### PRONOUNS

§ 397. The most difficult chapter in works on comparative grammar is the one dealing with the pronouns. It is impossible to state with any degree of certainty how many pronouns the parent Indg. language had and what forms they had assumed at the time it became differentiated into the various branches which constitute the Indg. family of languages. The difficulty is rendered still more complicated by the fact that most of the pronouns, especially the personal and demonstrative, must have had accented and unaccented forms existing side by side in the parent language itself; and that one or other of the forms became generalized already in the prehistoric period of the individual branches of the parent language. And then at a later period, but still in prehistoric times, there arose new accented and unaccented forms side by side in the individual branches, as e. g. beside the accented form *\*mē*, *me* there existed in prim. Indg. the unaccented form *\*me*, the former of which became generalized in Latin. In Sanskrit the original accented form *mā* = Indg. *\*mē* came to be used for the unaccented form and then a new accented form *mām* was created with *-m* from *ahām*, *I*. In Greek the accented form died out and then to the old unaccented form *μὲ* a new accented form *ἐμέ* was created with *ἐ-* from *ἐγώ*; and similarly Skr. *tvā* = Indg. *\*twē*, *thee* beside *tvām*; Gr. *σὲ* from Indg. *\*twe* beside the new accented



form  $\sigma\acute{\epsilon}$ . And in like manner Indg. \* $t\bar{u}$ , *thou* beside \* $tu$ , both forms of which were preserved in Greek and Old English, as Hom.  $\tau\acute{\upsilon}\nu\eta$ , OE.  $\beta\bar{u}$ , *thou* beside Dor.  $\tau\acute{\upsilon}$ , Att.  $\sigma\acute{\upsilon}$ , OE.  $\beta u$ , but the former became generalized in Latin and the latter in most of the Greek dialects. The original accented accusatives  $n\bar{o}s$ ,  $v\bar{o}s$  became generalized in Latin whereas Sanskrit preserved the old distinctions between the accented ( $asm\bar{a}n$ ,  $yu\check{s}m\bar{a}n$ ) and the unaccented ( $nah$ ,  $vah$ ) forms. The following examples will illustrate the manner in which such double forms come into existence: The prim. Germanic accented form for *I* was \* $ek$  beside the unaccented form \* $ik$ . The separate Germanic languages generalized one or other of these forms before the beginning of the oldest literary monuments and then new accented beside unaccented forms came into existence again. And similarly during the historic periods of the different languages. Thus, e. g. the OE. for *I* is  $ic$ , this became in ME.  $ich$  accented form beside  $i$  unaccented form,  $ich$  then disappeared in standard ME. (but it is still preserved in one of the modern dialects of Somersetshire) and  $i$  came to be used as the accented and unaccented form. At a later period it became  $\bar{i}$  when accented and remained  $i$  when unaccented. The former has become NE. *I*, and the latter has disappeared from the literary language, but it is still preserved in many northern Engl. dialects, as  $i$ . In these dialects  $i$  is regularly used in interrogative and subordinate sentences; the ME. accented form  $\bar{i}$  has become  $ai$  and is only used in the dialects to express special emphasis, and from it a new unaccented form  $a$  has been developed which can only be used in making direct assertions. Thus in one and the same dialect (Windhill, Yorks.) we arrive at three forms:  $ai$ ,  $a$ ,  $i$ , which are never mixed up syntactically by genuine native dialect speakers. This old distinction between the accented and unaccented forms of the personal pronouns has given

rise in many of the South Midland dialects to an entirely new classification whereby the old subjective form has come to be used for the subject and object when accented, and the old objective form for the subject and object when unaccented, as *she saw she, her saw her, she saw her, her saw she*, which have quite different meanings according as *she* and *her* are accented or unaccented. Something similar to what has happened, and still is happening in the modern dialects, must also have taken place in the prehistoric and historic periods of all the Indg. languages; hence in the prehistoric forms of the pronouns given in the following paragraphs, it must not be assumed that they were the only ones existing in prim. Indo-Germanic or prim. Greek. They are merely given as the nearest ascertainable forms from which the historic Greek forms were descended.

§ 398. The pronouns are usually divided into personal, reflexive, possessive, demonstrative, interrogative, and indefinite pronouns. There is among the various languages considerable agreement in the formation of the personal pronouns of the first and second persons, and of the simple reflexive, simple demonstrative and interrogative pronouns. But all the other classes or parts of classes of pronouns were formed more or less differently in each branch of the parent Indg. language, so that the words used to express such pronouns do not stand in any etymological relation to each other. Owing to this great multiplicity of forms in the oldest historic period of the individual languages, it is impossible in most classes of the pronouns to reconstruct the prim. Indg. paradigms with any degree of certainty or accuracy.

§ 399. In the parent Indg. language the formation of most of the cases of pronouns which had special forms for the masculine, feminine and neuter differed considerably from that of the nouns, cp. *ó*, Skr. *sá*, Goth. *sa* beside *λύκος*, Skr. *vṛkaḥ*, Goth. *wulfs, wolf*; *τό*, Skr. *tát*, Lat.

**is-tud** beside ζυγόν, Skr. **yugám**, Lat. **jugum**, *yoke*; nom. pl. *οί, τοί*, Skr. **té**, Goth. **þái** beside Skr. **vṛkāḥ**, Goth. **wulfōs**. This original distinction was not so well preserved in Greek as in most of the other Indg. languages. In Greek there were few differences between the case-endings of nouns and pronouns because of various analogical formations whereby the pronouns came to have noun-endings and vice versa, cp. τῶν (§ 408): *λύκων* beside Skr. **téṣām**: **vṛkāṇām**, but *λύκοι* (§ 325): *οί, τοί* beside Skr. **vṛkāḥ**: **té**, Hom. *θεᾶων* (§ 321): *τᾶων* beside Skr. **áśvānām**, *of mares*: **tásām**.

§ 400. In the personal pronouns we have not only to take into consideration the distinction between original accented and unaccented forms, but also between the different stems and different words which go to form the paradigms of the first and second persons. Many forms had no real case-endings at all, and the so-called cases were formed from entirely different words which were not etymologically related, as in English *I, me; we, us; thou, you*, corresponding in meaning to Skr. **ahám, mām; vayám, asmán; tvám**, nom. **yūyám**, acc. **yuṣmán**, but in Greek and Latin the original distinction between *we* and *us* became obliterated, as *ἡμεῖς*, acc. *ἡμέας, ἡμᾶς* from the same stem as the nominative, Lat. nom. and acc. **nōs**. The reason why the plural of *I* was formed from an entirely different word is obvious, because it not only includes the speaker but also the person or persons spoken to or of. But why the plural of *thou* should be an entirely different word in all the Indg. languages is not known. The plural endings of these pronouns in Greek and the other languages are not original. So far as the forms for the plural were inflected at all, they were originally inflected as singulars. Such personal pronouns as have real case-endings have them mostly after the analogy of the nouns. This is especially so in Greek. The pronouns of the third person

were originally demonstrative in origin. In the parent language as in Greek, Latin, Sanskrit, &c. the nominative of the personal pronouns was rarely used except to express emphasis, because it was sufficiently indicated by the personal endings of the verb.

§ 401. In many of the Indg. languages certain particles occur, which are attached enclitically to the personal pronouns, and in some forms have become an integral part of the pronoun, as in *ἐγώ-ν*, *ἐγώ-νῃ*, *ἔγωγε*, *ἐμέγε* (= Goth. *mik*, OE. *mec*, OHG. *mih*, where the particle became an integral part of the word), Skr. *ahám*, *I*, *vayám* : OE. *wē*, Goth. *weis*, Indg. *\*wei*, *we*; Lat. *ego-met*; and similarly in demonstrative pronouns, as *ὄδε*, *οὐτοσί*; Lat. *id-em*, Skr. *idám*, beside Lat. *id*; Lat. *hic* for older *hi-ce*; Skr. nom. fem. *a-sá-u*, *that*; and even medially in *οὗτος* from *\*so + u + to-s* (§ 411). Many of these particles are of obscure origin and it is therefore impossible to determine in all cases what was their original force or meaning.

## I. PERSONAL.

### First Person.

§ 402. Singular: It is impossible to determine with certainty what was the original form or forms of the nominative. It probably was *\*egō* = *ἐγώ*, *ἔγωγε*, *ἐγώ-ν* (mostly before vowels, entirely so in Homer), *ἐγώ-νῃ*, Boeot. *ίών*, *ίών* from *ἐγώ-ν* through the intermediate stages *\*έγων*, *\*ιγων*, beside *ίών-ει*, O.Lat. *egō*, beside the unaccented form *\*ego* = Lat. *ego*, Goth. *ik*, Skr. *ahám* from *\*egho-m* with the same interchange between *g* and *gh* as in *μέγας* beside Skr. *mahán*, *great*. This interchange between media and media aspirata existed in the parent Indg. language under certain unknown conditions (§ 111).

The original form of the accusative was *\*mē* beside *\*me*,

the former occurs in Skr. *mā*, *mā-m*, Lat. *mē*, and the latter in *ἐμέ*, *ἐμέ-γε*, *μὲ*, Goth. *mik* = *ἐμέ-γε*.

The stem-form \**me* was probably used for the genitive in the parent language. From \**me* was formed in each branch of the various languages a new genitive in different ways, cp. *ἐμοῦ*, Skr. *māma*, Lat. *meī*, *mīs*, Goth. *meina*. In Greek it was mostly formed from *ἐμέ*, *μὲ* by means of *-σjo*, *-σο* from the simple demonstrative pronoun (§ 408), as Hom. *ἐμείω* from \**ἐμεσjo*, Att. *ἐμοῦ*, *μοῦ*, Ion. *ἐμέο*, *ἐμεῦ*, *μεῦ*, from \**ἐμεσο*, \**μεσο*; Dor. Lesb. *ἐμοῦς*, Dor. *ἐμέος*, *ἐμεῦς*, from *ἐμε* + *ος* from the genitive of the consonantal stems (§ 302); Hom. Lesb. and Dor. *ἐμέ-θεν* with the same ablative adverbial particle which occurs in *πόθεν* (§ 568).

The dative *ἐμοί*, *μοί*, Skr. *mē*, Lat. *mī* represents the original unaccented form \**moi* which was also used for the genitive. The original accented form seems to occur in Skr. *māhya-m*, Lat. *mihī*. Dor. *ἐμίν* was formed after the analogy of the dative = locative plural *ἅμίν*; Hom. *ἐμέ-θεν* is the same as in the genitive.

Dual: The nom. and acc. *νώ* belongs, like the Skr. unaccented form *nāu*, to the plural stem *nō-* which occurs in Skr. *nah*, Lat. *nōs*, *we*; Hom. *νώϊ* from \**νωφι* with the numeral *ῥι*, *both*, *two* (§ 386).

The gen. and dat. *νών*, Hom. *νώϊν* from *νωφιν* with *-ν* from the dat. plural.

Plural: The original form of the nominative was \**wei*, which occurs in Skr. *vay-ām*, Goth. *wei-s*, *we*. The Greek nominative was formed from the stem of the accusative = Indg. \**ns-me*, and with *-s* after the analogy of the consonantal stems (§ 311). \**ns-me-s* regularly became \**άσμες* in prim. Greek, and corresponds to Hom. Lesb. *άμμες* (§ 214), Dor. Boeot. *άμές*; Att. Ion. Hom. *ήμεις* with *-εις* after the analogy of the masc. *s*-stems (§ 366). All the forms of the nom. acc. gen. and dat. plural with the spiritus asper had it from *ύμεις*, &c.

The original form of the accusative was \***ns-me**, probably from older \***ns-sme**, where **ns-** (= Goth. **uns**, *us*, *as-*, Skr. **as-**) is the weak grade of **nō-**, which occurs in Skr. **naḥ**, Lat. **nōs**, *we*, and **-sme** corresponds to the Sanskrit enclitic particle **sma**, *ever; indeed, certainly*, cp. the Skr. acc. **asmān**, *us*. \***ns-me** regularly became \***ασμε** in prim. Greek = Hom. Lesb. **ἄμμε**, Dor. **ἄμέ**, but Ion. **ἡμέας** with **-ας** from the accusative of the consonantal stems (§ 312), and similarly Att. **ἡμᾶς** from older **-εας**, the regular contraction of which would have been **-ῆς**.

The genitive plural was originally inflected like a singular. In Greek it was formed from the stem of the accusative plural and a pluralized form of the ending of the gen. singular, as Hom. **ἡμείων**, Hom. and Ion. **ἡμέων**, Att. **ἡμῶν**, Dor. **ἄμέων**, **ἄμῶν**, Lesb. **ἄμμέων**.

The original locative ending was probably **-smin** which occurs in the Sanskrit loc. sing. **tásmin** : nom. **sá**, *this* (§ 408). The Greek dative = locative was formed from the prim. Greek stem-form \***ασμ(ε)** with the addition of the ending **-ιν**, as Aeolic **ἄμμιν** beside **ἄμμι** with **-ι** from the ending of the dat. plural of consonantal stems (§ 316), Dor. **ἄμιν**, Att. Ion. **ἡμίν** beside Att. **ἡμίν** with long **-ῑ** after the analogy of the long vowel in the other plural case-endings; Lesb. **ἄμμεσιν** was formed from the nom. plural + the ending **-ιν**.

### Second Person.

§ 403. Singular : The original nominative was \***tū** beside \***tu**, the former occurs in Hom. Dor. **τού-νη**, Lac. **τού-νη** (*ou* = **ū**), Boeot. **τού-ν** (*ou* = **v̄**), Lat. **tū**, OE. **þū**, and the latter in Dor. Lesb. **τού**, Att. Ion. Lesb. **σύ** with **σ-** from the accusative, OE. **þu**.

The original accusative was \***tē**, \***twē** beside \***te**, \***twe**. The \***tē** corresponds to Lat. **tē**, and \***twē** to Skr. **tvā**, **tvā-m**. \***te** corresponds to Dor. **τέ**, unless the **τ-** was from

the nominative, OE. *þe-c*, OHG. *di-h*, and *\*twe* to Att. Ion. &c. *σέ* from *\*τφε* (§ 168). Dor. Boeot. *τίν* was the locative in form, cp. *ἐμίν* (§ 402). In Dor. the nom. *τύ* was also used for the accusative.

The original form of the genitive was *\*tewe*, which occurs in Skr. *táva*, of *thee*. In Greek, Lat. and the Germanic languages it was formed in the same manner as the genitive of the first person, as Hom. *σεῖο* from *\*τφεσγο*; Att. *σοῦ*, Ion. *σέο*, *σεῦ*, from *\*τφεσο*; Dor. *τέο*, *τεῦ*, from *\*τεσο*; Dor. Boeot. *τέος*, *τεῦς* from *τε + ος* from the genitive of the consonantal stems (§ 302); Dor. Boeot. *τεοῦς* from *τεο + ος* with double genitive ending; Dor. *τεοῦ* with *-εοῦ* from *τεοῦς*; Lesb. *σέθεν* as in *ἐμέθεν*. Lat. *tuī*, *tīs*, Goth. *þeina*.

The original form of the locative was *\*twoi* beside *\*toi* which was also used for the genitive, the former occurs in the Greek dative *σοί* from *\*τφοι*, and in the Sanskrit accented form *tvé*, and the latter in Hom. Dor. *τοί* and in the Sanskrit unaccented form *tē*. Dor. *τίν* and Hom. Dor. *τεῖν* were locatives formed like *ἐμίν*.

Dual: The nominative and accusative was in prim. Greek *\*σφω* from older *\*τφω*, which was changed to *σφώ* either through the influence of the ending in *ἄμ-φω* or of the *σφ-* in the reflexive pronominal form *σφί(ν)*; Hom. *σφῶϊ* was formed like *νῶϊ*.

The genitive and dative *σφῶν*, Hom. *σφῶϊν*, was formed like *νῶν*, *νῶϊν*.

Plural: The original nominative was *\*jūs* which occurs in Goth. *jūs*, Lith. *jūs*; Skr. *\*yūṣ-ám* was changed to *yūyám* after the analogy of *vayám*, *we*. The Greek nominative was formed from the stem-form of the accusative as in the first person, as Att. Ion. *ὑμεῖς*, Ion. *ὑμεῖς*, Hom. Lesb. *ὑμμες*, Dor. Boeot. *ὑμές*.

The original form of the accusative was *\*us-me* probably from older *\*us-sme*, where *us-* is the weak grade of *\*wōs* which occurs in Skr. *vaḥ*, Lat. *vōs*. From prim. Greek

\**ῥσ-με* were formed with the same endings as in the first person, Hom. Lesb. *ῥμμε* (§§ 214, 402), Dor. *ῥμέ*, Ion. *ῥμέας*, *ῥμέας*, Att. *ῥμάς*.

The genitive was formed in the same manner as in the first person, as Hom. *ῥμείων*, Ion. Dor. *ῥμέων*, Ion. *ῥμέων*, Att. Dor. *ῥμῶν*, Lesb. *ῥμμέων*.

The Greek dative = locative was formed from the prim. Greek stem-form \**ῥσμ(ε)-* with the same endings as in the first person, as Aeolic *ῥμμιν* beside *ῥμμι*, Dor. *ῥμίν*, Att. Ion. *ῥμῖν*, Ion. also *ῥμῖν*.

## 2. REFLEXIVE.

§ 404. The reflexive pronoun originally referred to the chief person of the sentence (generally the subject), irrespectively as to whether the subject was the first, second, or third person singular or plural. This usage was in a great measure preserved in Sanskrit and the Baltic-Slavonic languages, but in Greek, Latin and the Germanic languages the original reflexive pronoun became restricted to the third person, and then the reflexive pronouns for the first and second persons came to be expressed differently in the different languages. The original stem-forms of the reflexive pronoun were \**se-* and \**sewe-* beside \**swe-*. \**se-*, the strong grade form, occurs in Lat. *sē*, *si-bi* and in Goth. *si-k*, *himself*, and *s-*, the weak grade form, in *σ-φί(ν)* where *-φ(ν)* is the same suffix which often appears in nouns (§ 306). After the analogy of the datives *σφίν* : *φίν* there was formed *σφέ* beside *φέ*. At first the forms *σφίν*, *σφέ* were used beside *φίν*, *φέ* without any distinction in meaning, but at a later period the *σφ*-forms gradually came to be used more and more for the plural only, and then special plural forms for the other cases were made chiefly after the analogy of the personal pronouns of the first and second persons. For examples of \**sewe-* beside \**swe-* see below.



Singular: The original form of the accusative was \*se beside \*sewe, \*swe, the former occurs in Lat. *sē*, Goth. *si-k*, *himself*, and the latter in Hom. *έέ* from \*σεφε, Att. Hom. Dor. *έ*, Lesb. *φέ*, from \*σφε.

The original form of the genitive was \*swe which was also used for the accusative. In Greek the two cases became differentiated by the creation of a new form for the genitive just as in the personal pronoun of the first person, as Hom. *είο* from \*σφεσjo; Att. Dor. *οῦ*, Hom. *έο*, Ion. *εῦ*, from \*σφεσο; Dor. Boeot. *έους*, Dor. *οῦς*, Locr. *φέος*, from \*σφε+ος from the genitive of the consonantal stems (§ 302); Dor. *έοῦ* after the analogy of *έους*; Lesb. *φέθεν*, Hom. Dor. *έθεν* with -θεν as in *έμέθεν* (§ 402).

The Att. Ion. Dor. dative *οἷ* can be from prim. Greek \*σφοι or from \*σοι, *eius*, *ei*, Lesb. *φοῖ*, Cypr. *φοι* from \*σφοι; Hom. *έοἷ* from \*σεφοι; Dor. *φίν*, Boeot. *έίν* from \*σεφιν were old locative forms like *έμίν* (§ 402).

Dual: From *σφέ* and *σφίν* were formed the Hom. nom. and acc. *σφέε*, and gen. and dat. *σφωίν*.

Plural: The nom. *σφέις*, acc. Ion. *σφέας*, Att. also Hom. *σφᾶς*, gen. Hom. Dor. Lesb. *σφείων*, Ion. *σφέων*, Att. also Hom. *σφῶν*, were all formed after the analogy of the personal pronouns of the first and second persons. On the Dor. Lesb. acc. *σφέ*, and Ion. Dor. Lesb. dat. *σφί(ν)*, see above; the Att. Ion. dat. *σφίσι(ν)* was formed after the analogy of the dative of the consonantal stems (§ 316).

§ 405. The singular of the compound reflexive pronouns was formed from the personal pronouns + *αὐτός*, which in Homer is always written as two separate words, as *έμοι αὐτῷ*, *σοι αὐτῷ*, *οἷ αὐτῷ*, &c., but in the other dialects as one word, as acc. Att. *έμᾶυτόν*, *σεᾶυτόν*, *σᾶυτόν*, *έᾶυτόν*, *ᾶυτόν*, Ion. *έμεωυτόν*, &c.; gen. Att. *έμᾶυτοῦ*, *σεᾶυτοῦ*, *σᾶυτοῦ*, *έᾶυτοῦ*, *ᾶυτοῦ*, Ion. *έμεωυτοῦ*, &c.; dat. Att. *έμᾶυτῷ*, *σεᾶυτῷ*, *σᾶυτῷ*, *έᾶυτῷ*, *ᾶυτῷ*, Ion. *έμεωυτῷ*, &c. Regular forms were Att. *έᾶυτῷ*, Ion. *έωυτῷ*, from *έοἷ* (dat. of the

possessive pronoun) + *αὐτῶ*, Att. *αὐτῶ* from *οἱ* + *αὐτῶ*, then after the analogy of these the *ā* and *ω* were extended to the other cases.

In the plural the two pronouns were inflected separately in the first and second persons and often also in the third, as *ἡμᾶς αὐτούς*, *ὑμᾶς αὐτούς*, *σφᾶς αὐτούς* beside simply *αὐτούς*.

The origin of *αὐτός* is uncertain. Some scholars assume that it is from \**ἄσν* + the pronominal stem *το-*, where \**ἄσν* corresponds to Skr. *asu-*, *life, life of the soul*. Others assume that it is composed of the adverb *αὔ*, *again* + *το-s*. The oblique cases of *αὐτός* were used to express the personal pronoun of the third person. The reflexive forms *σφεῖς*, *σφᾶς*, *σφῶν*, *σφίσι* were also used to express the plural of the third person.

### 3. POSSESSIVE.

§ 406. The possessive pronouns were inflected like ordinary adjectives: *ἐμός*; Att. *σός*, Skr. *tváh*, Indg. \**twos*, *thy*, beside Hom. Dor. Lesb. *τέός*, Boeot. *τιός*, O.Lat. *tuos*, later *tuos*, *tuus*, Indg. \**tewos*; Att. Hom. *ός*, Cret. *φός*, Skr. *sváh*, Indg. \**swos*, *his*, beside Hom. *έός*, Boeot. *έφός*, O.Lat. *sovos*, later *suos*, *suus*, Indg. \**sewos*; Hom. *σφός* was formed after the analogy of *ός*, *έός*. Att. Ion. *ἡμέ-τερος*, Dor. *ἄμέ-τερος*, Lesb. *ἄμμέ-τερος*, Att. Ion. Dor. *ὑμέ-τερος*, *σφέ-τερος*, Hom. *νωί-τερος*, *σφωί-τερος*, like Lat. *nos-ter*, *ves-ter*, were formed with the comparative suffix *-tero-* (§ 376); Lesb. *ἄμμος*, *ὑμμος*, Dor. *ἄμός*, *ὑμός* were formed direct from the accusative stems of the personal pronouns.

### 4. DEMONSTRATIVE.

§ 407. In the parent Indg. language the nominative singular masculine and feminine was \**so*, \**sā* = *ó*, Dor. *ἄ*, Att. Ion. *ή*, Skr. *sá*, *sā*, Goth. *sa*, *sō*, *this, that, the*. All

the other cases of the singular, dual and plural were formed from the stems **to-**, **te-**, fem. **tā-**. On the Greek case-endings of the inflected forms see § 399.

### a. Masculine and Neuter.

§ 408. Singular: The nominative masculine **ó** corresponds to Skr. **sá**, Goth. **sa**, Indg. **\*so**. The accusative masculine **τόν** = Skr. **tám**, Lat. **is-tum**, Goth. **þan-a**, Indg. **\*tom**. The nom. and acc. neuter **τό** = Skr. **tát**, Lat. **is-tud**, Goth. **þat-a**, OE. **þæt**, Indg. **\*tod**. The original form of the genitive was **\*tosjo** beside **\*toso**, **\*teso**, the former occurs in Hom. **τοῖο** from **\*τοσjo**, Skr. **tásya**, and **\*toso** in Att. Ion. **τοῦ**, Dor. **τῶ**, and **\*teso** in Goth. **þis**, OHG. **des**. The original form of the dative was **\*tōi** beside **\*tosmōi**, the former occurs in **τῶ**, Lat. **is-tō**, and the latter in Skr. **tásmāi**.

Dual: The original case-endings of the nominative and accusative dual were the same as those of the **o**-declension of nouns (§ 325). Masc. **\*tōu** = Skr. **tāu**, beside **\*tō** = **τῶ**, Skr. **tá**; neut. **\*toi** = Skr. **té**, Gr. **τῶ** for **\*τοι** was a new formation like **ζυγῶ** (§ 326). On the gen. and dat. **τοῖν**, **τοῖν** see § 325.

Plural: The original masculine nominative was **\*toi** = Dor. &c. **τοί**, Skr. **té**, Lat. **is-tī**, Goth. **þái**; Att. Ion. Cret. Lesb. Thess. Arcad. and Cyprian **οί** was a new formation after the analogy of **ó**. The original masculine accusative was **\*tons** = Cret. **τόνς**, Att. Ion. &c. **τούς**, Skr. **tán**, Lat. **is-tōs**, Goth. **þans**. Nom. and acc. neut. Indg. **\*tā** = Vedic **tā**, Lat. **is-ta**, Goth. **þō**; Gr. **τά** was a new formation like **ζυγά** (§ 326). The Greek gen. **τῶν** was formed after the analogy of the **o**-declension of nouns (§ 399), the original genitive was **\*toisōm** which occurs in Skr. **téṣām**. The original form of the locative was **\*toisu** = Skr. **téṣu**; **τοῖσι** with **-σ-** restored as in **λύκοισι** (§ 325). The Greek dative

*τοῖς* corresponds to the original instrumental \**tōis* = Skr. *tāih*, Lat. *is-tis*, Lith. *taīs*.

### b. Feminine.

§ 409. Singular : Nominative Indg. \**sā* = Dor. *ᾶ*, Att. Ion. *ῆ*, Skr. *sā*, Goth. *sō*. Accusative Indg. \**tām* = *τήν*, Skr. *tām*, Lat. *is-tam*, Goth. *þō*. The Greek gen. and dat. *τῆς*, *τῇ* had the endings of the *ā*-declension of nouns (§ 321), the original forms were gen. \**tosjās* or \**tesjās* = Skr. *tāsyāḥ*, beside \**tesās* = Goth. *þizōs*; dat. \**tosjāi* or \**tesjāi* = Skr. *tāsyāi*, beside \**tesāi* = Goth. *þizai*.

Dual : Nominative and accusative Indg. \**tai* = Skr. *té*; Gr. *ταῖ* was a new formation like *χώρα* (§ 321); instead of *ταῖ* the masc. *τώ* was mostly used, and similarly gen. and dat. *τοῖν* for *ταῖν* (see § 325).

Plural : Nominative Indg. \**tās* = Skr. *tāḥ*, Goth. *þōs*, Lith. *tōs*; Gr. *ταί*, *αί* were new formations after the analogy of *τοί*, *οί* (cp. § 321). Accusative Indg. \**tāns* = Cret. *τάνς*, Att. &c. *τάς*, Lat. *is-tās*; Skr. *tāḥ*, Goth. *þōs* were the nom. used for the accusative. Genitive Indg. \**tāsām* (cp. § 314) or *-ōm* = Hom. *τάων*, Dor. *τάν*, Att. &c. *τῶν*, Lat. *is-tārum*. Locative Indg. \**tāsu* = Skr. *tāsu*; on the Gr. dative forms *ταῖς*, *ταῖσι*, *τῆς*, *τῆσι* see § 321.

§ 410. The origin of the second element of *ὅ-δε*, *ἧ-δε*, *τό-δε* is unknown. Inflected forms of the second element occur in Hom. *τοῖσ-δεσσι*, *τοῖσ-δεσι* and in the Lesb. gen. pl. *τῶν-δεων*. Traces of similar compounds of the simple demonstrative with particles of unknown origin occur in the Thessalian neut. nom. sing. *τό-νε*, pl. *τά-νε* and with both elements inflected in the gen. sing. *τοῖ-νεος* and gen. pl. *τοῦν-νεουν*; in the Arcadian gen. sing. *τω-νί*, acc. fem. *τάν-νί*, neut. pl. *τα-νύ*; and in the Cyprian nom. *ὄ-νν*.

§ 411. The prim. Greek forms corresponding to *οὔτος*, *αὐτή*, *τοῦτο* were: \**ὄ-υ-το*, \**ᾶ-υ-το*, \**τοδ-υ-το*; acc. \**τον-υ-το*, \**τᾶν-υ-το*, \**τοδ-υ-το*; gen. \**τοσο-υ-το*, \**τᾶσ-υ-το*, \**τοσο-υ-το*, &c.,

consisting of the simple demonstrative + the deictic particle *v*, which is also common in Sanskrit pronouns (cp. nom. fem. *asāu* = *a* + *sā* (= Gr. *ἄ*-) + *u*, *that*, acc. masc. *amúm* = *am* + *u* + *m*, *that*), together with the uninflected pronominal stem *το*-. During the prehistoric period of the language the inflexion was then transplanted from the first to the last element of the compound, as acc. *τοῦτον*, *ταύτην*, *τοῦτο*, from \**το-υ-τον*, \**τᾱ-υ-τᾱν*, \**το-υ-τοδ*; gen. *τούτου*, *ταύτης*, from \**το-υ-τοο*, \**τᾱ-υ-τᾱς*, &c.; and the old nominatives \**ούτο*, \**αὔτο* became *οὔτος*, *αὔτη* after the analogy of the nom. singular of adjectives. The Att. Ion. nom. pl. *οὔτοι*, *αὔται* beside Dor. *τοῦτοι*, *ταῦται* were new formations after the analogy of the nom. singular. The nom. acc. pl. neut. *ταῦτα* had *-αν*- from the feminine stem. The masc. forms of the dual were used for all genders; and similarly in Att. Ion. the gen. pl. *τούτων* beside Dor. and Lesb. fem. *ταυτᾱν*.

In the Boeotian dialect the stem-form of the masc. nom. singular became generalized, as acc. *οὔτον*, neut. *οὔτο*, gen. *οὔτω*, nom. pl. *οὔτοι*, neut. *οὔτα*, acc. *οὔτως*, gen. *οὔτων*.

The deictic particles *-ι*, *-ιν*, originally the feminine nominative and accusative singular of a demonstrative pronoun, were often attached to the above compound demonstratives to express emphasis, as *οδί*, *ήδί*, *τοδί*, *ούτοσί* or *-ίν*, *αὔτηί*, *τουτουί*, *τουτωνί*. This *-ι* is the same as in the Sanskrit fem. nom. sing. *iyám* from \**i-am*, *this*, and in the Gothic fem. acc. *ija*, *her*, and is related to Hom. *ἴα*, *ἴαν*, *ἴης*, *ἴῆ* (cp. § 380).

§ 412. Att. *ἐκεῖνος*, also poet. *κεῖνος*, Ion. *ἐκεῖνος*, *κεῖνος*, Dor. Lesb. *κῆνος*. *ἐκεῖνος* is composed of *ἐ* = the isolated pronominal particle which occurs in Skr. *asāu*, *that*, and *κεῖνος* from \**κε-ένος* where *κε*- corresponds to the Latin particle *ce* in *ce-do*, *huius-ce*, and *ένο*- is an old pronominal stem (§ 416); and similarly Dor. *τῆνος* from \**τε-ένος*. On forms like *ἐκεινοσί*, *ἐκεινωνί* see above.

## 5. RELATIVE.

§ 413. The Indg. stem-forms of the relative pronoun were masculine and neuter **jo-**, feminine **jā-** = **ó-**, **ή-**, Skr. **ya-**, **yā-**, as sing. nom. **ός** (Phrygian **ιος**), **ή**, **ó**, Skr. **yáh**, **yá**, **yát**, Indg. **\*jos**, **\*jā**, **\*jod**; gen. **oŭ** from **\*joso**, **ής** (a new formation like **τής**, § 409), Skr. **yásya**, **yásyāh**; the Hom. gen **όου** (*B* 325, *a* 70) and **έης** (*II* 208) are incorrect forms; pl. nom. **oί**, **ái** (a new formation like **αί**, § 409), **ά**, Skr. **yé**, **yáh**, Vedic **yá**, Indg. **\*joi**, **\*jās**, **\*jā**. The simple demonstrative, especially the **τ**-forms, was often also used for the relative in Homer, Herodotus, Dor. Lesb. Boeot. and Arcadian.

## 6. INTERROGATIVE AND INDEFINITE.

§ 414. The parent Indg. language had several stems from which the interrogative pronoun was formed, viz. **qo-**, **qe-**, fem. **qā-**; **qi-**, **qu-**, with labialized **q** (§ 202). It is impossible to determine to which cases the various stems originally belonged owing to the levelling which took place in the prehistoric period of the separate languages.

**qo-** occurs in Skr. **káh**, Goth. **hvas**, Lith. **kàs**, *who?*, neut. Lat. **quod**, Goth. **hva**, OE. **hwæt**, *what?*, Indg. **\*qos**, **\*qod**. In Greek it only occurs in pronominal adjectives and adverbs, as **πότερος**, Skr. **kataráh**, Goth. **hvaþar**, *which of two?*, **ποίος**, **πόσος**; **ποιί**, **πόθεν**, **πότε**, **πόποτε**, **πώς**, Cret. **ό-πω**.

**qe-** occurs in the gen. sing. Goth. **hvis**, O.Slav. **česo**, Hom. **τέο** (Att. **του**, Ion. **τευ**), from Indg. **\*qeso**, *whose?* From **τέο** was formed **τέων** and then further **τέω** (Att. **τῶ**), **τέοισι**; and similarly to **ότεο** (Att. **ότου**, Ion. **ότευ**) were formed **ότεων** (Att. **ότων**), **ότεω** (Att. **ότῶ**), **ότέοισι** (Att. **ότοις**). It also occurs in Dor. **πέι** for **\*τεί** and in the conjunction **τε**, Skr. **ca**, Lat. **que**, *and*.

**qā-** occurs in the fem. nom. Skr. **ká**, Goth. **hvō**, *who?*

acc. Skr. **kām**, Goth. **hwō**, *whom?*, and in Dor. **πᾶ**, Att. **πῆ**.

The stem **qu-** is only found in adverbs, as Dor. **ὄ-πῦς** (Rhodes), **ὄ-πυι** (Gortyn), **πῦς** (Syracuse), *whither*; Skr. **kū**, Lith. **kuř**, *where*; Lat. **ali-cu-bi**, **ne-cu-bi**, &c.

It is probable that **qi-** belonged originally only to the masc. and neut. nom. and acc. singular, cp. **τίς**, **τί**, Lat. **quis**, **quid**, Indg. **\*qis**, **\*qid**; masc. acc. **\*τίν**, Lat. **quem** for older **\*quim**. In Greek the stem **τι-** became generalized for all cases and genders. From **\*τίν** was formed a new accusative **τίνα** after the analogy of such words as **ένα**, cp. also § 330. The **-v-** in **τίνα** was then levelled out into the other cases, as **τίνος**, **τίνι**; **τίνε**, **τίνοι**; **τίνες**, **τίνας**, **τίνα**, **τίνων**, but **τίσι** : **τίνες** after the analogy of such forms as **φρεσί**, **κυσί** : **φρένες**, **κύνες**. From the stem **τι-** were also formed Lesb. **τίφ**, **τίοισιν**; Cret. **ὄ-τιμι** from **\*-τισμι**, Indg. **\*qismi** beside the Skr. loc. **kásmīn**. Megarian neut. pl. **σά** from **\*τja** for **τίνα** (Arist. *Ach.* 757, 784); indef. Att. **ἄττα**, Ion. **ἄσσα** for initial **\*τά**, **\*σά** (§ 167), which arose from a mistaken division of the words in such combinations as **ὀποι' ἄττα**, **σμίκρ' ἄττα** for **ὀποιά ττα** (cp. Hom. **ὀπποιά σσα**, τ 218), **σμικρά ττα**; indef. rel. Att. **ἄττα**, Ion. **ἄσσα**, from **\*ἄ-τja**. In like manner is also declined the simple indefinite pronoun which only differs from the interrogative in accent.

§ 415. **δείνα** is always accompanied by the def. article whether it remains uninflected for both numbers and all genders and cases or whether it is inflected. It is originally a compound of **ὄδε** + the pronominal stem **-ένο-** which occurs in **έκείνος** from **\*έ-κε-ενο-ς** (§ 412), so that the original nominative masc. was **\*ὄδείνος**, acc. **\*τονδεῖνον**, &c. For the explanation of **δείνα** we have to start out from the neut. plural form **ταδεῖνα** = **\*τάδε-ένα** which, by a mistaken division of the compound, came to be regarded as being for **τα-δεῖνα**. At a later period **δεῖνα** in the combination

τὸν δέινα came to be regarded as the accusative of a consonantal stem (cp. τίνα, τίνος, § 414) to which were then formed δέινος, δέινι, pl. δέινες, δέινας, δέινων.

### 7. OTHER PRONOUNS.

§ 416. The parent Indg. language had several pronouns besides those dealt with in the preceding paragraphs. Some of these were not preserved in Greek and others were only preserved in scanty fragments, as

e-. The original forms were nom. \*es, acc. \*em, neut. \*ed, gen. \*esjo (Skr. asyá, *of this*) beside \*eso (OHG. es, Goth. is, *of it*), fem. \*esjās (Skr. asyáh), loc. \*ei (preserved in εἰ, εἶ-τα, and the Goth. relative particle ei), instr. \*ē (preserved in ἧ, ἧ-τοι, ἐπει-ῆ). The stem e- occurs in words like ἐ-κεῖνος, ἐ-κεῖ, ἐ-κεῖθεν, ἐ-χθές, &c., cp. Skr. a-sāu, *that*, Lat. e-quidem.

eno-, ono-, the former of which occurs in ἐκεῖνος, κείνος, Dor. κῆνος, from \*κε-ένος, Dor. τῆνος from \*τε-ένος, and ἔννη, and the latter in Lith. anàs, *that*, O.Slav. onŭ, *that, he*.

The locative of an old fem. stem ā- is preserved in the Dor. conj. αἰ, *if*.

i-, Lat. is, Goth. is, *he*; acc. Indg. \*im, Cypr. ἶν, O.Lat. im, Goth. in-a, *him*, Skr. im-ám, *this*. The stem also occurs in Hom. ἰδέ, *and*, Skr. i-dā, *now, in this moment*, i-há, *here*. With ἶν, O.Lat. im are also probably related Hom. μίν used for all genders but only in the singular, and post-Homeric poet. νίν used for the singular and plural all genders. The exact formation of these two pronouns is obscure.

The feminine stem ī- which occurs in the Skr. nom. iyám from \*ī-ám, *this*, and the particle -ī as in οὗτοσ-ί, ἐκεινοσ-ί, &c.; the acc. Indg. \*ijām (Goth. ija, *her*) beside \*īm, \*ijm̄ (cp. § 330) occurs in the particle -īν, as οὗτοσ-īν. With this pronoun is also related Hom. ἴα, ἴαν, ἴης, ἴῆ,



to which was formed a masc. *ἴος*, dat. *ἰῶ* in Hom. and Cretan.

The fem. pronoun \**sī* = *ī*, O.Ir. OHG. *sī*, Goth. *si*, *she*.

**ko-, ke-**, the latter stem occurs in *ἐκέινος* from \**έ-κε-ενος*, in Lat. *ce-do*, *huius-ce*, and in *έ-κεί*, *κεί-θεν*, *κεί-θι*, &c. where *κεί* is the old locative.

## CHAPTER XII

### VERBS

§ 417. The forms constituting the Greek verbal-system are of two kinds : the finite and the infinite forms. The finite forms consist of the indicative, subjunctive, optative, imperative and the so-called injunctive (§ 524). Their special characteristics are the personal endings, the augment, reduplication and the distinction of voice, tense and mood. The infinite forms are the infinitive, participles, and the verbal adjectives. The participles had become a part of the verbal-system in the parent Indg. language, and accordingly had voice- and tense-forms ; whereas the infinitive, which is originally an isolated singular case-form of a nomen actionis, became for the most part associated with the verbal-system in the prehistoric period of the separate languages (§ 545). On the verbal adjectives see §§ 555-6.

Primitive Greek inherited almost the entire verbal-system of the parent Indg. language, to which it added considerably by the creation of numerous new formations, so that in course of time its verbal-system became more extensive than that of any other Indg. language. Such new formations were the passive aorist in *-θην*, the future passive in *-θησομαι*, the passive participle in *-θείς*, the so-called future perfect, the pluperfect, the future optative, the optative of the s-aorist, &c.

In the following paragraphs most of the remarks con-

cerning the finite forms of the verb properly belong to the province of syntax. And only such points are mentioned here as are necessary for understanding the finite forms. For the full treatment of the subject the student should consult Brugmann's *Griech. Grammatik*, third ed., pp. 458-568.

§ 418. **Number**: The Indg. finite forms of the verb had like nouns the three numbers—singular, dual and plural—which were preserved in the oldest period of Greek as also in the Aryan, Gothic and Baltic-Slavonic languages, but the dual had practically disappeared in the prehistoric period of the other languages. And even in prim. Greek the first person of the dual was supplanted by the plural. The second and third persons of the dual remained longer in Attic than in the other dialects, but even in this dialect they had become obsolete in the vernacular from about the beginning of the fourth century B. C.

§ 419. **Voices**: The parent Indg. language had two voices—the active and the middle. The former was preserved in the historic period of all the separate languages, and the latter was preserved in Greek, Aryan and Latin and partly also in Gothic. It had no special forms which were exclusively used to express the passive, but before the parent language had become differentiated into the separate languages the middle forms had to some extent begun to be used to express the passive. This mode of expressing the passive underwent further development in Greek, Sanskrit and Latin. And such middle forms as were preserved in Gothic became exclusively passive in meaning. The Greek second aorist passive in  $-\eta\nu$  was originally active in form (§ 458), and the first aorist passive in  $-\theta\eta\nu$  was a special Greek new formation (§ 514).

§ 420. The middle denoted that the action of the verb was directed towards the agent. The use in which the agent was the direct object was rare, as in  $\lambda\acute{o}\upsilon\omicron\mu\alpha\iota$  ( $\lambda\omicron\upsilon\mu\alpha\iota$ ),

*I wash myself.* The original difference in meaning between the middle and active was probably very slight, and this would account for the fact that many verbs with only middle forms have purely an active meaning without any idea of the reflexive meaning, cp. ἧσται, Skr. *āstē*, *he sits*; Skr. *sācatē*, *he follows*, Gr. *ἔπομαι*, Lat. *sequor*; *μητίομαι*, Lat. *mētior*; *κείται*, Skr. *śētē*, *he lies down*; and similarly *ἀγαμαι*, *ἄζομαι*, *ἄλλομαι*, *βούλομαι*, *ἐρεύγομαι*, *κρέμαμαι*, *μέμφομαι*, *οἶχομαι*, *πλάζομαι*, *σέβομαι*, *σκέπτομαι*, *τέρσομαι*, *φέβομαι*, &c. To such middle forms were often created active forms in the historic period of the language, as *ἄζω*, *σέβω* : *ἄζομαι*, *σέβομαι*. These new formations were based on the analogy of verbs which originally had active and middle forms side by side.

§ 421. Already in the parent Indg. language middle verbs sometimes had an active perfect, and some such verbs were also preserved in Greek, Sanskrit and Latin, as *-βέβουλα* : *βούλομαι*, *γέγονα* : *γίγνομαι*, *δέδορκα*, Skr. *dadārśa* : *δέρομαι*, *μέμηνα* : *μαίνομαι*, *ὄλωλα* : *ὄλλυμαι*; Skr. *papāda* : *pādyatē*, *he falls*, *vavārta* : *vārtatē*, *he turns*; Lat. *reverti* : *revertor*, *assensī* : *assentior*.

§ 422. Many verbs, which are otherwise active in form, have a future middle with active meaning. This is especially the case with such verbs as have a second aorist in use, as *τεύξομαι* : *ἔτυχον*, *πέισομαι* : *ἔπαθον*, *λήψομαι* : *ἔλαβον*, and similarly *ἁμαρτήσομαι*, *βήσομαι*, *γνώσομαι*, *δραμοῦμαι*, *θανοῦμαι*, *θίξομαι*, *καμοῦμαι*, *λήξομαι*, *φεύξομαι*, &c. This phenomenon is peculiar to Greek and is connected with the intransitive use of the second aorist. To aorists like *ἔστην*, *ἔφῶν* were formed the future *στήσομαι*, *φύσομαι*, because *στήσω*, *φύσω* were transitive; *βήσω* became transitive after the analogy of *στήσω*, and then to *ἔβην* was formed the future *βήσομαι*. This mode of forming a middle future then became extended to other verbs.

§ 423. **Mode or manner of action:** It is important to note that tenses in the sense in which we generally use that word were of comparatively late development in the Indg. languages. The verbal forms—whether presential or preterite—had originally in themselves no inherent characteristic to indicate whether an action referred to the present, past or future. If we compare together the augmented tenses we see that they originally expressed something other than what we generally understand by the word tense. In the imperfect, aorist and pluperfect the verbal form itself merely denoted the mode or manner of the action according as it was durative or only momentary, as in English **seek** beside **find**, and it was merely the augment which denoted the past time, but the fact that the augment does not appear in the Latin, Old Germanic and Baltic-Slavonic languages shows that even the augment was not originally necessary to express past time. When the time of the action was sufficiently indicated by the context the augment was not used in the parent Indg. language, see § 430.

§ 424. In the following classification of the mode or manner in which the action takes place (*actio verbi*, or *Aktionsart* as it is generally called in German), it is as a rule only necessary to grasp clearly the difference between the momentary and the durative action. The mode or manner in which an action takes place can be conveniently divided into five types:—

(1) An action is said to be momentary, perfective or aoristic when it is practically completed at the moment it begins, as in English **find**, **strike**. Since this mode of action has no duration it was seldom used to express the present, therefore unaugmented momentary formations generally have a future meaning, as *εἶμι*, *νέομαι*. A verb became perfective by the addition of a preposition, cp. *ἀποθνήσκει* beside *θνήσκει*; Lat. **consequor** beside **sequor**;

this distinction in form and meaning was most fully developed in the Slavonic languages and became one of the most distinctive features of the verbal-system. The aorist is characteristic of this type.

(2) An action is said to be cursive, durative or imperfective when it denotes continuous action without any reference to its beginning or end, as in English **I am striking** as compared with **I strike**; ἐσθίω, πίνω beside ἔδομαι, πίομαι. The primary verbs in -jo- (§ 477) mostly had durative action, as in χαίρω, &c.

(3) The perfect action, that is the mode of action expressed by the perfect stem, denotes a state of the subject which has resulted from a previous action, as in οἶδα, τέθνηκε as compared with γιγνώσκω, θνήσκει.

(4) An action is said to be iterative when it consists of repeated acts. Here belong especially the reduplicated presents, as βίβημι, βιβάω as compared with ἔβην. This meaning easily develops into the intensive, and in all languages the desire for emphasis in time reduces the intensive to the value of the simple verb, as in μίμνω, ἴσχω beside μένω, ἔχω. To this type also belong the verbs in -éjo-, as in φορέω (§ 497).

(5) An action is said to be terminative when it indicates the beginning or the end of the action, as in English **aim, start, throw** beside **hit**. To this class originally belonged the nasal-presents (§§ 460-7) like ἄγνῦμι, ὄρνῦμι, δάμνημι; and also the presents in -σκω (§ 469), as βάσκω, which however often became iterative.

§ 425. No one Greek verb has or could have all the forms which are associated with the full verbal-system. A present could not be formed from a base or stem which expressed momentary or aoristic action unless the base or stem was modified by a formative element; and on the other hand no base or stem expressing cursive action could occur in the second aorist. Hence arose the series

of defective verbs with presents but no aorists or with aorists but no presents, as φέρω : ἤνεγκον, cp. Lat. **fero** : **tulī**, ἔδω, ἐσθίω : ἔφαγον, ἔρχομαι : ἤλυθον, λέγω : εἶπον, ὀράω : εἶδον.

§ 426. **Tense-formation**: In the parent Indg. language there were strictly speaking only two tense-formations, viz. the present-aorist-system and the perfect. The present-aorist-system contained a present and an aorist form which arose from the same base or stem through a difference in accent. The forms mostly used as presents with cursive meaning had the accent in the singular of the active on the first syllable of the base which had the strong grade of ablaut, and in all other forms the accent was on the personal ending and the base had the weak grade of ablaut. The forms with momentary or aoristic meaning had the accent on the second syllable of the base in all forms and it therefore had the strong grade of ablaut. This is called the second or strong aorist. The reason why this difference of meaning should be associated with the difference in accent is uncertain, see Brugmann, *Kurze vergleichende Grammatik*, pp. 507-8. In Greek the tense-system was most completely carried out in the denominative verbs, because such verbs originally possessed no particular mode or manner of action.

The present in the narrower sense had no special characteristic to denote time unless we may regard the primary personal endings as such.

The imperfect belongs to the present stem. The difference between this tense and the second aorist was often one of syntax rather than of form, because forms of the same nature were used partly as imperfects and partly as aorists, cp. forms like ἔφην, ἔγραφον, ἔγλυφον beside the similarly formed aorists, ἔστην, ἔτραφον, ἔφυγον.

There were originally no special forms which were exclusively used to express the future. But forms with

momentary meaning could be used for the future, as *εἶμι*, *νέομαι*. The ordinary future in Greek was originally the subjunctive of the s-aorist (§ 499). The future passive and future perfect were special Greek new formations (§ 501).

The second aorist and the s-aorist had come to have the same meaning already in the parent Indg. language (§ 502). The passive aorist in *-θην* was a special Greek new formation (§ 514).

So far as syntax is concerned the perfect was originally a special kind of present which denoted a state of the subject resulting from a previous action. For the special characteristics of the perfect see § 515.

The Greek pluperfect is simply a preterite form developed from the perfect stem. See § 523.

§ 427. **Moods:** The parent Indg. language had four moods—the indicative, subjunctive (§§ 525–9), optative (§§ 530–8), and imperative (§§ 539–44)—all of which were preserved in Greek and Vedic. The so-called injunctive is strictly speaking not a mood, because it merely consists of unaugmented indicative forms with secondary personal endings (§ 524). Greek and Vedic are the only languages which preserved the original distinction between the subjunctive and optative in form and meaning. But even in Vedic the distinction began to disappear and with the development of the sjo-future (§ 498) the subjunctive disappeared entirely in classical Sanskrit, and the optative came to be used for both. It was also supplanted by the optative in the prehistoric period of the Germanic and Baltic-Slavonic languages. And although subjunctive and optative forms were preserved in Latin, they became confused in usage already in the prehistoric period of the language. Some scholars doubt whether the parent Indg. language possessed a subjunctive with the function and meaning that we usually associate with it. They are

inclined to regard it as being originally an indicative with momentary meaning which was used to express the future action. In this manner they account for the fact that what we call the subjunctive in Greek partly corresponds in form to the future in Latin, as  $\acute{\epsilon}\omega$  from \* $\acute{\epsilon}\sigma\omega$ ,  $\phi\acute{\epsilon}\rho\eta\tau\epsilon$  = Lat. *ero*, *ferētis*.

§ 428. It is not always easy to draw a hard and fast line between indicative and subjunctive forms. In Greek we have the original subjunctive of the *s*-aorist used as the future; in Homer forms like  $\acute{\alpha}\lambda\gamma\acute{\eta}\sigma\epsilon\tau\epsilon$ ,  $\acute{\alpha}\mu\acute{\epsilon}\iota\psi\epsilon\tau\alpha\iota$ , &c. (§ 526) are sometimes futures and sometimes aorist subjunctives; the subjunctive of the athematic verbs corresponds in form to the indicative of the thematic, cp. Hom.  $\acute{\iota}\omicron\mu\epsilon\nu$  beside  $\phi\acute{\epsilon}\rho\omicron\mu\epsilon\nu$ .

Possibly the optative (§§ 530-8) was originally merely a characterized present denoting *wish*. The *s*-aorist of the optative was a special Greek new formation.

Already in the parent Indg. language the imperative system was made up of several distinct formations which included (*a*) injunctive forms, (*b*) forms with the bare stem, and (*c*) compound forms. See §§ 539-44.

#### REDUPLICATION.

§ 429. Reduplication had become a part of the verbal-system already in the parent Indg. language, and was originally used to express iterative or intensive action. At a later period it also came to be used as a tense-forming element. It was preserved in Greek, Aryan, Latin, Gothic and Old Irish. There were originally three types of reduplication, type (*a*) with  $\check{\text{i}}$  in the reduplicated syllable, type (*b*) with  $\check{\text{e}}$  in the reduplicated syllable, and type (*c*) with the whole syllable reduplicated. The tenses which had reduplication were the present, aorist and perfect.

The reduplicated presents originally had  $\check{\text{i}}$  beside *e*, but the exact relation in which  $\check{\text{i}}$  stood to *e* is unknown. The



i became generalized in the Greek presents except perhaps in one or two isolated forms like Hom. *κέ-κλυ-θι*, pl. *κέ-κλυ-τε*, whereas both types were preserved side by side in Sanskrit, as *γίγνομαι* : Lat. *gigno*, *μίμνω*, *δίδασκω*, *ἴζω* from \**σισδω*, *ἴσχω* from \**σισχω*, *πίμπλημι* (Skr. *pí-parmi*, *I fill*), *πίμπρημι*, both verbs with -μ- after the analogy of *πιμπλάνω* (§ 466); *ἴστημι* from \**σιστāμι* : Lat. *sistit*, Skr. *tí-ṣṭhati*, *he stands*; but *τίθημι* from \**θιθημι* beside Skr. *dá-dhāmi*, *δίδωμι* beside Skr. *dá-dāmi*.

The aorist had e which was regularly preserved in Greek, as *ἔ-πε-φνον*, inf. *πε-φνέμεν*, *ἔ-σπομην* from \**σε-σπομāν*, and similarly *κεκλόμην*, *κεχαρόμην*, *λελαθέσθαι*, *λελαβέσθαι*, *πέφραδον* : *φράζω*, *πέπιθον*, *τετυκεῖν*, &c.

The perfect generally had e, as *δέδορκα*, *γέγονα* = Skr. *dadárśa*, *jajāna*, for other examples see §§ 516–22. Beside e there also existed ē which is rare in Greek (cp. Hom. *δη-δέχεται* : *δέχομαι*) but common in Vedic as *vā-vārta* beside *va-vārta*, *he has turned*, see Whitney, *Sanskrit Grammar*, § 786. On the consonants in the reduplicated syllable of the perfect see § 517.

Type (c), which consisted of the reduplication of the whole syllable, was the oldest mode of reduplication. Here it is necessary to make two sub-divisions according as the base or stem began with a consonant or a vowel. (1) When it began with a consonant the reduplication was not a tense-forming element but belonged to the whole verb, as *γαρ-γαίρω*, *μαρμαίρω*, *πορφύρω*, *παμφαίνω*, cp. also Lat. *murmurāre*, *tintinnāre*. In a small number of verbs the formation of the reduplicated syllable is not clear, (a) with i in the reduplicated syllable, as *δαιδάλλω*, *παιπάλλω* (Hesych.), *μαιμάω*, *παιφάσσω*, *ποιπνύω*, *ποιφύσσω*, (b) with a nasal or liquid, as *γογγύλλω*, *γαγγαλίζω* beside *γαργαλίζω*; *ἐγρή-γορα*. (2) When it began with a vowel, as *ἄρ-αρίσκω*; *ἀκ-ήκοα*, *ἀλ-ήλεμαι*, *ἄρ-ᾶρα*, *ὄλ-ωλα*, *ὀμ-ώμοκα*, *ὄρ-ωρα*; *ἦγ-αγον*, *ἦν-εγκον*, *ἦρ-αρον*, *ὠρ-ορον*; *ἄγ-αγεῖν*,

ἀλ-αλκεῖν, ἀρ-αρεῖν, ἐν-εγκεῖν, ὀρ-ορεῖν, &c.; ἐρύκ-ακον : ἐρύκω, ἠνίπ-απον : ἐνίπτω. See § 233.

The reduplicated aorist was common in the language of the epic, but in the later language only a few examples were preserved, as ἤγαγον, ἤνεγκον.

#### THE AUGMENT.

§ 430. The augment (Indg. e- = é-, Skr. a-, Arm. e-) was originally a temporal adverb denoting the past, and gradually became used in the so-called imperfect, aorist and pluperfect indicative to express the past tense, because the verbal forms as such possessed no inherent characteristic which indicated the past tense. When it stood in the parent Indg. language before consonants it is called the syllabic augment, as in Indg. \*ébherom = ἔφερον, Skr. ábharam; and when it underwent contraction with a following vowel it is called the temporal augment, as in Indg. \*ésm̐ from \*é-esm̐ = Hom. ἦα, Skr. ásam. The augment had become an integral part of the verbal system already in prim. Indo-Germanic and always had the principal accent of the compound form, as in \*ébherom beside \*bhérom. It was preserved in Greek, Aryan and Armenian, but in the other Indg. languages it either disappeared altogether or was only preserved in isolated forms. When the time of the action was sufficiently indicated by the context the augment was not used in the parent language, so that forms like \*ébherom and \*bhérom existed side by side without any distinction in meaning. After the analogy of the augmented forms the unaugmented forms also acquired in the course of time a preterite meaning independently of the context. This accounts for the optional use of the augment in Vedic, Homer and in later Greek poetry. The augmented forms became generalized in Sanskrit. They had also become general in the oldest

period of Greek prose except in the pluperfect where both forms existed side by side, as in *ἐπεπόνθη, ἐπεπόνθειν* beside *πεπόνθη, πεπόνθειν*, and in the Ionic iterative forms in *-σκον* which never have the augment, as *φεύγεσκον, φύγεσκον, λάβεσκον*. *ἐχρῆν* was a new formation beside the regular form *χρῆν* which was a contraction of *χρῆ ἦν*.

In verbs compounded with a preposition the augment stood between the component parts, as in *ἀπ-έ-βαλον, περι-έ-βαλλον, παρ-έ-σχον*, cp. Skr. imperf. **ud-á-patat** beside the pres. **ut-pátati**, *he flies up*. In a few cases the compound verb came to be regarded as a simplex and then had the augment in front of the preposition, as *ἐκάθιζον, ἐκάθειδον* beside *καθηῦδον*, epic *καθεῦδον* with temporal augment; or with both elements augmented, as *ἦν-ειχόμεν, ἦν-εσχόμεν, ἦμφ-εσβήτουν*.

Verbs compounded with the inseparable particle *δυσ-* have the augment in front of it, as *ἐδυστύχουν*; the same rule also applies to verbs derived from compound nouns, as *ἐμυθολόγησα*, but if the first element was a preposition the augment was sometimes placed after it on analogy with verbs of the type *ἀπ-έ-βαλον*, as *ἀπ-ε-λογησάμην*.

The syllabic augment also occurred originally in verbs which began with *s-* and *j-*, but these sounds disappeared in prim. Greek and the loss of them gave rise to various contractions and analogical formations. *έ-ε-* regularly underwent contraction (Att. *ει-*, Dor. *η-*) after the loss of *σ-* and *ζ-* in the combinations *έ-σε-*, *έ-ζε-*, as Att. *εἶχον*, Dor. *ἦχον* from *\*έσεχον*; *εἶρπον*, Dor. *ἦρπον* from *\*έσερπον*, cp. Lat. *serpo*; *εἰπόμεν* from *\*έσεπομην*, cp. Lat. *sequor* (§ 219); *εἰστήκειν* from *\*έσετηκειν*; *εἶμεν* from *\*έζεμεν*. In all other combinations we have the temporal augment after the analogy of verbs which originally began with a vowel, as *ἴζον* for *\*εἴζον* from *\*έσιζον*: *ἴζω*, and similarly *ὕγιανα*: *ὕγιαίνω*, *ὠρμησα*: *ὠρμάω*, *ἦνυτο*: *ἀνῦμι*, &c. On the double consonants in the original initial combination *s+*

nasal or liquid, see the phonology, as in Hom. ἔλλαβε, ἔρρεον (§ 215), ἔμμαθεν, ἔννεον (§ 214).

Verbs, which originally began with **w-** = **f-** have the syllabic augment in Homer, but contraction in Attic where possible, as Hom. εἶδον, Att. εἶδον, Lesb. εὐῖδον from \*ἐφιδον; Hom. εἶπον, Att. εἶπον; Att. εἶργαζόμεν, εἶκαζον beside ἡργαζόμεν, ἡκαζον with temporal augment; Hom. ἐέσσατο, ἐάνθανε, &c., Att. ἐωνούμην, ἐώθουν beside ὠθουν with temporal augment. Forms like Att. ᾤκησα, ὠργίσθην, ὠρθωσα, &c., Hom. ὠφελλον were new formations with the temporal augment. ἔρριπτον from ἐφρῖπτον : ῥίπτω, and similarly ἔρρηξα.

Beside **e-** there seems also to have been a form **ē-** (= Skr. ā-) in prim. Indo-Germanic, which occurred before verbs beginning with **w-**, **j-** or **r-**, as in Hom. ἡ-εἶδη, Att. ἡδεῖν, Hom. ἀπ-ἡ-ύρα from \*ἀπ-ἡ-φρα, cp. Skr. impf. ā-vṛṇak : pres. vṛṇākti, *he turns round*. Some scholars assume that such an ἡ- occurs in ἡβουλόμην : βούλομαι, ἡμελλον : μέλλω, ἡδυνάμην : δύναμαι, but it is more probable that these were new formations after the analogy of ἡθελον : ἐθέλω beside θέλω.

It is difficult to account satisfactorily for forms like ἐάλων : ἀλίσκομαι, ἐώρων, ἐώρων : ὀράω, with the rough breathing from the present, ἐάγην : ἄγνυμι, ἀν-έφξα : οἴγνυμι. They contain either both the syllabic and the temporal augment or else they had originally the syllabic augment **η-** and then underwent quantitative metathesis whereby ἡα-, ἡο- became ἐā-, ἐω- (§ 72).

§ 43<sup>r</sup>. The augment became contracted in prim. Indo-Germanic with verbal forms beginning with **e-**, as Indg. \*ésm̥ from \*é-esm̥ = Hom. ἦα, Skr. āsam, *I was*; Indg. éj̥m̥ from \*é-ej̥m̥ = ἦα for \*ἦα (§ 453), Skr. āyam, *I went*. It is probable that **e-o-** (ὠζον : ὄζω) and **e-a-** (ἦγον, Dor. ἀγον : ἄγω, cp. Skr. impf. ājam : pres. ājāmi, *I drive*, Lat. ēgī : ago) also became contracted in the parent Indg. language.

After the analogy of these and similar forms there arose in prim. Greek the system of simply lengthening the vowel in the augmented tenses of verbs beginning with a vowel, as *ἤθελον* : ἐθέλω, *ἤλπιζον* : ἐλπίζω, *ἤμπέδουν* : ἐμπεδόω; *ἔαινον* : *ἔαινω*, *ἔκέτεον* : ἔκετεύω; *ἔφην* : ἔφαίνω, *ἔγαινον* : ἔγαινώ; *ἔδαζον* : ἔδάξω, *ὠμίλουν* : ὠμιλέω.

The long diphthong, which occurred in the augmented tenses of verbs beginning with a diphthong, was regularly shortened in prim. Greek (§ 63), as in Ion. *αἶτεε*, *αὔξετο*, *εὔχετο*. Later new formations were forms like *ἦτεον*, *ἦτουν* : *αἰτέω*, *ἠῦξον* : *αὔξάνω*, *ἠύχόμεν* : *εὔχομαι*, *ᾠδήσα* : *οἰδέω*.

#### THE PERSONAL ENDINGS.

§ 432. The parent Indg. language had two kinds of personal endings—primary and secondary—, the former occurred in the present indicative active and middle, the so-called *s-* or *sjō-* future, and the indicative perfect middle, and the latter in all the augmented tenses of the indicative active and middle, the so-called injunctive forms of the imperative, and the optative. The subjunctive had originally partly primary and partly secondary endings. In Greek it has the same endings as in the present indicative. The indicative perfect active had its own special endings for the three persons of the singular. On the endings of the imperative see §§ 539–44.

The original system and distribution of the personal endings were better preserved in Sanskrit than in any of the other Indg. languages. The original distinction between the primary and secondary endings was only preserved in Greek in the first and second persons of the singular and in the third person of all numbers. Only scanty fragments of the athematic conjugation were preserved in Latin and the Germanic languages, and even in Greek many verbs passed over into the thematic conjuga-

tion, which remained athematic in Sanskrit. In Sanskrit the ending **-mi** of the athematic conjugation was extended by analogy to the thematic.

Of the origin of the personal endings nothing is known with any degree of certainty or even probability notwithstanding all that has been written upon the subject. It is sometimes assumed that they were partly or entirely of pronominal origin, but this is a theory which can neither be proved nor disproved. It is also unknown which of the two kinds of endings is the older or in what etymological relation they originally stood to each other. And in like manner the formal relation between the active and middle primary and secondary endings is equally obscure.

#### I. THE ENDINGS OF THE ACTIVE.

##### Singular.

§ 433. The primary endings of the first person were **-mi** in the athematic and **-ō** in the thematic verbs, as Lesb. *ἐμί*, Att. Ion. *εἰμί*, Skr. *ásmi*, Goth. *im*, Lith. *esmì*, O.Slav. *jesmī*, *I am*; *δίδομι*, *τίθημι* = Skr. *dādāmi*, *dádhāmi*; *ἴσθημι*, *δείκνυμι*, *δάμνημι*. *φέρω*, Lat. *fero*, Goth. *baíra*, but Skr. *bhárā-mi* with **-mi** from the athematic verbs; fut. *λείψω*, *λύσω*, *θήσω*, *δώσω*, *στήσω*, *δείξω*; subj. *ἔω*, *ᾠ* from *\*esō* = Lat. *ero* (fut.), *λείπω*, *τιθῶ*, *διδῶ*, *δεικνύω*.

NOTE.—In Boeot. Lesb. Thess. Arcad. and Cyprian the denominative verbs in *-άω*, *-έω*, *-όω* often had the ending *-μι* after the analogy of the athematic verbs; and similarly in Homer in the subjunctive, as *ἔθελωμι*, *ἀγάγωμι*, *εἴπωμι*, &c.

The original secondary ending was **-m** or **-m̄** according as the preceding sound was a vowel or a consonant, as *ἔφερον* (§ 141) = Skr. *ábharam*, cp. Lat. *amābam*; *ἐτίθην*, *ἔστην* = Skr. *ádadhām*, *ásthām*, *ἔδυν*; *εἶην* from *\*ἔσῃην* = Skr. *syām*, Lat. *siem*, *sim*; *τιθείην*, *διδόειην*, *θείην*, *δοίειην*. *ῆ*, Hom. *ῆα* from Indg. *\*ésm̄* = Skr. *ásam* for *\*ása* with

**-m** from forms like **ábharam**; ἔπειρα = Skr. **ápākṣam**, ἔλῦσα; opt. of the thematic verbs, as Skr. **bhárēya-m**, but Gr. **φέροιμι** for \*φεροῖα or \*φέροίῃα; after the analogy of **τίθημι**: **τίθης** so to **φέροις** was formed **φέροιμι**, and similarly **δεικνύοιμι**, &c.

§ 434. The primary ending of the second person was **-si** which was only preserved in Homer and Syracusan **ἔσ-σί**, Indg. \***es-si**, beside **εἶ**, Skr. **ási**, Indg. \***esi**; **εἶ** from \***εἶ-σι** = Skr. **ē-ṣi**, Lith. **ei-sì**. In Greek the other athematic verbs had the secondary ending, cp. **τίθης**, **δίδως** beside Skr. **dádhāsi**, **dádāsi**. The regular form of the thematic verbs would have been \***φέρει** from \***φέρεσι** = Skr. **bhárasi**, Indg. \***bhéresi**; \***φέρει** became **φέρεις** with secondary ending after the analogy of **ἔφες**; and similarly Hom. **εἶς** for **εἶ** after the analogy of forms like **τίθης**; the regular form of the subjunctive would have been \***φερῆ** from \***φερῆσι** = Skr. **bhárāsi**, Indg. \***bhērēsi**; **φέρῆς** was a new formation like **φέρεις**; and similarly **τιθῆς**, **δεικνύῆς**, &c.

The secondary ending was **-s**, as **ἔφες**, **ἔσθης**, **φέρεις** (Goth. **baíráis**), **εἶης** (Lat. **siēs**, **sīs**) = Skr. **ábharah**, **ásthāh**, **bhárēh**, **syāh**.

§ 435. The primary ending of the third person was **-ti** which was preserved in all the dialects in **ἔσ-τί** = Skr. **ásti**, Lat. **est**, Goth. **ist**, Lith. **ēs-ti**; it remained in the athematic verbs in Dor. Boeot. and the North-West Greek dialects, but became **-σι** (§ 169) in Att. Ion. and Lesbian, as Dor. **τίθητι**, **δίδωτι**, Att. **τίθησι**, **δίδωσι** = Skr. **dádhāti**, **dádāti**. The regular form of the thematic verbs would have been Dor. \***φέρειτι**, Att. \***φέρεσι** = Skr. **bhárati**, but all the dialects have **φέρει** which was formed after the analogy of **φέρεις**. The regular form of the subjunctive would have been Dor. &c. \***φέρῆτι**, Att. &c. \***φέρῆσι** = Skr. **bhárāti**, Indg. \***bhērēti**; Att. &c. **φέρῆ** was formed after the analogy of **φέρει**; and similarly Hom. **φέρῆσι**, **ἀγάγησι**, **ἐθέλησι**, &c., with **-σι** from **τίθησι**, &c.; **ίστη**, **τιθη**, **στη**, **θη**, &c.

The secondary ending was **-t** which regularly disappeared in prim. Greek (§ 230), as *ἔφερε, ἔστη, φέροι, εἶη* (Lat. *sit*) = Skr. *ábharat, ásthāt, bhárēt, syát*; Dor. &c. *ῆς* from *\*ῆστ* = Indg. *\*é̄st, he was*.

### Dual.

§ 436. The first person of the dual was preserved in Sanskrit, Gothic and the Baltic-Slavonic languages, but it disappeared in the prehistoric period of Greek, and its place was taken by the first person plural.

The original primary ending of the second person was **-t(h)es** (= Lat. **-tis** which became used for the plural) or **-t(h)os**, Skr. **-thaḥ** can be from either form, beside the secondary ending **-tom** = *-τον*, Skr. **-tam**. The original distinction was preserved in Sanskrit, but in Greek the secondary ending came to be used for both kinds, cp. *ἔσ-τόν, τίθετον, φέρετον* beside Skr. **s-tháh, dhat-tháh, bhára-thaḥ**, and *ῆσ-τον, ἐτίθετον, ἐφέρετον* beside Skr. **ás-tam, ádhat-tam, ábhara-tam**.

The original primary ending of the third person was **-tes** = Skr. **-taḥ**, beside the secondary ending **-tām** = *-τᾶν, -την*, Skr. **-tām**. In Greek the *-τον* of the second person came to be used for the primary ending, as *ἔσ-τόν, τίθετον, φέρετον*, but Skr. **s-táh, dhat-táh, bhára-taḥ**, beside *ῆσ-την, ἐτιθέτην, ἐφερέτην, φεροίτην* = Skr. **ás-tām, ádhat-tām, ábhara-tām, bhárē-tām**. Owing to the fact that *-τον* was used both as primary and secondary ending in the second person it also became used occasionally for the secondary ending of the third person, and conversely *-τᾶν, -την* instead of *-τον* also became used occasionally in the augmented tenses of the second person.

### Plural.

§ 437. The original primary ending of the first person was **-mes** beside **-mos**, the former corresponding to Dor.



-*μες* and the latter to Lat. *-mus*, Skr. *-mah* can be either form. The secondary ending was probably *-men* beside *-mḡ*, the former corresponding to Att. &c. *-μεν* and the latter to Skr. *-ma*. Sanskrit preserved the original distinction between the primary and secondary endings, but in Greek *-μες* became generalized in Doric and the dialect of Delphi and *-μεν* in the other dialects, as Dor. *φέρομες*, Att. &c. *φέρομεν*, Dor. *εἰ-μές*, Att. *ἔσ-μέν* (Hom. *εἰ-μέν*), *τίθεμεν*, but Skr. *bhārā-mah*, *s-máh*, *dadh-máh*; Att. &c. *ἐφέρομεν*, *ἐτίθεμεν* = Skr. *ábharā-ma*, *ádadh-ma*.

§ 438. The original primary ending of the second person was probably *-the* = Skr. *-tha* beside the secondary ending *-te* = Skr. *-ta*. This distinction was not preserved in the other branches of the Indg. languages. In all these languages *-te* was used for both kinds of endings, as *ἔσ-τέ* (O.Slav. *jes-te*), *τίθετε*, *φέρετε* (O.Slav. *berete*), but Skr. *s-thá*, *dhat-thá*, *bhára-tha*, beside *ἦ-τε* (*ἦσ-τε*), *ἐτίθετε*, *ἐφέρετε*, *φέροιτε* = Skr. *ás-ta*, *ádhat-ta*, *ábhara-ta*, *bhárē-ta*.

§ 439. The original primary endings of the third person were: *-énti*, *-ḡti*, *-nti* beside the corresponding secondary endings *-ént*, *-ḡt*, *-nt*.

The accented form *-énti* only occurred after consonants in the present indicative of the non-reduplicated athematic verbs. It regularly became *-ánti* in Sanskrit, as *s-ánti* = Dor. *έντί*, Att. *είσί* (both forms with the smooth for the rough breathing after the analogy of the singular), Goth. *sind*, Indg. *\*s-énti*, *they are*; Skr. *sunv-ánti*: *sunó-mi*, *I press out*; *krīṇ-ánti*: *krīṇá-mi*, *I buy*, corresponding to prim. Gr. *\*δεικνῦ-εντι*: *δείκνῦ-μι*, *\*δαμν-εντι*: *δάμνη-μι*. The only regular form preserved in Greek was Dor. *έντί*, Att. *είσί*. In all other verbs belonging to this type *-énti* was supplanted either by the postvocalic form *-nti* of the thematic verbs like Dor. *φέρο-ντι*, Att. *φέρουσι* or by the analogical formation *-αντι* (see below), and then the third

person came to be formed from the stem-form of the dual and of the other persons of the plural + *-ντι* or *-αντι*, as Dor. *φα-ντί*, Att. *φᾶσί*, Ion. *δεικνῦσι* from \**δεικνυ-ντι* but with the circumflex accent after the analogy of *ἰστᾶσι*, *δαμνᾶσι* from \**δαμνα-ᾶσι* older *-αντι*, *δεικνύ-ᾶσι*, *ἴᾶσι* from \**ἴ-αντι* beside Skr. *y-ánti* from Indg. \**j-énti* (§ 453).

The regular prim. Greek primary ending of the present of the reduplicated athematic verbs was *-ατι* = Indg. *-ṅti*, as in \**ἴστ-ατι*, \**τίθ-ατι* = Skr. *dád-h-ati*, \**δίδ-ατι* = Skr. *dád-ati*. This ending was preserved in the Hom. perfects *πεφύκ-ᾶσι*, *λελόγχ-ᾶσι*, but it disappeared in the present and its place was taken either by the postvocalic form *-ντι* or by the analogical form *-αντι*, as Dor. *τίθε-ντι*, *δίδο-ντι*, *ἴστα-ντι*, but Att. *τιθέᾶσι*, *διδόᾶσι*, *ἰστᾶσι*, from \**τιθε-αντι*, \**διδο-αντι*, \**ἴστα-αντι*, formed in both dialects from the stem-form of the dual and of the other persons of the plural; and similarly Hom. *τιθεῖσι*, *διδούσι* = Dor. *τίθεντι*, *δίδοντι*, but with the circumflex accent after the analogy of *ἰστᾶσι*.

The primary ending of the thematic verbs was *-ντι*, as in Dor. *φέρο-ντι*, Att. Ion. *φέρουσι*, Boeot. *-νθι*, Arcad. *-νσι*, Lesb. *-οισι* from *-ο-ντι* = Skr. *bháranti*, Lat. *ferunt*, Goth. *baírand*, Indg. \**bhero-nti*; subj. Dor. *φέρω-ντι*, Att. Ion. *φέρωσι*.

The original secondary endings were: *-ént*, *-ṅt* and *-nt*. The accented form *-ént* occurred after consonants in the imperfect of the non-reduplicated athematic verbs and in the optative, as Hom. *ἦεν*, *ἦν*, Dor. &c. *ἦν* which came to be used for the third person singular = Skr. *ás-an* with regular loss of final *-t*, Indg. \**és-ent*, *they were* (§ 452); Skr. *ásunv-an*, *they pressed out*; *ákrīṅ-an*, *they bought*, corresponding to prim. Gr. \**ἐδεικνϝ-εντ*, \**ἐδαμν-εντ*, see below; opt. *εἶεν* from \**ἐσϝεντ* (§ 230), O.Lat. *sient*, later *sint*; *φέροειν* from \**φεροίϝεντ*, and similarly *δεικνύοιεν*, *ἰσταίεν*, *τιθείεν*, *διδόειν*, *σταίεν*, *θείεν*, *δοίεν*; *λίποειν*, *φανοίεν*,

λύσοιεν, λύσαιεν, but λύσειαν, δείξειαν with -αν for -εν after the analogy of the aorist indicative.

The secondary ending -**nt** = prim. Gr. -α(τ) occurred after consonants in the imperfect of the reduplicated athematic verbs and in the s-aorist, as prim. Gr. \*ἔδιδ-α(τ), \*ἔτιθ-α(τ), \*ἔδειξ-α(τ). The ending -α(τ) was not preserved in the historic period of any of the dialects. From the stem-form of the dual and of the other persons of the plural were formed ἔτιθε-ν, ἔδιδο-ν with -ν after the analogy of thematic verbs like ἔφερο-ν, and similarly ἔθε-ν, ἔδο-ν, ἔστα-ν; and in like manner \*ἔδειξα became ἔδειξαν after the analogy of ἔφερο-ν, and similarly ἔλυσαν, ἔφηναν, ἦσαν (for \*ἦαν after the analogy of ἦσ-τε). Forms like ἦσαν, ἔδειξαν, ἔλυσαν gave rise to two kinds of new formations.

(1) To the new secondary ending -αν there was formed a new primary ending -αντι = -āσι after the analogy of ἔφερο-ν : φέρο-ντι, as δαμνᾶσι, δεικνύᾶσι, τιθέᾶσι, διδόᾶσι, ἰστᾶσι, see above. (2) The ending -σαν became extracted as a personal ending and then extended to the imperfect and aorist of athematic verbs and also to the optative, as ἴστασαν, ἐτίθεσαν, ἐδίδοσαν, ἐδείκνυσαν; ἔστησαν, ἔθεσαν, ἔδοσαν, ἔδυσαν; ἰσταίησαν, τιθείησαν, διδοίησαν; σταίησαν, θείησαν, δοίησαν.

The secondary ending -**nt** regularly occurred after vowels, as ἔφερον = Skr. ábharan, Indg. \*ébhero-**nt**; ἔλιπον, ἔγνον from \*ἔγνωντ, ἔβᾶν from \*ἔβᾶντ (§ 70).

### Perfect.

§ 440. Singular: The Indg. ending of the first person was -a which remained in Greek, as οἶδα, δέδορκα = Skr. véda, dadárša.

The original ending of the second person was -**tha** which was regularly preserved in ἦσ-θα (originally the perfect), Indg. \*és-**tha**, cp. Skr. ásitha; οἶσθα = Skr. vét-**tha**, and likewise originally with all stems ending in a dental, as

\*πέποισθα, \*λέλησθα (§ 110). In these and similar forms the -σθα came to be regarded as a personal ending and was then extended to other tenses, as Hom. τίθησθα, φῆσθα; ἐθέλησθα, εἶπησθα, πάθησθα; βάλοισθα, κλαίεισθα. The ordinary ending -ας, as in λέλοιπας, was a new formation from the first aor. indicative owing to the ending of the first person being alike in both tenses. And conversely the first aor. ending -ε of the third person was from the perfect for a like reason.

The original ending of the third person was -e which remained in Greek, as οἶδε, δέδορκε = Skr. véda, dadárśa.

§ 441. With the exception of the first person plural the Greek and Sanskrit endings of the dual and plural are entirely different, cp. Skr. dual -vá, -áthur, -átur; plural -má, -á, -úr. On Skr. -má beside Gr. -μεν see § 437. In Greek the endings are the same as in the present indicative, as ἴσ-τον, ἴσ-τον; ἴσ-μεν (Hom. ἴδ-μεν, Skr. vid-má), ἴσ-τε, ἴσ-ᾶσι from -αντι (§ 69); λελοίπ-α-τον, λελοίπ-α-μεν, λελοίπ-α-τε, λελοίπ-ᾶσι. The -α- in these forms was of the same origin as in the first aor. indicative, ἐλύσα-τον, ἐλύσα-μεν, &c. (§ 507). On the perfect ending -ᾶσι in Hom. πεφύκ-ασι, λελόγχ-ασι see § 439.

## 2. THE ENDINGS OF THE MIDDLE.

### Singular.

§ 442. It is impossible to determine what were the original primary and secondary endings of the first person. The Greek primary ending -μαι and the secondary ending -μην, -μᾶν are not found in any of the other Indg. languages. It is possible that -μαι was originally the primary ending of the athematic verbs which became generalized in Greek. The original ending of the perfect seems to have been -ai which corresponds to the -ē in Skr. tutud-é = Lat. tutud-ī (originally the middle). Sanskrit then generalized the -ē, cp. τίθεμαι : Skr. dadh-é, φέρομαι : Skr. bhár-ē, and

similarly *δείκνυμαι, δάμναμαι; τιθῶμαι, φέρωμαι; δέδομαι* : Skr. *dad-ē*, and similarly *δέδειγμαί, λέλνυμαι, γέγραμμαί*.

Secondary ending *-μην* : *ἐπιθέμην, ἐδιδόμην, ἐδεικνύμην, ἐφερόμην; τιθείμην, διδοίμην, φεροίμην; ἐδεδόμην, ἐδεδείμην, ἐλελύμην*. The origin of this ending is obscure.

§ 443. The original primary ending of the second person was *-sai = -σαι*, Skr. *-sē*, Goth. *-za*, as *τίθεσαι, δίδοσαι, δέδοσαι = Skr. dhat-sē, dat-sē, dadi-šē*; *φέρσαι, φέρη* (written *-ει* on Attic inscriptions from the fourth century B.C. onwards) = Skr. *bhāra-sē*, Goth. *baíra-za*; *φέρηαι, φέρη* for the regular form *\*φερεα*; *γέγραψαι, τέτριψαι*. The intervocalic *-σ-* regularly disappeared, as in *φέρσαι, φέρη* (§ 213, 2), but in Attic and Ionic the *-σ-* was restored in the present and perfect of the athematic verbs after the analogy of perfects the stem of which ended in a consonant, as in *γέγραψαι*, and similarly in the imperfect and pluperfect.

The original secondary ending was *-so* in the thematic and *-thēs = -θης*, Skr. *-thāḥ* in the athematic verbs. Greek generalized the former and Sanskrit the latter form, cp. *ἐτίθεσο, ἐδίδοσο, ἐφέρεο, ἐφέρου* beside Skr. *ádhat-thāḥ, ádat-thāḥ, ábhara-thāḥ*; *ἔθου, ἔδου; τιθεῖο, διδοῖο, φέροιο; ἐλύσω* (Hom. *-αο*, Dor. *-ᾱ*), *ἐπρίω; ἐδέδοσο, ἐγέγραψο, ἐλέλυσο*. On the intervocalic *-σ-* see above. The secondary ending *-thēs* was preserved in the aor. passive *ἐδόθης = Skr. ádi-thāḥ*.

§ 444. The original primary ending of the third person present was *-tai (= -ται*, Boeot. *-τη*, Thess. *-τει*, Arcad. and Cyprian *-τοι* for *-ται* after the analogy of the secondary ending *-το*, Skr. *-tē*, Goth. *-da*) which remained in Greek, as *τίθεται, ἦσται, φέρεται = Skr. dhat-tē, ás-tē, bhāra-tē* (Goth. *baíra-da*). The perfect had the ending *-ai = Skr. -ē*, but in Greek the ending of the present was extended to the perfect, cp. *δέδοται, πέπυσται* beside the Skr. *dad-ē, bubudh-ē*.

The original secondary ending was **-to = -το**, Skr. **-ta**, Lat. **-tu-**, as **ἔδοτο, ἐφέρετο, τιθείτο, φέροιτο = Skr. ádi-ta** (Lat. **da-tu-r** from **\*da-to-r**), **ábhara-ta, dadhī-tá, bhárē-ta**.

### Dual.

§ 445. It is impossible to determine what were the original personal endings of the three persons of the dual, because the Greek and the Sanskrit endings do not agree in form.

**-μεθον**, the ending of the first person, is from the plural ending **-μεθα** with **-ον** from **-σθον**. According to Kühner, *Ausführliche Grammatik der griech. Sprache*, vol. ii, p. 70, it only occurs three times in good authors, viz. **περιδώμεθον**, Hom. *Il.* xxiii. 485; **ὀρμώμεθον**, Soph. *Ph.* 1079, and **λελείμεθον**, *El.* 950.

The origin of the Greek endings of the second and third persons is unknown.

The primary and secondary ending of the second person is **-σθον**, cp. **τίθειςθον, φέρεσθον** beside Skr. **dadh-áthē, bhárēthē**; **ἐτίθειςθον, ἐφέρεσθον** beside Skr. **ádadh-āthām, ábharēthām**.

The primary ending of the third person is **-σθον** and the secondary **-σθην**, Dor. **-σθᾶν**, as **τίθειςθον, φέρεσθον** beside Skr. **dadh-átē, bhárētē**; **ἐτιθέσθην, ἐφερέσθην** beside Skr. **ádadh-ātām, ábharētām**.

### Plural.

§ 446. The original primary ending of the first person was **-medhai = Skr. -mahē**, beside the secondary ending **-medhə = -μεθα**, Skr. **-mahi**. Greek generalized the latter form, cp. **τιθέμεθα, φερόμεθα** beside Skr. **dádth-mahē, bhárā-mahē**; **ἐτιθέμεθα, ἐφερόμεθα = Skr. ádadh-mahi, ábharā-mahi**. The poet. ending **-μεσθα** had its **-σ** from **-σθε**.

§ 447. **-σθε** was used for the primary and secondary ending of the second person in all the dialects. The origin

of this form is unknown. In Sanskrit the primary ending is **-dhvē** and the secondary **-dhvam**, cp. τίθεσθε, ἐτίθεσθε, φέρεσθε, ἐφέρεσθε beside Skr. **dhad-dhvē**, **ádhad-dhvam**, **bhára-dhvē**, **ábhara-dhvam**. On forms like ἔσπαρθε, ἔσταλθε from \*ἔσπαρσθε, \*ἔσταλσθε see § 221.

§ 448. The original primary endings of the third person were **-ntai** (= **-νται**, Skr. **-ntē**, Goth. **-nda**) after vowels and **-ṅtai** (= **-αται**, Skr. **-atē**) after consonants. The former ending occurred in the present of the thematic verbs and the latter in the athematic, as φέρονται = Skr. **bhára-ntē**, Goth. **baíra-nda**; Hom. ἦ-αται = Skr. **ás-atē**, Indg. \***és-ṅtai**, Att. ἦ-νται was a new formation after the analogy of the thematic presents like φέρονται; prim. Gr. \*τιθ-αται, \*διδ-αται = Skr. **dádh-atē**, **dád-atē**. τίθενται, δίδονται, δείκνυνται, &c. were new formations formed from the stem-form of the dual and the other persons of the plural + **-νται** after the analogy of the thematic verbs like φέρονται; and similarly with the stem-form of Ion. τιθέ-αται, διδό-αται, &c. for \*τιθ-αται, \*διδ-αται, &c. The perfect had the ending **-νται** beside **-αται** just as in the present. Regular forms were: δεδούλωνται, βέβληνται beside τετράφαται, τετάχαται, κεκλίαται, κεχύαται, and then after the analogy of these and similar forms were made on the one hand forms like κέκρινται, λέλυνται, and on the other hand Hom. βεβή-αται, &c. After about the beginning of the fourth century B.C. the perfects in **-αται** and the pluperfects in **-ατο** disappeared and their place was taken by periphrastic forms.

The secondary endings were **-nto** (= **-ντο**, Skr. **-nta**, Lat. **-ntu-**) after vowels and **-ṅto** (= **-ατο**, Skr. **-ata**) after consonants, as ἐφέροντο = Skr. **ábhara-nta**, cp. Lat. **feru-ntu-r**; ἔμ-πληντο, cp. Lat. **im-ple-ntu-r**. Hom. ἦ-ατο = Skr. **ás-ata**, Indg. \***és-ṅto**, Att. ἦ-ντο was a new formation after the analogy of ἐφέροντο, &c.; prim. Gr. \*ἔτιθ-ατο, \*ἔδιδ-ατο = Skr. **ádadh-ata**, **ádad-ata**. ἐτίθεντο, ἐδίδοντο,

ἐδείκνυντο, &c. were new formations of the same kind as in the present ; and similarly with the aor. ἐλύσαντο, ἐδείξαντο, ἐπρίαντο for older \*ἐλύσ-ατο, &c. ; opt. Hom. φεροῖατο beside the new formations φέροιντο, λύσαιντο, δείξαιντο, δεικνύοιντο, τιθεῖντο, διδοῖντο, &c. Regular forms of the pluperfect were : ἐδεδούλω-ντο beside ἐτετράφατο, ἐτετάχατο ; new formations after the analogy of the former were ἐλέλυντο, ἐέκκρινο, &c. and after the latter Ion. ἐβεβλή-ατο, &c.

#### FORMATION OF THE PRESENT.

§ 449. The classification of the various ways in which the present was formed in Greek must be more or less arbitrary according as we regard this or that factor as being a sufficient characteristic to constitute a distinct class. In this grammar the formations of the present are divided into twelve classes, viz. Class I containing monosyllabic athematic light or heavy ablaut-bases ; Class II containing reduplicated monosyllabic athematic heavy ablaut-bases ; Class III containing verbs of the type φέρω, formed from dissyllabic light bases ; Class IV containing heavy ablaut-bases with and without reduplication ; Classes V–VIII containing the nasal-presents ; Class IX the s-presents ; Class X the sko-presents ; Class XI the dental-presents ; and Class XII the j-presents. The characteristic elements -sko-, &c. used in forming the present stem were often extended to other tense-stems. It should be noted that the word present as used above not only includes the present in the narrower sense but also the imperfect and aorist.

§ 450. In the parent Indg. language the conjugation of the present was divided into two great classes—athematic and thematic. In the athematic conjugation the personal endings were added direct to the bare base. In monosyllabic bases the accent was on the base in the active singular and on the personal endings in the dual and



plural. And the base had accordingly the strong grade of ablaut in the active singular, but the weak grade in all other forms, as \**éi-mi*, *I go*, \**éi-si*, \**éi-ti*, pl. \**i-més*, \**i-t(h)é*, \**j-énti*. In dissyllabic heavy bases the accent was on the first syllable of the base in the active singular and on the personal endings in the dual and plural. The first syllable of the base had accordingly the strong grade of ablaut and the second syllable the weak grade in the active singular, but in the dual and plural both syllables had the weak grade. Thus from an original base \**genō-* we have the two types \**génə-*, \**gnó-* (§ 458). The present indicative was \**génə-mi*, \**génə-si*, \**génə-ti*, pl. \**gnə-més*, \**gnə-t(h)é*, \**gn(ə)-énti*, but the aorist \**gnó-m*, \**gnó-s*, \**gnó-t*, pl. \**gnó-m* (§ 437), \**gnó-te*, \**gnó-nt* = *ἔ-γνων*, &c. Only middle forms of the type \**génə-* were preserved in Greek, all the active forms passed over into the thematic conjugation in the prehistoric period of the language (see § 458). The athematic conjugation was well preserved in Aryan and to a great extent in Greek, but in most of the other languages, including the Latin and the Germanic, the verbs originally belonging to this conjugation almost entirely passed over into the thematic conjugation.

The thematic conjugation had the thematic vowels *-e-*, *-o-* before the personal endings (§ 456). The accent was on the root-syllable throughout the present and on the thematic vowel throughout the aorist, as \**léiqō*, \**léiq-e-si*, \**léiq-e-ti*, pl. \**léiq-o-mes*, \**léiq-e-t(h)e*, \**léiq-o-nti* = *λείπω*, *λείπομεν*, &c., beside the aorist \**liqó-m*, \**liqé-s*, \**liqé-t*, pl. \**liqó-m*, \**liqé-te*, \**liqó-nt* = *ἔ-λιπον*, *ἔ-λίπομεν*, cp. *λιπεῖν* with preservation of the original accent. The presents of primary verbs of the type *λείπω*, *φέρω*, &c. originally belonged to the athematic conjugation, but already in the parent Indg. language nearly all of them passed over into the thematic conjugation with the *-e-*, *-o-* from the aorist type *ἔ-λιπο-ν*, *ἔλιπε-ς*, &c. The *-e-*, *-o-* in the aorist type

\***liqe-**, \***liqo-** was originally an integral part of the base, but in course of time \***liq-** came to be regarded as the base and the **-e-**, **-o-** as part of the ending. But seeing that the accent was originally always on the **-e-**, **-o-** it is difficult to account for the difference in their quality. How the **-o-** came to be confined to the first person singular and the first and third persons plural, and the **-e-** to the other forms of the singular, dual and plural, remains an unsolved problem.

§ 451. Before beginning to compare the Greek paradigms with those of the other languages the student should read carefully §§ 432-48 dealing with the personal endings, because what is stated there about these endings will not as a rule be repeated in the following paragraphs.

### CLASS I.

#### UNREDUPLICATED MONOSYLLABIC ATHEMATIC LIGHT OR HEAVY ABLAUT-BASES.

§ 452.	Indg.	Gr.	Skr.
Sing. 1.	*és-mi	εἶμί	ásmi
2.	*és-si, *ési	εἶ	ási
3.	*és-ti	ἐστί	ásti
Dual 2.	*s-tés, *s-thés	ἐστόν	stháh
3.	*s-tés	ἐστόν	stáh
Plur. 1.	*s-més	ἐσμέν	smáh
2.	*s-t(h)é	ἐστέ	sthá
3.	*s-énti	εἰσί	sánti

Indg. \*és-mi regularly became εἶμί, Dor. ἤμί, Lesb. Thess. ἐμμύ (§ 214), Skr. ásmi, Goth. im, Lith. esmì. εἶ from Indg. \*ési = Skr. ási, Lat. es, Goth. is, beside Hom. ἐσσί = Indg. \*és-si; Hom. εἶς with -s added after the analogy of forms like τίθης. ἐστί = Skr. ásti, Lat. est, Goth. ist, Indg. \*és-ti. In Greek the ε- of the singular was levelled out into the dual and plural. On the personal

endings, see §§ 433-9. Att. *έσμέν* with *-σ-* from *έστέ*, the regular form occurs in Ion. *είμέν*, Dor. *είμές*. *είσί* = Dor. Boeot. *έντί* for *\*έντί* (= Skr. *sánti*, Indg. *\*s-énti*) with *έ-* for *έ-* after the analogy of other forms of the present; Hom. *έ-άσι* from *\*έσαντι* (§ 439).

*Imperfect.*

	Indg.	Gr.	Skr.
Sing. 1.	* <i>és-m̄</i>	<i>ἦα, ἦ, ἦν</i>	<i>ásam</i>
2.	* <i>és-s</i>	<i>ἦσθα</i>	<i>ás(i)h̄</i>
3.	* <i>és-t</i>	<i>ἦν</i>	<i>ás(i)t</i>
Dual 2.	* <i>és-tom</i>	<i>ἦστον, ἦτον</i>	<i>ástam</i>
3.	* <i>és-tām</i>	<i>ἦστην, ἦτην</i>	<i>ástām</i>
Plur. 1.	* <i>és-men, -m̄</i>	<i>ἦμεν</i>	<i>ásma</i>
2.	* <i>és-te</i>	<i>ἦστε, ἦτε</i>	<i>ásta</i>
3.	* <i>és-ent</i>	<i>ἦσαν</i>	<i>ásan</i>

*ἦ* contracted from older (Hom.) *ἦα* = Indg. *\*és-m̄*. *ἦν* was a new formation with *-ν* from forms like *έτίθην*; *ἦ, ἦα* regularly fell together with the perfect = Indg. *\*és-a*, Skr. *ása* (§ 517); and similarly *ἦστον, ἦμεν, ἦστε*. *ἦσθα* was the old perf. form used for the imperfect; the regular form would have been *\*ἦs* = Vedic *áh̄*; the late form *ἦs* was a new formation. *ἦν* contracted from older (Hom.) *ἦεν* was originally the third pers. plural which came to be used for the singular, see below; the regular form was preserved in Dor. *ἦs* = Vedic *áh̄*, Indg. *\*és-t*. *ἦτον, ἦτην, ἦτε* beside the regular forms *ἦστον, ἦστην, ἦστε* were new formations after the analogy of *ἦμεν* (§ 214), Dor. *ἦμες* with primary ending. *ἦσαν* was a new formation with *ἦσ-* from *ἦστε* and the *-αν* in forms like *έλυσαν, έδειξαν* (§ 439); after this form had come into existence the regular old plural *ἦεν, ἦν* (= Indg. *\*és-ent*, Skr. *ásan*) came to be used for the singular. The long *é* of the singular was levelled out into the dual and plural already in the Indg. period.

§ 453.	Indg.	Gr.	Skr.
Sing. 1.	* <i>éi-mi</i>	<i>εἶμι</i>	<i>émi</i>
2.	* <i>éi-si</i>	<i>εἶ</i>	<i>éši</i>
3.	* <i>éi-ti</i>	<i>εἶσι</i>	<i>éti</i>
Dual 2.	* <i>i-t(h)és</i>	<i>ἴτον</i>	<i>itháh</i>
3.	* <i>i-tés</i>	<i>ἴτον</i>	<i>itáh</i>
Plur. 1.	* <i>i-més</i>	<i>ἴμεν</i>	<i>imáh</i>
2.	* <i>i-t(h)é</i>	<i>ἴτε</i>	<i>ithá</i>
3.	* <i>j-énti</i>	<i>ἴασι</i>	<i>yánti</i>

*éi* from older \**εἶσι* = Skr. *éši*, Lat. *eis*, *is*, Indg. \**éi-si*; Hom. *εἶσθα* with *-σθα* from *ἦσθα* (§ 452). *εἶσι* from *εἶτι* (§ 169) which was preserved in *ἕξειτι· ἕξελεύσεται* (Hesych.). *ἴασι* for \**έντι* (= Skr. *yánti*, Indg. \**j-énti*) was a new formation like *ἔασι* (§ 452).

#### Imperfect.

	Indg.	Gr.	Skr.
Sing. 1.	* <i>éj-m</i>	<i>ἦα, ἦειν</i>	<i>áyam</i>
2.	* <i>éi-s</i>	<i>ἦεις, ἦεισθα</i>	<i>áih</i>
3.	* <i>éi-t</i>	<i>ἦει(ν)</i>	<i>áit</i>
Dual 2.	* <i>éi-tom</i>	<i>ἦτον</i>	<i>áitam</i>
3.	* <i>éi-tām</i>	<i>ἦτην</i>	<i>áitām</i>
Plur. 1.	* <i>éi-men, -mṅ</i>	<i>ἦμεν</i>	<i>áima</i>
2.	* <i>éi-te</i>	<i>ἦτε</i>	<i>áita</i>
3.	* <i>éj-ent</i>	<i>ἦσαν, ἦεσαν</i>	<i>áyan</i>

The stem-form of the singular was levelled out into the dual and plural already in the Indg. period. Regular forms were *ἦτον, ἦτην, ἦμεν, ἦτε*. *ἦα* for \**ἦα* (§ 128) with *ἦ* after the analogy of *ἦτον*, &c. *ἦει(ν)* and *ἦεσαν* were aorist forms, the former of which gave rise to the new formations *ἦειν, ἦεις, ἦεισθα*. The regular forms of the singular would have been \**ἦα, \*ἦs, \*ἦ*. The Hom. forms *ἦει(ν), ἦομεν* were formed after the analogy of the thematic verbs.

§ 454. Other examples of verbs belonging to Class I are *φημί*, Dor. *φᾶμί* with shifted accent : *φαμέν*, *ἔφην* : *ἔφαμεν* ; *\*ἔδων* : *ἔδομεν* = Skr. *á-dā-m* : *\*á-di-ma* ; *\*ἔθην* : *ἔθεμεν* = Skr. *á-dhā-m* : *\*á-dhi-ma* ; *ἔστην*, Dor. *ἔστᾶν* : *\*ἔσταμεν* = Skr. *á-sthā-m* : *\*á-sthi-ma*. In Sanskrit the long vowel of the singular was levelled out into the dual and plural, whence *ádāma*, *ádhāma*, *ásthāma*, and similarly *ἔστημεν* for *\*ἔσταμεν*. Middle *κείται* = Skr. *śētē*, *he lies down*, *ἦσται* (with the rough breathing from *έδ-*, *sit*) = Skr. *ástē*, *he sits*, with *εῖ*, *ἦ* from the original active singular.

## CLASS II.

REDUPLICATED MONOSYLLABIC ATHEMATIC HEAVY  
ABLAUT-BASES.

§ 455. The presents of this class were formed from the aorist of monosyllabic bases to which the original presents had been lost already in the Indg. period, as *τίθημι* : *\*ἔθη-ν* = Skr. *dá-dhā-mi* : *á-dhā-m* ; *δίδωμι* : *\*ἔδω-ν* = Skr. *dá-dā-mi* : *á-dā-m*. On the difference between the Greek and the Sanskrit vowel in the reduplicated syllable, see § 429. The inflexion was the same as in Class I except in the third person plural.

	Indg.	Gr.	Skr.
Sing. 1.	<i>*dí-dhē-mi</i>	<i>τίθημι</i>	<i>dádhāmi</i>
2.	<i>*dí-dhē-si</i>	<i>τίθης</i>	<i>dádhāsi</i>
3.	<i>*dí-dhē-ti</i>	<i>τίθησι</i>	<i>dádhāti</i>
Dual 2.	<i>*di-dhə-t(h)és</i>	<i>τίθετον</i>	<i>dhattháh</i>
3.	<i>*di-dhə-tés</i>	<i>τίθετον</i>	<i>dhattáh</i>
Plur. 1.	<i>*di-dhə-més</i>	<i>τίθεμεν</i>	<i>dadhmáh</i>
2.	<i>*di-dhə-t(h)é</i>	<i>τίθετε</i>	<i>dhatthá</i>
3.	<i>*dí-dh(ə)-ṅti</i>	<i>τιθέασι</i> (§ 439)	<i>dádhati</i>

In Sanskrit the *-dh-* of the third person plural became generalized in the dual and plural, and conversely in Greek

the -θε- became extended to the third person plural. Like τίθημι : τίθεμεν, τίθεμαι are also inflected δίδωμι : δίδομεν, δίδομαι ; ἴσῳαμι, Att. Ion. ἴσῳημι from \*σί-σῳαμι : ἴσῳαμεν, ἴσῳαμαι. Imperfect ἐτίθην : ἐτίθεμεν ; ἐτίθεις, ἐτίθει were formed after the analogy of the thematic verbs, and similarly ἐδίδουν, -ους, -ου, and the imperative τίθει, δίδου.

### CLASS III.

#### DISSYLLABIC LIGHT BASES WITH OR WITHOUT REDUPLICATION.

##### a. Without Reduplication.

§ 456. The verbs of this class belong to the so-called thematic conjugation (§ 450). Two types are to be distinguished according as the first or the second vowel of the base originally had the accent, as \*léiq(e)-, \*liqé-, *leave*, cp. λείπω : λιπέιν, φεύγω : φυγείν, τρέπω : τραπέιν, ἔπομαι from \*σέπομαι : ἐσπόμην. The type \*léiq(e)- with regular loss of the final e (§ 450) was originally inflected like a verb of Class I, as \*léiq-mi, pl. \*liq-més = \*λείπιμι, \*λιπμέν. But already in the parent Indg. language nearly all the verbs of this type passed over into the thematic conjugation, as ἔρπω, λέγω, φέρω, δέρκομαι, τρέφω, πείθω, ἐρείκω, ἐρείπω, στείχω, κεύθω, πεύθομαι, ἐρεύγομαι, τεύχω, θήγω, &c., cp. Skr. bhárati beside bhárti, *he bears*, φέρετε beside φέρτε, Lat. *fero, volo* beside *fert, vult*. The type \*liqé-—with preservation of the original accent in the infinitive λιπέιν—was chiefly aorist in function, as ἔλιπον, ἔτραφον, ἔδρακον (Skr. ádrśam), ἤριπον, ἤρικον, ἐπιθον, ἔστιχον, ἔκυθον, ἤρυγον, ἔτυχον, ἔφυγον, &c. (§ 505). How this difference in function between the two types originally came about is unknown (cp. § 426). Side by side with the type \*liqé- with the function of an aorist, there exists in all the Indg. languages a certain number of presents the

stem-syllable of which is aorist in form, as γλύφω, τῦφω, γράφω, γλάφω, Dor. τράπω, τράφω; Skr. dáśati = Indg. \*dñkėti, *he bites*, jīvati, *he lives*; Goth. trudan, *to tread*; OĒ. cuman, *to come*, &c. Such presents are usually called aorist-presents in contradistinction to presents like λείπω, φέρω which are called imperfect-presents. The inflexion of φέρω will serve as a model for all presents of this class. On the endings in the Greek forms see the paragraphs dealing with the personal endings.

	Indg.	Gr.	Skr.	Goth.
Sing. 1.	*bhérō	φέρω	bhārāmi	baíra
2.	*bhére-si	φέρεις	bhāra-si	baír-s
3.	*bhére-ti	φέρει	bhāra-ti	baír-þ
Dual 2.	*bhére-t(h)es	φέρετον	bhārathah	
3.	*bhére-tes	φέρετον	bhāratah	
Plur. 1.	*bhéro-mes	φέρομεν, Dor. -μες	bhārāmah	baíram
2.	*bhére-t(h)e	φέρετε	bhāratha	baír-þ
3.	*bhéro-nti	φέρουσι, Dor. -οντι	bhāranti	baírand

*Imperfect.*

	Indg.	Gr.	Skr.
Sing. 1.	*é-bhero-m	ἔφερον	ábharam
2.	*é-bhere-s	ἔφερες	ábharah
3.	*é-bhere-t	ἔφερε	ábhara-t
Dual 2.	*é-bhere-tom	ἐφέρετον	ábharatam
3.	*é-bhere-tām	ἐφερέτην	ábharatām
Plur. 1.	*é-bhero-men, -mñ	ἐφέρομεν	ábharāma
2.	*é-bhere-te	ἐφέρετε	ábharata
3.	*é-bhero-nt	ἔφερον	ábharan

In like manner is also inflected the second or strong aorist, ἔλιπον, &c. (§§ 503, 505).

## b. With Reduplication.

§ 457. In the reduplicated verbs belonging to this class three sub-divisions are to be distinguished according as the reduplicated syllable contains *i*, *ε* or a fuller reduplication (§ 429).

1. Verbs with *i* in the reduplicated syllable have weak grade stems of the type \**liqé-*, as *γί-γνο-μαι*, cp. Lat. *gi-gno*; *μί-μνω* : *μένω*, *ἴσχω* from \**σι-σχω* : *ἔχω* from \**σεχω*, *πί-πτω* with *i* after the analogy of *ρί-πτω* : *πέτο-μαι*, *νίσομαι* from \**νι-νσο-μαι* : *νέομαι* from \**νεσο-μαι*, *τίκτω* from \**τι-τκω* : *ἔ-τεκον*, *ἴζω* from \**σι-σδω* : *ἔδος* from \**σεδος*; cp. Skr. *tí-ṣṭha-ti*, *he stands*, Lat. *sistit*.

2. Verbs with *ε* in the reduplicated syllable, preserved only in aorists like *ἔ-πε-φνο-ν*, inf. *πε-φνέ-μεν* : base \**ghén(e)-*, *ghné-*; *ἔ-σπε-το*, inf. *έ-σπέ-σθαι*, cp. Skr. *sá-śca-ti*, Indg. \**se-sqe-ti*, *he follows* : Lat. *sequi-tur*; *έ-κέ-κλε-το* : *κέλο-μαι*, *τε-τάρπε-το* : *τέρπω*, *ἔ(F)ειπον*, *εἶπον*, Indg. \**e-we-wqo-m*.

3. Verbs with fuller reduplication, preserved only in aorists like *ἦγ-αγο-ν*, inf. *άγ-αγεῖν* : *άγω*; *ἦρ-αρο-ν*, inf. *άρ-αρεῖν*; *ἦν-εγκο-ν*, inf. *έν-εγκεῖν*; *ῶρ-ορο-ν* : pres. *ῶρ-νῦ-μι*.

## CLASS IV.

DISSYLLABIC ATHEMATIC HEAVY ABLAUT-BASES WITH  
OR WITHOUT REDUPLICATION.

## a. Without Reduplication.

§ 458. In the dissyllabic heavy ablaut-bases the first syllable contained a short vowel or diphthong and the second a long vowel or a long diphthong, as \**petā-*, \**genō-* (\**genē-*), \**menēi-*. According as the accent was originally on the first or second syllable we get the two types \**pétā-* (*πέτα-μαι*), \**génə-*, \**menī-* (where *ī* is a contraction of *ai* (§ 88) and *i* is the weakest grade of ablaut), and \**ptá-*



(πτῆ-ναι, Dor. ἔ-πτᾶ-ν), \*gnó- (ἔ-γνω-ν and \*gné- in OE. *cnā-wan*, to know), \*mṅ-é(i) (ἔ-μάνη-ν).

Only middle forms of verbs of the type \*pétā- were preserved in Greek, all the active forms passed over into the thematic conjugation in the prehistoric period of the language and similarly in all the other languages except the Aryan branch, as πέτα-μαι, ἄγα-μαι, ἔρα-μαι beside the new thematic formations, πέτο-μαι, ἀγάο-μαι, ἐράο-μαι (Att. ἐράω), κρέμα-μαι. But on the other hand Lat. *vomo*, ἐμέω for \*φεμα-μι or \*φεμε-μι = Skr. *vāmi-mi*, cp. ἔμε-σσα, ἦμε-σα; *δαμάω* for \*δαμα-μι, and similarly ἐλάω, γελάω, ἀρόω, &c., cp. Skr. *āni-mi*, I breathe; *svāpi-mi*, I sleep; *rōdi-mi*, I weep.

The long vowel in the type \*ptā-, \*gnó- belonged in the parent Indg. language to all numbers of the active and middle. The forms of this type often had the function of an aorist, as Hom. πλῆ-το : Skr. *á-prā-t*, he filled, base \*plē- beside \*pélā-; πτῆ-ναι, ἔ-πτη-ν : πέτα-μαι; ἔ-δρᾶ-ν beside Skr. *drā-ti*, he runs; ἔ-γνω-ν : Skr. *jñā-táh*, Lat. (g)nō-tus, known; and similarly ἔβλην, ἔσβην, ἔτλην Dor. ἔτλᾶν, ἔβην Dor. ἔβᾶν = Skr. *ágām*, Att. ἐγήρᾶν : γηράσσω; Hom. πλῆ-το : πελάζω, cp. Dor. ἄ-πλᾶτος. The -ē- formations with intransitive meaning became productive in Greek in the shape of the so-called passive aorist, which was originally active both in form and meaning (§§ 503, 506). Examples of -ē- in other than aorist forms are : ἄη-σι = Skr. *vā-ti*, he blows; Lat. *im-plē-s*, Skr. *prā-si*, thou fillest.

Beside the type \*petā-, &c. with long vowel in the second syllable there also existed the type \*menēi- with long diphthong. These two types began to be mixed up already in the parent language owing to the frequent loss of the second element of long diphthongs (§ 63). It is often therefore no longer possible to keep the two types rigidly apart. When the Indg. accent was on the first syllable,

the long diphthong became weakened to *-ei-* which regularly became *-ī-* (§ 88) and in its weakest form *-i-*, cp. Skr. *ámī-ti*, *he injures*; *brávī-ti*, *he says*, and forms like Lat. *farcīs* beside *cupīs*. The presents of this type partly went over into the thematic conjugation already in the parent Indg. language and became mixed up with the *jo*-verbs (§ 481), as *μαίνομαι*, *φαίνομαι*, *χαίρω*, *τύπτω*, Hom. *ρήσσω*, from *\*μανجومαι*, *\*φανجومαι*, *\*χαρζω*, *\*τυπζω*, *\*ρήκζω*; *ἔζομαι* from *\*σεδجومαι*: Lat. *sedē-re*; *ὄζω* from *\*ὀδζω*: *ὀζή-σω* for *\*ὀδη-σω*. The *-i-* also occurs in characterized presents like *εὐρί-σκω*: *εὐρή-σω*, *στερί-σκω*: *στερή-σω*, *άλι-σκομαι*: *άλω-ναι*. When the Indg. accent was on the second syllable, the long vowel—originally long diphthong—remained, whence *ἐμάνην* beside *μαίνομαι*, and similarly *ἐφάνην*, *ἐχάρην*, *ἐτύπην*, *ἐρράγην*, &c. (§ 506), which as we have seen above became productive in Greek and eventually came to be passive aorist in meaning.

#### b. With Reduplication.

§ 459. *βί-βη-σι*, Skr. *jí-gā-ti*, *he goes*; *δί-ζη-μαι* from *\*δι-δζα-μαι* beside *δί-ζο-μαι* from *\*δι-δζο-μαι*; *ἴλη-μι* from *\*σι-σλη-μι* beside *ἴλα-μαι* from *\*σι-σλα-μαι*; *κί-χρη-μι*: *κί-χρα-μαι*. Presents like *πίμ-πλη-μι*, *πίμ-πρη-μι* had the nasal in the reduplicated syllable after the analogy of verbs of the type *λιμπάνω* (§ 467), and forms like *πίμπλα̃μεν*: *πίμπλημι* were new formations after the analogy of *ἴστα̃μεν*: *ἴστημι* (§ 455).

#### CLASSES V-VIII.

§ 460. There can hardly be any reasonable doubt that the general principle underlying the formation of the various classes of nasal-presents was originally identical in all the classes, cp. (1) Skr. *aśná-mi*, *I eat*; *aśnī-máh*, *we eat*; *aśn-ánti*, *they eat*; Gr. *δάμνη-μι*, *δάμνα̃-μεν* = Indg. *\*dm̃ná-mi*, *\*dm̃nə-més*. (2) Skr. *str̃ṇó-mi*, *str̃ṇu-máh* =

Gr. *στόρνῦ-μι, στόρνῦ-μεν*, Indg. \**str̥néu-mi*, \**str̥nu-més*. (3) Skr. *yunáj-mi*, *I yoke*; pl. *yuñj-máh*, *we yoke*, Indg. \**junég-mi*, \**juŋg-més*; Skr. *chinád-mi*, *I destroy*; pl. *chind-máh*: Lat. *scindo*, Gr. *σχίζω* from \**σχιδjw*. (4) Skr. *vindá-ti*, *he finds*; Skr. *yuñjá-ti, lumpá-ti* = Lat. *jungit, rumpit*, cp. also Engl. *stand*: *stood*. Besides having the characteristic feature of nasal-infix it should be noted that the root-syllable of all these types of verbs had originally the weak grade of ablaut. In verbs of the type *δάμνη-μι, στόρνῦ-μι* the nasal was infixed before the last element of the dissyllabic base, Indg. \**dm̥-á-*, \**str̥-éu-*. The *-ná-*, *-nə-*, and *-néu-*, *-nu-* came to be regarded as suffixes already in the parent language, and then became extended by analogy to root-forms to which they did not originally belong. In verbs of the type Skr. *yunáj-mi, -ne-*, the strong grade form of *-n-*, was infixed before the final consonant of the root-syllable. This type of present was only preserved in the Aryan group of languages. The types (1), (2), and (3) were inflected according to the athematic conjugation with the accent in the singular on the second syllable of the base which had full grade vowel, and in the dual and plural on the ending, as \**dm̥ná-mi*, \**str̥néu-mi*, \**junég-mi*, pl. \**dm̥nə-més*, \**str̥nu-més*, \**juŋg-més*. In verbs of the type Skr. *yuñjá-ti, lumpá-ti* = Lat. *jungit, rumpit*, Indg. \**juŋgé-ti*, \**rumpé-ti* the nasal was infixed before the final consonant of the root-syllable. The verbs of this type belonged to the thematic conjugation.

In the present state of our knowledge of the parent Indg. language it is impossible to determine what was the original function and meaning of the nasal-infix. It is also unknown how it came about that the nasal became infixed, because the infixing of formative elements is otherwise unknown in the Indg. languages.

## CLASS V.

§ 461. To this class belong verbs of the type δάμνημι : δαμά-σαι, ἐ-δάμα-σα ; πίτνημι : πετά-σαι, ἐ-πέτα-σα ; Skr. aśnāmi, I eat ; kṛiṇāmi, I buy ; μάρναμαι : παρα-σμός, cp. Skr. mṛṇāmi, I crush, destroy. Sanskrit has -nī- for -ni- in the dual and plural after the analogy of verbs of Class IV (§ 458).

	Indg.	Gr.	Skr.
Sing. 1.	-nā-mi	δάμνημι	kṛiṇāmi
2.	-nā-si	δάμνης	kṛiṇāsi
3.	-nā-ti	δάμνησι	kṛiṇāti
Dual 2.	-nə-t(h)és	δάμνατον	kṛiṇitháh
3.	-nə-tés	δάμνατον	kṛiṇitáh
Plur. 1.	-nə-més	δάμναμεν	kṛiṇimáh
2.	-nə-t(h)é	δάμνατε	kṛiṇithá
3.	-n(ə)-énti	δάμνασι (§ 439)	kṛiṇánti

And similarly Att. πέρνημι with -ε- after the analogy of περάω, ἐ-πέρα-σσα. The -ι- in the root-syllable of the following verbs has never been satisfactorily explained :— κίρνημι : κεράω, ἐ-κέρα-σα ; κρίμνημι : ἐκρέμα-σα ; πίτνημι : ἐ-πέτα-σα ; \*ὀρίγναμαι : ὀρέγω ; πίλναμαι : ἐ-πέλα-σα ; σκίδναμαι : ἐ-σκέδα-σα (cp. § 44, note 1). In δύναμαι the -να- was levelled out into all forms of the verb.

§ 462. Most of the verbs which originally belonged to Class V went over into the thematic conjugation with preservation or loss of the -α- in -να-, as δαμνάω, κιννάω, ὀριγνάομαι, πιλνάω, πιτνάω beside δάκνω, κάμνω : κάματος, πίτνω, Hom. Dor. τάμνω, πίνω. It is difficult to account for the strong grade vowel in the root-syllable of Att. τέμνω, Dor. δήλομαι from \*δελνομαι beside Att. βούλομαι from \*βολνομαι, Lesb. ἀπ-έλλω, Hom. εἴλομαι from \*φελνομαι. Some verbs went over into the jo-conjugation (§ 478), as Lesb. κλίννω, Hom. Att. κλίνω from

\*κλινῶ : Lat. *in-clī-nā-re* ; κρίνω from \*κρινῶ : Lat. *cerno* from \**crinō* ; ὀτρύνω from \*ὀτρυνῶ. This change from the athematic to the thematic conjugation probably began already in the parent Indg. language, cp. Skr. *gr̥nā-ti*, *he calls*, *minā-ti*, *he lessens*, *mṛnā-ti*, *he destroys*, beside *gr̥nā-ti*, *minā-ti*, *mṛnā-ti* ; Goth. *and-bundnis*, *thou becomest unbound*, beside Skr. *badhnā-si*, Indg. \**bh̥ndhnā-si*, *thou bindest* ; Lat. *sternit* beside Skr. *stṛnā-ti*, *he strews*.

## CLASS VI.

§ 463. To this class belong verbs of the type *στόρνυμι*, Skr. *str̥ṇómi*, *I strew* ; Goth. *stráujan*, *to strew* ; ὀρνυμι, Skr. *ṛṇómi*, *I move* ; Hom. *τάνυ-ται* = Skr. *tanu-té* : Skr. *tanómi*, Indg. \**t̥ṇ-nó-mi*, *I stretch*. In Greek the singular had *-νῦ-* for *-νευ-* : *-νυ-* after the analogy of *-νᾶ-*, Att. Ion. *-νη-* : *-να-* in Class V.

	Indg.	Gr.	Skr.
Sing. 1.	* <i>str̥-néu-mi</i>	<i>στόρνυμι</i>	<i>str̥ṇómi</i>
2.	* <i>str̥-néu-si</i>	<i>στόρνυς</i>	<i>str̥ṇóṣi</i>
3.	* <i>str̥-néu-ti</i>	<i>στόρνυσι</i>	<i>str̥ṇóti</i>
Dual 2.	* <i>str̥-nu-t(h)é</i>	<i>στόρνυτον</i>	<i>str̥ṇutháh</i>
3.	* <i>str̥-nu-tés</i>	<i>στόρνυτον</i>	<i>str̥ṇutáh</i>
Plur. 1.	* <i>str̥-nu-més</i>	<i>στόρνυμεν</i>	<i>str̥ṇumáh</i>
2.	* <i>str̥-nu-t(h)é</i>	<i>στόρνυτε</i>	<i>str̥ṇuthá</i>
3.	* <i>str̥-nw-énti</i>	<i>στορνύασι</i> (§ 439)	<i>str̥ṇvánti</i>

And similarly Hom. *ἀνῦμι*, *ἤνυ-το* : Skr. *sanómi*, *I gain, acquire* ; ἄρνημαι, ἄχνημαι, κίννημαι, πτάρνημαι : Lat. *sternuo*.

This type of present became productive in Greek which gave rise to numerous new formations. The *-νῦμι* came to be used—irrespectively whether the root-syllable had the weak or strong grade of ablaut—to form the present of bases ending in a guttural, when such bases had an s-aorist, as *δείκνυμι* : *ἔδειξα*, and similarly *ζεύγνυμι*, *μείγνυμι* (*μίγνυμι*),

ὀμόργνυμι, ὀρέγνυμι, πήγνυμι, πλήγνυμι, ῥήγνυμι, φράγνυμι. Other examples of new formations were: δαίνυμι: ἔδαισα, Ion. εἰνυμι, Att. ἔννυμι from \*φεσνυμι: ἔσ-σα, ὀλλυμι from \*ὀλνυμι: ὄλεσα, ὀμνυμι: ὄμοσα, τείνυμι: ἔτεισα; ὀρνυμι for \*ἀρνυμι, στόρνυμι for \*στρα- or \*σταρνυμι.

§ 464. The regular form εἰνυμι from prim. Gr. \*φεσνυμι (§ 214) was preserved in Ionic, but in the prehistoric period of Attic a new present \*φεσνυμι was formed with -σ- from forms like ἔσ-σα, ἔσ-θῆναι. This -σν- became assimilated to -νν- (§ 214), whence ἔννυμι, and similarly σβέννυμι, ζώννυμι. And then after the analogy of these verbs were formed presents like κορέννυμι: ἐκόρεσα, στορέννυμι, ῥώννυμι, στρώννυμι, κεράννυμι, κρεμάννυμι, πετάννυμι, σκεδάννυμι.

§ 465. A large number of the verbs which originally belonged to Class VI went over into the thematic conjugation partly in the historic and partly in the prehistoric period of the language. The presents in -νύω are common in Att. Ion. and Doric, as ἀνύω, δεικνύω, μιγνύω, ὀμνύω, ὀρνύω, τανύω, κεραννύω, στρωννύω. These presents mostly came into existence in the historic period of these dialects. But many verbs passed over into the thematic conjugation in the prehistoric period of the language, as Hom. ἄνομαι, Att. ἀνομαι from \*ἀνφομαι: Skr. sanómi, I gain, acquire; θύνω: Skr. dhūnómi, I shake; Hom. ἰκάνω, κιχάνω from \*ἰκανφω, \*κιχανφω; Hom. τίνω, Att. τίνω from \*τινφω: Skr. cinómi, I collect; Hom. φθάνω, φθίνω, Att. φθάνω, φθίνω from \*φθανφω, \*φθινφω. In the verbs θῦνέ(φ)ω (Hesiod), ἰκνέ(φ)ομαι, κῖνέ(φ)ω: κίννυμαι, οἰχνέ(φ)ω the change from the one conjugation to the other probably took place at the time when the singular still had \*-νευμι, \*-νευσ, \*-νευτι for later -νυμι, -νυς, -νυσι. This explains the -ε- which it would be difficult to account for otherwise. As in the verbs of Class V the change from the athematic to the thematic conjugation probably began already in the parent Indg.

language, cp. Skr. **cinvá-ti** beside **cinó-ti**, *he collects*; **ῥηνά-ti** beside **ῥηό-ti**, *he moves*; **miná-ti** beside **minó-ti**, *he lessens*. In Latin and the Germanic languages all the verbs originally belonging to this class went over into the thematic conjugation.

### CLASS VII.

§ 466. To this class belong the verbs which have a nasal infixed before the final consonant of the root-syllable (§ 460). This type of verbs was well preserved in Sanskrit and Latin, cp. Skr. **vindáti**, *he finds*; **yuñjáti**, **lumpáti** = Lat. **jungit**, **rumpit**; **krntáti**, *he cuts*; **limpáti**, *he smears*; Lat. **findo**, **fundo**, **linquo**, **pango**, **scindo**, **tango**, **vinco**, &c. But in Greek the original formation was only preserved in **ρέμβομαι**, **σφίγγω**, and possibly in **ἀτέμβω**, **στέμβω**. All the other verbs originally belonging to this class went over either into Class VIII or into the **jo**-conjugation (§ 478), cp. **λιμπάνω** : \***λιμπω**, Lat. **linquo**; **πυνθάνομαι** : \***πυνθω**, **πέυθομαι**; **κλαγγάνω** : \***κλαγγω**, Lat. **clango**, beside **κλάζω** from \***κλαγγῶ**; **πλάζω** from \***πλαγγῶ** : \***πλαγγω**, Lat. **plango** (§ 156); **πίσσω**, **πίττω** from \***πτισῶ** : Lat. **pīnsio**, **pīnso**; **λύζω** from \***λυγγῶ**. The type of present like **ἀνδάνω** : **ἀδεῖν**, **λαγχάνω** : **ἔλαχον**, **λανθάνω** : **ἔλαθον**, **τυγχάνω** : **ἔτυχον**, **χανδάνω** : **ἔχαδον**, all of which occur in Homer, became productive in the post-Homeric period. After the analogy of these verbs were formed many new presents to strong aorists, as **δαγκάνω** : **ἔδακον**, **ἐρυγγάνω** : **ἐρυγείν**, and similarly **θιγγάνω**, **λαμβάνω**, **μανθάνω**, **πανθάνω**, **φυγγάνω**. After the analogy of **λιμπάνω** were also formed **πιμπλάνω**, **πιμπράνω**.

### CLASS VIII.

§ 467. To this class belong the verbs in **-άνω**. The original type was probably denominative verbs like **θηγάνω** : **θηγάνη**, **θήγανον** (Hesych.); **όλισθάνω** : **όλισθανος**, as similarly formed denominative presents are also found

in Sanskrit, Armenian, and Lithuanian. The suffix *-ανω* then became productive in the formation of new presents, partly to forms which were already present, and partly to forms with the function of aorist, as *αἰσθάνομαι* : *αἰσθω*, *άλυσκάνω* : *άλυσκω*, *ἀπ-εχθάνομαι* : *ἔχθομαι*, *αὐξάνω* : *αὐξω*, *ἀμβλισκάνω* : *ἀμβλίσκω*, *ἐρῦκάνω* : *ἐρῦκω*, *ἰζάνω* : *ἰζω*, *ιστάνω* : *ἴστημι*, *ἰσχάνω* : *ἴσχω*, *κευθάνω* : *κεύθω*, *ληθάνω* : *λήθω*; *ἀλφάνω*, *κῦδάνω*; *ἀμαρτάνω* : *ἤμαρτον*, *βλαστάνω* : *ἔβλαστον*, *δαρθάνω* : *ἔδαρθον*. It can hardly be an accident that in all verbs of this class the root-syllable is long either by vowel quantity or by position. After the analogy of verbs like *ληθάνω* : *λήθω*, *ισχάνω* : *ἴσχω* were formed *λιμπάνω* : *\*λιμπω*, *κλαγγάνω* : *\*κλαγγω*, and then *-άνω* became extended to nearly all the verbs of Class VII (§ 466).

NOTE.—In a few verbs beside *-άνω* there are also forms in *-ανάω* (with *-άω* after the analogy of denominative verbs like *τιμάω*, *δαπανάω* : *δαπάνη*), and in *-αίνω* from *-ανῆω*, as *ἐρῦκανάω*, *ισχανάω* beside *ἐρῦκάνω*, *ισχάνω*; *κῦδαίνω*, *οἰδαίνω*, *ὀλισθαίνω* beside *κῦδάνω*, *οἰδάνω*, *ὀλισθάνω*. See § 478.

#### CLASS IX.

§ 468. To this class belong the original *s*-presents. The presents of this type were not numerous in the parent Indg. language nor did they become productive in the separate languages. The *-s-* was of the same origin as the *-s-* which occurred in the aorist (§ 507) and in the future (§ 499), and possibly also in the *sko*-presents (§ 469), and was doubtlessly closely connected with the *-s* in the *s*-stems of nouns, but it is unknown what was the original function or meaning of the *-s-*.

This class originally contained both athematic and thematic presents. The athematic forms except in the aorist were not preserved in Greek, but were well pre-



served in Sanskrit where however the **-s-** was levelled out into all forms of the verb, as **dvé-ṣ-mi**, *I hate*, pl. **dvi-ṣ-máh**, *we hate*, **dvi-ṣ-táh**, *hated* : Gr. \***δφει-**, \***δφι-**, *fear*. Of the thematic presents several were preserved in Greek, as Skr. **rák-ṣ-a-ti**, *he rescues*, pl. **rák-ṣ-a-nti**, *they rescue*, Gr. **ἀλέξω** : **ἀλ-αλκ-εῖν**, **ἀλκ-ή** ; Skr. **úk-ṣ-a-ti**, *he grows*, Gr. **αὔξω** : Skr. **ój-as-**, *strength*, Lat. **augēre** ; Skr. **trá-s-a-ti**, *he trembles*, Gr. **τρέω** from \***τρεσω** : **τρέμω**, Lat. **tre-mo** ; **ά(F)έξω**, **δέψω** beside **δέφω**, **έψω**, **κλάω** cp. **κέκλασ-ται**, **ὀδάξω** : **δάκ-νω**, **ξέω** cp. **ξέσ-σαι**, **σείω** cp. **σέ-σεισ-ται**, **σπάω** cp. **ἔ-σπασ-ται**. It should be noted that no sharp line of distinction can be drawn between primary **s-**verbs and denominative verbs formed from **s-**stems, cp. **τελέω** from \***τελεσῶ**, **γελάω** from \***γελασῶ** (§ 492) : **τελέσ-σαι**, **γελάσ-σαι**, beside **κλάω** from \***κλασω** : **κέ-κλασ-ται**.

#### CLASS X.

§ 469. To this class belong the verbs the present of which was originally formed by the addition of the formative suffix **-sko-** to the weak grade form of the base which could be either monosyllabic or dissyllabic. The presents of this type were rare in Sanskrit and the Germanic languages, but became productive in Greek and Latin. They appear in Greek both with and without reduplication, the former do not appear in Sanskrit, and Latin has only the one example **disco** from \***di-dc-sco**. The accent was originally on the suffix in all forms of the present, as sing. **-skó**, **-ské-si**, **-ské-ti**, pl. **-skó-mes**, **-ské-t(h)e**, **-skó-nti**. It is doubtful whether the suffix in the Ionic imperfect and aorist iterative forms like **φάσκει**, **φεύγεσκει**, **φιλέεσκει**, **δόσκον**, **φύγεσκει**, &c. is of the same origin, because the meaning of the suffix and the absence of the augment (§ 430) in such forms have never been satisfactorily explained.

## a. Without Reduplication.

§ 470. 1. Monosyllabic heavy bases, as *φάσκω* : *φημί* (§ 454), *βόσκω* : *βό-τωρ*.

2. Dissyllabic light bases, as *βάσκω*, *βάσκει*, Skr. *gácchā-mi*, *I go*, *gáccha-ti*, *he goes*, Indg. \**gṃskó*, \**gṃské-ti* : *βαίνω* from \**βαμῖω* (§ 142), Indg. \**gṃjǵ*, beside Goth. *qimip*, *he comes*, Indg. \**géme-ti*; Skr. *pr̥cchá-ti*, Lat. *poscit* from \**porc-scit*, Indg. \**pr̥k-ské-ti*, *he asks*; *ἵσκω* from \**φικ-σκω* (§ 186) : *ἔ-οικα*, *λάσκω* from \**λακ-σκω* : *ἔλακον*, *μίσγω* from \**μικ-σκω*, with -*γ-* for -*κ-* after the analogy of *μίγνυμι*, *έμίγην*, cp. Lat. *misceo*; *πάσχω* from \**παθσκω* : *ἔπαθον* (§ 109).

3. Dissyllabic heavy bases, as *ἀρέσκω* : *ἤρεσα*, *γηράσκω* : *γηράω*, *θνήσκω* (Dor. *θνάσκω*), *βλώσκω*, *θρώσκω*. In presents like *εὐρίσκω* : *εὐρήσω*, *στερίσκω* : *στερήσομαι*, *άλίσκομαι* : *άλῶναι*, *ἀμβλίσκω* : *ἤμβλωσα*, the -*i-* was the weak grade form of an original long diphthong *-ēi-*, *-ōi-* (§ 458). After the analogy of such presents were formed Att. *θνήσκω*, *μι-μνήσκω* (§ 471), *θρόσκω*, Ion. *κληῖσκω*, *χρηῖσκομαι*.

## b. With Reduplication.

§ 471. In the reduplicated verbs belonging to this class three sub-divisions are to be distinguished according as the reduplicated syllable contains -*i-*, -*e-*, or a fuller reduplication.

1. *βιβρώσκω*, *γιγνώσκω* : Lat. (*g*)*nōsco*, *διδάσκω* from \**δι-δακ-σκω* : Lat. *disco*, *διδράσκω*, *ἰλάσκομαι* from \**σι-σλα-σκομαι* : *ἴλαθι* from \**σι-σλα-θι*; *κικλήσκω*, *μιμνήσκω* beside *κικλήσκω*, *μιμνήσκω* (§ 470, 3), *πιπράσκω*, *τιτύσκομαι*, *πιπίσκω*.

2. *δεδίσκομαι*, *είσκω* from \**φε-φικ-σκω* beside *ἵσκω* : *ἔ-οικα*.

3. *ἀραρίσκω*, *ἀπαφίσκω*.

## CLASS XI.

§ 472. To this class belong the verbs the present of which contains a dental suffix *-to-*, *-do-*, or *-dho-*. The presents of this type were rare in the parent Indg. language and

remained unproductive in the various individual languages with the exception of the **-dho-** presents in Greek. In Sanskrit, Latin and the Germanic languages the dental was generally levelled out into all forms of the verb, and occasionally also in Greek. It is sometimes difficult to determine how far the dental can be regarded as a formative verbal suffix and how far it is merely a so-called root-determinative. The **-to-** presents are rare in all the Indg. languages. In these presents the **-to-** was closely connected with the nominal suffix **-to-**, cp. Lat. **plecto**, *πλεκτός*: *πλέκω*, *πέκτω*: *πεκτός*, *ἔβλαστον*: *βλαστός*. It is doubtful what was the origin and original function of the dental in the **-do-** and **-dho-** presents. Some scholars regard it as being connected with the **-d-**, **-dh-** of the roots *\*dō-* in *δί-δω-μι*, and *\*dhē-* in *τί-θη-μι*.

#### **-to-**presents.

§ 473. Att. *άνύτω*: *άνύω*, *άνυμι*; Att. *άρύτω*: *άρύω*; *πέκτω*, Lat. **pecto**, cp. OE. **feohtan**, *to fight*: *πέκω*; Lat. **plecto**: *πλέκω*. In forms like *ἔβλαστον*: *βλασάνω*, *ἤμαρτον*: *ἀμαρτάνω* the dental is not a present suffix but belongs to all forms of the verb. *τίκτω* is from older *\*τιτκω* (§ 457). All or nearly all the other **-to-**presents in Greek are of a different origin, as in *ἀστράπτω* from *\*ἀστραπῆω* (§ 129, 1): *ἀστραπή*; and similarly *δαπάνη*, *κλέπτω*: Lat. **clepo**, Goth. **hlifa**, *I steal*; *χαλέπτω*: *χαλεπός*; *κόπτω*, *σκάπτω*, *τύπτω*, and many others. These and similar presents, where the **-πτ-** was regularly developed from older **-πῆ-** (§ 129, 1), gave rise to numerous new formations. After the analogy of the future and aorist in verbs like *τύψω*, *ἔτυψα*: *τύπτω* from *\*τυπῆω*, new presents in **-πτ-** were formed to stems ending in **-β** and **-φ**, as *καλύπτω*: *καλύψω*, *ἐκάλυψα*, cp. *καλύβη*; *βάπτω*: *βάψω*, *ἔβαψα*, cp. *ἐβάφην*; and similarly *ἄπτω*, *βλάπτω*, *δρύπτω*, *ἐρέπτω*, cp. *ἐρέφω*, *θάπτω*, *κρύπτω*, *κύπτω*, &c. And in like manner were

formed new presents to stems originally ending in a velar guttural (§§ 202, 205), as πέπτω : πέψω, ἔπεισα, beside the regular form πέσσω, Att. πέττω from Indg. \*peqjō, cp. Lat. **coquo**, Skr. **pácāmi**, *I cook*; νίπτω : νίψω, ἔνιψα, beside the regular form νίζω from Indg. \*niqjō.

-do-presents.

§ 474. ἄλδομαι, ἀλδαίνω : ἄν-αλ-τος, Lat. **alo**; ἔλδομαι from \*fελδομαι : Lat. **vel-le**; μέλδομαι : μαλακός.

-dho-presents.

§ 475. ἀλήθω : ἀλέω, ἄλθομαι, ἀλθαίνω : ἄν-αλ-τος, Lat. **alo**; ἀλκαθεῖν : ἄλκω, ἄχθομαι : ἄχθυμαι, βαρύθω : βαρύς, βρίθω : βρι-αρός, γήθομαι, Dor. γάθομαι from \*γαφαθομαι : γαίω from \*γαfjω, cp. Lat. **gaudeo** from \*gāvideō; ἐμέθω : ἐμέω, ἔσθω, ἐσθίω : ἔδω, Lat. **edo**; aor. ἔσχεθον : ἔσχον, θαλέθω : θάλλω, κνήθω : κνάω, πελάθω : πέλας, πλήθω : πίμπλημι, πύθω : Skr. **pūyati**, *he stinks*, πύον; φλεγέθω : φλέγω, μινύθω : Skr. **mi-nō-mi**, *I lessen*, Lat. **minuo**; φθινύθω : Skr. **kṣi-nō-mi**, *I destroy*.

CLASS XII.

§ 476. To this class belong the various types of **j**-presents which from the point of view of Greek can be conveniently divided into the so-called primary verbs, the denominative verbs, and the causative together with the iterative verbs. In the so-called primary verbs two originally distinct types of presents fell together in Greek, viz. the thematic **jo**-presents and the athematic **ǰ**-presents (§ 481). Before reading the account of the history of the **j**-presents in Greek, the student should consult §§ 127-30, because what is stated there about **j** will not be repeated in the following paragraphs.

## I. PRIMARY VERBS.

## a. Thematic Presents.

§ 477. The thematic presents were formed by adding *-jo-*, *-je-* direct to the root-syllable which could have either the strong or the weak grade of ablaut, as *λεύσσω* from *\*λευκῶ*; *πέσσω* = Indg. *\*péqjō*: Skr. *pácyatē* = Indg. *\*péqjetai*, *he cooks*; Skr. *páśyati*, *he sees*: Lat. *specio*; beside *βαίνω* from *\*βανῶ*, Lat. *venio* (§ 142), Indg. *\*gmjō*; *σχίζω* from *\*σχιδῶ*: Goth. *skáidan*, *to divide*. The original inflexion of the present was: sing. *-jō*, *-je-si*, *-je-ti*, pl. *-jo-mes*, *-je-t(h)e*, *-jo-nti*, and the thematic vowel had or had not the accent according as the root-syllable contained the weak or the strong grade of ablaut, as *\*gmjéti*, *he goes*, beside *\*péqjeti*, *he cooks*. But the accent in presents of the type *\*gmjéti* probably became shifted on to the root-syllable already in the prim. Indg. period, cp. Skr. *kúpjati*, *he is angry*, Lat. *cupio*; *dívyati*, *he plays*; *hḡśyati*, *he rejoices*, beside *páśyati*, *he sees*. The oldest stratum of both types was the denominative presents formed from monosyllabic root-nouns. A distinction in the accent between them and the ordinary denominatives thus arose insomuch as all presents of the former type came to have the accent on the root-syllable, whereas the latter type had it on the thematic vowel *-jō-*, *-jé-*. Greek, Sanskrit, and the Baltic-Slavonic languages regularly preserved the primary *-jo-*presents, but in Latin and the Germanic languages they became mixed up with the originally athematic *ī-*presents (§ 481).

§ 478. The root-syllable of the primary *jo-*presents could end in a vowel or in a consonant, as *δράω*, *δρῶ* from *\*δραῶ*, Att. *ζῶ*, *κνῶ*, *χρῶ* from *\*ζηῶ*, *\*κνηῶ*, *\*χρηῶ*; *δέω* from *\*δεῶ*; *φύω*, Lesb. *φυίω* from *\*φυῶ*; *πτύω* from Indg. *\*spjūjō*, Lith. *spiáuju*, *I spit*.

δαίομαι, κναίω from \*δαιῖομαι, \*κναιῖω. γαίω, δαίω, κλαίω from \*γαῖῃω, \*δαῖῃω, \*κλαῖῃω.

ἄλλομαι from \*σαλῖομαι : Lat. *salio* ; βάλλω from \*βαλῖω, and similarly θάλλω, πάλλω, σκάλλω, σφάλλω, μέλλω, στέλλω, τίλλω, σκύλλω, &c.

σπαίρω from \*σπαρῖω, Indg. \*sprijō : Lith. *spiriù*, *I push with the foot*, and similarly σκαίρω, Dor. φθαίρω beside Att. φθείρω, ἀγείρω, αἶρω from \*φαρῖω, αἰείρω, Lesb. ἀέρρω from \*ἀφερῖω, δείρω, Lesb. δέρρω, κείρω, Lesb. κέρρω, μείρομαι, πείρω, σπείρω, φθείρω, Lesb. φθέρρω, κύρω, μύρομαι, φύρω.

βαίνω from \*βανῖω, Indg. \*gṃjō (§ 65), φαίνω from \*φανῖω, and similarly δραίνω, καίνω, κραίνω, Lesb. κταιίνω beside Att. κτείνω, Lesb. κτέννω, σαίνω, χραίνω.

βράσσω, Att. βράττω from \*βρατῖω, and similarly λίσσομαι, πάσσω. βλύζω from \*βλυδῖω, and similarly κνίζω, σχάζω, χάζομαι, &c.

δράσσω, Att. δράττω from \*δρακῖω, and similarly θράσσω, τάσσω, φράσσω, λεύσσω, πέσσω (Indg. \*péqjō), πράσσω, πλήσσω, φρίσσω, ἀμύσσω, ὀρύσσω, πτύσσω.

ἄζομαι, βάζω from \*ἀγζομαι, \*βαγῖω, and similarly κράζω, λάζομαι, σκάζω, σφάζω, ρέζω, βρίζω, κρίζω, λίζω, νίζω (Indg. \*nijō), στίζω, τρίζω, μύζω, τρύζω, &c.

ναίω from \*νασῖω : νάσ-σαι, and similarly μαιόμαι, κείω.

On the presents ending in -πτω from -πῖω see §§ 129, 1, 473.

§ 479. The -jo- in primary verbs was sometimes a secondary suffix added to other present-formative elements, as κλίνω, Lesb. κλίννω, from \*κλινῖω : κλίσις, κρίνω : κρίσις, πλύνω : πέπλυται, ὀτρύνω. κλάζω from \*κλαγγῖω : Lat. *clango*, πλάζω from \*πλαγγῖω : Lat. *plango*, λύζω from \*λυγγῖω (§ 460). κῦδαίνω from \*κῦδανῖω : κῦδάνω, and similarly οἰδαίνω, ὀλισθαίνω (§ 467, note).

§ 480. The reduplicated presents of this division generally have a fuller reduplication, and rarely -ι- in the reduplicated syllable, as νη-νέω, μαι-μάω. παι-πάλλω. γαρ-γαίρω, καρ-

καίρω, μαρ-μαίρω, μορ-μύρω, πορ-φύρω. βαμ-βαίνω, παμ-φαίνω. αἰσσω, Att. ἄττω, from \**φαι-φικ-ζω*, παι-φάσσω. ἰάλλω from \**σι-σαλ-ζω* (cp. § 213, 1) : ἄλλομαι, Lat. salio, τι-ταίνω, λι-λαίομαι from \**λι-λασ-jo-μαι*.

### b. Athematic Presents.

§ 481. To this division belong the primary presents which were formed from dissyllabic heavy bases containing the long diphthong *-ēi-* in the second syllable (cp. § 458). The presents of this type originally belonged to the athematic conjugation. In the singular the accent was on the first syllable of the base and in the dual and plural on the personal endings, as base \**menēi-*, *think*, sing. \**ménĭ-mi*, \**ménĭ-si*, \**ménĭ-ti*, pl. \**mñĭ-més*, \**mñĭ-t(h)é*, \**mñj-énti*. The original athematic inflexion was not preserved in all forms of the present in any of the Indg. languages in historic times. Judging from the Baltic-Slavonic languages (see below) it is probable that the first person singular went over into the *jo*-presents already in the parent Indg. language. In Greek all the presents of this type went entirely over into the thematic conjugation and thus fell together with the *jo*-presents. And the weak stem-form of the dual and plural became generalized, as *μαίνομαι* from \**μανjoμαι*, older \**mñjomai* : *ἐμάνην*, *χαίρω* : *ἐχάρην*, *ἔζομαι* from \**σεδjoμαι* : Lat. *sedē-re*, *ὄζω* from \**ὄδjo* : *ὄζήσω* for \**ὄδησω*. Also in Sanskrit most of the presents of this type went over into the thematic conjugation, whereas in Latin and the Germanic languages the two types of presents became mixed, cp. Lat. *capio* from \**capjō*, *capis*, *capit*, *capimus*, *capitis*, *capiant* from \**capjont*, beside *farcio* from \**farcjō*, *farcis*, *farcit* from older \**farcĭt*, *farcĭmus*, *farcĭtis*, *farciant* from \**farcjont*, where the first person singular and the third person plural belong to the thematic conjugation and all the other forms to the athematic. The original distinction

between the inflexion of the two types of presents was best preserved in the Baltic-Slavonic languages, cp. O.Slav. sing. *mīnja*, *I think*, *mīni-ši*, *mīni-tŭ*, pl. *mīni-mŭ*, *mīni-te*, *mīn-ętŭ*, beside sing. *borja*, *I fight*, *borje-ši*, *borje-tŭ*, pl. *borje-mŭ*, *borje-te*, *borja-tŭ*. Whether a present originally belonged to the athematic or to the jo-presents can generally be determined by the fact that the former type of present usually has an *ē*- or an *i*-stem beside it in the non-present forms, cp. *μαίνομαι* : *ἐμάνην*, *μεμανήως*, *μεμάνημαι*, *μανιά* ; *χαίρω* : *ἐχάρην*, *χάρις*.

## 2. DENOMINATIVE VERBS.

§ 482. The formation of the denominative presents was in principle the same as that of the so-called primary jo-presents (§ 478). Apart from the position of the accent in the two types of presents they were identical in formation. In the denominative presents the accent was originally on the *-jó-*, *-jé-*, thus sing. *-jó-*, *-jé-si*, *-jé-ti*, pl. *-jó-mes*, *-jé-t(h)e*, *-jó-nti*. This system of accentuation was preserved in Sanskrit, as sing. *dēva-yā-mi*, *I cultivate the gods, am pious*, *dēva-yā-si*, *dēva-yā-ti*, pl. *dēva-yā-maḥ*, *dēva-yā-tha*, *dēva-yā-nti*, formed from *dēvā-*, *god* ; but in prim. Greek the accent was shifted from the *-jó-*, *-jé-* on to the stem, cp. *φιλέω*, *τιμάω*, *μηνίω*, *φίτῳ*, *τεκταίνω*, *τελέω*, *ἐλπίζω*, from prim. Gr. *\*φιλεῖω* : *φίλος*, *\*τιμᾶῖω* : *τιμά-*, *-ή*, *\*μηνίῳ* : *μήνις*, *\*φίτυῖω* : *φίτυ*, *\*τεκτανῖω* (where *-αν-* = Indg. *\*-ṅ-*, the weak grade of *-ων*, *-ον-*) : *τέκτων*, *\*τελεσῖω* : *τέλος*, *τέλεσ-*, *\*ἐλπίδῖω* : *ἐλπίδ-*. By comparing the various languages with one another it can be shown that denominative presents were capable of being formed from all kinds of nominal stems already in the parent Indg. language, and that such presents were formed by the addition of *-jó-*, *-jé-* to the bare stem. The denominative verbs can be conveniently divided into two great groups according as they were formed from stems ending in a vowel or a consonant.



## a. Vocalic Stems.

§ 483. The formation of denominative verbs in *-ājō*, *-ejō*, *-ijō*, and *-ujō*, from *ā-*, *o-*, *i-*, and *u-*stems, was common in the parent Indg. language, and making allowance for the special sound-laws of the individual languages, this type of verb was preserved and often became very productive in the oldest period of all the languages. The Greek verbs in *-όω* (see below), formed from the *o*-form of *o*-stems, was a special Greek formation which does not occur in any of the other languages. Before reading the following paragraphs dealing with the contract verbs the student should consult §§ 79–80 on vowel contraction. In Greek as also in other Indg. languages the denominative verbs, formed from *ā-*, *o-*, *i-*, and *u-*stems, have a long vowel in the non-present forms and in the nomina derived from them, as *τίμησω*, *ἐτίμησα*, *τίμητός*, *τίμησις* : *τιμάω*, cp. Lat. *plantārem*, *plantātus* : *planto*; *φιλήσω*, *ἐφίλησα*, *φιλητός* : *φιλέω*, cp. Lat. *albērem* : *albeo*; *ἐδηρίσάμην*, *ἀδήριτος* : *δηρίομαι*, cp. Lat. *finīrem*, *finītus* : *finio*; *ἀδάκρυτος* : *δακρύω*, cp. Lat. *statūtus* : *statuo*; *μισθώσω*, *ἐμίσθωσα*, *μισθωτός* : *μισθώω*, cp. Lat. *aegrō-tus*. This development of the verbal system took place in prehistoric Greek partly through the influence of the verbs in Class IV (§§ 458–9) and partly through the influence of the verbal adjectives in *-ητος*, *-ωτος*, *-ιτος*, *-υτος*, which themselves were new formations formed after the analogy of the denominative and verbal adjectives in *-ατος*. In some dialects the long vowel in the non-present forms was levelled out into the present. This was especially the case in Boeot. Lesb. and Delph., and also with the verbs in *-ίω*, *-ύω* for *-ίω*, *-ύω* in Attic and Ionic. In the Boeot. Lesb. Thess. Arcad. and Cyprian dialects the denominative presents in *-άω*, *-έω*, *-όω* often went over into the athematic conjugation after the analogy of the original athematic presents (§ 433, note).

§ 484. The verbs in -άω were originally formed from ā-stems, as *τιμάω*, older \**τιμάζω*, Indg. -ājō : *τιμά*, -ή, cp. Skr. *ṛtanā-yā-mi*, *I fight*, *ṛtanā-yā-ti*, *he fights* : *ṛtanā*, *fight*, *battle* ; Lat. *planto*, older \**plantājō* : *planta*. Some verbs have a long vowel in the root-syllable as compared with the vowel in the corresponding nouns, as *νομάω* : *νομή*, *στρωφάω* : *στροφή*, *πωτάομαι* : *ποτή*, &c. ā-stems with collective and abstract meaning existed in the parent language by the side of o-stems, whence verbs like *ἀντιάω* : *ἀντίος*, *ἀ-τιμάω* : *ἀ-τίμος*, *γοάω* : *γόςος*, *ιεράομαι* : *ιερός*, *λοχάω* : *λόχος*, *μωμάομαι* : *μῶμος*, *φοιβάω* : *φοίβος*. The short -α- in *τιμάω*, &c. was due to the analogy of the short vowel of the verbs in -έω, -όω, -ίω, -ύω and partly also to verbs formed from jā-stems, as *τολμάω* : *τόλμα*. Cp. §§ 73-4.

§ 485. In the parent Indg. language the denominatives in -ejō (Gr. -έω, Skr. -ayā, Lat. -eo) were formed from the e-form of the o-stems, cp. Lat. *albeo* : *albus*, *lenteo* : *lentus*, Skr. *dēva-yā-mi*, *I am pious*, *amitra-yā-mi*, *I am hostile*, 3. pers. sing. *dēva-yā-ti*, *amitra-yā-ti* : *dēvá*, *god*, *ámitra*, *enemy*, Gr. *φιλέω*, *ἀριθμέω*, from \**φιλεζω*, \**ἀριθμεζω* : *φίλος*, *ἀριθμός* ; *κοιρανέω* : *κοίρανος*, *οἰκέω* : *οἶκος*, &c. Through the shifting of the accent in prim. Greek the denominatives in -έω fell together with the causative and iterative verbs *φοβέω*, *τροπέω*, &c. from Indg. -éjō (§ 497). Beside the more general form in -ejō there was also a form in -jō with omission of the final -e of the stem. This was probably due to the fact that numerous vocalic and consonantal stems existed side by side in the parent Indg. language, cp. Skr. *turaṇ-yā-mi*, *I hasten*, *adhvar-yā-mi*, *I sacrifice*, 3. pers. sing. *turaṇ-yā-ti*, *adhvar-yā-ti* : *turaṇá*, *hasty*, *quick*, *adhvará*, *sacrifice* ; Gr. *ἀγγέλλω* from \**ἀγγελζω* : *ἄγγελος*, and similarly *αἰόλλω*, *δαιδάλλω*, *καμπύλλω*, *ποικίλλω*, &c. ; *φαείνω* from \**φαφεισνζω* : *φαεινός* from \**φαφεισνος*, *μειλίσσω* from \**μειλιχζω* : *μείλιχος*, *χαλέπτω* from \**χαλεπζω* (§§ 129, 1, 473) : *χαλεπός*.

§ 486. The denominatives in -όω, which are generally factitive in meaning, were a special Greek new formation and came to be formed from the o-form of o-stems already in the prehistoric period of the language, as δουλόω : δοῦλος, δηλόω : δῆλος, μισθόω : μισθός, νεόω : νέος, πολεμóω : πολεμέω : πόλεμος, χρῦσόω : χρῦσός, &c. This type of present became productive and was extended to other than o-stems, as ζημιόω : ζημιᾶ, γεφῦρόω : γέφυρα, πλατόω : πλατός, ὀρνιθóω : ὀρνιθ-.

§ 487. κονίω from \*κονιω (Indg. -ijō, Skr. -īyā-) : κόνις, μητίομαι, Lat. mētiōr : μήτις, and similarly δηρίομαι, μαστίω, μηνίω, &c., cp. Skr. jani-yā-ti, he seeks a wife : jáni-, wife; sakhī-yā-ti, he desires friendship : sákhi-, friend; Lat. finio, grandio, lēnio : finis, grandis, lēnis.

§ 488. δακρύω from \*δακρυῶ (Indg. -ujō, Skr. -ūyā-) : δάκρυ, and similarly ἀχλύω, γηρύω, ἰθύω, μεθύω, φῖτύω, &c., cp. Skr. gātu-yā-ti, he sets in motion : gātú-, motion; śatru-yā-ti, he treats as an enemy : śátru-, enemy; Lat. acuo, statuo : acus, status.

§ 489. The denominatives in -εύω, prim. Gr. -ηfῶ, were formed from the stem of nouns of the type of βασιλεύς from \*βασιληυς : \*βασιληf- (§ 338). The -ηfῶ would regularly have become -είω (through the intermediate stages -ηifω, -ειfω) which is found in the dialect of Elis. In βασιλεύω for \*βασιλείω the -εύ- was introduced into the present after the analogy of the other tenses, and it may also in part be due to the influence of the nominative singular of the corresponding noun, and similarly ἀριστεύω, ἱερεύω, ἰππεύω, νομεύω, πομπεύω, τορεύω, φονεύω, χαλκεύω, &c. This type of present became productive in the oldest period of the language and was extended to other than -εύ-stems, as θηρεύω : θήρᾶ, βουλεύω : βουλή, ἀγορεύω : ἀγορά, οἰνοχοεύω : οἰνοχόος, μαντεύομαι : μάντις, δραγμαεύω : δράγμα, ἀληθεύω : ἀληθής.

## b. Consonantal Stems.

§ 490. From **n**-stems, as *ὀνομαίνω* from \**ὀνομανῆω* (= Indg. *-nǵō*) : *ὄνομα*, *ποιμαίνω* from \**ποιμανῆω* : *ποιμήν*, and similarly *εὐφραίνω* : *εὐφρων*, *κῦμαίνω* : *κῦμα*, *μελαίνω* : *μέλαν*, *πῖαίνω* : *πίων*, *σπερμαίνω* : *σπέρμα*, *τεκταίνω* : *τέκτων*, &c. This type of present became productive in the oldest period of the language and after the analogy of it were formed a large number of verbs from other than **n**-stems. These new formations generally had a factitive meaning, as *βασκαίνω* : *βάσκανος*, *κερδαίνω* : *κέρδος*, and similarly *λειαίνω*, *λευκαίνω*, *λιταίνω*, *πικραίνω*, &c. ; *γλυκαίνω* : *γλυκύς*. After the analogy of the verbs in *-αίνω* were formed those in *-ύνω* from **u**-stems, as *ἀρτύνω* : *ἀρτύς*, and similarly *βαρύνω*, *βραδύνω*, *ἡδύνω*, *θρασύνω*, *ιθύνω*. And then further after the analogy of these were formed new denominatives like *αἰσχύνω* : *αἴσχος*, *κακύνω* : *κακός*.

§ 491. From **r**-stems, as *τεκμαίρω* from \**τεκμαρῆω* (= Indg. *-rǵō*) : *τέκμαρ*. Analogical formations from other than **r**-stems were *γεγαίρω* : *γεγαρός*, *ἐχθαίρω* : *ἐχθρός*, *καθαίρω* : *καθαρός*, &c. *μαρτύρομαι* from \**μαρτυρῆομαι* : *μάρτυρ*, and similarly *κινύρομαι* : *κινυρός*, *μινύρομαι* : *μινυρός*.

§ 492. From **s**-stems, as *τελέω*, Hom. *τελείω*, Att. *τελῶ* from \**τελεσῆω* : *τέλος*, stem *τέλεσ-*, cp. Skr. *apas-yá-mi*, *I am active*, *apas-yá-ti*, *he is active* : *ápas-*, Lat. *opus*, *work* ; Goth. *riqizjan*, *to become dark* : *riqis*, *darkness* ; and similarly *ἀκέομαι* : *ἄκος*, *ἀνθέω* : *ἄνθος*, *πενθέω* : *πένθος*, *νεικέω* : *νεῖκος*, &c. *αἰδέομαι* from \**αἰδεσῆομαι* : *αἰδεσ-* : *αἰδώς*. Forms like *ιδρώω* from \**σφιδροσῆω*, *ρίγῶω*, Hom. *γελῶω*, *ιδρώω* were formed direct from the nominative *ιδρός*, *ρίγος*, *ιδρώς*, *γέλως*.

§ 493. From dental stems, as *αἰμάσσω* from \**αἰματῆω* : *αἷματ-*, *βλίττω*, *βλίσσω* (§ 129, 6) : *μέλιτ-*, *κορύσσω* from \**κορυθῆω* : *κόρυθ-*. *ἐλπίζω* from \**ἐλπιδῆω* : *ἐλπιδ-*, and similarly *ὀπίζομαι*, *λιθάζω*, *μιγάζομαι*, &c.

§ 494. From guttural stems, as κηρύσσω from \*κηρυκῶ : κῆρυξ, -ῦκος, βήσσω from \*βηχῶ : βήξ, βηχός, θωρήσσω : θώραξ, -ἄκος, &c. ἀρπάζω from \*ἀρπαγῶ : ἄρπαξ, -αγος, and similarly μαστίζω, σαλπίζω from \*σαλπιγγῶ (§ 156).

§ 495. The denominatives in -άζω, -ίζω from -αδῶ, -αγῶ, -ιδῶ, -ιγῶ became productive and gave rise to a large number of analogical formations from all kinds of stems, as ἀγαπάζω : ἀγαπάω, πειράζω : πειράω, δικάζω : δίκη, καναχίζω : καναχή, δοκιμάζω : δόκιμος, ἡσυχάζω : ἡσυχος, δειπνίζω : δεῖπνον, ἀκοντίζω : ἄκων, μακαρίζω : μάκαρ, αἱματίζω : αἷμα.

§ 496. The formation of the denominatives in -ώσσω, -ώττω is uncertain inasmuch as it cannot be determined whether it originally arose from dental or guttural stems. It is possible that this type of verb started out from ἀμβλυώσσω from \*ἀμβλυωκῶ : ἀμβλυωπός, τυφλώσσω : τυφλώψ, and that they were formed before the velar guttural became π in -ωπ-, cp. the parallel forms Skr. akṣī, Gr. ὄσσε from \*ὄκῆ, Indg. \*oqī, both eyes, Lat. oc-ulus, beside ὄφρομαι, ὀπτέον. The -ώσσω in these verbs may have become productive and extended by analogy to other than guttural stems, as λιμώσσω : λιμός, ὄνειρώσσω : ὄνειρος, ὑγρώσσω : ὑγρός, ὑπνώσσω : ὕπνος, &c.

### 3. CAUSATIVE AND ITERATIVE VERBS.

§ 497. Causative and iterative verbs were common in the parent Indg. language and were also preserved in the oldest period of all the separate languages. This type of present was formed by the addition of the formative suffix -éjo-, -éje- to the root-syllable which contained the o grade of ablaut (= Gr. o, Lat. o, Goth. a, Skr. ā), as Indg. sing. \*sod-éjō, I cause to sit, set, \*sod-éje-si, \*sod-éje-ti, pl. \*sod-éjo-mes, \*sod-éje-t(h)e, \*sod-éjo-nti = Skr. sād-áyā-mi, sād-áya-si, sād-áya-ti, sād-áyā-maḥ, sād-áya-tha, sād-áya-nti, Goth. sat-ja, sat-jis, sat-jip, sat-jam, sat-jip, sat-

**jand** : root \*sed-, *sit*; φοβέω from \*φοβεῖω : φέβομαι, and similarly σοβέω : σέβομαι, cp. Lat. **noceo** : **neco**, **moneo** : **memini**; Engl. **fell**, **set** : **fall**, **sit**.

ποτέομαι from \*ποτεῖομαι, Skr. **pāt-áyā-mi** : πέτομαι, Skr. **pātā-mi**, *I fly*, and similarly βρομέω : βρέμω, ὀχέομαι : Lat. **veho**, σκοπέω : σκέπτομαι, στροφέω : στρέφω, τρομέω : τρέμω, τροπέω : τρέπω, φοβέομαι : φέβομαι, φορέω : φέρω, &c.

After the shifting of the accent in the denominative presents formed from **o**-stems, as φιλέω from \*φιλεῖω, older -εῖω (§ 482) verbs like φοβέω, φορέω came to be regarded as being formed from the nouns φόβος, φόρος, and then after the analogy of φιλέω : φιλήσω, ἐφίλησα, φιλητός, to φορέω were formed φορήσω, ἐφόρησα, φορητός for \*φοριτός where -ιτός was the regular Indg. ending of the verbal adjective belonging to this type of present, cp. Lat. **monitus** : **moneo**, Goth. **satips** : **satjan**, *to set*, Skr. **vartitáh** : **vart-áyā-mi**, *I turn*.

#### THE FUTURE.

§ 498. It is doubtful whether the parent Indg. language had special forms which were exclusively used to express future meaning. By comparing together the oldest periods of the different languages we are forced to the conclusion that it must have been expressed in various ways. In Sanskrit and Lithuanian the future was formed by means of the formative element **-sjó-**, **-sjé-** which was an extension of the **-s-** element occurring in Class IX of the presents (§ 468). This **-sjo-** future belonged to the thematic conjugation and was inflected like a present, as Skr. **dā-syá-mi** (Lith. **dū-siu**), *I shall give*, **dā-syá-si**, **dā-syá-ti**, pl. **dā-syá-mah**, **dā-syá-tha**, **dā-syá-nti** = Indg. \***dō-sjó**, \***dō-sjé-si**, \***dō-sjé-ti**, pl. \***dō-sjó-mes**, \***dō-sjé-t(h)e**, \***dō-sjó-nti**. This formation may also exist in Greek in the future formed from bases or stems ending in an explosive, as δείξω, Skr.

**dēk-šyá-mi**, Indg. \***deik-sjó**, but it is far more probable that such is not the case, because the future formed from the other bases or stems cannot be explained as being of this origin.

The present with momentary meaning was also originally used with a future meaning, and a few such forms also occur in Greek, as *δήω*, *εἶμι*, *νέομαι* (§ 424). This mode of expressing the future became productive in the old Germanic and Slavonic languages. And in like manner the subjunctive of a presential or second aorist stem was also used with a future meaning, as *ἔδομαι* (Skr. pres. indic. **ád-mi**, *I eat*), *πίομαι*, *χέω*, Hom. *βείομαι*, cp. also Lat. **ero** = *έω*, *ῶ*, Indg. \***ésō**.

§ 499. The ordinary Greek future was originally the subjunctive of the s-aorist which came to be used for the future, cp. also the similar forms in Lat. **capso**, **dīxo**, **faxo**, &c. This subjunctive of the s-aorist had the same root-vowel as the present indicative. It belonged to the thematic conjugation and was inflected like a present, as sing. **-sō**, **-se-si**, **-se-ti**, pl. **-so-mes**, **-se-t(h)e**, **-so-nti**, whereas the indicative of the s-aorist belonged to the athematic conjugation (§ 507). The Greek future can be conveniently divided into two great categories according as it appears with or without the medial **-σ-**. The medial **-σ-** regularly remained in bases or stems ending in an explosive, as *λείψω*, *ὄψομαι*, *πέψω*, *τέρψω*; *βλάψω*, *βλάψομαι*, *τύψω*; *πλέξω*; *ἄξω*, *ζεύξω*, *πράξω*, *φεύξομαι*; *φράσω*: *φράζω* from \**φραδῶ*, *σπείσω*: *σπένδω*, *πείσω*: *πείθω*; *γλύψω*, *γράψω*, *γράψομαι*, *θρέψω*, *θρέψομαι*: *τρέφω*; *τεύξομαι*; *διδάξω*, *ποιφύξω*; *ἀρπάξω*, *κηρύξω*, *σαλπίγξω*, &c. After the analogy of these and similar forms the medial **-σ-** was restored in all verbs the base or stem of which ended in a long vowel or diphthong (see § 213, 2), as *θήσω*, *δώσω* (Hom. also *διδώσω*), *στήσω*; *λύσω*; *ἀμαρτήσομαι*, *βοσκήσω*, *βουλήσομαι*, *γενήσομαι*, *εἰδήσω*, *εὐδήσω*, *μανήσομαι*, *μνήσω*, *ὄξήσω*, *ποιήσω*, *σχήσω*,

τυπτήσω, χαιρήσω, γνώσομαι; τιμήσω, φιλήσω, δηλώσω; τείσω, πλεύσομαι, οἶσω. In the primary verbs the long vowel had its origin in monosyllabic (§§ 454-5) and dissyllabic (§ 458) heavy bases.

The medial *-σ-* generally disappeared (§ 213, 2) in the future formed from dissyllabic heavy bases with a short vowel in the second syllable, as ἐλάω, κρεμάω, ὁμόομαι, καλέω, ὀλέω, βαλέω, γαμέω, τενέω, Hom. πεσέομαι from \*πετεσομαι = Att. ἐλῶ, κρεμῶ, ὁμοῦμαι, καλῶ, ὀλῶ, βαλῶ, γαμῶ, τενῶ, πεσοῦμαι (§ 80), and similarly στελέω, στελέομαι, νεμέω, τεμέω, θενέω, μενέω, φανέω, φθερέω, &c. The *-σ-* was sometimes restored again, especially in epic Greek, as δαμάσω, ἐλάσω, κρεμάσω, ὀλέσω; κέλσω, ὄρσω, φθέρσω, &c. (cp. §§ 212, 3, 217).

After the analogy of forms like καλέω, τενέω, φθερέω were formed futures to denominative verbs with stems ending in a nasal, liquid, dental or *-s*, and to verbs with a nasal suffix in the present, as Ion. οὔνομανέω : ὀνομαίνω, ἀγγελέω : ἀγγέλλω, τεκμαρέομαι : τεκμαίρομαι, δικάω, δικῶ beside δικάσ(σ)ω : δικάζω from \*δικαδῆω, κομιῶ beside κομίσ(σ)ω : κομίζω from \*κομιδῆω, τελέω, τελῶ beside Hom. τελέσσω : τελέω from \*τελεσῆω; κλινέω : κλίνω from \*κλιηῆω, κρινέω : κρίνω, Hom. ἀνύω, τανύω beside ἀνύσω, τανύσω.

§ 500. The so-called Doric future, which also occurs in a few Attic verbs, was a new formation and arose from the contamination of the futures in *-σω* with those in *-έω* from *-έσω*, as δειξέω, ἰδησῶ : Att. δείξω, εἰδήσω, νευσοῦμαι : νέω, πλευσοῦμαι : πλέω, πνευσοῦμαι : πνέω, also Att. κλαυσοῦμαι : κλαίω, φευξοῦμαι beside φεύξομαι, χεσοῦμαι : χέζω.

§ 501. Special Greek new formations were the futures formed from the perfect and from the passive aorists in *-ην* (§ 506), *-θην* (§ 514). The futures formed from the perfect active are rare, but those formed from the perfect middle are common, as Att. ἐστήξω : ἔστηκα, τεθνήξω : τέθνηκα.



γεγράψομαι, λελείψομαι, μεμνήσομαι, τετρίψομαι, &c. This formation came to be regarded as a reduplicated future and then futures like δεδήσομαι, λελύσομαι, τετεύξομαι were formed direct from the simple future δήσω, λύσω, τεύξω. Examples of futures formed from the passive aorists in -ην, -θην are φανήσομαι : ἐφάνην, σβήσομαι : ἔσβην, and similarly βλαβήσομαι, γραφήσομαι, μανήσομαι, σταλήσομαι, στραφήσομαι, &c. ; δοθήσομαι : ἐδόθην, τιμηθήσομαι : ἐτίμηθην, and similarly κλιθήσομαι, λυθήσομαι, πεισθήσομαι, ταθήσομαι, φιληθήσομαι, δηλωθήσομαι, &c. It should be noted that the future in -θησομαι does not occur in Homer and that in Doric both types of futures have active personal endings, as ἀναγραφησεῖ, ἐπιμεληθησεῦντι = Att. ἀναγραφήσεται, ἐπιμεληθήσονται.

### THE AORIST.

§ 502. The parent Indg. language had two kinds of aorists, the root-aorist, also called the strong or second aorist, and the s-aorist. Although there was doubtless originally a difference in meaning and function between the root- and the s-aorist, the difference had disappeared before the parent language became differentiated into the separate languages. These two kinds of aorists were preserved in Greek, Aryan and the Slavonic languages, but in the other languages they either disappeared entirely or came to be used for other tenses. The aorist in -θην (§ 514) was a special Greek formation which does not occur in the other languages.

#### I. THE ROOT- OR STRONG AORIST.

§ 503. The strong aorist has for the most part been already dealt with in the formation of the present with which it is morphologically closely related, but even at the risk of repetition it is advisable to treat it here in a con-

nected manner. In the dissyllabic bases the only distinction between the base of the aorist and of the present was that caused by the original difference in the position of the accent and the consequent difference in the ablaut-grade, cp. λείπε- : λιπέ-, Indg. \*léiq(e) : \*liqé-, in λείπω : λιπεῖν ; πέτα- : πτά-, πτή-, Indg. \*pétə : \*ptá-, in πέτα-μαι : πτήναι, Dor. ἔπτᾶν (§ 458). On the other hand it is not always possible to draw a hard and fast line between the formation of the aorist and the imperfect in Greek, cp. aor. ἔβην, ἔστην, ἔδρακον beside impf. ἔφην : φημί, ἔγραφον (and similarly with other aorist-presents, § 456). ἔτεκεν, ἐγενόμην were properly the imperfect of the lost verbs \*τέκω, \*γένομαι, but they came to be regarded as the aorist of τίκτω and γίγνομαι. In the strong aorist we have to distinguish three types :—

#### a. Monosyllabic heavy Ablaut-bases (§§ 454–5).

§ 504. In the aorists of this type the root-syllable had the strong grade of ablaut in the active singular, but the weak grade in the dual, plural and the whole of the middle, as \*ἔδων, \*ἔθην, ἔστην, Dor. ἔστᾶν : pl. ἔδομεν, ἔθεμεν, \*ἔσταμεν = Skr. *ádām*, *ádhām*, *ásthām*, pl. *ádāma*, *ádhāma*, *ásthāma* (for \**ádima*, \**ádhima*, \**ásthima*) with *-ā-* levelled out from the singular, and similarly ἔστημεν for \*ἔσταμεν. The regular form with *-i-* occurs in the middle, as *ádita* = ἔδοτο. The Greek third person plural ἔδοσαν, ἔθεσαν, ἔστησαν had the ending *-σαν* from the *s*-aorist (§ 507), and similarly ἔδυσαν : δεικνῦμι. ἔδωκα, ἔθηκα with the same *-κα* which occurs in the *κ*-perfect (§ 520) were used for the sing. \*ἔδων, \*ἔθην in Old Attic until the fourth century B.C. and from then onwards the *-κα* became extended to the dual and plural; cp. also ἦκα : Lat. *jē-cī*, pl. *εἶμεν* from \*ἔγεμεν.

## b. Dissyllabic light Bases (§§ 456-7).

§ 505. This type of aorist, without and with reduplication, belonged to the so-called thematic conjugation, as λιπεῖν, ἔλιπον : λείπω, πιθέσθαι, ἐπιθον : πείθω, ἤρικον : ἐρείκω, ἤριπον : ἐρείπω, ἔστιχον : στείχω; ἔκυθον : κεύθω, πυθέσθαι : πεύθομαι, ἐρυγεῖν, ἤρυγον : ἐρεύγομαι, τυχεῖν : τεύχω, ἔφυγον : φεύγω; ἔδρακον = Skr. *ádr̥śam* : δέρκομαι, τραπεῖν : τρέπω, ἔτραφον : τρέφω. To verbs with characterized presents, as λαβεῖν, ἔλαβον : λαμβάνω, λαθεῖν, ἔλαθον : λανθάνω, ἔλαχον : λαγχάνω; δακεῖν, ἔδακον : δάκνω, καμῖν, ἔκαμον : κάμνω; θανεῖν, ἔθανον : θνήσκω; βαλεῖν, ἔβαλον : βάλλω from \*βαλῆω.

ἐσπέσθαι, ἔσπετο : ἔπομαι, ἐκέκλετο, κέκλετο : κέλομαι, πεπιθ-εῖν, πέπιθον : πείθω, τετυκεῖν : τεύχω, τετάρπετο : τέρπω, Hom. ἔειπον from \*ἐ-φε-φρον = Skr. *ánōcam* from \**á-va-uc-am*, Indg. \**é-we-wqom*; ἔτε-τμο-ν, ἔπε-φνο-ν. ἤγ-αγον : ἄγω, ἤν-εγκον, inf. ἐν-εγκεῖν; ἤρ-αρον, inf. ἄρ-αρεῖν; ὠρ-ορον : ὄρ-νῦμι.

## c. Dissyllabic heavy Bases (§§ 458-9).

§ 506. The aorists of this type belonged to the athematic conjugation and originally contained a long vowel or the long diphthong *-ēi-* in the second syllable of the base. The long vowel including the *-ē-* from older *-ēi-* (§ 458) belonged to all forms of the active and middle, but it was regularly shortened in the third person plural in prim. Greek (§ 70), as πτῆναι, Dor. ἔπτᾶν : πέταμαι, ἔδρᾶν : Skr. *dr̥á-ti*, *he runs*, Hom. πλῆτο : Skr. *á-prā-t*, *he filled*, Hom. πλῆτο : πελάζω, Att. ἐγήρᾶν : γηρά-σκω; ἔτλην, Dor. ἔτλᾶν, ἔσβην, ἔγνων; ἔβλην, ἐμάνην, ἐφάνην, ἐχάρην; ἔφῶν, ἔφῶ = Skr. *á-bhū-t*, from \**é-bhū-t*, older \**é-bhwə-t*, *he was* : base \**bhewā-*, *be*. It is not clear in what relation ἔβην (Dor. ἔβᾶν), ἔβη = Skr. *ágām*, *ágāt*, stands to βαίνω, Lat. *venio*. These aorists in *-ην* = Indg. *-ēm* with in-

transitive meaning became productive in Greek and came to be used as passive aorists (§ 514), as *ἐκλάπην* : κλέπτω, *ἐγράφη* : γράφω, *ἐμίγη* : μίγ-νῦμι, *ἐρρύη* : ῥέω, *ἐσάπην* : σήπω, *ἐτάκην* : τήκω, *ἐτάρπην* : τέρπω, *ἐτράπην* : τρέπω, &c.

## 2. THE S-AORIST.

§ 507. The s-aorist, also called the weak or first aorist, belonged to the athematic conjugation and originally had the following endings:—sing. *-s-m̄*, *-s-s*, *-s-t*, pl. *-s-men* or *-s-m̄n̄* (§ 437), *-s-te*, *-s-nt̄*. In formation it was morphologically related to the s-presents of Class IX (§ 468) and stood in the same relation to those presents as the strong aorist did to its corresponding presents (§ 456). The s-aorist was preserved in Greek, Aryan and the Slavonic languages, whereas in Latin it came to be used for the perfect (cp. *ἔ-δειξα*, *ῶ-ρεξα*, Skr. *á-vākṣam* beside *dīxī*, *rēxī*, *vēxī*), and in the other languages it disappeared entirely except in a few isolated forms. This type of aorist became very productive in Greek, especially as an aorist-formation for denominative verbs and for those verbs which did not have a root-aorist. The inflexion of an aorist like *ἔδειξα* was in the parent Indg. language:—sing. *\*é-dēik-s-m̄*, *\*é-dēik-s-s*, *\*é-dēik-s-t*, pl. *\*é-dik-s-men* (*-m̄n̄*), *\*é-dik-s-te*, *\*é-dik-s-nt̄*. In Sanskrit the long diphthong or long vowel of the singular was levelled out into the dual and plural, cp. Skr. *árāikṣam*, *árāikṣma* = *ἐλείψα*, *ἐλείψαμεν*; *áyāukṣam*, *áyāukṣma* = *ἔζευξα*, *ἔζευξάμεν*; *ákṣārṣam*, *ákṣārṣma* = *ἐφθειρα* from *\*ἐφθερσα* (§ 217), *ἐφθείραμεν*; cp. the similar levelling in Latin *dīximus*, *rēximus* : *dīxī*, *rēxī*. The long diphthong of the singular was regularly shortened in prim. Greek (§ 63) and then levelled out into the dual, plural and extended by analogy to the whole of the middle which originally contained the weak grade of ablaut, cp. Skr. middle *ádikṣi*, *áyukṣi* beside Gr. *ἐδειξάμην*, *ἔζευξάμην*. The old weak grade of ablaut

was preserved in *ἴσαν*, and *ἦσαν* from *\*ἦφιτσαν*, *they knew*, but apart from a few such isolated forms the vowel in the stem-syllable of the active and middle of the s-aorist to dissyllabic bases was due to the analogy of the present stem and the stem of the aorist subjunctive = s-future (§ 499). This is especially clear in such forms as *ἔγλυψα*, *ἔγραψα*, *ᾤμορξα*, *ἔστιξα*, *ἔσχισα* : *γλύφω*, *γράφω*, *ὀμόργνυμι*, *στίζω*, *σχίζω*, *ἔπηλα* from *\*ἐπαλσα* : *πάλλω*. Aorists like *ἔδειξα*, *ἔξενξα* can represent the original forms with long diphthongs or be new formations with *-ει-*, *-ευ-* from the present. The prim. Greek inflexion of the active and middle of *ἔδειξα*, *ἔλῦσα* and similar aorists was :—

Sing.	<i>*ἔδεικσ-α</i>	<i>*ἔλῦσ-α</i>	<i>*ἔδεικσ-μᾶν</i>	<i>*ἔλῦσ-μᾶν</i>
	<i>*ἔδεικσ-σ</i>	<i>*ἔλῦσ-σ</i>	<i>*ἔδεικσ-σο</i>	<i>*ἔλῦσ-σο</i>
	<i>*ἔδεικσ-(τ)</i>	<i>*ἔλῦσ-(τ)</i>	<i>*ἔδεικσ-το</i>	<i>*ἔλῦσ-το</i>
Plur.	<i>*ἔδεικσ-μεν</i>	<i>*ἔλῦσ-μεν</i>	<i>*ἔδεικσ-μεθα</i>	<i>*ἔλῦσ-μεθα</i>
	<i>*ἔδεικσ-τε</i>	<i>*ἔλῦσ-τε</i>	<i>*ἔδεικσ-σθε</i>	<i>*ἔλῦσ-σθε</i>
	<i>*ἔδεικσ-α(τ)</i>	<i>*ἔλῦσ-α(τ)</i>	<i>*ἔδεικσ-ατο</i>	<i>*ἔλῦσ-ατο</i>

The *-α* in the first person singular of the active regularly corresponds to Indg. *-ῃ* (§ 65, 1) and in the third person plural to Indg. *-ῃ* (§ 65, 1). The ending of the first person singular thus fell together with the ending of the perfect (*οἶδα*, *λέλοιπα*). After the analogy of *οἶδα* : *οἶδε* to *ἔδειξα* was formed *ἔδειξε*, and then the *-α* of the first person singular was levelled out into the second person, and at a later period the *-ας* was extended analogically to the perfect (*λέλοιπας*). The *-α* of the third person plural was levelled out into the dual and the other persons of the plural. Hence arose the usual forms : *ἔδειξα*, *ἔδειξας*, *ἔδειξε* ; *ἔδείξατον*, *ἔδειξάτην* ; *ἔδείξαμεν*, *ἔδείξατε*, *ἔδειξαν* (with *-ν* from imperfects like *ἔφερον*, § 439) ; *ἔλῦσα*, *ἔλῦσας*, *ἔλῦσε* ; *ἔλύσατον*, *ἔλῦσάτην* ; *ἔλύσαμεν*, *ἔλύσατε*, *ἔλῦσαν*. From the active the *-α-* was then extended to all forms of the middle (*ἔδειξάμην*, *ἔλῦσάμην* ;

ἐδείξαντο, ἐλύσαντο with -ντο from thematic verbs like ἐφέροντο; ἐδείξω, ἐλύσω with -ω from older -ασο), including the optative, imperative, infinitive and participle.

Before this levelling out of the -α- took place the -σ- in the dual and the first and second persons plural of the active and in the whole of the middle except the third person plural regularly disappeared in prim. Greek when the stem ended in a consonant (§§ 214, 221), but it was generally restored again at a later prehistoric period after the analogy of forms where it regularly remained. The regular old middle was preserved in Homeric forms like ἄλτο, ἄλμενος: ἄλλομαι, ἄρμενος: ἦρσα, δέκτο: δέχομαι, κατέπηκτο: κατέπηξα, λέκτο: ἔλεξα, ἔμικτο: ἔμιξα, πάλτο: ἔπηλα from \*ἐπαλσα; ὦρτο: ὦρσα, &c.

§ 508. When the base ended in a nasal the -μσ- and -νσ- became assimilated to -μμ-, -νν- which remained in Lesb. and Thess. but became simplified with lengthening of the preceding vowel in the other dialects as ἔνειμα, Lesb. ἔνεμμα: νέμω; ἔμεινα, Lesb. ἔμεννα: μένω (§ 216); ἔφηνα from \*ἐφανσα: φαίνω, ὕφηνα from \*ὕφανσα: ὑφαίνω; and similarly with the verbs in -αίνω, as ἐλέηνα: λααίνω, Hom. λειαίνω, ὠνόμηνα: ὀνομαίνω, ἐξήρᾶνα (§ 216): ξηραίνω; ἐπέρᾶνα: περαίνω.

§ 509. When the base or stem ended in a liquid assimilation also generally took place, with simplification of the double liquid and lengthening of the preceding vowel in Att. Ion., as ἔπηλα from \*ἐπαλσα: πάλλω; ἔστειλα, Lesb. ἔστελλα: στέλλω; ἔσφηλα, ἠγγειλα, ἔτιλα; ἔφθειρα, Lesb. ἔφθερρα from \*ἐφθερσα: φθείρω; ἔσῦρα (§ 217), &c., beside ἔκελσα, ἔκερσα, ὦρσα. In bases or stems ending in a dental the dental + -σ- became -σσ- which was simplified to -σ-, as ἔβλισσα: βλίττω, βλίσσω from \*βλιτῶ; ἔπερσα: πέρθω, ἔπεισα: πείθω; ἔψευσα: ψεύδω, ἐφεισάμην: φειδομαι, ἠλπισα: ἐλπίζω from \*ἐλπιδῶ (§ 166). The ζ in presents ending in -ζω came from -δj- and -γj- (§ 129, 8).

When it came from the former the aorist regularly had *-σ-* from older *-σσ-*, and *-ξ-* when from the latter, but in consequence of the presents being alike confusion arose in the aorist, cp. Hom. *ἦρπασα* beside *ἦρπαξα* : *ἀρπάζω* from *\*ἀρπαγῶ*; Att. *ἑσάλπισα* beside *ἑσάλπιγξα* : *σαλπίζω* from *\*σαλπιγγῶ*. In Doric the *-ξ-* became generalized for both kinds of aorists. On forms like Hom. *ἕξεσσα*, *ἔτρεσσα*, *ἐτέλεσσα* beside Att. *ἕξεσα*, *ἔτρεσα*, *ἐτέλεσα* : *ζέω*, *τρέω*, *τελέω* from *\*ζεσω*, *\*τρεσω*, *\*τελεσ-ῶ*, see § 212, 2. This *-σσ-* from bases or stems ending in *σ* became productive in the oldest period of the language and is common in Aeolic, Homer and his imitators, as *ἐγέλασσα*, *ἔμεσσα*, *ἐπέρασσα*, *δαμάσσαι*, *ἐλάσσαι*, *κρεμάσσαι*, *ὀλέσσαι*, *ὀμόσσαι*, &c.

§ 510. The *-σ-* also regularly disappeared in prim. Greek in several of the forms of bases or stems ending in a vowel, viz. in the first person singular of the active, the third person plural of the active and middle (§ 213, 2), in the first person singular of the middle and the first person plural of the active and middle (§ 214), but here again the *-σ-* was mostly restored after the analogy of those forms of the vocalic and consonantal bases and stems where it regularly remained. In aorists like *ἠλεύατο* : *ἠλευσα*, *ἔσσευα* (*ἔσειυα*), *ἔχεα* (Hom. also *ἔχευα*), *ἀλέασθαι* the old *σ-*less form became generalized. Apart from a few such isolated aorists without *-σ-*, all the vocalic bases and stems had intervocalic *-σ-* already in the oldest historic period of the language, as *ἤμεσα*, *ἐδάμασα*, *ὠμοσα*, *ἔχρησα* (§ 512); *ἐτίμησα*, *ἐφίλησα*, *ἐμίσθωσα* (§ 483); *ἐφόρησα* (§ 497).

§ 511. The stem-syllable of dissyllabic light bases had originally a lengthened vowel or diphthong in the singular of the active and weak grade vowel in the dual, plural and the whole of the middle (§ 507), but this original distinction was not entirely preserved in any of the languages in historic times. As we have already seen the Greek stem

of the aorist was a new formation formed direct from the present-stem and the stem of the aorist subjunctive (§ 507), as ἔβλαψα : βλάπτω, ἔπεμψα : πέμπω, ἔλεξα : λέγω, ἔπλεξα : πλέκω, and similarly ἔγραψα, εἶξα, ἔκοψα, ἔτερψα, ἔτηξα, ἔθρεψα, &c.; middle ἔγραψάμην, ἔκοψάμην, ἔθρεψάμην, ἔπλεξάμην, &c. ἔδειξα : Lat. *dixi*, ἔλειψα : Skr. *ārāikṣam*; ἔζυξα : Skr. *ājāukṣam*, ἔτευξα : τεύχω, ἔχεα (Hom. also ἔχευα) : χέω; middle ἔδειξάμην, ἔζυξάμην, ἔχεάμην, &c. In forms like ἔτεισα : Skr. *ácāiṣam*, ἔπλευσα the intervocalic -σ- was restored after the analogy of forms like ἔδειξα, &c. where the -σ- was not intervocalic. ἔσφηλα, ἔφθειρα from \*ἔσφαλσα, \*ἔφθερσα (§ 217), and similarly ἔτιλα, ἔδειρα, ἔσῦρα, &c. beside ἔκελσα, ἔκερσα, ὦρσα. ἔτεινα from \*ἔτενσα (§ 216), and similarly ἔκτεινα, ἔμεινα, ἔνειμα, ἔθεινα; ἔσπεισα from \*ἔσπενσα : σπένδω. ἔπεισα : πείθω, ἔψευσα : ψεύδω (§ 166). ἔξεσα : ζέω (§ 212, 2), εὔσα : εὔω.

§ 512. The aorists formed from dissyllabic heavy bases belong to the presents of Class IV (§ 458) and may be divided into two types according as the second syllable of the base contained the weak or the strong grade of ablaut. To the former belong aorists like ἤμεσα : ἐμέω, ὤλεσα; ἐδάμασα : δαμάω, ἐκέρασα, ἐκλασα, ἐκρέμασα, ἤλασα, ἐπέλασα, ἐγήρασα; ἤροσα, ὤμοσα; ἔφῦσα : ἔφῦν. And to the latter ἐδέησα, ἐδεύησα, ἐθέλησα, ἔμνησα, ἔνησα, ἔχρησα; ἔδρᾶσα; ἀν-έγνωσα : Skr. *ājñāsam*. The intervocalic -σ- in all these and similar aorists was restored after the analogy of aorists like ἔδειξα, &c.

§ 513. The formative element of characterized presents was often extended to the aorist, as ἔκλινα from \*ἔκλινσα : κλίνω from \*κλι-νῶ; ἤμῦνα, ἤμῦνάμην : ἀμύνω; ἔπλαγξα : πλάζω from \*πλαγγῶ, cp. Lat. *plango*, *plānxī*; ἐδίδαξα, ἐποίφυξα, ἐτέτρηνα : διδάσκω, ποιφύσσω, τετραίνω, &c.



THE PASSIVE AORIST IN *-θην*.

§ 514. The parent Indg. language had no special forms which were used exclusively to express the passive voice, but already at that period the middle came to have also a passive meaning which was preserved in Greek in such forms as *ἐ-δό-θης*, *ἐ-τέ-θης*, *ἐ-κτά-θης* = Skr. *á-di-thāḥ*, *á-dhi-thāḥ*, *á-kṣa-thāḥ*. The forms of the passive voice are accordingly expressed variously in the different Indg. languages. In Greek the only passive forms distinct from the middle are the second aorist in *-ην* and the first aorist in *-θην*. The aorist in *-ην* is, as we have already seen (§ 458), originally an active athematic formation with intransitive meaning which came to be used to express the passive in Greek. This aorist in *-ην* was also an important factor in the origin and development of the aorist in *-θην* which was a special Greek new formation and probably in part of the same origin as the preterite of denominative verbs in the Germanic languages. The origin of the aorist in *-θην* is difficult to account for satisfactorily. It is probable that several factors played an important part in its origin and development. Starting out from the second person singular of the aorist middle with the secondary ending *-θης* (= Indg. *-thēs*, Skr. *-thāḥ*, § 443) which occurs in such forms as *ἐ-δό-θης*, *ἐ-τέ-θης*, *ἐ-στά-θης*, *ἐ-κτά-θης* = Skr. *á-di-thāḥ*, *á-dhi-thāḥ*, *á-sthi-thāḥ*, *á-kṣa-thāḥ*, there was formed *ἐ-δό-θην*, *ἐ-δέ-θην*, &c. : *ἐ-δό-θης* after the analogy of aorists like *ἐ-μάν-ην*, *ἐ-μάν-η*, &c. : *ἐ-μάν-ης*, thus creating a complete new aorist out of a single form. But it is improbable that the aorist in *-θην* had its origin solely in the *-θης* of forms like *ἐ-δό-θης*, &c. In part at least it was probably also a periphrastic formation which was originally confined to denominative verbs, as in *ἐ-τιμή-θην*, *ἐ-φιλή-θην*, *ἐ-δηλώ-θην*, *ἤδέσ-θην*, &c., and then at a later period became extended to primary verbs as well. In this respect it

corresponds exactly in formation with the preterite of denominative verbs in the Germanic languages, as Goth. *salbō-da*, *I anointed*, *salbō-dēs*, *salbō-da*, where *-da*, *-dēs*, *-da* = Indg. *-dhēm*, *-dhēs*, *-dhēt*, which was originally an aorist of the root *\*dhē* which occurs in *τί-θη-μι*. If the assumption is right that the aorist in *-θην* was in part a periphrastic formation, there must have been a time when two types of the dual and plural existed side by side, viz. *ἐ-δό-θην* : *ἐ-δό-θημεν*, &c. and *ἐ-τίμη-θην* : *\*ἐ-τίμη-θε-μεν* (cp. *ἔ-θε-μεν*), &c. and that then the form *-θημεν* with *-η* became generalized. The periphrastic formation was originally active both in form and meaning as in the Germanic languages, but in Greek it became passive in meaning through the influence of the aorists of the type *ἐδόθην*, *ἐμάνην*. The aorist in *-θην* became very productive in the prehistoric period of the language and already in Homer it was far more common than that in *-ην*. Its great expansion was doubtless due to the large mass of denominative verbs.

#### THE PERFECT.

§ 515. The perfect had originally certain well-defined characteristics which clearly distinguished it from the other tenses. The more important of these characteristics were :—

(a) The personal endings in the active singular, as Indg. *\*wóid-a*, *\*wóit-tha*, *\*wóid-e* = *οἶδ-α*, *οἶσ-θα*, *οἶδ-ε*, Skr. *véd-a*, *vét-tha*, *véd-a*. What the original endings of the dual and plural were cannot be determined, because there is little or no agreement amongst the languages which have preserved the perfect forms in historic times (see §§ 440-1). (b) Reduplication with *e* (rarely *ē*) in the reduplicated syllable. (c) A different grade of ablaut in the active singular as compared with the active dual, plural, and the whole of the middle. (d) A special participial ending (§ 552).

§ 516. The perfect generally had reduplication with **e** in the reduplicated syllable, as *δέ-δορκα* = Skr. *da-dárṣa*; *πέ-πηγα* = Lat. *pe-pigī*. Beside **e** there also existed **ē** which is rare in Greek (cp. Hom. *δη-δέχεται* : *δέχομαι*) but common in Vedic. Latin and especially the Germanic languages show that unreduplicated perfects were also common in the parent Indg. language. But the reason why the perfect was originally formed partly with and partly without reduplication is unknown. The forms with reduplication became productive in Greek and Sanskrit and those without it in Latin and the Germanic languages. Already in the prim. Germanic period the old perfect active came to be used as a simple preterite and then a new periphrastic perfect was formed. What is called the perfect in Latin was a mixture of various kinds of formations, e. g. old perfects, as *tu-tudī*, *de-dī*, *vēnī*, *lēgī*; old strong aorists, as *te-tigī*, *pe-pulī*, *fidī*, *scidī*; and old s-aorists, as *dixī*, *lēxī*, &c. (§ 507).

Greek, Old Latin and Gothic show that the reduplicated syllable originally contained **e**, cp. O.Lat. *me-mordī*, *pe-pugī*, *te-tulī*, classical Lat. *ce-cidī*, *de-dī*, &c.; Goth. *haí-háit*, *he called*, *ga-raí-rōþ*, *he reflected upon* : inf. *háitan*, *ga-rēdan*. But in classical Latin the vowel in the reduplicated syllable became assimilated to that of the root-syllable when the present and perfect had the same vowel, as *mo-mordī*, *pu-pugī* : *mordeo*, *pungo*. In Sanskrit the reduplicated syllable generally had **a** = Indg. **e** (§ 42), as *da-dárṣa* = *δέ-δορκα*, but when the root-syllable contained the ablaut **ē** : **i** = Indg. **oi** : **i**; **ō** : **u** = Indg. **ou** : **u**, the vowel in the reduplicated syllable became assimilated to that in the root-syllable of the active dual and plural, and of the middle, as *ri-rēca* = *λέ-λοιπα*, pl. *ri-ricimá*; *tu-tōda*, *I have pushed* = Goth. *staí-stáut*, pl. *tu-tudimá*.

§ 517. In dealing with the reduplicated syllable it is necessary to distinguish between bases or stems which

began with a consonant and those which began with a vowel. When the base or stem began with a single consonant the reduplication consisted of this consonant + ε, as *δέ-δορκα*, *λέ-λοιπα*, but with dissimilation of aspirates, as *πέ-φευγα*, *τέ-θεικα*, *κέ-χυμαι* (§ 115). When the base or stem began with an explosive plus a nasal or liquid, the reduplication generally consisted of the explosive + ε, as *πέ-πνευκα*, *τέ-θνηκα* (with dissimilation of the aspirate), *γέ-γραφα*, *γέ-γλυμαι*. But combinations like *γν-*, *βλ-*, *ζ-*, *ξ-*, *ψ-*, *κτ-*, *πτ-* generally had simply *έ-* for the reduplicated syllable, as *έγνωκα*, *έβλάστηκα* beside *βεβλάστηκα*, *έζηκα*, *έξαμαι*, *έψαλκα*, *έκτονα*, *έπταισμαι*. In these and similar perfects the form of reduplication was due to the analogy of perfects like *έσχηκα*, *έσχημαι* : *έχω*. In bases or stems originally beginning with *s*, *w*; *s* or *w* + a consonant we have *έσχηκα* : *έχω* from *\*σεχω*; *έοικα* from *\*φε-φοικα*, *έολπα*; *είμαρται* from *\*σε-σμαρται*, *είληχα* from *\*σε-σληχα*, *είληφα*, *είλοχα*; *είωθα* from *\*σε-σφωθα*, *έσταλκα* from *\*σε-σταλκα*, *έστηκα* from *\*σε-στηκα*; *έρρωγα*, *είρηκα*, from *\*φε-φρωγα*, *\*φε-φρηκα*.

In bases or stems originally beginning with a vowel the *e* would regularly become contracted in the parent Indg. language, but it is not certain what were the rules governing this contraction in all cases, cp. *ήχα* (with prim. Greek *ā*) : *άγω* beside Lat. *ēgī* : *ago*; *ήσθα* which is properly the perfect of *είμί* (§ 452). In Greek it became the rule that the perfect had a long vowel. This occurs in the perfects with the so-called Attic reduplication, as Hom. *έδ-ηδώς* : Skr. *áda*, Lat. *ēdī*; *όδ-ωδα*, *όλ-ωλα*, *όπ-ωπα*, *όρ-ωρα*, *έλ-ήλακα*, *έλ-ήλαμαι*; after the analogy of which were formed Att. *άκ-ήκοα*, *άλ-ήλιφα*, *άλ-ήλιμαι*, *έλ-ήλυθα*, &c. This type of perfect with the so-called Attic reduplication was a special Greek new formation, and the reduplication was based on the analogy of the reduplicated presents and aorists.

§ 518. The perfect belonged to the athematic conjugation and accordingly had a difference of ablaut in the active singular as compared with the active dual, plural, and the middle. In verbs belonging to the e-series of ablaut the active singular had the strong grade *o* in the root-syllable, and the weak grade in all other forms, as *οἶδα*, Skr. *véda*, Goth. *wáit*, *I know* : pl. *ἴδ-μεν* (Att. *ἴσ-μεν*), Skr. *vid-má*, Goth. *wit-um*; *γέ-γον-α* : *γέ-γα-μεν*, *πέ-πονθα* : *πε-παθυῖα*, *τέ-τροφα* : *τε-τράφαται*. Other examples with *o* in the active singular are : *δέδορκα*, *δι-έφθορα*, *εἰλήλουθα*, *ἔκτονα*, *ἔμμορα*, *ἔοικα*, *ἔολπα*, *ἔοργα*, *ἔστροφα*, *κέκλοφα*, *κέχοδα*, *λέλογχα*, *λέλοιπα*, *πέποιθα*, *τέτοκα*. Or a long vowel in the active singular and *ə* (= Gr. *α*, § 49) in all other forms, as *λέ-ληθα* : *λέ-λασμαι*, *λέ-λασται*, *λε-λασμένος*. In the active singular the accent was originally on the root-syllable, as in Skr. *da-dárs̥a*, *ja-jāna* beside Gr. *δέ-δορκε*, *γέ-γονε*. Sanskrit and the old Germanic languages preserved almost entirely the original distinction between the strong grade of ablaut in the active singular and the weak grade in the dual and plural, but in Greek the original distinction was in a great measure obliterated by levelling and new formations already in the oldest period of the language. Regular old forms were *οἶδα*, *ἔοικα*, *γέ-γονα*, *μέ-μονα* beside *ἴδμεν*, *ἔκτον* from *\*φε-φικτον*, *γέ-γα-μεν*, but *γεγόναμεν* with *-o-* from the singular, and similarly Hom. *εἰλήλουθμεν* beside *εἰλήλυθμεν* : *εἰλήλουθα*. In nearly all other verbs either the vowel of the singular was levelled out into the dual and plural, as in *εἰκόκαμεν*, *λελοίπαμεν*, *πεποίθαμεν*, *τετρόφαμεν*, *ἐρώγαμεν* : *εἰκόκα*, *λέλοιπα*, *πέποιθα*, *τέτροφα*, *ἐρωγα*; and similarly with a large number of other verbs. Or more rarely the vowel of the dual and plural was levelled out into the singular, as in Att. *εἰλήλυθα*, *τέτραφα*. In many verbs the perfect active had its vowel direct from the stem of the present, as *πέφευγα* for *\*πέφουγα* : *φεύγω*, and similarly *βέβλεφα*, *γέγραφα*,

λέλεγα, πέπλεχα, βέβριθα, γέγηθα, ἔρριγα, κέκλαγγα : κλάζω from \*κλαγγω.

The weak grade of ablaut was mostly preserved in the middle, as δέδαρμαι, δεδαρμένος : δέρω, and similarly ἔσπαρται, πέπαρμαι, πεπαρμένος, πέπυσμαι, τέταμαι, τετράφαται, τέθραμμαι, πέφαται, πεφυγμένος, &c. But the middle had also sometimes its vowel direct from the stem of the present, as λέλειμμαι, λέλειπται, λειμμένος : λείπω, and similarly γέγευμαι, γέγευται, τέτεισμαι, τέτεισται, Hom. τετεύχεται : τετυγμένος.

§ 519. The original inflexion of the active was fairly well preserved in a perfect like οἶδα, as

	Greek.	Skr.	Goth.
Sing. 1.	οἶδα	véda	wáit
	2. οἶσθα	véttha	wáist
	3. οἶδε	véda	wáit
Plur. 1.	ἴδμεν (ἴσμεν)	vidmá	witum
	2. ἴστε	vidá	witup
	3. ἴσᾱσι	vidúr	witun

On the Greek personal endings of the plural see § 441. The -σ- in ἴσμεν, ἴσᾱσι from \*ἴσαντι was due to levelling out of the -σ- in ἴστε, and in the dual ἴστον where it was regular (§ 110). This mode of inflexion was only preserved in a few verbs in Greek. All others had an -α- between the stem ending in a consonant and the personal ending beginning with a consonant, as λέλοιπα, λέλοιπ-α-ς, λέλοιπε, λελοίπ-α-τον, λελοίπ-α-μεν, λελοίπ-α-τε, λελοίπᾱσι, cp. also the Ionic new formations οἶδ-α-ς, οἶδ-α-μεν, οἶδ-α-τε, οἶδᾱσι. The most commonly accepted explanation of this -α- is that it first arose in the s-aorist (§ 507) and then became extended by analogy to the perfect. The -ασ of the second pers. sing. λέλοιπας was undoubtedly of this origin. On the discussion of other explanations which have been proposed see Brugmann, *Kurze vergl. Grammatik*, pp. 544-5.

§ 520. The  $\kappa$ -perfect, also called the first or weak perfect, was a Greek new formation which does not occur in the other Indg. languages. Although much has been written upon the subject, no really satisfactory explanation has ever been given of the origin of this formation. The  $\kappa$  is generally regarded as being a root-determinative, found in the aorists ἔ-θηκα = Lat. *fēcī* : *facio*, ἦκα = Lat. *jēcī* : *jacio*, which became productive in Greek, cp. ἔδωκα : ἔδομεν after the analogy of ἔθηκα : ἔθεμεν. Then after the analogy of these aorists were formed the perfects τέθηκα, δέδωκα, ἔστηκα : ἔσταμεν, εἶκα from \*je-jeka, Dor. ἀφ-έωκα ; πέφυκα, τέτληκα : πεφύασι, τέτλαμεν. From perfects of this type the  $\kappa$ -formation became extended in the first instance to all bases or stems ending in a vowel, and the  $\kappa$  was levelled out into the dual and plural, as τέθηκα, τεθήκαμεν (later τέθεικα, τεθείκαμεν with -ει- after the analogy of εἶκα), and similarly βέβηκα, βέβηκα, βέβρωκα, γεγάμηκα, δέδρακα, κέκμηκα, ἔγνωκα, νενέμηκα, τετίμηκα ; δέδεκα : δέδεμαι, τέτακα : τέταμαι, &c. It was afterwards extended to those verbs which in the future and s-aorist had bases or stems that came to be felt as ending in a vowel, as πέπεικα : πείσω, ἔπεισα, πείθω, and similarly ἔσπακα, ἔσπεικα, τετέλεκα, &c. And then lastly in the post-Homeric period it was extended to bases and stems ending in a consonant, as ἔφθαρκα, ἔσταλκα : ἔφθαρται, ἔσταλται ; ἦγγελκα, πέφαγκα, &c. So that in the classical period the perfect of the majority of Greek verbs was formed with the suffix -κα and the original difference of ablaut-grade between the active singular, and the dual and plural was disregarded.

§ 521. The aspirated perfect was also a Greek new formation and consisted in the aspiration of  $\kappa$ ,  $\gamma$ ,  $\pi$ ,  $\beta$  when the perfect stem ended in one of these consonants. This new formation took place earlier in the third person of the middle than in the active. In Homer it is only found in the middle, as ἔρχαται, ἔρχατο : ἔργω ; δηδέ-

χαται : δέκομαι ; τετράφαται, τετράφατο : τρέπω. With the exception of πέπομφα : πέμπω and τέτροφα : τρέπω it is not found in the active in the early classical period. From about the time of Aristophanes and Plato onwards it became more and more common, as πέπλεχα : πλέκω, ἦχα : ἄγω, βέβλεφα : βλέπω, and similarly δέδοχα, ἔπτηχα, κεκήρυχα, μέμαχα, πέπραχα, ἔξευχα, εἴλοχα, λέλεχα ; βέβλαφα, ἔρριφα, κέκλοφα, κέκοφα, τέτριφα, &c. Both the middle and the active forms were analogical formations, starting out from verbs originally ending in an aspirate (χ, φ) which regularly fell together with those ending in κ, γ, π, β in all the middle forms except in the third person ending in -αται, -ατο, as γέγραμμαι, γέγραψαι, γέγραπται : τέτραμμαι, τέτραψαι, τέτραπται after the analogy of which were formed τετράφαται, τέτροφα beside γεγράφαται, γέγραφα.

§ 522. Various phonological changes took place in the middle which have already been mostly dealt with in the Phonology. When the stem ended in a labial the labial became assimilated to a following μ, as λέλειμμαι, τέτριμμαι, γέγραμμαι : λείπω, τρίβω, γράφω (§ 117). Stems ending in κ, χ have γ before a following -μ, as πέπλεγμαι, ἀφίγμαι, πεφύλαγμαι, τέτυγμαι : πλέκω, ἀφικνέομαι, φυλάσσω from \*φυλακῆω, τεύχω. This γ was due to the analogy of forms like λέλεγμαι beside λέλεξαι, λέλεκται where γ regularly became κ before σ and τ and thus fell together in these forms with stems ending in κ, χ. Stems ending in σ and a dental generally have the endings -σμαι, -σμεθα, -σμενος with σ restored (§ 214) after the analogy of endings like -σται where the σ was regular, as ἔξεσμαι for \*ἔξειμαι : ἔξεσται, and similarly ἔσπασμαι, ἔξωσμαι, τετέλεσμαι, &c. beside the regular forms ἔξωμαι (Attic inscriptions), γέγευμαι from which was formed γέγευται for \*γεγευσται ; λέλασμαι for \*λέλαθμαι after the analogy of λέλασται : λέληθα, and similarly πέπεισμαι, πέπυσμαι,



πέφρασμαι for \*πέφραδμαι, cp. -πεφραδμένος. The σ was also introduced analogically into stems ending in ν or a vowel, as πέφασμαι : πέφανται, ἐξήρασμαι, ὕφασμαι, beside the regular forms ἤσχυμμαι, ὠξυμμαι with assimilation of νμ to μμ (§ 150); τέτεισμαι, τέτεισται, ἔγνωσμαι, κέκλαυσμαι beside the regular forms κέκλαυμένος, κέκλαυται.

#### THE PLUPERFECT.

§ 523. The parent Indg. language had no special forms which were used exclusively to express the pluperfect. It accordingly came to be expressed differently in the different languages. Greek had two distinct formations of the pluperfect.

1. The augmented perfect forms together with secondary personal endings. In this formation the active dual and plural were athematic, but the singular was thematic after the analogy of the imperfect, as Hom. ἔστατον, ἐίκτην, γεγάτην, ἐπέπιθμεν, ἐδείδιμεν, ἔσταμεν, ἔστατε, βέβασαν, ἐδείδισαν, ἔστασαν, μέμασαν, ἴσαν from \*φίδσαν, &c., but singular Hom. ἐμέμηκον, ἐπέπληγον, ἐγέγωνε, δείδιε, &c. Middle Hom. τετύγμην, κεχόλωσο, ἐτέτακτο, ἐτέτυκτο, τετάσθην, βεβλήατο, ἠλήλατο.

2. But the usual mode of forming the active pluperfect started out originally from dissyllabic heavy bases ending in -ε in Greek (§ 458), to which were added in the singular the personal endings -α, -ας, -ε of the perfect, contracted with the -ε in Attic into -η, -ης, -ει (= Herodotus -εα, -εας, -εε); but dual -ε-τον, -ε-την, pl. -ε-μεν, -ε-τε, -ε-σαν where the -ε- belonged to the base as in ὠλώλε-μεν. The -ε then became extended to other verbs, as ἐλελοίπη, ἐλελοίπης, ἐλελοίπει; ἐλελοίπετον, ἐλελοιπέτην; ἐλελοίπεμεν, ἐλελοίπετε, ἐλελοίπεσαν. At a later period in Attic were formed the endings -ειν, -εις with ει from the third person singular, and then the ει was levelled out into the dual and plural.

NOTE.—The prim. Greek preterite to οἶδα was formed from

the stem *φειδη-* (cp. *εἰδήσω*, and Lat. *vidē-re*) with *-η-* in all forms of the tense, as \**ἦφειδην*, *-ης*, *-η* (Hom. *ἦείδην*), pl. \**ἦφειδημεν* (= Hesych. *ἦδημεν*). *ἦδεμεν*, *ἦδετε*, *ἦδεσαν* were new formations after the analogy of *ἐλελοίπη-ε-μεν*, &c. The regular form of the first person singular would have been \**ἦδην*. The form *ἦδεα*, Att. *ἦδη* was either a new formation after the analogy of *λελοίπεα*, *-η* or else it was an aorist formation corresponding to a prim. Greek form \**ἦφειδεσα* (§ 430).

### THE INJUNCTIVE.

§ 524. Beside the subjunctive there also existed in the parent Indg. language the injunctive which in appearance consisted of unaugmented indicative forms with secondary personal endings, cp. *φέρει*, *φέρετε* = Skr. *bhārat*, *bhārata*, beside the imperfect *ἔφερε*, *ἔφετε* = Skr. *á-bharat*, *á-bharata*; *θές*, *δός* for \**θής*, \**δός* = Skr. *dhāḥ*, *dāḥ*, beside the aorist *á-dhāḥ*, *á-dāḥ*. This mood, also sometimes called the impure subjunctive, was fully developed in Vedic and was used with an indicative and subjunctive meaning, but in classical Sanskrit it was only preserved in imperative forms and in combination with the negative particle *mā* = *μή* to express prohibitions, as *má krthāḥ*, *do not do*, *má dhāḥ*, *do not place*, beside the aorist *á-krthāḥ*, *á-dhāḥ*. The injunctive was originally used partly with a present meaning, e.g. when the verbal form was unaccented, as in \**pró bheret* beside \**bhēret* = *φέρει*, partly with a past meaning, and partly also with a voluntative or future meaning. But already in the prim. Indg. period the second and third persons (except the second pers. sing. active) had become part of the imperative system in making positive commands (§ 539), as *ἔπεο*, *ἔπου* = Lat. *sequere*, Indg. \**séqeso*; *φέρετε*, *φέρετον*, *φερέτων* for \**φερέτᾱν* = Skr. *bhārata*, *bhāratam*, *bhāratām*; middle *φέρεσθε*, *φέρεσθον*, *φερέσθων*. In Sanskrit and prim. Greek the

second pers. sing. of the aorist active also came to be used for the imperative, as **dhāh**, **dāh** = **θές**, **δός**, and similarly **ἔς**, **ἐνί-σπες**, **σχές**, &c.

### THE SUBJUNCTIVE.

§ 525. The original subjunctive, also called conjunctive, was preserved in Greek, Latin and Vedic, but in classical Sanskrit it had practically disappeared and its place was taken by the optative. It was also supplanted by the optative in the prehistoric period of the Germanic and Baltic-Slavonic languages. The original personal endings were partly primary and partly secondary. In the parent Indg. language the subjunctive was formed in various ways according as the stem of the indicative ended in (a) a consonant or (b) in **-e**, **-o** (dissyllabic light bases) or (c) in a long vowel (monosyllabic and dissyllabic heavy bases).

§ 526. Type (a). The subjunctive to indicative stems ending in a consonant had the characteristic formative element **-e**, **-o**. The **-e**, **-o** was doubtless of the same origin as the **-e**, **-o** in the present and strong aorist of the thematic verbs, as **λείπο-μεν**, **λείπε-τε**, **ἐλίπο-μεν**, **ἐλίπε-τε**, so that the subjunctive of this type was the same in form as the present indicative of the thematic verbs. To this type belong presents and strong aorists like **ἔω**, **ῶ** = Lat. fut. **ero**, Indg. **\*esō**, Hom. **ἴομεν** : indic. **ἴμεν**, **ἄλεται** : **ἄλτο**, **φθίεται**, **φθιόμεσθα** : **φθίτο**; the verbs **ἔδομαι**, **πίομαι**, **χέω**, &c. which came to be used as futures (§ 498). s-aorists, common in Homer and his imitators, as **ἀλγήσετε**, **ἀγείρομεν**, **βήσομεν**, **τείσομεν**, **ἀμείψεται**, Ion. **ποιήσει**, Cret. **δείκσει**, **ὀμόσει**; fut. **ἄξω**, **οἴσω**, **ὄψομαι** (§ 499); the imperatives **ἄξετε**, **οἴσε**, **ὄψεσθε**, **λέξεο**, &c. Perfects like Hom. **εἶδομεν**, **εἶδετε** : **οἶδα**, but **εἶδῶ** from **\*φειδεσω**, **πεποίθομεν**.

From the time of Homer onwards the **-ε**, **-ο** began to be supplanted by **-η**, **-ω** in all tenses except in those forms

which became used for the future and imperative. This change in Greek as in other Indg. languages was doubtless due to the fact that the latter was a more distinctive formation of the subjunctive, cp. ἴωμεν beside Hom. ἴομεν, τείσωμεν, πεποίθωμεν, &c.

§ 527. Type (b). The subjunctive to thematic indicative stems (dissyllabic light bases) had in Greek -η-, -ω- corresponding to the -ε-, -ο- of the indicative. It is uncertain whether this -η- and -ω- existed in the parent Indg. language or whether the -η- alone belonged originally to all forms of the subjunctive. So far as Greek is concerned the -η-, -ω- might be a contraction of the -ε-, -ο- in dissyllabic light bases like φερε-, φερο- with the -ε-, -ο- which occurs in the subjunctive of type (a), but this explanation does not account for the long -ā- in forms like Lat. *ferā-mus*, *ferā-tis* beside the fut. *ferē-mus*, *ferē-tis*. Sanskrit unfortunately throws no light upon this difficult point, because in this language Indg. ē, ō, ā all fell together in ā (§ 42). It is, however, far more probable that the -η- originally belonged to all forms of the singular, dual and plural, and that \*φέρην, \*φέρημεν, \*φέρηντι then became φέρω, φέρωμεν, φέρωντι (φέρωσι) after the analogy of the present indic. φέρω, φέρομεν, φέροντι (φέρουσι). This -η- had its origin in dissyllabic heavy bases ending in -ē (§ 458), cp. subj. ἴδη-τε : Lat. *vidē-te*, *πίθη-ται* : *πεπιθή-σω*, *βάλη* : *ἔ-βλη-ν*, and it is probable that the whole formation originally started out from the injunctive forms of the strong aorist of such bases as regularly had η in all forms of the singular, dual and plural (§ 528). And in like manner the ā, which occurs in Latin, Keltic and the Slavonic languages, probably started out from the injunctive forms of dissyllabic bases ending in -ā (§ 458). The inflexion of type (b) in Vedic was sing. *bhārā-ni*, *bhārā-s(i)*, *bhārā-t(i)*, pl. *bhārā-ma*, *bhārā-tha*, *bhārā-n*, but in Greek φέρω, φέρης, φέρη, φέρω-μεν, φέρη-τε, φέρω-ντι (φέρω-σι), where φέρης, φέρη from older

\*φέρη-εις, \*φέρη-ει had ει from the endings of the present indicative. The regular forms would have been \*φέρη-ς, \*φέρη. For φέρω-ντι (φέρω-σι) we should have expected \*φέρο-ντι (\*φέρουσι) with shortening of the -ω- (§ 70), but either the -ω- was introduced into the third person plural after the law for the shortening of long vowels in this position had ceased to operate, or else it was re-introduced from φέρω-μεν in order to preserve the distinction between the subjunctive and indicative.

In like manner was formed the subjunctive of denominative verbs from vocalic stems, as τιμάωμεν, τιμάητε, φιλέωμεν, φιλήητε, Att. τιμῶμεν, &c. The contracted forms of the subjunctive and indicative of τιμάω regularly fell together in Attic in the second and third persons singular, and then after the analogy of these the indicative forms δηλοῖς, δηλοῖ also came to be used for the subjunctive of δηλόω.

§ 528. Type (c). The subjunctive to indicative stems ending in a long vowel. Here a distinction must be made according as the final long vowel of the indicative stem originally belonged (1) to all forms of the singular, dual and plural or (2) belonged only to the active singular. The regular old subjunctive forms of (1) were preserved in some Doric dialects, as Mess. γράφηντι beside Att. γράφωσι, Heracl. οἰκοδόμηται : indic. οἰκοδομεῖται, Cret. πέπᾶται, Ther. πέπρᾶται. But already in Homer the original forms were remodelled after the analogy of types (a) and (b), as δαμήω, δαμήετε : ἐ-δάμην, τραπήομεν : ἐ-τράπην, γνώομεν : ἔ-γνων, &c. beside δαμήης, φανήη, γνώη, γνώωσι, &c. Prim. Greek had in (2) the long vowel in all forms, but it cannot be determined what were the original Indg. forms of the dual and plural active and of the middle. A few such forms have been preserved in various dialects, as Cret. δύνᾶμαι, νύνᾶται, νύνᾶντι, ἴθθᾶντι = ἴστᾶντι, Mess. προ-τίθηντι, Arcad. ἐπισυν-ίστᾶτοι, δέᾶτοι (§ 444), &c. But already in Homer the prim. Greek forms

were also here remodelled after the analogy of types (a) and (b), as δάομεν, θήομεν, στήομεν, στήετον, and with quantitative metathesis, Hom. θέομεν, στέομεν, &c. (§ 72), beside δάοσι(ν), στήοσι, δώησι(ν), στήησ, θήη, &c. Attic regularly has the contracted forms, as διδῶ, διδῶς, διδῶ, διδῶμεν, διδῶτε; τιθῶ, τιθῆσ, τιθῆ, τιθῶμεν, τιθῆτε, &c.

§ 529. In some verbs Attic and Ionic had new formations in the middle. After the analogy of φέρωμαι : φέρηται was formed τίθωμαι : τίθηται. After  $\bar{a}$  had become  $\eta$  in Attic and Ionic (§ 51) we then also have ἐπίστωμαι : ἐπίστηται, and similarly δύνωμαι, κρέμωμαι, μάρνωμαι. The circumflex in τιθῶμαι, διδῶμαι, ἰσθῶμαι was due to the analogy of the active.

#### THE OPTATIVE.

§ 530. The optative was originally formed in two ways according as the corresponding tense-stems of the indicative were athematic or thematic. The optative to the athematic indicative stems had the formative element  $\cdot(i)j\bar{e}\cdot$ ,  $\cdot\bar{i}\cdot$  where  $\cdot\bar{i}\cdot$  was the weak grade of  $\cdot j\bar{e}\cdot$  (§ 90), and the optative to thematic indicative stems had  $\cdot\bar{i}\cdot$  which combined with the thematic vowel  $\cdot o\cdot$  to form the diphthong  $\cdot oi\cdot$ . Both types of optatives had secondary personal endings.

§ 531. In the first type of optative the active singular had  $\cdot(i)j\bar{e}\cdot$  and all other forms of the active and the whole of the middle had  $\cdot\bar{i}\cdot$  before endings beginning with a consonant, but  $\cdot(i)j\cdot$  before endings beginning with a vowel. In the active singular the accent was on the  $\cdot\bar{e}\cdot$ , but in all other forms on the personal endings, and the stem had accordingly the weak grade of ablaut. The weak form of the stem was however generally supplanted by the strong form already in prim. Greek, i.e. the optative came to be made direct from the strong grade form of the stem. The original manner of forming this type of the optative was only preserved in the historic period of the language when the stem originally

ended in a vowel or came to end in a vowel after the loss of intervocalic *-σ-* (§ 213, 2), as *στα-ίην*, *θε-ίην*; *ε-ίην*, *ε-ίμεν* from *\*έσ-γήν*, *\*έσ-τμεν*; *είδε-ίην*, *είδε-ίμεν* from *\*φειδεσ-γήν*, *\*φειδεσ-τμεν*. The original inflexion of *είην* was:—

	Indg.	Gr.	Skr.	O.Lat.
Sing. 1.	<i>*s-(i)jé-m</i>	<i>είην</i>	<i>syám</i>	<i>siem</i>
2.	<i>*s-(i)jé-s</i>	<i>είης</i>	<i>syáh</i>	<i>siēs</i>
3.	<i>*s-(i)jé-t</i>	<i>είη</i>	<i>syát</i>	<i>siet</i>
Plur. 1.	<i>*s-ī-m'</i>	<i>είμεν</i>	<i>syáma</i>	<i>sīmus</i>
2.	<i>*s-ī-té</i>	<i>είτε</i>	<i>syáta</i>	<i>sītis</i>
3.	<i>*s-(i)j-ént</i>	<i>είεν</i>	[ <i>syúr</i> ]	<i>sient</i>

In Greek the stem had the strong grade of ablaut which occurs in *έσ-τί*, so that the prim. Greek forms were *\*έσ-γή-ν*, *\*έσ-γή-ς*, *\*έσ-γή-(τ)*, pl. *\*έσ-τ-μέν*, *\*έσ-τ-τέ*, *\*έσ-τ-έν(τ)*. From the time of Homer onwards the *-ιη-* of the singular became levelled out into the dual and plural, as *είητον*, *είήτην*, *είημεν*, *είητε*, *είησαν*, and similarly *σταίημεν*, *θείημεν*, *δοίημεν*. A similar levelling out of the *-yā-* also took place in the prehistoric period of Sanskrit, as *syáma* for *\*sīmá*, whereas in classical Latin the *-ī-* of the plural was levelled out into the singular, as *sim*, *sīs*, *sit*, and similarly in prim. Germanic, as in Old High German *sī*, *sīs*, *sī*, pl. *sīm*, *sīt*, *sīn*.

But the optative to indicative stems ending in a consonant came to be formed after the analogy of the thematic type already in prim. Greek, as *λε-λοιπ-οι-μι*, *λε-λοιπ-οι-μεν*: *λέ-λοιπ-α*; *δείξ-αι-μι*, *δείξ-αι-μεν*, *δείξ-αι-το*: *έ-δειξ-α*; *λύσ-αι-μι*, *λύσ-αι-μεν*: *έ-λυσ-α*; cp. on the other hand Skr. *vid-yā-t*: indic. *véd-a* = *οίδε*; *ri-ric-yā-t*: indic. *ri-réc-a* = *λέ-λοιπ-ε*; third pers. sing. of the *s*-aorist middle *dikṣ-ī-ta*: indic. *á-dikṣ-i*, cp. Lat. *dīx-ī-mus*.

§ 532. The regular optative to dissyllabic heavy bases, which had a long vowel in the second syllable of all forms of the indicative, was in prim. Greek *\*δράζην*, *\*γνώζην*, pl.

\*δραῖμεν, \*γνωῖμεν : indic. ἔ-δρᾶν, ἔ-γνων, pl. ἔ-δρᾶμεν, ἔ-γνωμεν, which would regularly have become \*δρᾶην, \*γνωην (§ 128), pl. \*δραιμεν, \*γνοιμεν with shortening of the long vowel (§ 63). The historic forms δραῖην, γνοῖην were new formations either after the analogy of θείην, δοῖην, σταίην or else with αι, οι from the plural \*δραιμεν, \*γνοιμεν; and similarly ἀλοῖην, βαλείην, βλείην, γηραῖην, κιχείην, φανείην, &c. The circumflex in the pl. δραῖμεν, γνοῖμεν, ἀλοῖμεν, βαλείμεν, βλείμεν, κιχείμεν, φανείμεν, &c. as also in forms like τιθείμεν, θεῖμεν (§ 533) has never yet been satisfactorily explained, see Brugmann, *Griech. Grammatik*, third ed., p. 338.

§ 533. The optative to monosyllabic heavy ablaut-bases had the weak form of the base, as τι-θε-ίη-ν, θε-ίη-ν, pl. τι-θείμεν, θεῖμεν : indic. τί-θη-μι, τί-θε-μεν. The ι in the sing. θείην, &c. was either due to levelling out of the ι of the dual and plural (except the third person which was also a similar new formation) into the singular or else it represented Indg. -ij-, as \*dhə-ijē-m corresponding to Sanskrit dhēyām. An Indg. form \*dhə-jē-m would have become \*θεην in Greek. The circumflex in θεῖμεν, τιθείμεν, θεῖτο, τιθείτο presents the same difficulty as in δραῖμεν for \*δραῖμεν (§ 532); and similarly διδοῖην, δοῖην (Skr. dēyām), ἰσταῖην, σταῖην (Skr. sthēyām), φαῖην, pl. διδοῖμεν, δοῖμεν, ἰσταῖμεν, σταῖμεν, φαῖμεν; pf. ἔσταῖην, ἔσταῖμεν, τεθναῖην. In Herodotus and later Attic the -ιη- of the active singular was levelled out into the dual and plural, as θείημεν, δοῖημεν, σταῖημεν (cp. § 531).

§ 534. The original formation of the optative to disyllabic heavy ablaut-bases was not preserved in Greek. The original optatives of this type were remodelled after the analogy of the thematic type, as κρέμαιτο : indic. κρέμαται; δεικνύοιμι, δεικνύοιμεν, δεικνυοίμην, δεικνυοίμεθα, the optative to presents in -νῦμι would regularly have had \*-νυ(j)ην, pl. \*-νυφιμεν, cp. Skr. ῥ-ἡ-υᾶ-t, middle ῥ-ἡ-νυ-



**ī-tá** : indic. **ῤ-ῥῶ-ti**, *he moves*; **μαρνοίμην, μαρνοίμεθα** : indic. **μάρναται, δύναιτο** : indic. **δύναται**, cp. Skr. middle **ṣṛ-ṇī-tá** : indic. **ṣṛ-ṇā-ti**, *he breaks in pieces*.

§ 535. The Greek optative to the s-aorist was a new formation after the analogy of the thematic type, as in **λύσαιμι, λύσαις, λύσαι**; **λύσαιτον, λῦσαιτήν**; **λύσαιμεν, λύσαιτε, λύσαιεν**; middle **λῦσαιμην** : **ἔ-λῦσ-α, ἐ-λῦσ-ά-μην**, where the **-α-** of the s-aorist indicative (§ 507) came to be regarded as a thematic vowel like the **-ο-** in **φέροιμι, φεροίμην**; and similarly **δείξαιμι, δείξαιμεν, δειξαίμην** : **ἔ-δειξα, φήναιμι, φήναιμεν, φηναίμην** : **ἔ-φηνα** from **\*ἔ-φανσα**, &c.

The so-called Aeolic optative of the s-aorist which occurs in Homer and Attic was also a Greek new formation with reduplication of the s-element of the aorist and with **ε** from the original s-aorist of the subjunctive, as **δείξειας, δείξειε**, third pers. pl. **δείξειαν** from **\*δεικσεσαν**, and similarly in Lat. **dīxerim, dīxerimus** beside the regular old forms **dīxim, dīximus**.

§ 536. The optative to thematic indicative stems had originally **-ī-** which combined with the thematic vowel **-ο-** to form the diphthong **-oi-**, but **-oj-** before endings beginning with a vowel. This type of optative was preserved in Greek, Sanskrit and also in the old Germanic languages, but with the function of the subjunctive, whereas in Latin it disappeared already in the prehistoric period of the language. The original inflexion of this type of optative was:—

	Indg.	Gr.	Skr.	Goth.
Sing. 1.	<b>*bhéroj-ṃ</b>	<b>φέροιμι</b>	<b>bhárēyam</b>	<b>baíráu</b>
	<b>*bhérois</b>	<b>φέροις</b>	<b>bhárēḥ</b>	<b>baíraís</b>
	<b>*bhéroit</b>	<b>φέροι</b>	<b>bhárēt</b>	<b>baíraí</b>
Dual 2.	<b>*bhéroit-om</b>	<b>φέροιτον</b>	<b>bhárētam</b>	
	<b>*bhéroit-ām</b>	<b>φεροίτην</b>	<b>bhárētām</b>	
Plur. 1.	<b>*bhéroim-</b>	<b>φέροιμεν</b>	<b>bhárēma</b>	<b>baíráima</b>
	<b>*bhéroite</b>	<b>φέροιτε</b>	<b>bhárēta</b>	<b>baíraip</b>
	<b>*bhéroj-ṅt</b>	<b>φέροιεν</b>	<b>bhárēyur</b>	<b>baíraína</b>

The regular forms of the first pers. singular and the third pers. plural were not preserved in the historic period of any of the languages. Both forms would regularly have become \*φέρω from older \*φέροια. φέρομι had the stem φέροι- from the other persons where it was regular and -μι after the analogy of the athematic presents, and similarly φέροι-εν with -εν from the optative of the athematic type (§ 531). And in like manner both forms would regularly have become \*bhārāya in Sanskrit, but the stem bhārēy- had -ē- from the other forms.

§ 537. In the -έω class of contract verbs the optative plural φιλέοιμεν, &c. regularly became contracted into φιλοῖμεν, &c., and thus fell together with the athematic type διδοῖμεν. And then after the analogy of διδοῖμεν : διδοῖην to φιλοῖμεν a new singular φιλοῖην was formed, and at a later period the -οῖη- of the singular was levelled out into the dual and plural. After the analogy of the optative of this type were also formed new optatives to the contract verbs in -άω, -όω.

§ 538. The prim. Greek forms of the middle were \*φεροιμᾶν, \*φεροισο, \*φεροίτο (= Skr. bhārēta); \*φεροισθον, \*φεροισθᾶν; \*φεροιμεθα, \*φεροισθε, \*φεροίατο (= Indg. \*bhérojnto), on the personal endings see §§ 442-8. \*φεροίατο would regularly have become \*φερωτο. φέροιτο was a new formation with the stem φέροι- from the other forms and the ending -ντο from forms like ἐφέροντο. The old ending -ατο is found in Homer, Herodotus and the Attic dramatists in the combination -οι-ατο where -οι- was from the other forms.

#### THE IMPERATIVE.

§ 539. Already in the parent Indg. language the imperative system was made up of several distinct formations which included (a) injunctive forms, as φέρετε, Skr. bhārata; (b) forms with the bare stem, as φέρε, Skr. bhāra, ἔξ-ει, Lat.

**ex-ī**; and (c) compound forms, as ἴσ-θι, ἴσ-τω = Skr. **vid-dhí**, **vit-tád**. It had injunctive forms for the second person singular of the middle, the second person plural of the active and middle, and the second and third person dual of the active and middle, as ἔπεο = Lat. **sequere**; φέρετε, φέρεσθε; φέρετον, φερέτων for older \*φερέτᾱν after the analogy of φερέτω, φέρεσθον, φερέσθων, see § 524. To these were added in prim. Greek the injunctive forms of the second aorist active, as εἶσ-φρες, ἔκ-φρες, ἐνί-σπες, σχές, θές, δός, ἔς, &c. (§ 524). The active forms of the injunctive require no further comment and will therefore be omitted in the following paragraphs.

### 1. The Active.

§ 540. The second person singular was expressed (a) by the bare stem, as φέρε, Skr. **bhára**, Goth. **baír**; ἄγε, Lat. **age**; βάσκε, Skr. **gáccha**; τίμα, φίλει, δήλου, from τίμαε, φίλεε, δήλοε; τέλει from \*τελεσζε, φαῖνε from \*φανζε; aorists like εἶπέ, ἔλθέ, εὐρέ, ἰδέ, λαβέ beside λίπε, &c., where the former preserved the old accent when such imperatives were originally used at the beginning of the sentence, and the latter represented the original enclitic form (§ 38). ἔξ-ει, Lat. **ex-ī**: εἶ-σι, ἴστη: ἴστη-σι, and similarly δείκνῦ, κρήμνη, Lesb. πῶ beside πῶ-θι. At a later period the -ε in φέρε, &c. came to be regarded as an ending and was then extended to athematic verbs, as καθ-ίστᾱ from \*-ίσταε, τίθει from \*τίθεε, and similarly δίδου, κατά-βᾱ, ὄμννε, &c.

(b) By the addition of the accented adverbial particle **-dhí** (= Skr. **-dhí**, later **-hí**) to athematic stems. This formation only occurs in Greek, Aryan and the Baltic-Slavonic languages, but the fact that the stem had the weak grade of ablaut shows that it was very old. Examples are ἴ-θι, Skr. **i-hí**: εἶ-σι, Skr. **é-ti**; ἴσ-θι from \*φιδ-θι, Skr. **vid-dhí**; κλῦ-θι, Skr. **śru-dhí**; πῖ-θι beside πῶ-θι, Skr. **pā-hí**. Heavy

ablaut-bases, as *φά-θι* : *φη-σί*, *ἴλα-θι* from \**σι-σλα-θι*, *ὄρνυ-θι*, perfects *ἔστα-θι*, *κέκλυ-θι*, *τέτλα-θι*, *τέθνα-θι*, Hom. *δείδι-θι* from \**δεδφι-θι*. Heavy bases with a long vowel (§ 458), as *γνῶ-θι*, *τλῆ-θι*, *φάνη-θι*. After the analogy of second aorists like *τλῆ-θι*, *φάνη-θι* it was added to the new first aorist passive (§ 514) with dissimilation of the *θ* after the preceding aspirate, as *λείφθη-τι*, *λύθη-τι*, &c. At a later period such imperatives were also formed from the strong grade stem of heavy ablaut-bases, as *ἴλη-θι* beside the regular form *ἴλα-θι*, *πῶ-θι* beside *πῖ-θι*, *στῆ-θι*, Hom. *δίδω-θι*, &c.

The ending *-ον* of the second person singular of the s-aorist *δεῖξ-ον*, *λῦσ-ον*, *φῆν-ον* : *ἔ-δειξα*, *ἔ-λῦσα*, *ἔ-φηνα*, has never been satisfactorily explained.

NOTE.—Att. *πίει* (also extended to *πίει-ς* after the analogy of injunctive forms like *σχές*), *δίδοι* (Pindar), and Dor. *ἄγει* probably contain the deictic particle *ἴ* which occurs in such forms as *οὔτοσ-ἴ*, *νῦν-ἴ* (§ 411).

§ 541. In Greek the third person singular was formed by the addition of *-τω* to the bare stem. This *-τω* (=Skr. *-tād*, Lat. *-tō*, Indg. \**-tōd*) was not originally a personal ending, but simply the ablative singular of the neuter demonstrative pronoun \**tod* (=Gr. *τό*, Skr. *tād*, Lat. *is-tud*, Engl. *that*) used adverbially with the meaning *from that time, after that, then*. The combination was originally used to express the second and third persons of all numbers, but already in prim. Greek it became restricted to the third person singular, and in Latin to the second and third person singular, whereas in Vedic it was almost exclusively restricted to the second person singular, but it also occurred occasionally for the third person singular, and the second person dual and plural. In Vedic it had the function of a kind of future imperative, expressing an injunction

which was to be carried out at a time subsequent to the present. Originally the **-tōd** had the principal accent and the stem of ablaut-bases had the weak grade of ablaut, as *ἴσ-τω* from *\*φιτ-τω*, Skr. *vit-tād*, *δό-τω*, Lat. *da-tō*, Skr. *dat-tād*, and similarly *διδότω*, *τιθέτω*, *ιστάτω*, *ἴτω*, *φάτω*, *ὀμνύτω*, *δαμνάτω*, *δράτω*, *γνώτω*, &c. ; perfects like *ἑστάτω*, *τεθνάτω*, *μεμάτω*, Lat. *mementō*. This formation was probably confined originally to athematic verbs, but it must have been extended to thematic verbs at a very early period as is shown by examples like *φερέτω*, *εἰπέτω*, Lat. *vehitō* beside Skr. *bharatād*, *vōcatād*, *vahatād*, *ἀγέτω* beside Lat. *agitō*.

§ 542. The third person plural. The restriction of the formation with **-tōd** to the third person singular in prim. Greek gave rise to several new formations for expressing the third person plural. The exact chronological order in which these new formations took place cannot be determined with certainty. The oldest type seems to be *φερόντω* which occurs in Doric, Boeotian and Arcadian. This type probably arose in prim. Greek by the addition of *-τω* to the injunctive form *\*φερον*, cp. the similar formation in Lat. *ferunt-ō*. From *φερόντω* was formed *φερόντων* by the addition of the secondary plural ending *-ν* of the third person. The type *φερόντων* occurs in Homer, Attic, Ionic and some Doric dialects, and was the only good one in Attic until Aristotle's time. The type *ἕστων*, *ἴτων*, &c., which occurs in Homer, Attic, and Ionic (on inscriptions), arose from the pluralizing of the singular by the addition of *-ν*, cp. the similar process in Latin *agitō-te* with **-te** after the analogy of *agi-te*. After the analogy of forms like *ἑδίδοσαν* : *ἕδιδον* was formed the type *φερόντωσαν* : *φερόντων*, which is found on Attic inscriptions of the fourth century B. C. And then lastly arose the type *φερέτωσαν*, *διδότωσαν* from a pluralizing of the singular by the addition of the plural ending *-σαν*. This type occurs in Attic prose

since the time of Thucydides and on Attic inscriptions from 300 B. C. onwards and also on inscriptions in the later Doric and North-Western dialects.

## 2. The Middle.

§ 543. For the second person singular of the present and second aorist the injunctive forms were used, as *ἔπεο*, *ἔπου* from \**ἔπεσο* = Lat. *sequere*, and similarly *λείπου*, *λιποῦ*, *θοῦ*, *δοῦ*, &c. In forms like *τίθεσο*, *δίδοσο*, *ἴστασο*, *δείκνυσο* the *-s-* was restored after the analogy of the other forms, *τιθέσθω*, &c.

The second person singular of the s-aorist *δείξαι*, *λῦσαι*, *φῆναι* from \**φανσαι*, &c. is difficult to account for, because this form does not occur in any of the other languages. Most scholars are inclined to regard it as being originally the active infinitive which came to be used for the imperative through the influence of the personal ending *-(σ)αι* (as in *φέρεαι*, *τίθεσαι*) of the second person singular of the present indicative, cp. also the Latin passive imperative plural *legi-minī* which in form corresponds to the infinitive *λεγέ-μεναι* (§ 546).

§ 544. The other forms of the middle contain the element *-σθ-* which is of the same origin as in the infinitive *φέρεσθαι*, *τίθεσθαι*, &c., but in other respects they have the same endings as the active. In prim. Greek the form *φερέσθω* arose beside the active form *φερέτω* after the analogy of *φέρεσθε* : *φέρετε*. The history and development of the middle forms of the third person plural went parallel with those of the active, but with regular loss of the *-ν-* in the combination *-νσθ-* (§ 153), cp. *φερέσθων*, *τιθέσθων* beside the active *φερόντων*, *τιθέντων*.

## THE INFINITIVE.

§ 545. The infinitives of the Indg. languages were originally isolated singular case-forms of *nomina actionis*, and as with other kinds of nouns the case-form used depended upon the construction of the sentence. Such isolated forms became associated with the verb as soon as they were no longer regarded as being connected with the declension of the type to which they originally belonged. This isolation took place with some *nomina actionis* already in the parent Indg. language. The original Indg. *nomina actionis* were best preserved in the Aryan, Old Germanic and Baltic-Slavonic languages, whereas in Greek and Latin they became in a great measure associated with the verbal system. The infinitive being a noun in form had originally nothing to do with the distinction between active, passive, and middle. The association of particular forms to particular voices took place at a much later period.

As there were in the parent Indg. language a large number of suffixes which were used to form *nomina actionis*, there are accordingly a large number of different forms of the infinitive in the separate languages, cp. Lat. *regere* from \**reges-i*; Goth. O.E. *nim-an*, to take; Lith. *dũ-ti*, O.Slav. *da-ti*, to give; Vedic *yúdh-am*, to fight, *át-tum*, to eat, *yujé*, to yoke, *dá-man-ē* (Hom. *δό-μεν-αι*), *dā-ván-ē*, to give, *át-tav-ē*, to eat, *sak-śán-i*, to abide. Of all these and various other Vedic forms only the one in *-tum*—identical with the Latin supine in *-tum*—was preserved in classical Sanskrit. In Vedic the case-form of the infinitive could be the accusative, dative, locative, and ablative-genitive. In classical Sanskrit and the Old Germanic languages the case-form was restricted to the accusative, in Latin to the dative, locative and accusative

(= the supine in **-tum**), and in Greek to the dative and locative. Datives were the infinitives in **-μεναι, -ναι, -έναι, -σαι, -σθαι**, and locatives those in **-μεν, -ειν, &c.**

### 1. Datives.

§ 546. **-μεναι** is the dative ending of a **-μεν-**stem (§ 345). This form only occurs in Homer and the Lesbian dialect and was originally confined to athematic verbs, as Hom. **δόμεναι**, Ved. **dāmanē**, **ἴδμεναι**, Ved. **vidmánē**, and similarly **γνώμεναι, ἔδμεναι, ζευγνύμεναι, θέμεναι, ἐστάμεναι, τετλάμεναι**; and then later extended to thematic verbs, as Hom. **ἀειδέμεναι, ἀξέμεναι, εἰπέμεναι; λεγέμεναι** which corresponds in form to the Latin second person plural of the passive imperative (**legimini**).

The dative ending **-ναι** in Attic, Ionic, Arcadian and Cyprian probably arose from older **-μναι** where **-μν-** was the weak grade form of **-μεν-** (§ 273) and which became simplified to **-ν-** after long vowels (§ 146), as **ἀῆναι, γνῶναι, δῦναι, στῆναι**, beside **ἀήμεναι, γνώμεναι, δῦμεναι, στήμεναι**. The **-ναι** then came to be used after short vowels and supplanted the old locative ending in **-μεν** (§ 549), as **δεικνύναι, διδόναι, ἰστάναι, φάναι, τιθέναι, τεθνάναι**.

After the analogy of **-μεναι** (**δόμεναι, &c.**): **-έμεναι** (**λεγέμεναι, &c.**) to **-ναι** a new ending **-έναι** was formed which became productive especially in the perfect infinitive, as **εἰδέναι, δεδιέναι, ὀλωλέναι, γεγραφέναι, λελοιπέναι, γεγονέναι, &c.** In Cypr. **δοφεναι**, Att. **δοῦναι** it is doubtful whether the **f** belongs to the stem or to the suffix, cp. also Ved. **dāvánē**.

§ 547. The infinitive of the **s-**aorist **δείξαι, λῦσαι, φῆναι, &c.** is an old dative of an **s-**stem which became associated with the verbal system after the analogy of **ἔδειξα** and the participle **δείξας**. It corresponds in form to Vedic infinitives like **jiṣ-ē, to conquer, stuṣ-ē, to praise**, and to the Latin



passive infinitive *darī* from \**das-ai*, cp. also *τιμῆσαι*, *φιλησαι* beside Lat. *amārī*, *habērī*.

§ 548. The ending of the middle infinitive in *-σθαι* is probably related to the Vedic infinitives in *-dhyāi*, *-dhyē*, as in *dhiyá-dhyāi*, *to deposit*, *gamá-dhyē*, *to go*, beside which there was originally a form in *-dhē* corresponding to Greek *-θαι*. The origin of the formation of this type of infinitive is uncertain. The most commonly accepted theory is that it was a compound consisting of an *es*-stem, as in *είδεσ-* : *είδος* (§§ 279, 364), and the dative of a root-noun \**dhē-*, \**dh-* : *τί-θη-μι*, and that from forms like *είδεσθαι* : *είδε-ται* the *-σθαι* came to be regarded as the ending and was then extended to all kinds of tense-stems, as *λύεσθαι*, *λύσεσθαι*, *λύσασθαι*, *λελύσθαι*, and similarly *δίδοσθαι*, *τίθεσθαι*, *ἴστασθαι*, *δείκνυσθαι*, *ἦσθαι*, *δόσθαι*, *θέσθαι*, *λιπέσθαι*, *πεπύσθαι*, &c. *δέχθαι*, *γεγράφθαι* from \**δεκσθαι*, \**γεγραπσθαι* (§ 221), and similarly *πεπλέχθαι*, *λελείφθαι*, *τετράφθαι*, *ἐστάλθαι*, *πεφάνθαι*, &c. This type of infinitive became medio-passive in meaning through the influence of the middle personal endings *-σθε*, *-σθον*, &c.

## 2. Locatives.

§ 549. The ending *-μεν*, which occurs in Homer and in the Aeolic, Doric, Thessalian, Boeotian, Elean, Arcadian and the North-Western group of dialects, is an endingless locative of a *-μεν*-stem (§§ 273, 345), as in *ἴδμεν*, *τιθέμεν*, *θέμεν*, *δόμεν*, *ὀρνύμεν*, *ἐστάμεν*, &c. Cretan infinitives like *δόμην*, *ἡμην* had *-ην* after the analogy of *φέρην* = *φέρειν*; and similarly *δόμειν*, *θέμειν* in the dialect of Rhodes were formed after the analogy of *φέρειν*.

§ 550. It is difficult to account satisfactorily for the formation of the infinitive in *-ειν*. The difference between the ending *-ειν* in Attic, Ionic, &c. and the *-ην* in Doric, Lesbian and Elean shows that the *-ειν*, *-ην* is the result of contraction. This contraction probably arose from *-εσεν*

and represented an old endingless locative, but as this exact type of infinitive ending does not occur in the other languages, it is uncertain whether the *-εσεν* represents an original formation *-e-sen-* or *-es-i*. In the former case it would correspond to the Vedic forms in *-san-i*, as *nē-ṣāṇ-i*, *to lead*, *sak-ṣāṇ-i*, *to abide*; and in the latter to Vedic forms like *jéṣ-i*, *to conquer*, *stóṣ-i*, *to praise*, and to Lat. *dare* from *\*das-i*, which are locatives of *s*-stems. We should then have to assume that prim. Greek *\*φερεσι* became *\*φερεσεν* through the influence of the *-εν* in the ending *-μεν*.

The Doric and Arcadian ending *-εν* in *φέρεν*, *ἔχεν*, *τράφεν*, &c. was due to the analogy of the ending *-μεν*.

#### PARTICIPLES.

§ 551. All active participles except the perfect had originally the formative element *-ent-* with the various ablaut-grades *-ont-*, *-nt-*, *-nt-*. For the declension of these participles see §§ 352-5.

§ 552. The formative element of the masculine and neuter of the perfect active participle consisted of the blending of the two distinct elements *-wes-* with the ablaut-grades *-wos-*, *-wōs-*, *-us-*, and *-wet-*, *-wot-*. The relation in which the elements *-wes-*, *-wos-*, and *-wet-*, *-wot-* originally stood to each other is unknown. It is also uncertain which cases originally had the *-s*-form and which the *-t*-form. In Greek the *-wot-* became generalized in the oblique cases, whereas in Sanskrit it only occurred in the instrumental, dative and ablative dual and plural (*vidvādbhyām*, *vidvādbhiḥ*, *vidvādbhyaḥ*), the locative plural (*vidvātsu*), and the nominative and accusative neuter singular (*vidvát*, *knowing*). This mode of forming the perfect active participle was preserved in Greek, Aryan and the Baltic-Slavonic languages, but in the other

languages only scanty fragments are found. For a similar blending of two distinct formative elements see § 371.

In the masculine nominative singular the **-wos-** was regularly lengthened to **-wōs** (§ 368), cp. *εἰδώς* beside *εἰδότα*, *εἰδότος*, &c., neut. *εἰδός*. In forms like Hom. *τεθνηῶτα*, *μεμαῶτες*, *πεφυῶτας* the **-ω-** of the nominative singular was levelled out into the oblique cases. The stem-syllable had originally the weak grade of ablaut, but in Greek it generally had either the strong grade vowel of the present indicative or the stem-syllable was formed direct from the perfect indicative, cp. *εἰδός* beside Skr. *vidvát*, *λε-λοιπ-ώς* : *λέ-λοιπ-α* beside Skr. *ri-rik-vás-* : *ri-réc-a*; and similarly *εἰώς*, *έστηώς*; *γεγονώς*, *δεδορκώς*, *πεπονθώς*, *τετοκώς*, *λελυκώς*, *έδ-ηδώς*, *έρρωγώς*, *έλληλουθώς* beside *έλληλυθώς*; and in all *κ*-perfects, as *έστηκώς*, *τετιμηκώς*, &c. The weak grade of ablaut occurs in *έσταώς* : *έσταμεν*, *βεβαώς* : *βέβαμεν*, *γεγαώς* : *γέγαμεν*, *μεμαώς* : *μέμαμεν*.

The feminine of the perfect active participle had also originally the weak grade of ablaut in the stem-syllable, as in *ιδ-υῖα* = Skr. *vid-úṣī*, *λελακυῖα*, *πεπαθυῖα* : *λεληκώς*, *πεπονθώς*, Hom. *άραρυῖα*, *τεθαλυῖα* : *άρηρώς*, *τεθηλώς*. Forms like *εἰδυῖα*, *λελοιπυῖα*, *γεγονεῖα* were new formations from the stem-form of the masculine. Both in Greek and Sanskrit it belonged to the *jā*-declension (§ 322). The original sing. nom. was **-wes-jə**, gen. **-us-jās** which in Greek would regularly have become *-εῖα*, gen. *-υῖας*. Leveling then took place in both directions whereby partly *-εῖα* and partly *-υῖας* became generalized, as *γεγονεῖα*, &c. beside *ιδυῖα*, &c.

§ 553. The formative element **-μενο-** was used in forming all Greek middle participles, as *λειπόμενος*, *λιπόμενος*, *λειψόμενος*, *λειψάμενος*, *λειφθησόμενος*, *λελειμμένος*, *λελειψόμενος*; *ιστάμενος*, *τιθέμενος*, *διδόμενος*, *δεικνύμενος*, *θέμενος*, *δόμενος*, &c. The formative element originally

had the three grades of ablaut **-meno-**, **-mono-**, **-mno-** (cp. § 240). The first became generalized in Greek, and probably also in Latin in the second person plural of the passive (**legimini** = **λεγόμενοι**), the second in Sanskrit thematic verbs, as **bódha-māna-h** = **πευθό-μενο-ς**, and the third occurs in isolated forms like Latin **alumnus**, **autumnus**.

§ 554. The passive participle in **-θείς**, as in **λυθείς**, &c. (cp. § 514) was a special Greek new formation formed after the analogy of participles like **φανείς**.

#### VERBAL ADJECTIVES.

§ 555. The verbal adjectives in **-τό** originally denoted completed action, but they were not passive in function. They preserved their original function and meaning in Greek, but in the Sanskrit, Latin, Old Germanic and Baltic-Slavonic languages they generally came to be used as perfect or past participles, mostly with a passive meaning, especially when related to transitive verbs. The accent in Greek and Sanskrit shows that the stem-syllable originally had the weak grade of ablaut, cp. **κλυτός**, Skr. **śrutáh**, Lat. **in-clutus**; **στατός**, Skr. **sthitáh**, Lat. **status**, **δοτός**, Lat. **datius**; and similarly **κριτός**, **λυτός**, **χυτός**, **σχετός**, **τακτός**, **φαντός**, &c. beside new formations like **λειπτός**, **στρεπτός**, **τρεπτός** formed from the stem of the present. See § 258.

§ 556. The verbal adjectives in **-τέος** from older **\*-τέφος**, as in **δοτέος**, **dandus**, **γραπτέος**, **scribendus**, **σταλτέος**, **εύρετέος**, **λυτέος**, **λειπτέος**, **πειστέος**, **τίμητέος**, &c. (§ 255) were a special Greek formation which has no parallel in the other languages.

## CHAPTER XIII

## ADVERBS

§ 557. Greek adverbs are for the most part of twofold origin. They are partly isolated case-forms of pronouns, nouns, substantivized adjectives, and occasionally predicative adjectives used adverbially, and partly formed by means of suffixes the origin of which is often unknown. It is probable that some at least of these suffixes were the remnants of case-endings which became isolated from the inflexional system already in the parent Indg. language and were then crystallized as adverbial suffixes.

## I. CASE-FORMS.

§ 558. The nominative occurs in *ἀναμίξ, ἀλλάξ, ἄλις, λέχρις, μόλις, χωρίς, ἐγγύς, εὐθύς, &c.*, cp. also Skr. *parāḥ, far off*, Lat. *prorsus, satis*.

§ 559. The accusative was often used adverbially in all the Indg. languages, as *αὔριον, δηρόν, μόνον, νέον, σήμερον*, Att. *τήμερον, πλησίον, πρῶτον, χθιζόν*, cp. Skr. *kāmam, at pleasure, willingly*, Lat. *domum, rūs, multum*, OE. *ealne weg, always*. *ἀκμήν, ἀρχήν, δήν*, Dor. *δάν* from \**δῆν*, *δωρεάν, μακράν, πρόην, σχεδίην, ταχίστην. πρόφασιν, χάριν*, cp. Skr. *kīm, why?*, Lat. *furtim, partim, facile*. *εὐθύ, πολύ* = Skr. *purú*, Goth. *filu*. Att. *τῆτες*, Ion. *σῆτες, χθές* = Skr. *hyáh*. *προῖκα, ὄναρ, μέγα, &c.*, cp. Skr. *nāma, by name*. *ἀλλά, πολλά, πρόκα, πρῶτα, μάλιστα, τάχιστα, &c.* Here belong also the adverbs in *-δον, -δην, -δα* (neut. pl.), the *-δ-* of which was probably the same as in verbal abstract nouns like *χρόμαδος*, and Skr. *samád-, fight, battle*. Examples are: *ἀγεληδόν, ἀμφαδόν, ἀνασταδόν, ἀναφανδόν, βοτρῦδόν, μουναδόν, ῥυδόν, σχεδόν, ὠρῦδόν;*

ἀνέδην, βάδην, βλήδην, κλήδην, κρύβδην, λίγδην, σποράδην, στάδην, συλλήβδην, χύδην; ἀγεληδά, ἀναφανδά, ἀποσταδά, κρύβδα, μίγδα, φύγδα, χανδά, &c.

§ 560. The genitive occurs in adverbs of time and place, as ἐσπέρας, ἡμέρας, ἔνης, Dor. ἔνας, νυκτός = Goth. *nahts*, OE. *nihtes*. ἀγχοῦ, τηλοῦ, πανταχοῦ, ὑψοῦ, ἐπιπολήης; αὐτοῦ, ὁμοῦ, ποῦ, πού, ὅπου.

§ 561. The adverbial use of the dative was rare, as in χαμαί, Lat. *humī*, καταί, παραί. The dative supplanted the original instrumental in forms like Attic, Ionic ἀνάγκη, δίκη, ἰδία, κοινῇ, σπουδῇ, κύκλω; ἄλλη, ταύτη, ἦ, πῆ, τῆ-δε, Cret. ἄλλα, ὅπα. As the dative and locative regularly fell together in the *ā*-declension it is possible that some of the above forms may be originally locative (§ 305).

§ 562. The locative was common both in nominal and pronominal forms, as οἴκοι, οἴκει, cp. Lat. *domī*, *bellī*, Ἴσθμοῖ, Πύθοι, πανταχοῖ, ἀθειί, πανδημεί, cp. Skr. *ākē*, near at hand, *durē*, at a distance; οἶ, ποῖ, Dor. αὐτεῖ, ὅπεῖ, πεῖ, τεῖ-δε, τηνεῖ, τουτεῖ, Att. ἐκεῖ, Cret. διπλεῖ, Θηβαιγενής, Elean Ὀλυμπίαι; Ἀθήνησι, Πλαταιᾶσι, θύρασι, ὠραῖσι. αἰεῖ from \*αἰφεισι, ἦρι from \*ἄζερι, Μαραθῶνι, Dor. πέρυτι, Att. πέρυσι = Skr. *parut*; endingless locatives were αἰέν, Dor. αἰές, νύκτωρ, cp. the similar *-r* in Lith. *kuř*, where, Lat. *cūr*, why, Goth. *ivar*, where, Lat. *nocturnus*.

§ 563. The ablative (= Indg. *-ōd*, *-ēd*) was mostly preserved in pronominal forms, as οὐτω, Dor. ὦ, ὅπω, πῶ, unde, τῶ-δε, τουτῶ, *hinc*, τηνῶ, *istinc*, Locr. ὦ, ὅπω, unde, cp. Skr. *tāt* (= Indg. \**tōd*), then, in this way, *kāsmāt*, why, *yāt*, in so far as. Delph. φοίκω, *domo*, cp. O.Lat. *meritōd*, *rectēd*, Goth. *sinteinō*, continually, *þiubjō*, secretly.

§ 564. The instrumental occurs in both nominal and pronominal forms, as ἐπι-σχερώ, Dor. κρυφᾶ, Att. Ion. κρυφῆ, ἀμαρτῆ, Att. λάθρα, Ion. λάθρη. οὐ-πω, πώ-ποτε, cp. Lat. *quō*, τῶ-δε, Ion. ὦ-δε, Lesb. ἄλλα, ὅππα, Dor. ᾗ-τε,

ταυτᾶ, Att. ταύτη, ἦ, *if*, πῆ, Cret. ὀ-πῆ, Lac. πῆ-ποκα, cp. Goth. *hwē*, *wherewith*; Dor. ᾶ-χι, Hom. ῆ-χι. Instrumental were also the adverbs in -ω like ἄνω, ἔξω, κάτω, πρόσ(σ)ω; ἄνω-τέρω, ἄνω-τάτω, ἐκαστέρω, ἐκαστάτω, προτέρω, &c. It probably also occurs in the adverbs in -α, as αἰψα, ἄμα, ἄρα, ἦκα, θαμά, κάρτα, λίγα, λίπα, μάλα, παρά, πεδά, πύκα, σάφα, σίγα, τάχα, ὦκα.

§ 565. The so-called positive of adverbs of quality is originally the ablative singular of the adjective used adverbially to which was added the particle -ς (§ 575). The ending -ως belonged originally to ο-stems only, as in καλῶς, σοφῶς, φίλως, δικαίως, &c. From these it became extended to all kinds of stems, as ἡδέως, ἀληθῶς, πάντως, εὐδαιμόνως, χαριέντως, &c.

In the comparison of adverbs it is necessary to distinguish between the adverbs derived from adjectives and those derived from adverbs. For the comparative of adverbs derived from adjectives the accusative neuter singular of the corresponding adjective was used, as σοφώτερον, ἡδιον, and similarly in Sanskrit and Latin. And for the superlative the accusative neuter plural was used, as σοφώτατα, ἡδιστα, and similarly in Sanskrit, whereas in Latin we have the ablative singular of the corresponding adjective, as O.Lat. (inscription) *facilum* = *facillumēd*, later *facillimē*.

The comparative and superlative of adverbs derived from adverbs had the instrumental ending -ω just as in the so-called positives, as ἄνω, ἄνωτέρω, ἄνωτάτω; κάτω, κατωτέρω, κατωτάτω.

## 2. SUFFIXES.

§ 566. -θι (= Indg. \**dhi*, cp. Skr. *á-dhi*, *above*, *upwards*, and the -*b*- in Lat. *ubi*, *ibi*) denoting *where*, as in Κορινθό-θι, οἴκο-θι, οὐρανό-θι; ἄλλο-θι, αὐ-θι, αὐτό-θι, κεί-θι, ὄ-θι, πό-θι, τό-θι; ἔκτο-θι, ἔνδο-θι.

§ 567. *-θα* beside *-θε(ν)* denoting *place*. The relation in which these suffixes stand to each other is unknown, but they are doubtless related to the *-ha* in Skr. *i-há*, *here*, *kú-ha*, *where*. Examples are: *ἐν-θα*, *ἐνταῦ-θα*, *ὑπαι-θα*, Dor. Lesb. *ἐνερ-θα*, *πρόσ-θα* beside Hom. *ἐνερ-θε(ν)*, *πρόσ-θε(ν)*, *ὄπι-θε(ν)*, *ὄπισ-θε(ν)*, *ὑπερ-θε(ν)*.

§ 568. *-θεν* denoting *whence*, as *ἄκρο-θεν*, *Διό-θεν*, *ἠῶ-θεν*, *ἰππό-θεν*, *κλισίη-θεν*, *οὐρανό-θεν*; *ἄλλο-θεν*, *ἀμφοτέρω-θεν*, *αὐτό-θεν*, *ὄ-θεν*, *πάντο-θεν*, *πό-θεν*, Dor. *τουτῶ-θεν*; *ἐκεί-θεν*, *ἐν-θεν*, *ἐξω-θεν*, *ὕψό-θεν*.

§ 569. *-δε* denoting *whither* is originally a preposition and is related to Lat. *dē*, O.Slav. *do*, OE. *tō*, *to*, Indg. *\*dē*, *\*dō*, as *ἄγρα-δε*, *ἄλα-δε*, *Μέγαρά-δε*, *οἴκα-δε* (acc. neut. pl.) beside Hom. *οἰκόν-δε*, *πόλεμόν-δε*, *φύγα-δε*, *Ἀθήναζε* from *\*Ἀθᾶνανε-δε* (§ 153), and similarly *θύραζε*.

§ 570. *-σε* with the same meaning as *-δε*, as *κυκλό-σε*, *πάντο-σε*, *τηλό-σε*; *ἄλλο-σε*, *ἀμφοτέρω-σε*, *αὐτό-σε*, *κεῖ-σε*, *ὀμό-σε*, *πό-σε*. The *-σε* may be the same as Goth. *-þ*, cp. *ἄλλο-σε*, *πό-σε* beside Goth. *aljaþ*, *elsewhere*, *hvaþ*, *whither*, but it is difficult to see why the *\*-τε* became *-σε* in adverbs of place whilst it remained in adverbs of time.

§ 571. *-τε* denoting *time*, as *ἄλλο-τε*, *αὖ-τε*, *ὄ-τε*, *πάντο-τε*, *πό-τε*, *τό-τε*. Lesbian has *-τα*, as *ἄλλο-τα*, *ὄ-τα*, *πό-τα*, cp. also Att. *εἶ-τα*, *ἐπ-εῖτα*.

§ 572. *-τος* (= Skr. *-taḥ*, Lat. *-tus*), as *ἐκ-τός*, *ἐν-τός*, cp. Skr. *i-táḥ*, *from here*, *tá-taḥ*, *from there*, Lat. *in-tus*, *caeli-tus*, *fundi-tus*.

§ 573. *-κα* the origin of which is unknown, as in *αὐτί-κα*, *ἠνί-κα*, *τηνί-κα*, Dor. *ὄ-κα*, *ἄλλο-κα*, *πό-κα*, *τό-κα*.

§ 574. *-κας* in *ἐ-κᾶς* from *\*σφε-κας*, *ἀνδρα-κᾶς* is probably the same suffix as in Skr. *dēva-śáh* (= Indg. *\*-kṇs*), *god for god*.

§ 575. Quite a number of adverbs have forms with and without a suffixal *-s*, as *ἀμφί-ς*, *οὐτω-ς*, *πέρυτι-ς* beside *ἀμφί*, *οὐτω*, *πέρυτι* (*πέρυσι*), Delph. *οἶ-ς* beside the usual form *οἶ*,



Elean *άνευς* for *άνευ*, Hom. *άτρέμας* beside *άτρέμα*, &c. The -ς became generalized in adverbs of quality formed from adjectives already in the prehistoric period of the language. The origin of this -ς is uncertain. It probably arose from various sources, such as the adverbial forms where the -ς was originally a case- or stem-ending, as nom. *άλις*; gen. *νυκτός*; acc. neut. sing. *χθές*, and the -ς in multiplicative numerals, as *δίσ*, Skr. *bhīḥ*, Lat. *bis*. See Brugmann, *Grundriss*, &c., vol. ii, second ed., p. 737.

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### CORRIGENDA.

§ 44 note 1	<i>for</i> σκίδνημι	<i>read</i> σκίδναμαι.
73	,, ὀμόκλα	,, ὀμόκλᾱ.
96	,, ἐσπέσθαι	,, ἐσπέσθαι.
97	,, κέρασαι	,, κεράσαι.
118, 127	,, ὑμεῖς	,, ὑμεῖς.
129	,, ἄλλεσθαι	,, ἀλέσθαι.
153	,, φερόσθων, *-ονσθων	,, φερέσθων, *-ενσθων.
237	,, χρῦσειος, χρῦσεος	,, χρῦσειος, χρῦσεος.
287	,, ἄριστον	,, ἄριστον.
289	,, ναυκράτης	,, ναυκρατής.
	,, λαθικήδης	,, λαθικηδής.
402	,, ἐμέθεν	,, ἐμέθεν.
	,, ἄμε	,, ἄμέ.
431	,, ὠμίλων : ὀμιλέω	,, ὠμίλων : ὀμιλέω.
466 (last two lines)	<i>for</i> were also formed	<i>read</i> was also formed,
	and <i>delete</i> πιμπράνω.	
501	<i>for</i> ἐστήκα	<i>read</i> ἐστήκα.
512	,, ἐγήρασα	,, ἐγήρᾱσα.
517	,, κεχύμαι	,, κέχυμαι.









