



GRUNDRISS DER INDO-ARISCHEN PHILOGIE UND ALTERTUMSKUNDE

(ENCYCLOPEDIA OF INDO-ARYAN RESEARCH)

BEGRÜNDET VON G. BÜHLER, FORTGESETZT VON F. KIELHORN,
HERAUSGEGEBEN VON H. LÜDERS UND J. WACKERNAGEL.

I. BAND, 4. HEFT.

VEDIC GRAMMAR

BY

A. A. MACDONELL.



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INTRODUCTION.

I. General Scope of this Work.—Vedic grammar has never till now been treated separately and as a whole. Both in India and in the West the subject has hitherto been handled only in connexion with Classical Sanskrit. Hundreds of Pāṇini's Sūtras deal with the language of the Vedas; but the account they give of it is anything but comprehensive. In the West, BENFEY was the first, more than half a century ago (1852), to combine a description of the linguistic peculiarities of the Vedas with an account of the traditional matter of Pāṇini; but as Vedic studies were at that time still in their infancy, only the Sāmaveda¹ and about one-fourth of the R̥gveda² having as yet been published, the Vedic material utilized in his large grammar³ was necessarily very limited in extent. In WHITNEY's work⁴ the language of the Vedas, which is much more fully represented, is treated in its historical connexion with Classical Sanskrit. Partly for this reason, his work does not supply a definite account of the grammar of the Saṃhitās as compared with that of the later phases of the language; thus what is peculiar to the Brāhmaṇas or to a particular Saṃhitā is often not apparent. Professor WACKERNAGEL's grammar⁵, which when finished will present the ancient language of India more completely than any other work on the subject, deals with the combined Vedic and post-Vedic material from the point of view of Comparative Philology. Different sections or individual points of Vedic grammar have been the subject of separately published treatises or of special articles scattered in various Oriental and philological journals or other works of a miscellaneous character. It is advisable that all this as well as additional material⁶ should now be brought together so as to afford a general survey of the subject.

In view of the prominent position occupied by the Indo-Aryan branch in Comparative Philology and of the fact that the language of the Vedas

¹ Edited by BENFEY, with German translation and glossary, Leipzig 1848.

² Vol. I edited by MAX MÜLLER, London 1849, vol. VI 1875; 2nd ed. London 1890—92; edited by AUFRECHT, Berlin 1861 and 1863 (vols. VI and VII of Indische Studien), 2nd ed. Bonn 1877.

³ Vollständige Grammatik der Sanskritsprache, Leipzig 1852.

⁴ A Sanskrit Grammar, Leipzig 1879; 3rd ed. 1896.

⁵ Altindische Grammatik von JACOB

WACKERNAGEL, I. Lautlehre, Göttingen 1896; II, 1. Einleitung zur Wortlehre. Nominalkomposition, 1905. (Cp. BARTHOLOMAE, Beiträge zur altindischen Grammatik, ZDMG. 50, 674—735).

⁶ Such additional material is supplied in this work from collections made for me by my pupils Prof. H. C. NORMAN (Benares) from the Vājasaneyi Saṃhitā, and Mr. A. B. KEITH from the Taittirīya Saṃhitā, the Mantras in the Aitareya Aranyaka, and the Khilas of the R̥gveda.

represents the foundation of the subsequent strata, it seems important for the sake of clearness and definiteness that the earliest phase should be treated as a whole independently of later developments. The present work will therefore deal with the grammar of only the Mantra portions of the Saṃhitās; that is to say, it will embrace the whole of the Ṛgveda, the Atharvaveda¹, the Sāmaveda², and the Vājasaneyi Saṃhitā³, but will exclude those portions of the Taittiriya Saṃhitā⁴, the Maitrāyaṇī Saṃhitā⁵ and the Kāthaka⁶ which have the character of Brāhmaṇas⁷. Reference will also be made to Mantra material not found in the canonical texts of the Saṃhitās, that is, to the Khilas⁸ of the Ṛgveda and the occasional Mantras of this type occurring in the Brāhmaṇas⁹ and Sūtras. As the linguistic material of the Ṛgveda is more ancient, extensive and authentic than that of the other Saṃhitās, all of which borrow largely from that text¹⁰, it is taken as the basis of the present work. Hence all forms stated without comment belong to the Ṛgveda, though they may occur in other Saṃhitās as well. From the other Vedas, such matter only is added as occurs in their independent parts or, if borrowed from the Ṛgveda, appears in an altered form, the source being in such cases indicated by an abbreviation in parentheses (as VS., TS., AV.). The addition of the abbreviation 'RV.' means that the form in question occurs in the Ṛgveda only.

2. Verbal Authenticity of the Texts¹¹.—In dealing with the linguistic material of the Saṃhitās the question of the authenticity of the forms which it embraces is of great importance. What guarantees then do we possess that the original form of the texts handed down by tradition has not in the course of ages undergone modification and modernization in respect to vocabulary, phonetics, and grammatical forms? This question must first be applied to the Ṛgveda, the oldest of the Saṃhitās, which forms the very foundation of Vedic tradition. The evidence of the Sarvānukramaṇī¹², which states the number of stanzas, the metre, and the deity for every hymn of the RV., shows that in general extent, form, and matter, this Saṃhitā was in the Sūtra period the same as now. The Prātiśākhya¹³ demonstrates that its phonetic character was also the same. Yāska's commentary¹⁴ proves that,

¹ Edited (Saṃhitā text only) by ROTH and WHITNEY, Berlin 1856 (Index Verborum in JAOS., vol. XII); translated by WHITNEY (Books I—XIX), with a critical and exegetical commentary, Cambridge, Mass., 1905 (vols. VII and VIII of the Harvard Oriental Series); also edited by SHANKAR P. PANDIT (both Saṃhitā and Pada text), Bombay 1895—99.

² Besides BENFEY's edition also that of SATYAVRATA SĀMAŚRAMĪ, 5 vols., Calcutta 1874—78 (Bibliotheca Indica).

³ Edited by WEBER, with the commentary of Mahidhara, London and Berlin 1852.

⁴ Edited by WEBER (vols. XI and XII of Indische Studien), Berlin 1871—72.

⁵ Edited by L. v. SCHROEDER, Leipzig 1881—86.

⁶ Edited by L. v. SCHROEDER, vol. I (books I—XVIII), Leipzig 1900.

⁷ Cp. OLDENBERG, Die Hymnen des Ṛgveda, Band I (Prolegomena), Berlin 1888, p. 294 ff.

⁸ See AUFRECHT, Die Hymnen des Ṛgveda², vol. II, 672—88; MAX MÜLLER, Ṛgveda², vol. IV, 519—41; cp. MACDONELL, Brhad-devatā, vol. I, introduction, § 15 (Cambridge,

Mass., 1904); SCHEFFELOWITZ, Die Apokryphen des Ṛgveda (edition of the Khilas), Breslau 1906 (cp. OLDENBERG, Göttingische Gelehrte Anzeigen 1907, 210—41).

⁹ Cp. OLDENBERG, op. cit., 359 ff.; AUFRECHT, Das Aitareya Brāhmaṇa, Bonn 1879, p. 420 f.

¹⁰ Cp. OLDENBERG, op. cit., chapter III; MACDONELL, History of Sanskrit Literature, 181 and 186.

¹¹ Cp. OLDENBERG, op. cit., chapter III (271—369) Der Riktext und der Text der jüngeren Saṃhitās und der Brāhmaṇas; LUDWIG, Ueber die Kritik des Ṛgveda-Textes, Abhandlungen d. k. böhm. Gesellschaft der Wissenschaften, Prag 1889.

¹² Edited by A. A. MACDONELL, Oxford 1886.

¹³ The Ṛgveda Prātiśākhya, edited with German translation by MAX MÜLLER, Leipzig 1856—69; edited with UVATA's commentary, Benares Sanskrit Series 1894.

¹⁴ Yaska's Nirukta, edited by ROTH, Göttingen 1852; edited by SATYAVRATA SĀMAŚRAMĪ, 4 vols. (II—IV with the commentary

as regards the limited number of stanzas explained by him, his text was verbally identical with ours. The frequent statements of the Brāhmaṇas concerning the number of verses contained in a hymn or liturgical group agree with the extant text of the R̥gveda. The explanatory discussions of the Brāhmaṇas further indicate that the text of the R̥gveda must have been regarded as immutably fixed by that time. Thus the Satapatha Brāhmaṇa, while speaking of the possibility of varying some of the formulas of the Yajurveda, rejects as impossible the notion of changing the text of a certain verse of the R̥gveda as proposed by some teachers¹.

Probably soon after the completion of the actual Brāhmaṇas the hymns of the R̥gveda were fixed in the phonetic form of the Saṃhitā text; and after no long interval, in order to guard that text from the possibility of any change or loss, the Pada text was constituted by Śākalya, whom the Āraṇyakas or appendixes to the Brāhmaṇas, the Nirukta, and the R̥gveda Prātiśākhya presuppose². By this analysis of the Saṃhitā text, its every word, stated in a separate form as unaffected by the rules of euphonic combination, has come down to us without change for about 2,500 years.

The Saṃhitā text itself, however, only represented the close of a long period in which the hymns, as originally composed by the seers, were handed down by oral tradition. For the condition of the text even in this earlier period we possess a large body of evidence corresponding to that of Mss. for other literary monuments. It was then that the text of the other Vedas, each of which borrowed extensively from the R̥gveda, was constituted. With each of them came into being a new and separate tradition in which the borrowed matter furnishes a body of various readings for the R̥gveda. The comparison of these variants, about 1200 in number, has shown that the text of the R̥gveda already existed, with comparatively few exceptions, in its present form when the text of the other Vedas was established. The number of instances is infinitely small in which the R̥gveda exhibits corruptions not appearing in the others. We have thus good reason for believing that the fixity of the text and the verbal integrity of the R̥gveda go several centuries further back than the date at which the Saṃhitā text came into existence. As handed down exclusively by oral tradition, the text could hardly have been preserved in perfectly authentic form from the time of the composers themselves; and research has shown that there are some undeniable corruptions in detail attributable to this earliest period. But apart from these, the Saṃhitā text, when the original metre has been restored by the removal of phonetic combinations which did not prevail in the time of the poets themselves, nearly always contains the very words, as represented by the Pada text, actually used by the seers. The modernization of the ancient text appearing in the Saṃhitā form is only partial and is inconsistently applied. It has preserved the smallest minutiae of detail most liable to corruption and the slightest differences in the matter of accent and alternative forms which might have been removed with the greatest ease. We are thus justified in assuming that the accents and grammatical forms of the R̥gveda, when divested of the euphonic rules applied in the Saṃhitā text, have come down to us, in the vast majority of cases, as they were uttered by the poets themselves.

Though the tradition of nearly all the later Saṃhitās has in a general way been guarded by Anukramaṇis, Prātiśākhya, and Pada texts, its value is clearly inferior to that of the R̥gveda. This is only natural in the case

of DURGA), Calcutta 1882—91 (Bibliotheca Indica).

¹ See OLDENBERG, op. cit., 352.

² See OLDENBERG, op. cit., 380 f.

of collections in which the matter was largely borrowed and arbitrarily cut up into groups of verses or into single verses solely with a view to meet new liturgical wants. Representing a later linguistic stage, these collections start from a modernized text in the material borrowed from the R̥gveda, as is unmistakable when that material is compared with the original passages. The text of the Sāmaveda is almost entirely secondary, containing only seventy-five stanzas not derived from the R̥gveda. Its variants are due in part to inferiority of tradition and in part to arbitrary alterations made for the purpose of adapting verses removed from their context to new ritual uses¹. An indication that the tradition of the Yajur and Atharva Vedas is less trustworthy than that of the R̥gveda is the great metrical irregularity which is characteristic of those texts². Of all these the Vājasaneyi Samhitā is the best preserved, being not only guarded by an Anukramanī, a Prātisākhya, and a Pada text, but partially incorporated in the Śatapatha Brāhmaṇa, where the first 18 books are quoted word for word besides being commented on. The Taittiriya Samhitā has also been carefully handed down, being protected by an Anukramanī, a Prātisākhya, and a good Pada text³. The Maitrāyaṇī Samhitā is not so well authenticated, having no Prātisākhya and only an inferior Pada text, of which but a single somewhat incorrect Ms. is known⁴. Least trustworthy of all is the tradition of the Kāthaka which lacks both a Prātisākhya and a Pada text. Moreover only one complete Ms. of this Samhitā is known⁵. As that Ms. is unaccented, it has only been possible to mark the accent in small portions of that part of the text which has as yet been published (Books I–XVIII). As, however, the texts of the Black Yajurveda often agree even verbally, and the Maitrāyaṇī Samhitā is closely connected with the Kāthaka, the readings of the latter can to some extent be checked by those of the cognate Samhitās.

The inferiority of tradition in the Atharvaveda was increased by the lateness of its recognition as a canonical text. It contains many corrupt and uncertain forms, especially in Book XIX, which is a later addition⁶. The text is guarded by Anukramanīs, a Prātisākhya, and a Padapāṭha⁷. The latter, however, contains serious errors both in regard to accentuation and the division of compound verbal forms, as well as in other respects. The Padapāṭha of Book XIX, which is different in origin from that of the earlier books⁸, is full of grave blunders⁹. The critical and exegetical notes contained in WHITNEY's Translation of the Atharvaveda accordingly furnish important aid in estimating the value of the readings in the Śaunakiya recension of the Atharvaveda. The Paippalāda recension is known in only a single corrupt Ms., which has been reproduced in facsimile by Professors GARBE and BLOOMFIELD¹⁰. About one-eighth or one-ninth of this recension is original, being found neither in the Śaunakiya text of the Atharvaveda nor in any other known collection of Mantras¹¹. The various readings of this recension, in the

¹ On the Padapāṭha of the Sāmaveda see BENFEY's edition of that Samhitā, p. LVII–LXIV.

² See WHITNEY's Introduction to the Atharvaveda, p. CXXVII; BLOOMFIELD, The Atharvaveda, Grundriss II, 1 B, § 1.

³ Cp. WEBER's edition p. VIII f., and Indische Studien 13, 1–114 (Ueber den Padapāṭha der Taittiriya-Samhitā).

⁴ See L. V. SCHROEDER's edition, Introduction, p. XXXVI f.

⁵ Cp. L. V. SCHROEDER's Introduction to his edition, § 1.

⁶ See LANMAN's Introduction to Book XIX in WHITNEY's Translation of the Atharvaveda.

⁷ See LANMAN's Introduction to WHITNEY's Translation, p. LXIX–LXXIV.

⁸ The Padapāṭha of the Atharvaveda has been edited in full by SHANKAR P. PANDIT in his Atharvaveda.

⁹ Cp. BLOOMFIELD, The Atharvaveda p. 16.

¹⁰ The Kashmirian Atharva-Veda, Baltimore 1901.

¹¹ BLOOMFIELD, The Atharvaveda p. 15;

material common to both recensions, are given in the critical notes of WHITNEY's Translation. The variations range from slight differences to complete change of sense, and exact textual agreement between parallel stanzas is comparatively rare¹. The text of this recension has not yet been critically edited except Book I².

I. PHONOLOGY.

Rgveda Prātiśākhya, ed. with German translation by MAX MÜLLER, Leipzig 1856—69; with UVATA's Commentary, Benares Sanskrit Series, 1894. — Atharvaveda Prātiśākhya, ed. WHITNEY, JAOS. vols. VII and X. — Taittirīya Prātiśākhya, ed. WHITNEY, JAOS. vol. IX, 1871. — Vājasaneyi Prātiśākhya, ed. WEBER, IS. vol. IV, 1858; with UVATA's Commentary, Benares Sanskrit Series, 1888. — Riktantravyākaraṇa (= Prātiśākhya of the SV.), ed. and transl. by BURNELL, Mangalore 1879.

BENFEY, Vollständige Grammatik p. 1—70. — WHITNEY, Sanskrit Grammar p. 1—87. — WACKERNAGEL, Altindische Grammatik. I. Lautlehre (very full bibliography).

3. Ancient Pronunciation.—Evidence throwing light on the phonetic character of the language of the Samhitās is furnished not only by the pronunciation of its sounds by the Brahmans of to-day, who still recite those texts, but also by the transcription of Sanskrit words in foreign languages, particularly Greek, in ancient times; by the summary information contained in the works of the old Sanskrit grammarians, Pāṇini and his successors; and more especially by the detailed statements of the Prātiśākhyas and the Sikṣās. From these sources we derive a sufficiently exact knowledge of the pronunciation prevailing about 500 B. C. This pronunciation, however, need not necessarily have coincided in every particular with that of the Samhitās, which date from many centuries earlier. Nevertheless, judging by the internal evidence supplied by the phonetic changes and analogical formations occurring in the language of the texts themselves and by the external evidence of comparative philology, we are justified in concluding that the pronunciation, with the possible exception of a very few doubtful points, was practically the same.

4. The Sounds of the Vedic Language.—There are altogether 52 sounds, 13 of which are vocalic and 39 consonantal. They are the following:

A. Vocalic sounds.

1. Nine simple vowels: *a ā i ī u ū ṛ ṝ ṝ̄*.
2. Four diphthongs: *e o³ ai au⁴*.

B. Consonantal sounds.

1. Twenty-two mutes, divided into five classes, each of which has its class nasal, making a group of twenty-seven:
 - a) five gutturals: *k kh g gh ṅ*,
 - b) five palatals: *c ch j jh ñ*,
 - c) seven cerebrals: *ṭ ṭh ḍ ḍh* and *ḷ⁵ ḷḥ⁵ ṇ*,
 - d) five dentals: *t th d dh n*,
 - e) five labials: *p ph b bh m*.

cp. WHITNEY's Translation of the Atharvaveda p. 1013—23.

¹ On the readings of the Paippalāda recension, see LANMAN's Introduction p. LXXIX—LXXXIX.

² The Kashmirian AtharvaVeda, Book One. Edited with critical notes by LEROY CARR BARRET, in JAOS. 26, 197—295.

³ These are really simple long vowels, being diphthongs only in origin (= *āi*, *āu*).

⁴ Pronounced *āi*, *āu* (see WHITNEY on APr. I. 40 and TPr. II. 29), but derived from diphthongs with a long first element.

⁵ These sounds take the place of *ḍ* *ḍh* respectively between vowels; e. g. *īḷe* (but *īḍya*), *mīḷhūṣe* (but *mīḍhvān*).

2. Four semivowels: *y r l v*.
3. Three sibilants: *ś* (palatal), *ṣ* (cerebral), *s* (dental).
4. One aspiration: *h*.
5. One pure nasal: *m* (*m̐*) called Anusvāra ('after-sound').
6. Three voiceless spirants: *ḥ* (Visarjanīya), *ḥ* (Jihvāmūlīya), *ḥ* (Upadhmanīya).

5. Losses, changes, additions.—In order that the phonetic status of the Vedic language may be understood historically, the losses, changes, and additions which have taken place in it as compared with earlier linguistic stages, must be pointed out.

a. It has **lost** the IE. 1) short vowels *e̊ o̊* and *ə*; 2) long vowels *ē ō*; 3) diphthongs *ēi ōi, ēu ōu; āi ēi ōi, āu ēu ōu*; 4) sonant nasals; 5) voiced spirant *z*.

b. It has **replaced** a number of IE. sounds by others: 1) the short vowels *e̊ o̊* by *ā, ə* by *i*; 2) the long vowels *ē ō* by *ā*; 3) the diphthongs *ēi ōi* by *ē, ēu ōu* by *ō*; also *āz ēz ōz* by *ē ō*; 4) *ṛ* by *īr (ūr)*, *ḷ* by *r*; 5) *āi ēi ōi* by *āi, āu ēu ōu* by *āu*; 6) *r*, when followed by a nasal, has become *ṛ*; 7) gutturals (velars) have, under certain conditions, become palatals¹; 8) a palatal mute has become the palatal spirant *ś*².

c. It has **added** the whole series of eight cerebrals (including the spirant *ṣ*).

The above innovations are specifically Indian, excepting (1) the loss of the vowels *e̊ o̊ ə*, together with the diphthongs formed with them; (2) the loss of the sonant nasals; and (3) the addition of the spirants *ś* and *ṣ*. These the Avesta shares with the Vedas.

1. The simple vowels.

6. The vowel *a*.—This is by far the commonest vowel, being much more than twice as frequent as *ā*; while these two *a*-vowels combined occur as often as all the rest (including diphthongs) taken together³. According to the modern Indian pronunciation, *a* has the sound of a very short close neutral vowel like the English *u* in *but*. That such was its character as early as the time of Pāṇini appears from his last Sūtra, according to which *a* is not the short sound corresponding to *ā*. To the same effect are the statements of the Prātiśākhya⁴, which describe *a* as a 'close' (*samvṛta*) sound. This pronunciation is borne out by the reproduction of Indian words in Greek, where the vowel, though usually represented by *a*, appears as *e̊* or *ō̊* also; on the other hand, the frequent reproduction of the Greek *a* by the Indian *ā* indicates that, to the Indian ear, that vowel was both longer and had more distinctively the sound of *a*. Similarly, Hindus of the present day make the observation that the English pronunciation of *ā* in Sanskrit words sounds long (*dīrgha*) to them. As the ancient Iranian languages have the normal *ā* throughout, the close pronunciation must be an Indian innovation. But whether it already prevailed in the period when the Samhitās were composed is uncertain. The fact, however, that in the RV. the metre hardly ever admits of the *ā* being elided after *e* or *o*, though the written text drops it in about 75 per cent of its occurrences, seems to indicate that when the hymns of the RV. were composed, the pronunciation of *ā* was still open, but that at

¹ Cp. BRUGMANN, *Kurze vergleichende Grammatik der indogermanischen Sprachen* 1902, I, 244.

² Op. cit. 233.

³ Cp. WHITNEY, 22 and 75.

⁴ APr. I. 36; VPr. I. 72.

the time when the Samhitā text was constituted, the close pronunciation was already becoming general.

a. Though *a* ordinarily represents IE. *ā ē ō*¹, it also often replaces an original sonant nasal² representing the reduced form of the unaccented Vedic syllables *a*+nasal: 1) *an* in derivative and inflexional syllables; e. g. *sat-ā* beside the stem *sant-* 'being'; *jūh-ati* 'they sacrifice' (suffix otherwise *-anti*); 2) *a*+nasal in radical syllables; e. g. *ta-tā* 'stretched': *√tan-*; *ga-tā* 'gone': *√gam-*; *das-mā* 'wondrous': *√dam-*; stem *pathi-* 'path', beside *pānthā-*; 3) in words as shown by comparative philology; e. g. *śatā-m* 'hundred' (Lat. *centum*), *dāśa* 'ten' (Lat. *decem*)³.

Very rarely *a* is a Prakritic representative of *r*, as in *vi-kaṣa-4* 'monstrous', beside *vi-kr̥ṣa-* 'deformed'.

7. The vowel *ā*. — This sound represents both a simple long vowel⁵ and a contraction; e. g. *ā-sthā-t* 'he has stood'; *āsam* 'I was' (= *ā-as-am*), *bhārāti* 'may he bear' (= *bhāra-a-ti*).

a. Like *a*, the long vowel *ā* frequently corresponds to or is derived from a syllable containing a nasal; e. g. *khā-tā* 'dug': *√khan-*; *ā-tmān-* 'soul': *an-* 'breathe'. In very rare instances the nasal is retained in the RV.: *jighāmsati* 'desires to strike': *√han-*; *śrāntā-* 'wearied': *√śram-*; *dhvāntā-* 'dark': *√dhvan-*; there are six or eight more instances in the later Samhitās⁶. Here the reappearance of the nasal in a weak radical syllable is an innovation due to the influence of other forms with nasals⁷.

8. The vowel *i*. — This sound in the first place is an original vowel; e. g. *div-i* 'in heaven'. It also frequently represents the low grade of *e* and *ya* both in roots⁸ and suffixes; e. g. *vid-mi* 'we know', beside *ved-a* 'I know'; *nāv-iṣṭha-* 'newest', beside *nāv-yas-* 'newer'. It further appears as the low grade of *ā* in roots containing that vowel: e. g. *sidhyati* 'succeeds', beside *sīdhati*; *śiṣṭā-* 'taught', beside *śāsti* 'teaches'; especially when the vowel is final, as in *sthi-tā* 'stood': *√sthā-*. From the latter use it came to assume the function of a 'connecting' vowel; e. g. *jan-i-tr-* 'begetter': *√jan-*; after heavy syllables also in the ending *-ire* of 3 pl. pf. mid. *vavand-ire* (beside *nunudr-*). In *śithirā-* 'loose' *i* would be a Prakritic representative of *r*, if the word is derived from *√śrath-*⁹.

9. The vowel *ī*. — This sound is an original vowel, e. g. in *jīvā-* 'living'¹⁰. It also often represents the low grade of *yā* both in roots and suffixes; e. g. *jī-tā* (AV.), 'overcome': *√jyā-*; *as-i-māhi* 'we would attain', beside *as-yām* 'I would attain'. It further seems to represent the low grade of both radical and suffixal *ā*; but this can probably in all instances be explained as either a low grade of *ai* or a later substitution for *i*; e. g. *gī-tha-* (AV.) beside *gā-thā-* 'song', is from the root *gai-*; *adī-mahi* (VS.) and *dī-śva* (VS.), from *√2 dā-* and *√3 dā-*, occur beside forms in *i* from the three roots *dā-* which have *i* only in the RV.; *hīnd-* 'forsaken', from *√hā-*, occurs once in RV. x beside forms with *i* only in RV. I–IX. A similar explanation probably applies to the *-nī-* of the ninth class of verbs beside *-nā-*, e. g. *grbhñī-*: *grbhñā-*¹¹.

¹ Cp. BRUGMANN, KG. 92, 104, 116.

² Cp. BRUGMANN 184.

³ See WACKERNAGEL I, 7 (p. 7–10).

⁴ Cp. WACKERNAGEL I, 146.

⁵ It represents IE. *ā ē ō*: cp. BRUGMANN, KG. 98, 110, 122. It also appears for IE. *ō* before single consonants: cp. WACKERNAGEL I, 10.

⁶ See below, past passive participles 574, 2 a.

⁷ See WACKERNAGEL I, 13.

⁸ This term will be retained in the present

work in its conventional sense (cp. BRUGMANN, KG. 365), and 'roots' will be quoted in the usually low grade form in which they appear in Sanskrit grammar. The term 'base' will be used to designate the phonetic unit which is the starting point of vowel gradation (cp. BRUGMANN, KG. 211). Thus *bhāva-* or *bhavi-* is a 'base', *bhū-* is a 'root'.

⁹ Cp. WACKERNAGEL I, 16 (p. 19, note).

¹⁰ Cp. BRUGMANN, KG. 73.

¹¹ See WACKERNAGEL I, 18.

10. The vowel *u*.—This sound is an original vowel; e. g. *úpa* 'up to'; *duhitṛ-* 'daughter'; *mādhū-* 'sweetness'. It also represents the low grade of *o* or *va* both in roots and suffixes; e. g. *yugá-* m. n. 'yoke', beside *yóga-* m. 'yoking'; *suptá-* (AV.) 'asleep': *svápnā-* m. 'sleep'; *krnu-*: *krnó-* present base of *kr-* 'make'.

11. The vowel *ū*.—This sound is an original vowel; e. g. *bhrū-* 'brow'; *sūra-* 'hero'. It is also the low grade for *avi*, *au*, *vā*; e. g. *bhū-t* 'has become': *bhavi-syāti* 'will become'; *dhūtá-* 'shaken': *dhautīrī-*, f. 'shaking'; *sūd-* 'sweeten': *svād-* 'enjoy'.

12. The vowel *r̥*.—The vowel *r̥*¹ is at the present day usually pronounced as *ri*; and that this pronunciation is old is shown by the confusion of the two sounds in inscriptions and Mss., as well as by the reproduction of *r̥* by *ri* in the Tibetan script². But *r̥* was originally pronounced as vocalic *r*. The Prāṭisākhya of the RV., VS., AV.³ describe it as containing an *r*, which according to the RPr. is in the middle. According to the commentator on the VPr. this medial *r* constitutes one-half of the sound, the first and last quarter being *ā*⁴. This agrees with *rr̥*, the equivalent of *r̥* in the Avesta.

Except in the acc. and gen. plur. of *r̥*-stems (where *r̄* is written), the long vowel is in the RV. represented by the sign for *r̥*: always in forms of the verb *mṛd-*⁵ 'be gracious', in the past participles *tṛlhá-* 'crushed', *dṛlhá-* 'firm', in the gen. *nr̥nām*, and in the one occurrence of the gen. *tisr̥nām*⁶. In the later Samhitās, the vowel in these instances was pronounced short⁷; and it was doubtless for this reason that *r̥* came to be erroneously written for *r̄* in the text of the RV.

13. The vowel *r̄*⁸.—This long vowel, according to RPr. and APr.⁹, contains an *r* in its first half only. It appears only in the acc. and gen. plur. masc. fem. of *r̥*-stems; e. g. *pitṛn*, *mātṛs*; *pitṛnām*, *svatṛnām*. Thus the *r̄* was written only where *a*-*i*-*u*-stems showed analogous forms with *ā* *ī* *ū*; and prosodical evidence proves that, in the RV., *r̄* is required even in the two genitives in which *r̥* is written (*nr̥nām* and *tisr̥nām*)¹⁰. In the TS., however, all these genitives plur. have *r̥*¹¹ (that is, *pitṛnām* as well as *nr̥nām*, *tisr̥nām*).

14. The vowel *l̥*.—This sound, though pronounced as *lri* at the present day, was originally a vocalic *l*. Its description in the Prāṭisākhya¹² is analogous to that of *r̥*. It is found only in a few forms or derivatives of the verb *kṛp-* 'be in order': *cakṛpṛ*, 3 pl. perf.; *cikṛpati*, 3 sing. aor. subj.; *kṛṇpti-* (VS.) 'arrangement'. In the RV. *r̥* appears beside it in *kṛp-* 'form'¹³.

2. The diphthongs.

15. The diphthongs *e* and *o*.—At the present day these sounds are pronounced in India as long monophthongs like *ē* and *ō* in most European

¹ In several instances *r̥* appears to represent an IE. *l* sound. Cp. WACKERNAGEL 1, p. 33.

² See WACKERNAGEL 1, 28.

³ RPr. VIII 14; VPr. IV. 145; APr. I. 37, 71.

⁴ Cp. BENFEY, *Vedica und Verwandtes* I, 18.

⁵ Except possibly RV. VII 56¹⁷ where the vowel is metrically short; cp. op. cit. I, 6; ARNOLD, *Vedic Metre*, p. 143.

⁶ RV. v. 69^a.

⁷ In the AV. the vowel is still metrically long in some of these instances: OLDENBERG, *Prolegomena* 477.

⁸ The *r̄* of the gen. pl. is an Indian innovation; cp. 5, b 6 and 17. On the other hand, IE. *r̄* is represented by *ir̄* and (after labials) *ūr̄*; e. g. from *kṛ-* 'commemorate', *kṛ-ir̄* 'fame'; *pṛ-* 'fill': *pṛ-ir̄-tā-*, n. 'reward'; as low grade of *rā* in *dirghā-* 'long', beside *drāgh-iyas-* 'longer'. Cp. WACKERNAGEL 1, 22.

⁹ RPr. XIII 14; APr. I. 38.

¹⁰ See above, 5, b 6.

¹¹ Cp. BENFEY, *Vedica und Verwandtes* I, 3.

¹² RPr. XIII 14; VPr. IV. 145.

¹³ Cp. WACKERNAGEL 1, 31.

languages. That they already had this character at the time of the Prātiśākhya¹ and of Pāṇini's successors Kātyāyana² and Patañjali³, appears from the accounts given by those authorities, who at the same time recognize these two sounds to be in many instances the result of the euphonic combination (*sandhi*, Sandhi) of *a+i* and *a+u* respectively. This evidence is borne out by the reproduction of Indian words by the Greeks⁴ and of Greek words by the Indians⁵ from about 300 B. C. onwards.

a. These two sounds as a rule represent earlier diphthongs of which the second element was *i* or *u* respectively. 1. This is most evidently so when they are produced in Sandhi by the coalescence of *ā* with *ī* and *ū*. As the result of such a combination they are explicable only on the assumption of an earlier pronunciation of these sounds as the genuine diphthongs *āi* and *āu*. — 2. They are further based on prehistoric contractions within words in declension and conjugation; e. g. loc. sing. of *ātva* 'horse': *āve* (cp. *nāv-i* 'in the ship'); nom. acc. du. neut. of *padā* 'step': *padē* (cp. *vācas-i* 'two words'); 3. sing. pot. mid. *bhāvēta* 'should become' (cp. *ās-īta* 'would sit'); *maghōn-* weak stem (= *magha-un*) of *maghāvan-* 'bountiful'; *ā-voc-at* 3. sing. aor. of *vac-* 'speak' (= *ā-va-uc-at*)⁶. — 3. These two sounds also represent the high grade corresponding to the weak grade vowels *i* and *u*; e. g. *śatati* 'pours', beside *sik-tā* 'poured'; *bhoj-am*, beside *bhūj-am*, aor. of *bhuj-* 'enjoy'⁷.

b. 1. In a small number of words *e*¹⁰ represents Indo-Iranian *az* (still preserved in the Avesta) before *d* *dh* and *h* (= *dh*): *dehi* 'give', and *dhehi* 'set' (Av. *dasdi*); *e-dhi* 'be', beside *ās-ti*; *nīd-īyas-* 'very near', *nīd-īṣṭha-* 'nearest' (Av. *nasdyo*, *nasdiṣta-*); *medhā-* 'insight' (Av. *mazdā*); *miyēdha-* 'meat-juice' (Av. *myazda-*); *vedhās-* 'adorer' (Av. *vardanē-*); *sed-*⁸ weak perf. of *sad-* 'sit' (Av. *hazd-* for Indo-Iranian *sazd-*)⁹. — 2. Similarly *o*¹⁰ represents *az* in stems ending in *-as* before the *bh* of case-endings, e. g. from *dvēṣ-as-* n. 'hatred', inst. pl. *dvēṣo-bhis*; and before secondary suffixes beginning with *y* or *v*: *amho-yū-* 'distressing' (but *apas-yū-* 'active'); *duvo-yū-* 'wishing to give' (beside *divas-yū-*); *sāho-van-* (AV.) 'mighty', beside *sāhas-van-* (RV.). In derivatives of *śās-* 'six', and of *vah-* 'carry', *o* represents *az* before *d* or *dh*, which it cerebralizes: *śo-ḍaśa* (VS.) 'sixteen'; *śo-dhā* 'six-fold'; *vo-dhum* 'to carry'.

16. The diphthongs *ai* and *au*. — These sounds are pronounced at the present day in India as diphthongs in which the first element is short. Even at the time of the Prātiśākhya they had the value of *āi* and *āu*¹¹. But that they are the etymological representatives of *āi* and *āu* is shown by their becoming *āy* and *āv* respectively before vowels both in Sandhi¹² and within words; e. g. *gāv-as* 'kine', beside *gāu-s* 'cow'¹³. That such was their original value is also indicated by the fact that in Sandhi *a* contracts with *e*¹⁴ to *ai*, and with *o* to *au*¹⁵.

17. Lengthening of vowels. — 1. Before *n*, vowels are lengthened only (except *r* in the gen. pl.) in the acc. pl. in *-ān*, *-īn*, *-ūn*, *-ṛn*¹⁶, where the long vowel is doubtless pre-Indian¹⁷.

2. Before suffixal *y*, *i* and *u* are phonetically lengthened: a) as finals of roots; e. g. *kṣi-yate* 'is destroyed' (*√kṣi-*); *sū-yāte* 'is pressed' (*√su-*); *śrū-yās* 'may he hear' (*√śru-*); b) as finals of nouns in denominatives formed with *-yā* and their derivatives; e. g. *jāni-yānt-* 'desiring a wife' (*jāni-*); *valgū-*

¹ See WHITNEY on APr. I. 40.

² Vārttika on Pāṇini VIII. 2, 106.

³ Comment on Vārttika 1 and 3 on Pāṇini I. 1, 48.

⁴ Thus *Kakaya-*, name of a people, becomes *Κακαῖοι*; *Gonḍa-* name of a people, *Γόνδαλοι*.

⁵ Thus *κἀμῆλος* becomes *kramēla-ka-*; *ῶρα* becomes *horā*.

⁶ Cp. WACKERNAGEL I, 33 b.

⁷ Op. cit. I, 33 c, d, e.

⁸ On this base see below on the Perfect, 483 a, 2.

⁹ Cp. WACKERNAGEL I, 34 a.

¹⁰ These *e* and *o* are not distinguished in

pronunciation from the monophthongs representing the diphthongs *āi* and *āu*.

¹¹ See WHITNEY on APr. I. 40 and TPr. II. 29.

¹² See below 73.

¹³ Cp. WACKERNAGEL I, 36.

¹⁴ That is, originally *ā* + (*e* =) *āi* became *āi*.

¹⁵ That is, originally *ā* + (*o* =) *āu* became *āu*.

¹⁶ For original *a i u r* + *ns*.

¹⁷ As the *s* which caused the length by position had already for the most part disappeared in the Vedic language.

yāti 'treats kindly' (*valgū-*); *gātū-yāti* 'desires free course' (*gātū-*; but also *gātu-yāti*)¹. The AV.² has a few exceptions: *arāti-yāti* 'is hostile'; *jani-yāti* as well as *jani-yāti*³; c) *i* in the suffix *-i-ya* and in the comparative suffix *-īyas*.

3. Before *r*, if radical, *i* and *u* seem to be lengthened when a consonant follows; e. g. *gīr-bhis* beside *gīr-as* (*gīr-* 'song of praise'); *pūr-śu* beside *pūr-as* (*pūr-* 'fort'), but *īr* and *ūr* here represent IE. *r̥*⁴. In a few instances this is extended by analogy to words in which the *r* is not radical: *āsīr* 'blessing' (*āsīs-*); *sajūr* 'together' (*√jūs-*)⁵.

4. Before *v*, the vowels *a i u* are lengthened: a) in some instances the augment: *āvidhyat* 'he wounded' (*√vyadh-*)⁶; b) once before the primary suffix *-vāms* of the perfect participle: *jigī-vāms-* 'having conquered' (*√ji-*); c) often before the secondary suffixes *-van*, *-vana*, *-vant*, *-vala*, *-vin*; e. g. *rtā-van-* 'observing order'; *kīrṣi-vana-* (AV.) 'ploughman'; *yā-vant-* 'how great'; *śvāsī-vant-* (RV.) 'snorting' (*√śr-as-*); *krṣi-vala-* 'ploughman'; *dvayā-vin-* 'dishonest'; d) often before the second member of a compound; e. g. *gūrtā-rasu-* 'whose treasures are welcome'⁷.

5. Before *l*r. *z* and *z̥*, when followed by one or more consonants, vowels are lengthened by way of compensation for the loss of the *z* or *z̥*⁸; a) *ā* (= *aṣ*) in *tādhi* 'hew' (*√takṣ-*); *bādhi-* 'firm' (*√banh-*); *sādhr-* 'conquering', *ā-sādha-* 'invincible' (*√sah-*); b) *ī* = *iṣ* in *īḍ-* 'adore' (*√yaj-* 'sacrifice', or *√iṣ-* 'wish'); *nīḍa-* 'nest'; *pīḍ-* 'press'; *mīḍhā-* 'reward'; *mīḍhvāms-* 'bounteous'; *rīḍhā-* 'licked' (*√rih-*); *vīḍū-* 'swift'; *śidati* (= *sizdati*) 'sits'; *hīḍ-* 'be angry' (cp. *hims-* 'injure'). c) *ū* = *uṣ* in *ūḍhā-* 'borne' (*√vah-*); *gūḍhā-* 'concealed' (*√guh-*)⁹.

6. Vowels also appear lengthened under conditions other than those enumerated above (1-5).

a. Final *a i u* are very frequently lengthened in the Samhitās before a single consonant owing to rhythmical predilections; from this use the lengthening of the vowels is extended to syllables which are reduplicative or precede suffixes¹⁰.

b. For metrical reasons the length is in a few words shifted to another syllable. Thus *didihī* often appears instead of the regular *dīdihī*; and in *virā-sāt* 'ruling men', *virā-*¹¹ stands for *vīra-*. A similar explanation perhaps applies to *carātha-* 'moving', beside *carātha-*; and *māhina-* 'gladsome', beside *māhina-*.

c. The long vowel beside the short in the same stem appears in some instances to be due to vowel gradation; as in *tvāt-pitāras* (TS.) 'having thee as a father', beside *pitāras*; *prithu-jāghana-* 'broad-hipped', beside *jāghāna-*

¹ Before this *-yā*, the final of *a*-stems is sometimes lengthened, but probably not phonetically; see below 6 d.

² See WHITNEY on APR. III. 18.

³ No lengthening takes place in the optative present of verbs of the 5th or 8th class, e. g. *śṛnu-yāma* (*śru-* 'hear'); nor in adverbs formed with *-yā* from *u*-stems; e. g. *āśu-yā* 'swiftly'; *amu-yā* 'thus'.

⁴ See above on *r̥*, p. 8, note 8.

⁵ Cp. WACKERNAGEL I, 23. When *ir* stands for suffixal *-is*, it remains unchanged; e. g. *hāvīrbhis* 'with oblations' (*hāv-is-*), *krīvir-dat-i* 'saw-toothed'; *-ur*, with genuine *u*, remains short in *urvārā-* 'field', *urvi-* 'wide', *urviyā* 'widely' (*uru-* 'wide'), *uru-āi-* 'desire', *dur-*

(for *dus-*) e. g. in *dur-gā-* 'hard to traverse'.

⁶ The lengthening of the augment in *āyunak*, *āyukta* (*√yuj-*) and *āriṇak*, *āriak* (*√ric-*), follows this analogy.

⁷ The lengthening here probably started from that in Sandhi: cp. WACKERNAGEL I, 42.

⁸ This appears to be the only kind of compensatory lengthening in the Vedic language. Cp. 17, 1.

⁹ On *e* and *o* for *aṣ* *aṣ*, see above, 15, a, b, and cp. WACKERNAGEL I, 40.

¹⁰ See WACKERNAGEL I, 43.

¹¹ Metrical shortening of a long syllable

'hip'; *ānu-śāk* 'in continuous order', beside *ānu-* 'along' as first member of a compound.

d. The lengthening of the vowel in a certain number of instances appears to be due to analogy; thus the denominatives in *-āyā* beside *-ayā* from *a*-stems (e. g. *ṛtāyā-* 'observe order', beside *ṛtayā-*)¹, seem to follow the model of those in *-īyāti* and *-ūyāti*, which would account for the fluctuation in quantity. *Tikṣṇā-* 'sharp' (beside *tigmā-*: *tij-* 'be sharp') and *hālīksna-* (TS.) beside *hālīksna-* (VS.), a kind of animal, appear to owe their *ī* to the influence of desideratives which in several instances have *ī* (partly for older *i*) before *kṣ*. The reason for the *ū* in *tūṣṇīm* 'silently' (*tus-* 'become quiet'), and in *śūmnā-* (VS.), otherwise *sumnā-* 'favour', is, however, obscure.

18. **Loss of vowels.**—Vowels are very rarely dropped in the language of the Samhitās. Medial loss is almost entirely restricted² to the isolated disappearance of *u* before *v* and *m*. That vowel is dropped at the end of the first member of a compound in *anvartitī* (RV¹) 'wooner' (= *anu-vartitā*); *ānvartisyē* (AV.) 'I shall follow'³; *cār-vadana-* (AV. Paipp.) 'of lovely aspect' (= *cāru-vadana-*) and *cār-vāc-* (AV. Paipp.) 'speaking pleasantly'⁴. The only example of the loss of *ā* in this position seems to be *tīl-piñja-* (AV¹) a kind of plant, beside *tīla-piñji-* (AV¹). The vowel *u* is further dropped before the *m* of the 1 pers. pl. pres. ending of the 5th (-*nu-*) class, when the *u* is preceded by only one consonant, in *kṛṇ-mahe* and *kṛṇ-māsi* (AV.)⁵ 'we do'.

Initial vowels also occasionally disappear. The only vowel that is lost with any frequency is *ā*, which is dropped in Sandhi after *e* and *o*, according to the evidence of metre, in about one per cent of its occurrences in the RV. and about twenty per cent in the AV. and the metrical portions of the YV.⁶ In a few words its disappearance is prehistoric: in *vī-* 'bird'⁷ (Lat. *avi-*), possibly in *nī-* 'in' (Greek *ἐνι*)⁸, in *pīd-* 'press'⁹, *bhī-śāj-*¹⁰ 'healer'. *ā* is lost in *tmān-*, beside *ā-tmān-*, but the reason has not been satisfactorily explained¹¹. In *va* 'like', beside *iva*, the loss of *i* is probably only apparent: cp. *vā* 'like' (Lat. *vē* 'or')¹². Initial *u* seems to be lost, if the reading is not corrupt, in *śmasi* (RV. II. 31⁶) beside *uśmāsi* 'we desire' (*√vas-*).

19. **Contraction.**—Long vowels and diphthongs are often the result of contraction in Sandhi¹³. They have frequently a similar origin in the interior of words¹⁴.

a. **Contractions of *a*** with a vowel or diphthong are the following:

1. *ā* often stands for *a + a*, *ā + a*, or *a + ā*; e. g. *āj-at*, augmented imperfect (= *ā-aj-at*); *ād-a*, red. perf. (= *a-ād-a*); *bhārāti*, pres. subj. (= *bhāra-ati*); *ukthā*¹⁵, inst. sing. (= *ukthā-a*); *āsvās* 'mares', nom. pl. (= *āsvā-as*); *dāti*, aor. subj. (= *dā-ati*); *devām*, gen. pl. (= *devā-ām*).

2. *e* stands for *a + ī* and *ā + ī*; e. g. *āsve*, loc. sing. (= *āsva-i*); *padé*,

(at the end of a triṣṭubh-line), without interchange of quantity, appears in *sirāsu*, loc. plur. of *sirā-* 'stream'.

¹ See below, Denominatives, 563, a.

² Apart from the syncope of *ā* in low grade syllables: cp. 25, A 1.

³ Cp. BÖHTLINGK, ZDMG. 39, 533; 44, 492f.; cp. OLDENBERG 324.

⁴ See BÖHTLINGK's Lexicon s. v. Perhaps also in *jāmbila-* (MS.) 'knee-pan', if = *jānu-bila-*.

⁵ Cp. DELBRÜCK, AIV. 174; v. NEGELEIN, Zur Sprachgeschichte des Veda 60 (*ṛ-Wurzeln*).

⁶ Cp. WACKERNAGEL I, p. 324; OLDEN-

BERG, ZDMG. 44, 321 ff. (Der Abhinihita Sandhi im Rgveda).

⁷ Cp. 25, A 1; WACKERNAGEL I, 71.

⁸ Cp. SCHMIDT, KZ. 26, 24; WACKERNAGEL 2¹, p. 73.

⁹ Op. cit. 2¹, p. 71 (bottom).

¹⁰ Op. cit. 2¹, p. 72 (bottom).

¹¹ Op. cit. 1, p. 61 (top).

¹² Cp. op. cit. 1, 53 c, note; ARNOLD, Vedic Metre, 129 (p. 78).

¹³ See below 69, 70.

¹⁴ See above 15, a 2.

¹⁵ The original inst. ending *-a* under the influence of this contracted form became *-ā*; cp. WACKERNAGEL I, p. 102, mid.

nom. acc. du. neut. (= *padā-ī*); *bhāves*, opt. pres. (= *bhāva-īs*); *yamé* 'twin sisters', nom. acc. du. fem. (= *yamā-ī*).

3. *o* stands for *a+u*; e. g. *āvocam*, aor. of *vac-* 'speak' (= *āva-uc-am*).

4. *ai* stands for *ā+e* and, in augmented forms, *a+ī*; e. g. *tāsmāi* 'to him', dat. sing. masc. (= *tāsma-e*); *devyāi*, dat. sing. fem. (= *devyā-e*); *dicchat*, 3. sing. impf. (= *ā-icchat*); *āirata*, 3. pl. impf. (= *ā-irata*) 'set in motion'.

5. *au* stands for *a+ū* in augmented forms; e. g. *āucchat*, 3. sing. impf. of *vas-* 'shine' (= *ā-ucchat*); *auhat*, 3. sing. impf. of *ūh-* 'remove' (= *a-ūh-at*).

b. Contractions of *i* with *i* or *ā* are the following:

1. *ī* stands for *i+i* in the nom. acc. pl. neut. of *i*-stems; e. g. *trī* 'three' (= *trī-i*).

2. *ī* stands for *i+i* in weak forms of the perfect, when the reduplicative vowel is immediately followed by *i* (either original or reduced from *ya*); e. g. *īś-ūr* (= *i-īś-ūr* from *īś-* 'speed'); *īj-é* (= *i-ij-é* from *yaj-* 'sacrifice').

3. *ī* stands for *i+ā* in the inst. sing. fem. and the nom. acc. du. masc. fem. of stems in *-i*; e. g. *matī* (= *matī-ā*) 'by thought'; *pāti* 'the two lords' (= *pāti-ā*, cp. *rtvij-ā*), *śūcī*, du. fem. 'the two bright ones' (= *śūcī-ā*).

4. *ī* stands for *i+ā* in compounds of *dvi-* 'two', *nī* 'down', *prāti* 'against', with the low grade of *āp-* 'water': *dvīp-ā* 'island'; *nīp-ā* 'low-lying' (K.)¹; *pratīpām* 'against the stream'².

5. *ī* stands for *i+ā* when reduplicative *i* is followed by the low grade form of a root beginning with *ā*: *īpsa-ti* (AV.), desiderative of *āp-* 'obtain' (= *i-īp-sa-*)³. A similar contraction takes place when initial radical *a* is long by position, in *īks-ate* 'sees' (cp. *āks-i* 'eye') and *īkḥ-āyati* 'swings' (cp. *pari-āṅkhāyate* 'may he embrace'). In *īj-ate* 'drives', beside *āj-ati* 'drives', the contraction to *ī* of *i+ā* is perhaps due to analogy⁴.

c. Contractions of *u* with *u* or *ā* are the following:

1. *ū* stands for *u+u* in weak forms of the perfect when the reduplicative vowel is immediately followed by *u* (either original or reduced from *va*); e. g. *ūc-e*, 3 sing. mid. (= *u-uc-e*) from *uc-* 'like'; *ūc-ūr* (= *u-uc-ūr*) from *vac-* 'speak'.

2. *ū* stands for *u+ā* in the compound formed with *ānu* 'along' and the low grade of *āp-* 'water': *anūp-ā*⁵ 'pond'.

3. *ū* stands for *u+ā* in the nom. acc. du. masc. fem. of *u*-stems; e. g. *bāhū* 'the two arms' (= *bāhū-ā*).

4. *ū* seems to stand for *u+i* in the nom. acc. pl. neuter of *u*-stems; e. g. *vāsū* (= *vāsu-i*), from *vāsu-* 'good'; but the vowel may possibly be lengthened by analogy⁶, for the Pada text always has *ū*.

20. Hiatus.—a. In the written text of the Saṃhitās, hiatus is, as a rule, tolerated in diphthongs only, vowels being otherwise separated by consonants. It nevertheless appears:

1. in Sandhi, when a final *s y* or *v* has been dropped before a following vowel; when final *ī ū e* of dual endings are followed by vowels; when *a* remains after final *e* and *o*; and in some other instances⁶;

2. in compounds, when the final *s* of the first member has disappeared before a vowel; e. g. *āyo-agra-* 'iron-pointed' (*āyas-* 'iron'); *pura-āt-* 'leader' (*purās* 'before'); and when, by a Prakritism, *y* is lost in *prā-uga-* 'fore-part of the shaft' (= *prā-yuga-*);

¹ Cp. *nīp-ya-* (VS.), 'lying at the bottom'.

² Cp. *ānika-* and *prātika-* 'face'.

³ Cp. Saṃprasāraṇa *ī* and *ū* for *yā* and *vā*.

⁴ Cp. WACKERNAGEL I, 90 c, p. 104.

⁵ That is, of the *a* and *i* stems; e. g.

bhadrā, trī.

⁶ See below, Sandhi 69—73.

3. in the simple word *tītaū*¹ 'sieve' (probably from *tams-* 'shake'), by a loss of *s*, due most likely to borrowing from an Iranian dialect (where medial *s* would have become *h*, which then disappeared).

b. 1. Though not written, hiatus is common elsewhere also in the Samhitās². The evidence of metre shows that *y* and *v* must often be pronounced as *i* and *u*, and that a long vowel or a diphthong has frequently the value of two vowels. When the long vowel or diphthong is the result of contraction, the two original vowels must often be restored, within a word as well as in Sandhi. Thus *pānti* 'they protect', may have to be read as *pā-anti* (= *pā-anti*)³, *āñjan* 'they anointed' as *ā-añjan*; *jyēṣṭha-* 'mightiest' as *jyā-iṣṭha-* (= *jyā-iṣṭha-* from *jyā-* 'be mighty'); *dicchas* as *ā-icchas* 'thou didst wish'; *aurṇos* as *a-urṇos* 'thou didst open'⁴.

2. Hiatus is further produced by distraction of long vowels⁵ which, as the metre shows, are in the Rgveda often to be pronounced as two short vowels. This distraction was doubtless originally due partly to a slurred accentuation which practically divided a syllable into two halves, and partly to the resolution of etymological contraction. From such instances distraction spread to long vowels in which it was not historically justified. It appears most often in *ā*, especially in the gen. pl. in *-ām*, also in the abl. sing. in *-āt*, the nom. acc. pl. in *-ās*, *-āsas* of *a*-stems, in the acc. sing. in *-ām* of such words as *abjām* 'born in the water'; and in many individual words⁶. Distraction is further found in the diphthongs of words in which it is not etymologically justified; as in the genitives *vēs* 'of a bird', *gōs* 'of a cow', in *tradhī* 'threefold', *ndr-* 'leader', *rēkṇas-* 'property', *śrēṇi-* 'row'; and in other words⁷.

22. Svarabhakti.—When a consonant is in conjunction with *r* or a nasal, a very short vocalic sound tends to be developed between them, and the evidence of metre shows that a vowel must often be pronounced between them. It is the general view of the Prātisākhya⁸ that when an *r* precedes another consonant a vowel is sounded after it; according to some of them this also takes place after *l* or even after any voiced consonant. They call it *svarabhakti* or 'vowel-part', which they describe as equal to $\frac{1}{8}$, $\frac{1}{4}$, or $\frac{1}{2}$ mora in length and generally as equivalent to *a* or *e* (probably = *ē*) in sound.

a. The metre of the RV. shows that an additional syllable is frequently required in words in which *r* either precedes or follows⁹ another consonant; e. g. *darsatā-* 'worthy to be seen' (quadrisyllabic); *indra-*¹⁰, name of a god (very often trisyllabic); *prā* 'forth' (disyllabic)¹¹.

¹ Cp. WACKERNAGEL I, 37 b, note.

² See OLDENBERG, Prolegomena 434 ff.: 'Hiatus und Contraction'; ARNOLD, Vedic Metre, chapter IV, p. 70 ff. (Sandhi), chapter V, p. 81 ff. (Syllabic Restoration).

³ As a rule, one vowel (including *e* and *o*) is shortened before another: see OLDENBERG, op. cit., 465 ff.; 447 ff.

⁴ WACKERNAGEL I, 46 b.

⁵ See OLDENBERG, op. cit., 163 ff. (Vocale mit zweisilbiger Geltung).

⁶ See WACKERNAGEL I, 44. This is a very old phenomenon, as it is found in the Avesta in the gen. pl. and in other forms: OLDENBERG 181; WACKERNAGEL I, p. 50.

⁷ WACKERNAGEL I, 46. This distraction of diphthongs is also pre-Vedic, parallels being found in the Avesta. Its use gradually decreases in the RV. and is lacking in the later Samhitās, doubtless owing to the dis-

appearance of slurred accentuation: WACKERNAGEL I, 47.

⁸ RPr. VI. 13f., VPr. IV. 16; TPr. XXI. 15f.; APr. I. 101 ff.

⁹ The vowel which has to be restored in the gen. loc. du. termination *-tros*, which must always be read as a disyllable, is not to be explained as Svarabhakti, since *-tros* is the original ending.

¹⁰ Cp. OLDENBERG, ZDMG. 60, 711—745 (Die Messung von *indra*, *rudrā* u. a.).

¹¹ There seem to be a few instances of a Svarabhakti vowel being actually written: *tarāsanti*, beside *tras-* 'tremble'; the secondary derivative *svaitārim*, beside *svitrā-* (AV.) 'white'; *pūruṣa-* and *pūruṣa-* 'man', probably for **pūruṣa-* (WACKERNAGEL I, 51, cp. 52). The initial vowel of *ulokā-*, which is commoner than *lokā-* 'world', has not yet been satisfactorily explained; cp. op. cit. I, 52 d.

b. When a consonant is followed by *ñ*, *n*, or *m*, the same parasitic vowel often appears; e. g. *yajñá-* (= *yajⁿná-*) 'sacrifice'; *gná-* (= *gⁿná-*) 'woman'. It is, however, here frequent only as representing the second syllable after the caesura in *trīṣṭubh* and *jagati* verses; it rarely occurs at the beginning of such verses, and never at the end¹.

VOWEL GRADATION.

I. The Guṇa series: *e o ar*.

22. A. Low grade: *i u ṛ*.—In the same root or stem the simple vowels *i u ṛ* are found to interchange² with the respective high grade forms *e o ar a*³ called Guṇa ('secondary form?') by the native grammarians, according to the conditions under which the formative elements are attached. Beside these appear, but much less frequently, the long grade forms *ai au ā* called Vṛddhi ('increase') by the same authorities. The latter regarded the simple vowels as the fundamental grade, which, from the Indian point of view, these vowels often evidently represent: thus from *ūrṇavābhi-* (SB.) 'spider', we have the derivative formation *aūrṇavābhā-* 'sprung from a spider'⁴. Comparative grammar has, however, shown that in such forms we have only a secondary application of an old habit of gradation derived from the IE. period, and that Guṇa⁵ represents the normal stage from which the low grade form, with reduced or altogether lacking vowel⁶, arose in less accented syllables. This theory alone can satisfactorily explain the parallel treatment of Guṇa gradation (*e o ar* beside *i u ṛ*) and Samprasāraṇa gradation (*ya va ra* beside *i u ṛ*), as in *diṣ-ṭá-*, *dī-dṛś-a* (*dīṣ-* 'point out') and *iṣ-ṭá-*, *iyáj-a* (*yaj-* 'sacrifice'). In other words, *i u ṛ* can easily be explained as reduced forms of both Guṇa and Samprasāraṇa syllables (as ending or beginning with *i u ṛ*), while the divergent 'strengthening' of *i u ṛ*, under the same conditions, to *e o ar* or *ya va ra* cannot be accounted for⁷.

The interchange of Guṇa and simple vowel is generally accompanied by a shift of accent: Guṇa appears in the syllable which bears the accent, but is replaced by the simple vowel when the accent is transferred to the following syllable. This shows itself most clearly in inflexional forms; e. g. *é-mi* 'I go', but *i-más* 'we go'; *āp-nó-mi* (AV.) 'I obtain', but *āp-nu-más* 'we obtain'; *várdhāya*, but *vṛdhāya* 'to further'. Hence it is highly probable that change of accent was the cause of the gradation⁸.

a. Long grade or Vṛddhi: *ai, au, ā*.—Vṛddhi is far more restricted in use than Guṇa, and as it nearly always appears where Guṇa is to be expected, it may be regarded as a lengthened variety of it⁹ dating back to the IE. period.

¹ See OLDENBERG, *Prolegomena*, 374, note.

² This interchange was already noticed by Yāska; see *Nirukta* x. 17.

³ The only root in which the gradation *a*:*i* is found is *kṛp-*, cp. 14. It is employed in word-formation much in the same way as in verbal and nominal inflexion.

⁴ See below a, 3 and cp. 25 B2; WACKER-NAGEL I, 55, p. 62, note (top).

⁵ Both *a* and *ā* represent the Guṇa or

normal stage in the gradation of the *a*-vowels in many roots: see 24; WACKER-NAGEL I, 55 b.

⁶ The vowel sometimes disappears in the low grade of the *a*-series ('Schwundstufe') see 24.

⁷ Cp. WACKER-NAGEL I, 55.

⁸ Occasional exceptions, such as *vṛka-* 'wolf', are capable of explanation: cp. WACKER-NAGEL I, 57.

⁹ 'Dehnstufe'; cp. WACKER-NAGEL I, 61.

It is to be found 1) in strong forms of a few monosyllabic substantives, in the nom. sing. of *sákhi*- 'friend' and of stems in *-r*, and in the loc. sing. of stems in *i* and *u*: *su-hárd*- 'good-hearted' (from *hád*- 'heart'), *dyáu-s* 'heaven' (from *dyú*-), *gáu-s* 'cow' (from *gó*-); *sákha*¹, *pitā*²; *agnā*³ (from *agni*- 'fire'), *aktáu* (from *akti*- 'night'); 2) before the primary nominal suffixes *-a*, *-i*, *-ti*, *-tna*, *-man*, *-vana*; e. g. *spārḥ-ā*- 'desirable' (*√sprh*-); *hārd-i*- 'heart' (from *hád*-); *kārṣ-i*- (VS.) 'drawing' (*√krṣ*-); *śráuṣ-ti* 'obedient' (*√śruṣ*-); *cyau-tná*- 'stimulating' (*√cyu*-); *bhārman*- 'board' (*√bhr*-); *kārṣ-i-vāṇa*- (AV.) 'ploughman'; 3) in secondary nominal derivation, generally to form patronymics or adjectives expressive of connexion or relation⁴; e. g. *gairikṣitā*- 'descended from *giri-kṣi*!'; *auśijā*- 'son of *Uśij*'; *śrautrá*- 'relating to the ear' (*śrútra*-); *hairanyā*- 'golden' (*hiranya*- 'gold'); 4) in the singular pres. of a few verbs of the second class and in the active *s*-aorist of roots ending in vowels: *kṣnú-mi* 'I sharpen' (*√kṣnu*-); *mārs-ti*⁵ 'he wipes' (*√mrj*-); *yáu-mi* (AV.) 'I unite' (*√yu*-); *a-jai-ṣam* 'I have conquered' (*√ji*-); *yáu-s*, 2 sing. 'ward off' (*√yu*-); *a-bhār-ṣam* 'I have borne' (*√bhr*-).

B. Low grade: *ī ū īr*.—The same Guṇa and Vṛddhi forms as a rule correspond to these long vowels as to their short forms *i u r*. Thus *bhī*- 'fear': *bi-bháy-a* and *bi-bhāy-a*; *hū*- 'call': *ju-hāv-a*; *tī*- 'cross': *ta-tār-a*, beside *tir-dāte* and *-tīr-ṇa*- (just like *śrī*- 'resort': *śi-śrāy-a*; *śru*- 'hear': *śu-śrāv-a*; *kṛ*- 'do': *ca-kār-a*). Before consonants the roots *prī*- 'love', *vī*- 'desire', *vī*- 'impel', *śī*- 'lie', *nī*- 'lead', *bhī*- 'fear', have Guṇa forms in *e*, the last two also Vṛddhi forms in *ai*; but roots in *ū* and *ī* have *avi*⁶ and *ari* as Guṇa, *āvi* and *āri* as Vṛddhi, respectively; e. g. *pū*- 'purify', aor. *pavi-ṣa* and *āpāviṣur*; *kṛ*- 'scatter', aor. subj. *kāri-ṣat*.

a. *ī* and *ū* instead of Guṇa. In a few verbs and some other words *ī* and *ū* are the old weak grade vowels (almost invariably medial) of *e* and *o*, the length of which has been preserved by the accent shifting to them (while when not thus protected they have been shortened to *ī* and *ū*), and which as thus accented, sometimes appear instead of the Guṇa vowels. Thus *ī* is found in *riṣ-ant*- 'injuring' (= **riṣ-ānt*-), beside *reṣa*-, the low grade form of the radical syllable otherwise becoming *riṣ*-⁸. Similarly *gīhāti* 'hides' appears beside *goh-a*- 'hiding-place', the root being also shortened in *guh-yāte*, etc.; *dūṣ-āyati* 'spoils', beside *doṣ-ā*- and *doṣās*- (AV.) 'evening', also *dūṣ-ti*- (AV.) 'destruction'; *ūh-ati* 'removes', beside *oh-a*- 'gift'; *nū* 'now', *nū-tana*- 'new', *nū-nām* 'now', beside *nāva*- 'new', also *nū* 'now' (never at the beginning of a sentence); *mūs*- 'mouse', beside *mūṣatha* 'ye rob', also *musitā*- 'stolen'; *yāpa*- 'post', beside *yuyōpa* 'has infringed', also *yupitā*- (AV.) 'smoothed'; *sthāpa*- 'tuft', beside *sto-kā*- 'drop', also *stu-pā*- (VS.) 'tuft'.

b. In a few roots ending in *v*¹⁰, the radical vowel *ī* represents the low

¹ With loss of the final element, which however, remains in datives like *tāsmāi*, probably because the diphthong was here pronounced with a slurred accent: cp. WACKERNAGEL I, 93.

² With loss of *r*, the preceding vowel having compensatory IE. lengthening (cp. WACKERNAGEL I, 61 c). In a few instances, the Vṛddhi of the nom. sing. spread to other cases (cp. 25 B b 1); e. g. *tār-as*, nom. pl., from old nom. sing. **stār* (beside *stīr-bhīr*).

³ Also *agnāu*, like the *u*-stems.

⁴ See below 191.

⁵ From the present the *ār* spread to other forms, e. g. perf. *mamārja* (AV.).

⁶ They have *o* in the intensive reduplication only; e. g. *soṣū*- : *√sū*-.

⁷ Cp. WACKERNAGEL I, 76.

⁸ The accentuation of *ī*, the low grade of *yā*, is probably to be explained similarly in feminines like *nāpti-s* (masc. *nāpāt*-); shortened to *nāpti* in voc.; cp. 19 b 3 and 29.

⁹ The accentuation of *ū*, the low grade of *vā* is probably to be explained similarly in feminines like *kadrū-s* (TS. B.) 'brown' (masc. *kādrū-m*, TS. B.); shortened to *u* in voc., e. g. *bābhru*; cp. WACKERNAGEL I, 82.

¹⁰ That is, the original form would have been *īv*- or *iū*- according as a vowel or a consonant followed.

grade, but early began to supplant *e*; thus from *div-* 'play', beside *didēva* (AV.), *dēv-ana-* 'game of dice', occur *div-yati*, *div-é* and *div-i* dat. and loc. of *div-* 'game of dice'; from *sriv-* 'fail', beside *śrevāyant-*, *śrivayati* (AV.); but from *mtv-* 'push', only *miv-ati* etc.; from *stiv-* 'sew', only *siv-yati* etc. It is a peculiarity of these roots that *iv* appears before vowels and *y* only, becoming *yū* or *ū* before other consonants; thus *dyū-tā-* (AV.) 'play'; *-mū-ta-* 'impelled', *mū-rā-* 'dull', *mū-tra-* (AV. VS.) 'urine'; *syū-tā-* 'fastened', *sū-cī-* 'needle', *sū-tra-* (AV.) 'thread'; *śrū-* 'lead ball'¹.

II. The Samprasāraṇa² series.

a. Gradation of *ya va ra*.

23. Low grade: *i u r*³.—In place of the accented syllables *ya va ra* (corresponding to the Guṇa vowels *e o ar*) appear the low grade vowels *i u r*⁴ when the accent shifts to the following syllable in some fourteen roots, viz. *yaj-* 'sacrifice', *vyac-* 'extend', *vyadh-* 'pierce', *vac-* 'speak', *vad-* 'speak', *vap-* 'strew', *vas-* 'be eager', *vas-* 'dwell', *vas-* 'shine', *vah-* 'carry'; *svap-* 'sleep', *grabh-* and *grah-* 'seize', *pracch-* (properly *praś-*) 'ask', *vraśc-* 'hew'; e. g. *iṣ-tā-*: *yās-tave*; *us-māsi*: *vās-ti*; *susup-vāms-*: *susvāpa*.

a. Besides these, a good many other roots, in occasional verbal forms or nominal derivatives, show the same gradation in the radical syllable.

1. *i* appears in *mimikṣūr*: *mimyakṣa* perf. of *√myakṣ-*; *vithūra-* 'waving', *vithuryāti* 'wavers', beside *vyāth-ate* 'wavers'.

2. *u* in *ūksant-* 'growing': *vavākṣa* 'has grown'; *śus-ant-*: *śvas-iti* 'breathes'; *ju-hur-as*: *hūr-ati* 'is crooked'; *ur-ū-* 'broad': comp. *vār-īyas-*, superl. *vār-iṣṭha-*; *dūr-*: *dvār-* 'door'; *dhūn-i-* 'resounding': *dhvan-t-* (AV.) 'sound'.

3. *r* in *kṛpate* 'laments': aor. *akrapīṣṭa*; *grṇatti* (AV.): *grath-itā-* 'tied'; *-śrth-ita-*: *śrath-nāti* 'becomes loose'; *rj-ū-* 'straight': *rāj-iṣṭha-* 'straightest'; *rbh-ū-* 'adroit': *rābh-ate* 'grasps'; *dṛh-ya* 'be firm' (impv.): *drah-yāt* 'firmly'; *prth-ū-* 'broad': *prāth-ati* 'spreads out'; *bhṛm-ā-* 'error': *bhram-ā-* 'whirling flame'; *ā-ni-bhrṣ-ṭa-* 'undefeated': *bhraś-at* aor., *bhraś-tā-* (AV.) 'fallen'; *mṛd-ū-* 'soft': *mṛda-* 'soften' (impv.), *ūrṇa-mradas-* 'soft as wool'; *śṛk-van-*: *śṛk-va-* 'corner of the mouth'.

b. This gradation also appears in the stems of a few nouns and in certain nominal suffixes: *dyū-bhis*: *dyāv-i* loc., *dyāv-s* nom. 'heaven'; *śūn-*: *śūd-*, *śūdān-* 'dog'; *yūn-* (= *yū-un-*): *yūva-*, *yūvān-* 'youth'; *catūr-*: *catvār-* 'four'; the superlative and comparative suffixes *-iṣṭha* and *-yas*; the perf. part. suffix *-uṣ*: *-vat*, *-vāṇs*⁵.

b. Gradation of *yā vā rā*.

24. Low grade: *ī ū ṛ*.—Corresponding to the reduction of the short syllables *ya va ra* to the short vowels *i u r*, the long syllables *yā vā rā* appear as *ī ū ṛ* (= IE. *ī*).

¹ The etymology of this word is, however, doubtful. Cp. WACKERNAGEL I, 81.

² In the terminology of the native grammarians Samprasāraṇa ('distraction') designates the change of the semi-vowel only to the corresponding vowel (but see also Pāṇini VI. 1, 108). Here we use the word to express the reduction of the entire syllables *ya va ra* to the corresponding vowels *i u r*.

³ Though *r* seems invariably to have resulted from the reduction of Guṇa or Samprasāraṇa syllables, there is no reason

to suppose that every *i* and *u* has a similar origin. On the contrary, it is more likely that IE. *i* and *u* have been preserved by the side of the reduced vowels and that the Guṇa grade has in many instances been subsequently added to original *i* and *u*. Cp. PEDERSEN, IF. 2, 323, note.

⁴ This reduction goes back to the IE. pretonic syncope of *ē ē*: cp. WACKERNAGEL I, 62 (p. 69, mid.). — On the two forms of the roots cp. also Nirukta II. 2 and Mahābhāṣya I, 112.

⁵ See WACKERNAGEL I, 63.

a. *ī* is found thus both in radical and suffixal syllables: 1. in *jī-tā* (AV.) *jī-yāte* (AV.) and *jī-yate*: *jyā*- 'might', *jyā-yas*- 'stronger', *jī-jyā-sant-* 'desiring to overcome'; 2. in the fem. suffix *-ī*: *kan-ī-nām* (for *kanī-nām*) from *kan-yā*- 'girl'; in nom. acc., e. g. *devī*, *devīm*, *devīs*, beside *-yā* in dat. abl. gen. loc. sing. *devyāi* (= *devyā-e*), *devyās* (= *devyā-as*), *devyām* (= *devyā-am*); 3. in the optative, either before or after the accented syllable, beside *-yā*; e. g. *bruv-ī-tā* and *bhāret* (= *bhāra-ī-t*), but *i-yā-t*.

b. *ū* is found: 1. in forms of *sūd-* 'put in order' (= 'make palatable'), e. g. *sū-sūd-ati*, *sūd-āyati*, *saṃ-sūd-ā-* (TS.) 'gum', beside forms and derivatives of *svād-* 'enjoy', 'taste', e. g. *svāda-te*, *svāttā-*, *svād-ū-* 'sweet'; 2. in fem. nouns in *-ū* beside *-vā* in dat. abl. gen. loc. sing.; e. g. *śvaśrū-* 'mother-in-law', dat. *śvaśr-vāi* (AV., = *śvaśr-vā-e*), gen. *śvaśr-vās* (AV., = *śvaśr-vā-as*), loc. *śvaśr-vām* (= *śvaśr-vā-am*).

c. *īr* (= *ī*) is found in *dirgh-ā*- 'long', beside *drāgh-īyas*- 'longer', *drāgh-iṣṭha*- 'longest', *drāgh-mān-* 'length'.

III. The *ā*-series.

a. Gradation of *a*.

25. A. Low grade: *a* or *ṛ*.—Many roots and formatives have *a* in the Guṇa or normal stage. The reduction of *ṛ* from *ar* or *ra* indicates that in low grade syllables this *a* would normally disappear. As a rule, however, it remains¹, doubtless because its loss would in most cases have led to unpronounceable or obscure forms². At the same time, the syncope takes place in a considerable number of instances:

1. in verbal forms: *ad-* 'eat': *d-ānt-* (= old pres. part.) 'tooth'; *as-* 'be': *s-ānti*, *s-yāt*, *s-ānt-*, beside *ās-ti* 'is'; *gam-* 'go': *ja-gm-ūr*; *ghas-* 'eat': *a-kṣ-an*, 3. pl. impf., *g-dha* (= *ghs-ta*), 3. sing. impf. mid., *ja-kṣ-īyāt*, perf. opt., beside *ghas-a-t* 'may he eat'; *pat-* 'fall': *pa-pt-ima*, *pa-pt-ūr*, *pa-pt-ivāms*, perf., *a-pa-pt-at*, aor., beside *pāt-anti*; *pad-* 'go': *pi-bd-a-māna-*, red. pres. part., *pi-bd-anā-* 'standing firm', beside *pād-yate* 'goes'; *bhas-* 'chew': *ba-ps-ati*, 3. pl. pres., *bā-ps-at*, pres. part., beside *bhās-a-t* 'may he chew'; *sac-* 'follow': *sā-śc-ati*, 3. pl. red. pres., *sa-śc-ata*, 3. pl. impf. mid., *sa-śc-iré*, 3. pl. perf. mid., beside *sāc-ante* 'they accompany'; *sad-* 'sit': *sīd-ati* (= *si-zd-ati*), 3. sing. pres., *sed-ūr* (= *sa-zd-ūr*), 3. pl. perf., beside *ā-sad-at* 'he sat'; *han-* 'strike': *ghn-ānti*, 3. pl. pres., beside *hān-ti* 3. sing.

2. in nominal derivatives: *ghas-* 'eat': *a-g-dhād-* (TS.) 'eating what is uneaten' (= *a-ghs-ta-ad-*), *sā-g-dhi* (VS.) 'joint meal' (= *sa-ghs-ti-*); *bhas-* 'chew': *ā-ps-u-* 'foodless'; *pad-* 'walk': *upa-bd-ā-*, *upa-bd-i-* 'noise' (lit. 'tread'); *tur-īya-* 'fourth' (= **ktur-īya-*): *catūr-* 'four'; *napī-* 'granddaughter': *nāpāt-* 'grandson'.

3. in suffixes: *-s-* for *-as-* in *bhī-ś-ā*, inst. sing.: *bhīy-ās-ā* 'through fear'; *śīr-ś-ān-*: *śīr-as-* 'head'; *-s-* for *-as* in the abl. gen. sing. ending of stems in *i u o*: e. g. *agné-s*, *viśno-s*, *gú-s*.

B. Long grade: *ā*.—The Vṛddhi corresponding to the *a* which represents the Guṇa stage is *ā*. It appears:

a. in the root:

1. in primary nominal derivation: thus *pād-* 'foot': *pad-*, *bā-* 'walk'; *rāj-*

¹ See WACKERNAGEL I, 70.

² When *a* is followed by *n* or *m*, the syllables *an* and *am*, if preceded by a consonant, usually lose the nasal before mutes; e. g. *han-* 'strike': *ha-thās* 2. du. pres.; *gam-*

'go': *ga-tā-*; *dyu-mānt-*, inst. sing. *dyu-māt-ā*; *nā-man-*, inst. pl. *nāma-bhis*. The *a* in such low grade syllables is generally regarded as historically representing the sonant nasal *ṃ*: cp. WACKERNAGEL I, 66.

'king': *raj-*, *ṛj-* 'direct'; *vāc-* 'voice': *vac-*, *uc-* 'speak'; *kṣās*, nom., *kṣām*, acc., 'earth': *kṣam-*, *kṣm-*; *nābh-* 'well': *nābh-as*, *abh-ri-* (*abh-* = *n̄bh-*) 'cloud'. Also before primary suffixes: *āp-as*: *āp-as* 'work'; *vās-as* 'garment': *vas-*, *uṣ-* 'wear'; *vāh-as* 'offering': *vah-*, *uh-* 'convey'; *vās-tu* 'abode': *vas-*, *uṣ-* 'dwell'. Perhaps also *pāth-as* 'place': *path-* 'path'¹.

2. in secondary nominal derivation; e. g. *kāṇvā-* 'descended from Kaṇva'; *vāp-us-ā-* 'marvellous': *vāp-us-* 'marvel'.

3. in the active of the *s*-aorist: thus *a-cchānt-s-ur*: *chānd-*, *chād-* (= *chṇd-*) 'appear'; *a-yām-s-am*, 1. sing.: *yam-*, *ya-* (= *yṃ-*) 'stretch'; *sāk-ṣ-āma*, also mid. *sāk-ṣ-i*, *sāk-ṣ-ate*: *sah-* 'overcome'².

b. in the suffix of nominal stems:

1. in the nom. sing. masc. of stems in *-mant* and *-vant*, and throughout the strong cases of stems in *-an*, of *mahāt* 'great', and of *nāpāt* 'grandson': thus *dyu-mān* 'brilliant': *dyu-mānt-*, *dyu-māt-* (= *mnt-*); *re-vān* 'rich': *re-vānt-*, *re-vāt-* (= *vnt-*)³; *rāj-ā*, acc. *rāj-ān-am* 'king': *rāj-an-*, *rāj-ñ-*, *rāj-a-* (= *rāj-ṇ-*); *mah-ān*, acc. *mah-ānt-am*; *nāpāt*, acc. *nāpāt-am*.

2. in the nom. acc. pl. neuter of stems in *-an* and *-as* and of one in *-ant*; thus *nāmā*⁴ 'names': *nāman*, *nāma-* (= *nāmṇ-*); *mānāṃs-i* 'minds': *mān-as*; *sānt-i*: *s-ānt-* 'being'.

c. in *ānu-* as first member of a compound in *ānu-ṣāk* and *ānūkām* 'continuously': otherwise *anu-*.

b. Gradation of ā.

26. Low grade: *i*.—The vowel *ā* is not always the long grade vowel: in a number of roots it represents Guṇa. The low grade of this *ā* is normally *i*; it sometimes, however, appears as *ī*, owing to analogy⁵, and, especially with a secondary accent, as *a*. Thus *sthi-tā*: *sthā-s* 'thou hast stood'; *dhi-tā*: *dā-dhā-ti* 'places'; *pu-nī-hī*: *pu-nā-ti*, from *pū-* 'purify'; *gāh-ana-* 'depth', *gāh-vara-* (AV.) 'hiding-place': *gāh-ate* 'plunges'.

a. The low grade vowel disappears: 1. in roots ending in *ā* before vowel terminations; in the weak forms of the reduplicated present base of *dā-* 'give' and *dhā-* 'put', before all terminations; and in the weak form of the suffix *-nā-* in the ninth class before vowel terminations; thus in the perf. of *dā-*: *dad-āthur*, *dad-atur*; *dad-ā*, *dad-ūr*; *dad-ē*; in the pres. of *dhā-*: *dadh-māsi*; beside *pu-nā-ti* 'he purifies', *pu-n-ānti* 'they purify'. Similarly from *hā-* 'forsake' occurs, in the opt. pres., the form *jah-yāt* (AV.).

2. in the final member of compounds formed with the perf. part. passive of *dā-* 'give', and *dā-* 'cut', or with a substantive in *-ti-* from *dā-* 'give': *devā-tta-*, a name ('given by the gods'); *dva-tta-* (VS.) 'cut off'; *pāri-tta-* (VS.) 'given up'; *d-prati-tta-* (AV.) 'not given back'; *bhāga-tti-* 'gift of fortune'; *maghā-tti-* 'gift of presents'; *vāsu-tti-* 'gift of wealth' (beside *vāsu-dhiti-* 'bestowal of wealth': *dhā-*). Also in *agni-dh-*⁶ 'fire-placer', a kind of priest⁷.

¹ Cp. AUFRECHT, BB. 14, 33; WACKER-NAGEL I, 72 (p. 79, bottom).

² Op. cit. I, 72 b δ (p. 80).

³ The long vowel in these nominatives is to be accounted for by IE. compensatory lengthening (*-mān* = *mant-s*, etc.); in the following examples it has spread from the nominative to other cases.

⁴ Such neuter plurals were in origin probably feminine singular collectives: cp. BRUG-MANN, KG. 481; WACKERNAGEL I, 73 and 95.

⁵ That is, under the influence of *ī* as low grade of *ai* which before consonants appears as *ā*, as in *gī-tā* beside *gā-thā*, from *gai-* 'sing', pres. *gāy-ati*; cp. 27 a.

⁶ Cp. *agni-dhāna-* 'fire-place'; in VS. *agnīdh-* appears instead, as if 'fire-kindler' (from *idh-* 'kindle').

⁷ For a few other examples (which are doubtful) of the loss of the low grade vowel in the final member of compounds, see WACKERNAGEL I, p. 82 (mid.).

IV. The *ai* and *au* series.a. Gradation of *ai*.

27. Low grade: *i*.—As the final of roots and in suffixes *i* is graded with *ai* (as with *yā*¹), which appears as *āy-* before vowels and as *ā-* before consonants². The roots in which this gradation is found are stated by the Indian grammarians in five different forms. They are:

a. 1. roots given with *-ai-* (because their present base appears as *-āy-a*): *gai-* 'sing': *gī-tā*, *gī-yā-māna-*, beside *gāy-ati* 'sings', *-gāy-as* 'song', and *gā-s-i*, 1. sing. aor. mid., *gā-thā* 'song'; *pyai-* 'swell': *pī-nā*, beside *pyāy-ate*; *śrai-* 'boil': *śrī-nā-ti*, *śrī-tā*, beside *śrāy-ati*, *śrā-tā*. — 2. with *-āy-*: *cāy-* 'observe': *cikī-hi* (AV.), beside *cāy-amāna-*, *cāy-ū* 'respectful'. — 3. with *-e-*: *dhe-* 'suck': *dhit-tā*, beside *dhāy-as* 'drink', *dhāy-ū* 'thirsty', and *dhā-tave* 'to suck', *dhā-ri-* (AV.) 'sucking'. — 4. with *-ā-*: *pā-* 'drink': *pī-tā*, *pī-ti* 'drink', beside *pāy-āyati*, caus., *pāy-āna-* 'causing to drink', and *pā-t*, aor., *pā-tave*; *rā-* 'give': *ra-rī-thas*, 2. sing. injv., beside *rāy-ā* 'with wealth', and *rā-sva*, impv., *rā-m*, acc. — 5. with *-ī-*: *nī-* 'lead': *nī-tā*, beside *nāy-ā* 'leader', and *nā-thā* (AV.) 'help'; *pī-* 'revile': *pī-yati*, *pī-ya-tmī-* and *pī-y-ū* 'reviler', beside *pāy-ū* (VS.) 'anus'; *pī-* 'love': *pī-nā-ti*, *pī-tā*, beside *prāy-as-e*³; *śī-*⁴ 'lie': *-śī-van-* 'lying', beside *a-sāy-ata*, 3. sing.⁵

b. This gradation also occurs in the final of dissyllabic bases: thus *grabhi-ṣṭa*, *a-grabhi-t*, *grbhī-tā*, beside *grbhāy-āti* 'seizes'⁶; and in the base of the ninth class: *grbhñī-ta*, 2. pl., beside *grbhñā-ti*.

c. It is also found in the suffixes *-dhe -ete* and *-ethām -etām* of the 2. 3. du. mid. of the *a*-conjugation, which can only be explained as containing *īthe īte* and *īthām ītām*, with weak grade *i* corresponding to the accented *ā* of *āthe āte* and *āthām ātām* of the non-thematic conjugation (and parallel to the *-ī-* of the optative beside *-yā-*⁷).

b. Gradation of *au*.

28. Low grade: *ū*.—As the final of roots *ū* is graded with *au* (parallel with *vā*⁸), much in the same way as *i* with *ai*, appearing as *āv-* before vowels, *ā* before consonants⁹; but the certain examples are few. Thus *dhū-nū-ti* 'shakes', *dhū-ti* 'shaker', *dhū-mā* 'smoke', beside *dhūv-ati* 'runs', *dhā-rā* 'stream'; *dhū-tā* 'washed', beside *dhūv-ati* 'washes'. But here *au* appears before consonants as well as *ā*; thus *dhau-tāri-* 'shaking', beside *dhū* 'shake'; and *dhau-ti* 'spring', *dhau-tā* (SV.), beside *dhūv-ati* 'washes'. Similarly *gā-m*

¹ See above 24.

² *ai* appears only in the *s*-aor., as *nai-ṣṭa*, 2. pl., *nī-* 'lead', owing to the analogy of forms like *ā-jai-ṣ-ma*, from *ji-* 'conquer'.

³ Occurs RV. IV. 21⁷ (Pp. *prā āyase* (and is explained by BÖHTLINGK (pw.) as = *prāyase*.

⁴ Perhaps also in *śī-* 'fall': *śīyate* (AV.), beside *śītā-yati* 'cuts off', which may be a denominative from **śā-tā* 'fallen'. Cp. WHITNEY, Roots, under *√śat-* and *√śī-*; WACKERNAGEL I, 79 a & b (p. 88).

⁵ In some of the above roots *e* appears instead of *ā* before consonants; e. g. *cī-ru-* 'devout', beside *cāy-ū*; *pe-rū-* 'causing to drink', beside *pāy-āna-*; *dhe-nū-* 'milch cow', *dhit-nū-* id.; *śī-ṣe*, beside *a-śīy-ata*; *ne-trī-*, beside *nāy-ā*; *ste-nā-* 'thief', beside *stāy-ū* (VS.) id., and *stāy-ant-* (AV.) 'furtive'; *śinā-missile*, beside *sāy-aka-*. It is, perhaps, due

to this *e* that *ay-* sometimes appears instead of *āy-* in some of the above verbs; as *prāy-as* 'enjoyment', from *√prī-*; *ray-i-* 'wealth', from *√rā-*; *sāy-e*, 3. sing., from *śī-* 'lie'.

⁶ Cp. WACKERNAGEL I, 79 b (p. 89).

⁷ Op. cit. I, 79 c (p. 89).

⁸ See above 24 b.

⁹ Similarly in the RV. the *-au* of duals and of *aṣṭau* 'eight' normally appears as *āv* before vowels and *ā* before consonants in Sandhi. The nominatives in *ā* of *-r* stems and *-an* stems, e. g. *mātā*, *śvā* 'dog', are probably due originally to the loss of the final *r* and *n* before consonants in the sentence, then becoming the regular form everywhere. Conversely *aṣṭau* has become the only independent form in the AV., *aṣṭā-* appearing only as first member of a compound. Cp. WACKERNAGEL I, 94, 95.

and *gā-s*, acc., beside *gāv-as*, nom. pl., but *gāu-s*, nom. sing., 'cow'; and *dyā-m*, acc. sing., beside *dyāv-as*, nom. pl., but *dyāu-s*, nom. sing., 'heaven'.

V. Secondary shortening of *i ū r̥*.

29. Low grade: *i u r̥*.—Owing to the shift of the accent from its normal position in a word to its beginning, the low grade vowels *i ū r̥* ($=\tilde{r}$) are often further shortened to *i u r* in compounds and reduplicated forms. A pre-tonic syllable thus acquires a post-tonic position, where the force of the accent is weakest. It is the same cause which shortens final weak grade *i* and *ū* in the vocative singular; e. g. *dēvi*, nom. *devi*; *śvāsru*, nom. *śvāsrūs*¹. This shortening often appears in:

a. compounds²:

1. those in which the final member is derived with *-ta-* and *-ti-*, the accent being regularly thrown back on the first member³: thus *ā-ni-si-ta* 'restless', *nī-si-tā* (TS. B.) 'night', from *śī* 'lie'; *prā-si-ti-* 'onset', beside *sāy-aka* 'missile'⁴; *sū-su-ti-* 'easy birth', beside *sūti-kā* (AV.) 'lying-in woman'; *ā-str-ta* 'unconquered', *ā-ni-ṣṭr-ta* 'not overthrown', beside *stir-nā*, from *stṛ-* 'strew'⁵; *ā-huti-* 'invocation', otherwise *-hū-ti-* in *sā-hūti-* 'joint invocation', *devā-hūti-* 'invocation of the gods', and other compounds.

2. those in which the final member is a root in *i⁶* or *ū* with or without the suffix *-t*; e. g. *dhi-jū-* 'thought inspiring', beside *jū-* 'hastening', *jū-tā* 'impelled'; very often *-bhu-*, beside *bhū-*, as in *ā-pra-bhu-* 'powerless', *vi-bhū-* 'mighty'; *nī-yū-t-* 'team', beside *yū-* 'unite' (as in *yū-thā* 'herd').

3. those in which the final member is formed with other suffixes; thus *madhyān-dī-na-* 'midday', *su-dī-na-* 'bright', beside *dī-* 'shine'; *su-su-mānt-* 'very stimulating', beside *sū-tā-* 'impelled'; also in *tuvi-gr-ā-* and *tuvi-gr-i-* 'much devouring', beside *saṃ-gir-ā-* (AV.) 'devouring', as *r* here = *r̥*⁷.

4. some Bahuvrihis (in which the first member is normally accented)⁸; thus *brhād-ri-*⁹ 'possessing much wealth' (*rāi-*); *try-udh-ān-* 'having three udders', beside *ūdh-an-* 'udder'.

b. reduplicated forms¹⁰ in which accentuation of the reduplicative syllable, especially in the third class and one form of the aorist, counteracts the normal accent of the verb; thus from *dī-* 'shine', are formed *dī-dī-hi*, 2. sing. impv., *dī-dī-vāns-*, perf. part., *dī-dī-vi-* 'shining', beside *dī-paya-* (causative)

¹ Cp. 23.

² The application of this shortening process becomes obscured, on the one hand because the phonetically shortened vowel has found its way into accented final members of compounds as being characteristic of the end of a compound; while, on the other hand, *i ū r̥ ūr* ($=\tilde{r}$) for the most part have remained unchanged, even when the accent has shifted, because of the influence of the uncompounded word; e. g. *sū-sūta-* 'well-begotten', *prā-sūta-* 'impelled'; *ā-kūti-* 'intention'; *rtā-dhīti-* 'truly adored'; *prā-tūrti-* 'onset'.

³ That this is the cause of the shortening is shown by the fact that the *i* of the inst. sing. of derivatives in *-ti* appears as *i* only when such words are compounded: e. g. *prā-yukti* 'with the team'. Cp. WACKERNAGEL I, 84.

⁴ Cp. 27, note 5.

⁵ The secondarily shortened form of the past part. *stṛ-ta-* is not found as an independent word in the RV.; it first appears in later texts.

⁶ An example of the shortening of *i* is perhaps *adhi-kṣi-t-* 'ruler', *kṣi-* being according to J. SCHMIDT, Pluralbildung 419, the original weak form of the root; cp. WACKERNAGEL I, 83 b.

⁷ Cp. KRETSCHMER, KZ. 31, 397; WACKERNAGEL I, 83 c.

⁸ See accentuation of compounds, 90.

⁹ Occurring only in the dat. sing. *brhād-ṛaye*, beside *rāy-tē*, dat. of *rāi-* 'wealth'.

¹⁰ On the shortening of the radical syllable in some verbs of the fifth and the ninth classes, *jī-nā-ti*, beside *jī-rā-* 'lively', *du-no-ti* 'burns', beside *dū-nā-* (AV.); *ju-nā-ti* 'impels', beside *jū-tā-*; *pu-nā-ti* 'purifies', beside *pū-tā-*, see WACKERNAGEL I, 85, note (bottom).

'kindle'; from *dhī-* 'think', *dī-dhi-ma*, 1. pl. perf., *dī-dhi-ti-* 'devotion', beside *dhi-ti-* 'thought'; from *kṛ-* 'commemorate', *cār-kṛ-se*, intv., *cār-kṛ-ti-* 'praise', beside *kṛ-ti-* 'praise'; from *pṛ-* 'fill', *pī-pr-tām*, 3. du., beside *pūr-nd-* and *pūr-tā-*. Such shortening often occurs in red. aor., e. g. *bī-bhiṣ-a-thās*, 2. sing. mid., beside *vi-bhiṣ-ana-* 'terrifying'. It is also found in a few nouns; e. g. *śī-śi-ra* (AV.) 'coolness', beside *śī-tā-* 'cold'; *tū-tu-mā-* beside *tū-ya-* 'strong'¹.

The Consonants.

30. Doubling of consonants.—All consonants, except *r h l*, Anusvāra, and Visarjaniya, can be doubled, and the distinction between double and single consonants is known to the Prāśākyas as well as to Pāṇini. Aspirates are, however, nearly always written double by giving the first in the unaspirated form. A double consonant² is pronounced by the organs of speech dwelling longer on it than on the single sound. Within words³ a double consonant appears:

1. as the result of the contact of the same consonants or the assimilation⁴ of different ones; e. g. *cit-tā-* 'perceived' (= *cit-ta-*); *uc-cā-* 'high' (= *ud-ca-*); *bha-tṛ-* 'breaker' (= *bha-d-tṛ-*); *ān-na-* 'food' (= *ad-na-*).

2. in a few onomatopoeic words: *akḥkhalī-kṛtyā* 'shouting'; *ciccikā-* a kind of bird; *kukkuṣā-* (VS.) 'cock'; *tittiri-* (VS.) and *tittiri-* (TS. B.) 'quail'; *pippakā-* (VS.) a kind of bird.

3. in the case of the palatal aspirate, which regularly appears as *ch* between vowels (though often written as *ch* in the Mss.), for it always makes the preceding vowel long by position and is derived from an original conjunct consonant⁵. Some forms of *khid-* 'press down', are doubled after a vowel in the TS. (*akḥhidat*, *d-kḥhidra-*; *ā-kḥhidat*, *pari-kḥhidat*). In the TS.⁶ *bh* appears doubled in *pāri bhuja*. In a school of the White Yajurveda initial *v* was regularly doubled⁷.

4. when final *n* is doubled after a short vowel if followed by any vowel sound⁸.

a. In the Mss., when double consonants are preceded or followed by another consonant⁹, one of them is frequently dropped, because in such consonantal groups there was no difference in pronunciation between single and double consonants. Hence the VPr. (vi. 27) prescribes a single *t* in *kṣatṛā-* 'dominion' (= *kṣad-tṛā-*), and in *satṛā-* 'sacificial session' (= *sad-tṛā-*). Such shortening is further presupposed by the analysis of the Pada texts in *hr(d)-dyotāh* (AV. I. 22¹) and *hr(d)-dyōtanah* (AV. V. 20¹²) as *hr-dyotāh* and *hr-dyōtanah*; in *tād'dyām* (AV. IV. 19⁶) as *tāt yām* (instead of *tāt dyām*); and in *upāstha-*, which appears in the RV. Pada as *upā-stha-* instead of *upās-stha-*, if GRASSMANN's suggestion is right¹⁰. In some instances this reduction is IE., as in *satṛā-* (IE. *setlo-*)¹¹.

¹ On variations in cognate forms between *i u r* and *ī ū ṛ* in some other words see WACKERNAGEL I, 86.

² Sometimes a single *s* represents the double sound, as in *asi* 'thou art' (= *as-si*); *apāsu* (RV. VIII. 41⁴), loc. pl. of *apās-* 'active'; *āmhasu* (AV.), loc. pl. of *āmhas-* 'distress'; *jū-ji* 'thou shalt taste' (*ju-ji*); probably also in *ghō-ji* (from *ghuṣ-* 'sound'), in *uṣ-ās*, gen. sing., acc. pl. of *uṣ-*, weak stem of *uṣ-ās-* 'dawn' (for **uṣṣ-as*), possibly in *uṣṛ-* 'dawn' (for **uṣṣ-ṛ-*). As the single *s* in such forms is shown by cognate languages also, it seems here to be pre-Vedic, and the double *ss* in forms like *rājas-su*, loc. pl., is probably an Indian innovation. The change of *ss* to *ks*,

as in *avikṣat* (AV.) = **dviṣ-sat*, aor. of *dviṣ-* 'hate', is also an Indian innovation.

³ On double consonants in Sandhi, see below 77.

⁴ The evidence of the Avestan form *vṛṛḍka-* shows that the double consonant in *vṛḥkā-* (AV. VS.) 'kidney' is due to assimilation.

⁵ See below 40; WACKERNAGEL I, 133.

⁶ See TPr. XIV. 8.

⁷ See WEBER, Abh. d. Berliner Ak. d. Wiss. 1871, p. 83 f.

⁸ See below 46; cp. WACKERNAGEL I, 279 a.

⁹ Cp. ROTH in ZDMG. 48, 102 f.

¹⁰ See his Lexicon, s. v. *upāstha-*.

¹¹ See WACKERNAGEL I, 98 b, note.

Mutes.

31. **Modes of articulation.**—There are 20 mutes (or 22 counting *lh* among the cerebrals), which comprise a tenuis, an aspirate tenuis, a media, and an aspirate media in each of the five groups of gutturals, palatals, cerebrals, dentals, and labials (4). These four modes of articulation are initially and medially liable to but little variation except when they come into contact with other mutes or with following sibilants.

1. The **tenuis** regularly represent IE. tenuis; e. g. *cakrá-* 'wheel', Gk. κύκλος; *pítṛ-* 'father', Gk. πατήρ, Lat. *pater*.

2. The **mediae** regularly represent IE. mediae; e. g. *gácchati*, Gk. βάσκει; *rāj-* 'king', Lat. *rēg-*; *mád-ati* 'is drunk', Lat. *mad-et*. There are a few instances in which a media appears in place of an older tenuis: *gulphá-* (AV.): *kulphá-* 'anle'; *árbhaga-* 'youthful': *arbhaká-* 'little'; *tij-* : *tíc-*, *toká-* 'offspring'; *án-ava-prgna-* 'undivided': *prc-* 'mix'; *giriká-* (MS.): *kiriká-* (VS.)¹ a kind of demon. These examples may be due to popular dialects, in which tenuis largely became mediae². In a few derivatives the media *g* appears instead of *k* before the *n m v* of suffixes owing to the influence of Sandhi: e. g. *vag-nú-* 'sound', from *vac-* 'speak', but *rék-nas-* 'wealth', from *ric-*; *śag-mi-* 'helpful', from *śak-*, but *ruk-má-* 'gold', from *ruc-* 'shine'; *vāg-vín-* (AV.) 'eloquent', from *vāk* 'speech', but *tak-vá-* 'swift', from *tak-* 'hasten'.

3. The evidence of cognate languages shows that the Vedic **aspirate tenuis** in a large number of instances is original, and it is highly probable that it is the regular representative of IE. aspirate tenuis. The following are examples in which mutes of this character are inherited:

a. *khan-* 'dig'; *khā-* 'spring'; *khād-ati* 'chews'; *nakhá-* 'nail'; *makhá-* 'lively'; *múkha-* 'mouth'; *śaṅkhá-* (AV.) 'shell'; *sákhi-* 'companion'.

b. *ch* = IE. *skh*, e. g. in *chid-* 'split'; = IE. *sk* in inchoative *gácchati* 'goes', *ucchāti* 'shines'.

c. *ṭh* = *th* in *ṣaṣ-thá-* (VS. AV.) 'sixth'; *ṣṭhīv-ati* (AV.) 'spits'.

d. *th*⁴ in *átha* 'then'; *atharí-* 'tip'; *átharvan-* 'fire-priest'; *ártha-* 'use'; *granth-* 'knot'; *path-* 'way'; *prth-ú-* 'broad'; *práth-as* 'breadth'; *próthat-* 'snorting'; *math-* 'stir'; *míth-* 'alternate'; *yá-thā* 'as'; *rátha-* 'car'; *vyathate* 'wavers'; *śnath-* 'pierce'. Further in the various suffixes *-tha*: forming primary nouns; e. g. *uk-thá-* 'praise', *gā-thá-* f. *gā-thā-* 'song'; as *-atha* in *śvas-átha-* 'hissing'; forming ordinals: *catur-thá-* (AV.) 'fourth'; *saptá-tha-* 'seventh'; forming 2. sing. perf.: *dadā-tha* 'thou gavest', *vét-tha* 'thou knowest'; forming 2. pl. pres.: *bhava-tha* 'ye are'; also in *-thās* of 2. sing. mid., e. g. *a-sthi-thās* 'thou hast stood'.

e. *ph* in *phāla-* 'fruit'; *phāla-* 'ploughshare'; *sphar-* and *sphur-* 'jerk'; *sphā(y)-* 'grow fat'.

4. The **aspirate media**, which represents the same IE. sound, is a media combined with *h*. This is proved by the express statements of the Prāṭisākhya⁵; by the fact that *lh* = *dh* is written with the separate letters *l* and *h*; and by the change of *h* following a media to an aspirate media (as *tád dhi* for *tád hi*).

a. In two or three words an aspirate media interchanges with an aspirate tenuis: *nādhāmāna-* 'praying', *nādhīā-* 'distressed', beside *nāthīā-* 'distressed' (where *th* is probably due to the influence of *-nāthā-* 'help'); *ádha* and *átha* 'then'⁶; *niṣaṅgáthi-* (VS.) and *niṣaṅgáthi-* (TS.) 'scabbard'.

¹ For some doubtful instances of media representing IE. tenuis, see WACKERNAGEL 1, 100 b, p. 117, note. ² L. c.

³ Op. cit. 101.

⁴ A complete list of Vedic and Sanskrit words containing *th* in his article 'Die ur-

sprachliche tenuis aspirata dentalis im arischen, griechischen und lateinischen' by ZUBATY in KZ. 31, 1—9.

⁵ RPr. XIII. 2. 5; TPr. II. 9.

⁶ There seem to have been a few IE. doublets of this kind: see WACKERNAGEL 1, 103.

32. Loss of aspiration. — Aspiration is lost when there is another aspirate in the same syllable or at the beginning of the next in roots¹. Hence

a. initial aspiration is lost: 1. in the reduplicative syllable: e. g. *ja-ghān-a* (*han-*, *ghan-* 'strike'); *ca-cchand-a* (*chand-* 'please'); *da-dhā-ti* (*dhā-* 'put'); *par-phar-at* (*phar-* 'scatter'?). But when the reduplication consists of two syllables, the rule does not apply; e. g. *ghāni-ghan-at*, intv. part. of *han-* (beside *jān-ghn-at*), *ghanā-ghan-ā-* 'fond of striking'; *bhāri-bhr-at*, intv. part. of *bhr-* 'bear'. Loss of aspiration, however, began, even in the RV.², to spread from monosyllabic to dissyllabic reduplication; thus *ā-pāni-phan-at*, intv. part. of *phañ-* 'bound'. — 2. in the following words, according to the evidence of cognate languages: *kumbhā-* 'pot'³; *gad-* 'attach'; *gābhas-ti-* 'arm'; *guh-* 'conceal'; *grdh-* 'be greedy'; *grhā-* 'house'; *grabh-* 'seize'; *jāmhas* 'gait'; *jānghā-* 'leg'; *jaghāna-* 'buttock'; *dabh-* 'harm'; *dah-* 'burn'; *dih-* 'besmear'; *duh-* 'milk'; *duhit-* 'daughter'; *drahyāt* 'strongly'; *druh-* 'injure'; *bandh-* 'bind'; *babhri-* 'brown'; *bādh-* 'distress'; *bāhū-* 'arm'; *budh-* 'awake'; *budhnā-* 'bottom'; *bṛh-* 'be great'. It is probable also in *dagh-* 'reach': *bañh-* 'be firm'; *badhirā-* 'deaf'; *bahū-*, *bahuld-* 'much'; *bradhnā-* 'pale red'; *brāhman-* 'devotion'.

b. Final aspiration is often lost⁴. 1. When this occurs before suffixal *s*, original initial aspiration is lost in some cases; thus from *guh-* 'hide', desid. 3. du. *ju-guk-ṣa-tas*; *grdh-* 'be eager': *grtsi-* 'dexterous'; *dabh-* 'harm': desid. *dip-sa-ti*, *dip-si-* 'intending to hurt'; *dah-* 'burn': impv. *dak-ṣi*, aor. part. *dākṣat*, *dākṣu-* and *dakṣi-* 'flaming'; *duh-* 'milk': aor. *a-dukṣat*, *dukṣas*, etc., desid. part. *dūdukṣan*⁵; *bhas-* 'chew': *bap-sati*, part. *bāps-at*; *ghas-* 'eat': *jak-ṣi-yāt*, perf. opt.; *has-* 'laugh': part. *jāks-at*; also in the word *drap-sā-* 'drop'⁶.

But in some of the above and in analogous forms with *s*, the original initial aspirate remains; thus from *guh-*, aor. *aghukṣat*; *dah-*: *dhākṣi*, part. *dhākṣat*, fut. part. *dhakṣyān*; *duh-*: aor. *ādhuṣat*, *dhukṣān*, etc. 2. impv. *dhuk-ṣva*; *bādh-* 'distress': *bi-bhat-si-* 'loathing'; *budh-* 'awake': aor. *ā-bhut-si-*.

2. When the loss of final radical aspiration is due to any other cause than suffixal *s*, the original initial aspirate regularly remains; thus from *dah-*, aor. *a-dhāk*; *budh-* 'waken': nom. *-bhut* 'waking'; *dhā-* 'put': *dhat*⁷, 3. sing., *dhat-thas*, *ā-dhat-tam*, etc.; and in the latter verb always before *s* also: *dhat-se*, *dhat-sva*, desid. *dhāt-sati*.

c. On the other hand, there is no loss of aspiration in the root if an aspirate follows which belongs to a suffix or second member of a compound; e. g. *vibhū-bhis* 'with the Vibhus'; *proth-ātha-* 'snorting'; *dhēṣtha-* 'giving most' (*dhā-iṣṭha-*); *ahi-hān-* 'serpent-slaying'; *garbha-dhī-* 'breeding-place'. The only exceptions⁸ are the two imperatives *bo-dhi* 'be' (for **bho-dhi*⁹ instead of **bhū-dhī*) and *ja-hi* (for **jha-hi*) from *han-* 'strike'¹⁰.

¹ Except when the second aspirate belongs to a suffix or second member of a compound, see below c.

² Later this became the rule.

³ Initial aspiration has perhaps been lost also in *sākhā-* 'branch', and in the roots *stigh-* 'mount', and *stambh-* 'make firm'. Cp. WACKERNAGEL I, 105 a.

⁴ This may also be the case in the roots *bhu-* 'bend', *chid-* 'split', *chad-* 'cover', *dhraj-* 'sweep': op. cit I, 105 b, note.

⁵ These forms from *dah-* and *duh-* almost always appear in the Pada text with *dh*, doubtless because from the time of the Brāhmaṇas this initial aspiration had become the rule; cp. BENFEY, GGA. 1873, p. 18f.

⁶ IE. *dhrebh-* 'coagulate'.

⁷ For *dhadh-ti*.

⁸ Forms like *bud-dha-* for *budh-ta* can hardly be regarded as exceptions since the aspiration is assumed by the suffix instead of reappearing in the initial of the root.

⁹ Here *bho-* is a Prakritic contraction for *bhava-*.

¹⁰ Also *vidātha-* 'feast', if correctly derived from *vidh-* 'worship'; on this word see MAX MÜLLER, SBE. 32, 350; FOY, KZ. 34, 226; BLOOMFIELD, JAOS. 19, 2, 12 ff.; GELDNER, ZDMG. 52, 730—61; WACKERNAGEL I, 108. A few more uncertain examples might be exceptions: *garda-bhā-* 'ass'

d. There are a few cognate words in which an aspirate is found beside the corresponding media or tenuis: *máj-man-* 'greatness': *máh-* 'great'; *vi-spulinga-ká-* 'scattering sparks': *sphur-áti* 'darts'.

e. In a few isolated words a media seems, according to the evidence of cognate languages, to stand for an IE. aspirate: *gmā-* 'earth', gen. *gmás*; *jmā-* 'earth', gen. *jmás*, inst. *jmā*; *dvār-*, *dur-*² 'door'; *majján-* 'marrow'.

33. Aspirates in contact with other mutes.—Of two mutes in juxtaposition (of which both must be voiced or both voiceless³), the second only can be aspirated. In such case either

1. the second represents an original aspirate, the first an aspirate or not: e. g. *dhat-thás* = **dhadh-thás* (*dhā-* 'put'); *ran(d)-dhi* = **randh-dhi* (*randh-* 'make subject'), *uk-thá-* 'song' = *uk-thá-* (*vac-* 'speak'); *vét-tha* = **véd-tha* (*vid-* 'know'); *śag-dhi* 'help' = **śak-dhi* (*śak-* 'be strong'); or

2. the first represents an aspirate media⁴, the second a dental tenuis⁵ which assumes the mode of articulation of the first; e. g. *dág-dhy-* 'one who burns' (acc.) = **dāgh-tr-* (*dah-* 'burn'); *-vid-dha-* 'pierced' = **vidh-ta-* (*vyadh-*); *-lab-dha-* 'taken' = **labh-ta-* (*labh-*). An intervening sibilant (*s* = *ś*) did not prevent the same result: *jag-dhá-*, *jag-dhvāya*, *jag-dhvā* (AV.), *a-g-dha* (TS.) from *ghas-* 'eat', *gdh* representing *gzdh-* for *gzh-t-* from *gh(a)s-t-*.

a. When the first is *h* representing an old palatal aspirate (= *ṣh*, IE. *ḡh*)⁶, it disappears after cerebralizing the dental and lengthening the preceding vowel; e. g. *ūdhá-* = **uṣ-dhá-* for *uṣh-tá-* from *vah-tá-*⁷.

b. In a few instances the *t* does not become *dh* owing to the influence of cognate forms: thus *dhaktam* (instead of **dagdham* = **dhagh-tám*) according to 2. 3. sing. *dhak* (= **dhagh-t*) from *dagh-* 'reach'; *dhat-tám* etc. (instead of **dad-dham* for **dhadh-tam*) according to 3. sing. *dhat* (= **dhadh-t*), 2. sing. mid. *dhāt-se*, etc. (= **dhādh-se*)⁸.

The Five Classes of Mutes.

34. The gutturals.—These mutes, by the Indian phoneticians called *kañhya* ('produced from the throat'), are minutely described in the Prāṭisākhya as formed at the 'root of the tongue' (*jihvā-mūla*) and at the 'root of the jaw' (*hanu-mūla*)⁹. They are therefore velar¹⁰ sounds and, as the evidence

(if from *grdh-* 'be greedy'), *bārjaha-* 'udder' (if from *ḡrh-* 'be great'), *sabar-dūgha-*, *sabar-dhū-*, *sabar-dhūk*, epithet of cows (if *sabar-* = Gk. *ἄφαρ*: BARTHOLOMAE, BB. 15, 18): cp. WACKERNAGEL I, 108, note, 217 b; ZDMG. 43, 667 f.; 46, 292 (*bārjaha-*).

¹ A few doubtful examples discussed by WACKERNAGEL I, p. 129 bottom.

² Op. cit. I, 109, note (mid.); according to BLOOMFIELD, *Album Kern*, p. 193 f., the media is due to the influence of the numeral *dva-* 'two'.

³ This was often due to assimilation, the mode of the articulation of the second generally prevailing; e. g. *āt-ti* = **ad-ti* (*ad-* 'eat'); *vét-tha* = **véd-tha*; *śag-dhi* = **śak-dhi*; the articulation of the first prevails in 33, 2.

⁴ An aspirate tenuis loses its aspiration in these circumstances; thus *gṛnāthi* (AV.) for **gṛnāth-ti*, if this form is derived from *grath-* 'tie'.

⁵ There seems to be no example of any other tenuis in contact with a preceding aspirate media within a word, but the result would probably have been the same. There is no example of *th* becoming voiced in this combination; it remains in *dhat-thás* (= **dadh-thás*).

⁶ See below 58.

⁷ According to this rule *ūṣ-tra-* 'buffalo', could not be derived from *vah-* 'carry' (as in that case it would have become *ūḍhra-*): cp. WACKERNAGEL I, 111 b, note.

⁸ Before sibilants, all aspirates as well as mediae become tenuis; but according to TPr. XIV. 12, APr. II. 6 (cp. RPr. VI. 15) a tenuis in such a position may be pronounced as an aspirate; see WACKERNAGEL I, 113.

⁹ See APr. I. 20 and WHITNEY's note.

¹⁰ That is, pronounced with the velum or soft palate.

of cognate languages shows, derived from IE. velars¹. Gutturals are found interchanging to some extent with sounds of the four other classes.

1. Under certain conditions they interchange with the new palatals (*ç j h*) which are derived from them²; with the old palatal *ś*³ (also old *j* and *h*) only when followed by *s* (which then becomes *ṣ*)⁴. Between this *kṣ* = *ś-s* and *kṣ* = *k-s* it is possible to distinguish by the aid of Iranian, where the two are represented by different sounds⁵; and the original value of the *k* can thus be determined even in words in which no form without the sibilant occurs. This evidence shows that, in the following words, *kṣ* represents⁶.

a. *ś-s*: *ākṣi-* 'eye'; *ṛkṣa-* 'bear'; *kāṁṣa-* 'armpit'; *kukṣi-* 'belly'; *kṣi-* 'dwell'; *kṣūd-* 'hunger'; *caṁṣ-* 'see'; *takṣ-* 'fashion'; *dākṣiṇa-* 'right'; *pākṣman-* (VS.) 'eyelash'; *makṣū* 'quickly'; *rakṣ-* (AV.) 'injure'; *rākṣ-as-* 'injury';

b. *k-s*: *kṣatrá-* 'dominion'; *kṣáp-* 'night'; *kṣi-* 'rule'; *kṣip-* 'throw'; *kṣīrd-* 'milk'; *kṣud-* 'shake'; *kṣód-as-* 'rush of water'; *kṣudrá-* 'small' (VS.), n. 'minute particle'; *kṣúbh-* 'swift motion'; *tvakṣ-* 'be strong'; *vṛkṣá-* 'tree'.

2. In a few instances *k* stands for a medial *t*: in *vṛkkáu* (AV.) 'kidneys', for **vṛtkáu*?; *prkṣú* (SV.) = *prtsú* 'in battles'. In these two forms the substitution is due to Prakritic influence; this is probably also the case in *skambh-* beside *stambh-* 'prop'⁸. The guttural only seems to stand for a dental in *ásiknt-* beside *ásita-* 'black', *páliknt-* beside *palitá-* 'grey', and *háriknikā-* (AV.) beside *hárita-* 'yellow', as there is no etymological connexion between *-knt-* and *-ta-*⁹.

3. In a few words a guttural interchanges with a labial medially: *kakárdu-* beside *kaparda-* 'braid of hair'; *kulika* (VS.): *pulika* (MS.) a kind of bird; *kutikáya-* (TS.): *pulikáya-* (MS.), *kulipáya-* (VS.): *purikáya*¹⁰ (AV.) a kind of aquatic animal; *nicunṁuná-* (TS.): *nicunpundá-* 'flood'; and in the TS. (B.) *tristígghis* and *anuṣtígghyas* occur beside *tristúb-bhis* and *anuṣtúb-bhis*¹¹.

4. In a few verbal forms from three roots *k* stands for *ś* before suffixal *s*¹², though this *k* never made its way into the loc. pl. (where only *-ṣ-su-* or *-h-ṣu-*, *-ṣ-su* occur). The only example in the RV. is *pinak* (for *pinak-ṣa*) 2. sing. impf. of *pināṣ-ṣi* (*piṣ-* 'crush'). In the AV. occur *dvik-ṣ-at*, *dvik-ṣ-ata*, aor. of *diviṣ-* 'hate'; *śiṣlikṣate*, *-śiṣlikṣu-*, desid. of *śliṣ-* 'embrace'. Other possible examples from the RV. are *-ṛkṣará-* 'thorn' (if from *ṛṣ-* 'prick'); *ririkṣa-ti* and *ririkṣú-*, desid. (if from *riṣ-* 'injure'); *vivekṣi* (if from *viṣ-* 'work')¹³.

35. The palatals.—These are pronounced in India at the present day as a close combination of a *t*-sound followed by a palatal spirant *ś*. The evidence of the Greek reproduction of Indian words¹⁴ points in the same

¹ That is, the *g*-sounds; some, however, are derived from IE. labio-velars or *gʷ*-sounds; see BRUGMANN, KG. I, 244 and 254; WACKERNAGEL I, 115.

² See BRUGMANN, op. cit. 244.

³ Op. cit. 233.

⁴ See below 56.

⁵ That is, *ś-s* by *ṣ* and *k-s* by *hṣ*; thus *vakṣi*, from *vaiṣ-* = *vaiṣi*; *vakṣyá-mi*, from *vak-* (for *vac-*) = *vahṣiá*.

⁶ The two components of *kṣ* cannot yet have coalesced when *ṣ* dropped out between two mutes in *abhakta*, for *abhak-ṣ-ta* (aor. of *bhakt-*), and *ataṣ-ta* for *ataṣ-ṣ-ta* from *takṣ-* (AV. *taṣ-*) 'fashion'; otherwise the two different original sounds could not have been kept apart in these two forms.

⁷ See above 30, note 4.

⁸ Cp. WACKERNAGEL I, p. 136, note (top).

⁹ Cp. J. SCHMIDT, Pluralbildung 398.

¹⁰ See ZDMG. 33, 193.

¹¹ See WEBER, IS. 8, 40. 54; 13, 109.

¹² This probably started from the parallelism of the 3. sing. of roots in *ṣ* and *ś*: thus *dveṣ-ṣi* from *√dviṣ-*, and *vaiṣ-ṣi* from *√vaiṣ-*; then the 2. sing. *dvek-ṣi* for *dveṣ-ṣi*, followed *vak-ṣi*.

¹³ The relation of the *k* in *dadhṛk* 'firmly', to *dadhṛṣá-*, *dadhṛṣ-váṇi-* 'bold', is uncertain. Cp. WACKERNAGEL I, 118, note (end).

¹⁴ Thus *τῶανδανον* = *candana-* 'sandal-wood'; *Πασάνης* = *caṣṣana-*, N.; *Παζάλοι* = *pañcāla-*, N. of a people; *Σανδρόκλυτος* = *candragupta-*, N.; *Ὀζίνη* = *ujjayinī-* (Prakrit

direction. It is therefore likely that they were thus pronounced in Vedic times¹. Prosodically, however, they have the value of a single consonant (excepting *ch*²). They date from the Indo-Iranian period only; but in order to understand their place in the Vedic language, especially in relation to the gutturals, we must go back to their ultimate origin. The evidence of comparative grammar shows that **two distinct series of palatals**, the later and the earlier, must be distinguished. This evidence alone can explain how the same Vedic palatal sound (*j* or *h*) is, under certain conditions, treated differently.

36. The new palatals (*c*, *j*, *h*) are derived from gutturals (velars), being interchangeable, in most roots and formatives, with gutturals, and being in most cognate languages represented by the same sounds as represent original gutturals. Thus from the root *śuc*- 'shine' come verbal forms such as *śucati*, beside the nominal derivatives *śūka*-, *śūkran*-, *śukrā*-, *śuklā*- (AV.); from *yuj*- 'yoke', *yuje* 1. sing. mid., etc., beside *yugā*-, *y'ga*-, *yuktā*-, *yugvan*-; from *druh*- 'injure', *dudrōha*, 3. sing. perf., etc., beside *druhyū*-, a name, and *drōgha*- 'deceitful'.

The (Indo-Iranian) change from gutturals to palatals was regularly produced before the palatal sounds *i* *ī* *y*³; e. g. *cittā*- 'noticed', beside *kēta*- 'will', from *cit*- 'perceive'; *ājīyas*- 'stronger', beside *ugrā*- 'strong'; *druhyū*- beside *drōgha*-. This change invariably takes place in Iranian, while the exceptions in Vedic appear only before vowels which were not originally palatal.

a. Gutturals thus appear instead of palatals before *ir* (*il*) and *ir* (= IE. *rr*- and *r̥*)⁴, which were not yet pronounced with an *i*-sound in the Indo-Iranian period⁵: thus *āngiras*-, a name; *giri*-⁶ 'mountain'; *kirāti*, 3. sing., *kirāṇa*- 'dust', from *kṛ*- 'scatter'; *carkirāma*, *carkiran*, *kīrti*- 'fame', from *kṛ*- 'commemorate'; *gīr*- 'lauding', from *gṛ*- 'praise'; *gīrāti* (AV.), 3. sing., *-gīla*- (AV.) 'devouring', from *gṛ*- 'swallow'. Before *i* (= IE. *ə*)⁷ *k* appears in *ok-i-vāms*-, part. from *uc*- 'be pleased', and *g* in *tigītā*-⁸ 'sharp', beside *tejate*, *tejas*- 'brilliance', and other derivatives, from *tij*- 'be sharp'.

Otherwise a guttural followed by a palatal vowel is due to the influence of cognate forms. This is the case

i. in the initial of roots α) in *gṛ*-, the weak stem of *gai*- 'sing', beside *gāy*-, *gā*-; β) in reduplicated forms with *cik*-, *jig*-, due to forms like *cikāya*, *jigāya*- (where the guttural is in accordance with phonetic law) and to the frequency of palatal reduplication of guttural initial; thus perf. *ciky-ur*, part. *ciky-at*-, desid. *cikīṣate*, impv. *cikihi* (AV.), from *ci*- 'perceive'; intv. *cēkit*-, *cikit*-, desid. *cikits*-, from *cit*- 'perceive'; perf. *jigy-ur*, desid. *jigīṣate*, *jigyū*- 'victorious',

ujjenī), N. of a city; *Δαμοῦνα* = *yamunā*-, N. of a river. Cp. WACKERNAGEL I, 119.

¹ Cp. WHITNEY on APR. I. 21.

² Cp. above 30, 3; 31, 3 b; and below 40.

³ The sphere of the palatals has been extended by analogy at the expense of the gutturals and *vice versa*. The aspirate guttural *kh* appears where the other gutturals are replaced by palatals; thus before the *y* in *khyā*- 'see' (but *jyā*-) 'overpower'; before the thematic *a* of the present: *rikhati* 'sits' (but *dakati*); before the *-ayati* of the Causative: *īkḥayati* 'swings' (but *arcāyati*); and notably in *sākhi*- 'friend': dat. *sākhye*, pl. *sākhibyas* (IIr. *sachi*-): cp. WACKERNAGEL

I, 121 (p. 140, top). The palatal aspirate in fact never represents a guttural aspirate, but only an IE. palatal, or sibilant and palatal.

⁴ Cp. WACKERNAGEL I, 24. 25.

⁵ Cp. WACKERNAGEL I, 123 a α.

⁶ In Av. *gairi*-.

⁷ This sound had probably not yet become a pure palatal in IIr.

⁸ Otherwise the palatal regularly appears before this *i* in perfect forms; e. g. *śaścīrē* (*śac*- 'accompany'); *bhejirē* (*bhaj*- 'divide'); *uvōcītha*, *ūcīṣe* (*uc*- 'be pleased'); *dudōhītha* (*duh*- 'milk').

from *jī-* 'conquer'; γ) in the pronominal forms *kis*, *kim*, *kīm*, *kiyat*, *kivant*, *kidīś-*, beside the enclitic *cid*, because owing to the influence of the frequent forms *kā-s*, *kā-d*, etc., *k* appeared to be characteristic of the interrogative pronoun¹.

2. in the final of roots in which guttural forms predominate, before the *y* of the optative and the gerund; thus *dagh-yās*, from *dagh-* 'reach'; *sak-yām*, from *sak-* 'be able'; *sagh-yāsam* (TS.), from *sagh-* 'be equal to'. It also appears very often before the suffixes *-i*, *-ī*, *-in*, *-ya* forming derivatives from nouns the last consonant of which is a guttural: e. g. *phāyogi-* 'descendant of Playoga'; *vrk-ī-* 'she-wolf' (*vrka-*); *sāk-in-* 'powerful' (*sākā-*); *śrṅg-in-* 'horned' (*śrṅga-*); *upa-vāk-yā-* 'to be praised' (beside *upavācya-*) from *upavākd-* 'praise'. Similarly *drāgh-īyas-* 'longer', *drāgh-iṣṭha-* 'longest' (beside *dirghā-* 'long', *drāgh-mān-* 'length'); *sphig-ī-* 'buttock', with *g* from the nom. *sphik* of *sphij*, which occurs in the post-Vedic language only.

3. in a certain number of abnormal words, almost invariably at the beginning:

α) words which may be suspected of foreign origin owing to meaning or phonetic form: *kimśukā-*, *kiyāmbu-* plant names; *kimūdin-*, *kikaṭa-*, *kirāta-* (VS.), *śva-kiṣkin-* (AV.) names of foreigners or demons; *kija-* a kind of utensil; *kilbiṣa-* 'guilt' (contains the rare letter *b*), *kistā-* 'singer' (*st* instead of *ṣt*); β) onomatopoeic words: *kikidīvi-* 'blue jay'; *kikirā-kr-* 'tear to tatters'; *kikkīṭi* (TS.) an interjection; γ) some words of doubtful origin: *kikasa-* 'vertebra'; *kīnāra-* 'ploughman'(?); *kīnāśa-* 'ploughman'; *kilāla-* 'sweet draught'; *kirmirā-* (VS.) 'variegated'; *kiśorā-* (AV.) 'foal'; *kiśmīla-* (AV. Paipp.) a kind of disease.

37. New palatals as radical initials. — a. Before *a*, *ā*, and diphthongs, both palatals and gutturals are very frequent in Vedic and Iranian. Comparative grammar shows that the palatals occur before a vowel or diphthong representing IE. *ǵ ǵ̌* or a diphthong beginning with *ǵ ǵ̌*²; but gutturals before IE. *a o* or sonant nasal. According to this evidence the palatal has come into being in the following words: *ca* 'and'; *cakrā-* 'wheel'; *catvāras* 'four'; *caramā-* 'last'; *carū-* 'pot'; *cāru-* 'agreeable'; *pāñca* 'five'; *jaṭhāra-* 'belly'; *jānt-*, *jāni-* 'woman'; *jāmi-* 'akin'; *hāras* 'flame'.

On the other hand, the original guttural has remained in *kakūd-* 'peak'; *kākṣa-* 'armpit'; *kārū-* 'poet'; *kēta-* 'will'; *gāus* 'cow'; *gharmā-* 'hot'; *ghorā-* 'terrible'; and in the roots *kās-* (AV.) 'cough'; *gadḥ-* 'clasp'; *gā-* 'go'; *gāh-* 'plunge'; *gai-* 'sing'³.

b. Among the roots with *ǵ ǵ̌* / as low grade vowels, the only one in which the regular phonetic interchange of palatal and guttural takes place, is *jar-*: *gṛ-* 'call'; *g* appearing before *r ir ar* (= IE. *ǵr*), *j* before *ar* (= IE. *ǵr*) preceding the thematic *-a-* of the present or the suffix *-tr-*; thus *gr-nāti*, *gir-*, *garā-* (VS.), beside *jārate*, *jarādhyai*, *jaritṛ-*. In other roots either the guttural or the palatal appears throughout; mostly the guttural, because the forms with *ǵ ǵ̌* / and *o ar al* (= IE. *ǵu ǵr ǵl*), which required the guttural, were more numerous than those with *o ar al* (= IE. *ǵu ǵr ǵl*); thus from *kr-* 'do', *īkar* aor. 'has done', *kartṛ-* 'agent', *kārman-* 'action', retain the guttural, though the palatal would be phonetic (as *ar* here = IE. *ǵr*), through the influence of forms with *kr-* and of *kārana-* 'deed' (where *ar* = IE. *ǵr*).

¹ Cp. WACKERNAGEL I, 128 a (p. 150, bottom).

² Cp. Italian and the Balto-Slavic languages in which palatalize before *e* as well as *i*.

³ In the IE. vowel gradation of these roots only *ǵ* and *ǵ̌* appear. In other roots in the IE. vowel gradation of which *ǵ̌* is found, an initial palatal would be expected

On the other hand, the palatal appears in *cud*¹, *códati* 'impel'; *ścut*-, *ścotati* 'drip', because here forms with *u*, which required a guttural, were rare; in *car*-, *carati* 'move', where the palatal is almost invariably phonetic in RV. (but AV. has *cacāra*); in *crt*- 'bind', the palatal has fixed itself in spite of many forms with *r*; while beside *harṣate* 'rejoices', *hūrṣant*-, part., both *h* and *gh* occur in weak forms: *hr̥ṣitā*-, *gh̥r̥ṣu*- 'lively', *gh̥r̥ṣvi*- 'gladdening'.

c. Among roots in *-an* and *am*, survivals of the regular interchange are found in *kan*- 'be pleased', and *han*- 'strike'. The former has the palatal (= IE. *kē*) in the aor. *caniṣtam*, in the superl. *cāniṣtha*-, and in *cānas*- 'favour', but otherwise the guttural. In *han*-, *h* appears before *an* (= IE. *en*) and, by analogy, also before *an* = *nn* and *a* = *n*; but *gh* before *n* and *ā* = IE. *ō*; thus *hān-ti*, inf. *hān-tave*; *han-mas*, *han-yāma*; *ha-thās*-, *-ha-tā*-, and with *j* in impv. *jahi* (= **jhahi*), but perf. *jaghāna*, and *ghanā*- 'striker', *ghanāghanā*- 'found of striking'. In the intv. *jañghan*-, *gh* stands for *h* before *a* = IE. *ē* owing to the influence of the weak stem *jañghn*-. In *gam*- 'go', *ga*- = *gm*- (e.g. in *gacchati*, *ga-tā*-) has led to the use of *gam*- = **jam*-, as in *gām-anti*².

d. In the remaining verbs, that is, those with *a* (25) or *e* (22) as high grade vowel, there appears chiefly the palatal throughout; thus *cakṣ*:- *cacākṣa* (for **cakākṣa*). The phonetic guttural is, however, preserved in some forms of the three verbs *ci*- 'observe' (perf. *cikāya*); *cit*- 'observe' (perf. *cikēta*; *kēta*- 'will'; *keti*-³ 'appearance'); and *ji*- 'conquer' (perf. *jigāya*; *gāya*- 'household'). A guttural not phonetically justified appears before *a* (= IE. *ē*) only in *ghas*- 'eat' (aor. *dghas*, subj. *ghas-a-t*) and in *gal*- 'drop' (*gal-galiti* VS.).

e. In reduplicative syllables containing *a* of roots having initial guttural or palatal, the palatal always appears in the perfect, pluperfect, or reduplicated aorist; thus *kṛ*- 'make': *cakāra*; *khād*- 'chew': *cakhāda*; *gam*- 'go': *jagāma*; *ghas*- 'eat': *jaghāsa*; *cakṣ*- 'see': *cacākṣa*; pluperf. of *kṛ*:- *acakra*t; red. aor. of *jas*- 'be exhausted': *jajas-tām*. The palatal is here historically phonetic, as the IE. reduplicative vowel was *ē*.

In the intensive, however, the palatal is invariable only when the reduplication is monosyllabic⁴; e.g. *kram*- 'stride': *can-kramata*; *gr*:- *jā-gr*- 'awake'; *han*- 'strike': *jañ-ghanti*. But when the reduplication is dissyllabic, the guttural⁵ predominates; thus *kṛ*-, part. *kāri-kṛ-at*;- *krand*- 'roar': *kāni-kra(n)d*;- *gam*- 'go': *gani-gan*-, *gani-gm*;- *han*- 'strike': *ghani-ghn*-(cp. *ghanāghand*-); *skand*- 'leap': both *kāni-ṣkand*- and *cani-ṣkadat* subj.

38. New palatals as radical finals. a. Verbal forms.—Before the thematic verbal endings (including those of the *a*-aorist and the reduplicated aorist) the final of roots regularly appears as a palatal which, though phonetic⁶ only in about the same degree as the guttural, has prevailed. Gutturals are

in certain forms; but few traces of this remain, as the forms of each verb have been normalized.

¹ If *kūtsa*- N. is derived from *cud*-, and *carṣaṇi*- 'active', from *kṛ*-, the initial consonant has not been affected by the normalizing influence of the roots, because these words have been isolated.

² The correct phonetic interchange appears in *jāñgahe* 'kicks', and *jāmhas*- 'course', if these forms are connected, as BR. think. WHITNEY, *Roots*, however, considers the former an intensive of *gāh*- 'plunge'.

3 Beside *cṛu*- 'devout', *keru*- appears in the compound *māhi-keru*- 'very devout'; cp. WACKERNAGEL 2¹, p. 101 (43 b).

4 In the post-Vedic language, the palatal is invariable even in dissyllabic reduplication.

5 But if the initial of the root is a palatal, the reduplicative consonant is of course always a palatal; thus *cand*- 'shine': *cāniṣcad*;- *car*- 'move': *carācarā*;- *cal*- 'move': *calācalā*- 'ever moving'. Cp. 32 a.

6 Phonetically we should have **pākāmi* (IE. *ō*), *pāc-asi* and *pāc-ati* (IE. *ē*).

rare at the end of the root, appearing only¹ in *śak-* 'be able'; 2. sing. *śak-as*; *sagh-* 'be equal to': 3. sing. *sagh-at*; *dagh-* 'reach': *dagh-at* (TS.); in these roots the guttural prevails throughout owing to the influence of the present stem *śak-nu-*, *sagh-nu-*². Even in the non-thematic presents and in the perfect the palatal carried the day, though phonetic in still fewer forms; thus the guttural alone would be historically justified in the forms *yunāḥ*, *yuñje*; *yuyōja*³. The palatal further regularly appears before the causative⁴ suffix *-āya-*, where it is phonetic (= IE. *ēte*); e. g. *arc-āya-ti* from *arc-* 'praise'⁵.

b. As shown by the appearance, in cognate forms, of a guttural before other consonants than *s*, the final of the following verbs is a new palatal: *añj-* 'anoint'; *ej-* 'stir'; *tij-* 'sharpen'; *tuj-* 'beat'; *tyaj-* 'forsake'; *nij-* 'wash'; *bhāj-* 'divide'; *bhañj-* 'break'; *bhuj-* 'bend'; *yuj-* 'yoke'; *rañj-* 'colour'; *ruj-* 'break'; *vij-* 'shoot up'; *vrj-* 'turn'; *śiñj-* 'sound'; *sañj-* 'attach'; *suañj-* 'embrace'; also in the noun *śrāj-* 'garland'.

c. Apart from being the result of the Sandhi of *d + j*, *jj* is shown by the evidence of cognate languages to be derived from a sibilant + guttural (= IE. *sg*) and thus to belong to the series of new palatals in *majjān-* 'marrow'; *rājju-* 'rope'; *bhrjjāti* 'roasts'; *majjati* 'dives', from which is derived *madgū-* (VS.) 'diver' (a bird).

d. Nominal derivatives. 1. Before the suffix *-a*, the final of the root is mostly guttural, because the *a* in nearly all the cases of the noun represents IE. *ō*. The rule in the RV. is that the guttural appears before both unaccented *-a* and accented *-ā*, but the palatal before accented *-ā* only⁶; e. g. *abhi-droh-ā*, *druh-ā* 'injury': *drōgh-a-* 'injuring'; *bhoj-ā* 'liberal': *bhōg-a-* 'enjoyment'; *a-yuj-ā* 'companionless'; *yōg-a-* 'yoking'; *ruj-ā* 'breaking': *rōg-a-* (AV.) 'disease'; *vevij-ā* 'swift': *vēg-a-* (AV.) 'speed'; *śuc-ā* 'bright': *śūk-a-* 'flame'; *ruc-ā* (VS.) and *roc-ā* (AV.) 'shining': *rūk-a-* and *rok-ā* 'light'⁷.

2. Before the suffix *-as*, the palatal generally appears, as it is for the most part phonetically required; e. g. *īj-as-* 'force': *ug-rī-* 'mighty'. The guttural, however, prevailed in *ānik-as-* 'bend'; *āg-as-* 'offence'; *-ny-ogh-as-* 'streaming'; *bhārg-as-* 'brilliance'; as there were no corresponding verbs with palatal beside these words; it also prevailed in *ōk-as-* 'ease' and *ny-ōkas-* 'comfortable', as well as *-fok-as-* 'flaming', though there are such verbs (*uc-* 'be pleased', and *śuc-* 'shine').

3. Before other suffixes beginning with *a*, the final of the root is generally palatal; thus before *-ana* (= IE. *-eno-*), *vac-and-* 'speaking'; *tēj-ana-* 'act of sharpening'; *manh-āna-* 'gift'⁸; before *-ant*, *-āna* (under the influence of

¹ Apart from roots ending in *kh*, see 35, note 3.

² In *ni-mēgha-māna-* 'drenching oneself', the *gh* seems to be phonetic (as *-amāna* = *-āmēnā*). In *vālgate* (AV.) 'springs', the guttural is perhaps due to the preceding *l*, as neither *lj* nor *lc* is ever found to occur.

³ This normalization of the palatal is probably Indo-Iranian, see J. SCHMIDT, KZ. 25, 104.

⁴ The denominatives in *-ayā-* (IE. *eiē* and *oiē*) follow the noun from which they are derived; e. g. from *aghā-* 'evil', *aghāyāti* 'wishes to injure'.

⁵ The causative *ingāyati* of *tjati* 'stirs' is probably due to an old present base **inag-*, *ing-* formed according to the 7th class; the phonetic form *-injayati* is found in the BAU. VI. 4, 23.

⁶ The fluctuation of words in *-a-* probably arose from some cases in oxytones having had IE. *z*, others *δ*; hence in some words the palatal prevailed throughout, in others the guttural. The agent-nouns, being mostly oxytone, show a preference for the palatal, which originally appeared in oxytones only. Cp. WACKERNAGEL I, 128 a (p. 150, note, end).

⁷ A palatal before an unaccented *-a* first appears in *dōh-a-* (RV. x. 12²), otherwise *dōgha-* 'milking'; *mōh-a-* (AV.) 'delusion', beside *mōgh-a-* 'vain'; *kriñc-a-* (VS.) 'curlew', is probably only an extension of *kriñc-* (VS.).

⁸ The *gh* of *yaghāna-* 'buttock', is phonetic (Gk. *κοχών*).

verbal forms), e. g. *dūh-āna-* and *duduh-ānā*¹; before *-ata* (= IE. *-etō*), e. g. *pac-atā-* 'cooked'²; before *-an* in *majj-ān-* 'marrow'³.

4. Nouns formed without suffix (including infinitives and gerunds) have the palatal of the corresponding verb; e. g. *pr̥c-as*, nom. pl. 'food'; *ā-pr̥c-as* and *ā-pr̥c-e* 'to satisfy'; *tuj-āye* 'to procreate'. A guttural of course appears where the verb has a guttural only; e. g. *pra-tānk-am* (AV.) 'gliding' (*tak*-run).

5. The suffix *-ka* is treated analogously to the final guttural of roots⁴. The guttural regularly appears except when the suffix, being attached to unaccented prepositions, is itself accented; thus *asmā-ka-* 'our'; *yuṣmā-ka-* 'your'; *āpā-ka-* 'coming from afar'; *abhi-ka-* 'collision'; and even with the suffix accented in locatives such as *upā-kē*, *upā-kūyos* 'in the vicinity' and in the abl. *parā-kāt* 'from a distance'; but *uc-cā* and *uc-cāis* 'above'; *parā-cāis* 'aside'; *paś-cā* and *paś-cāt* 'behind'; *prā-cāis* 'forwards'.

39. Irregular palatalization.—Before *ū* *r* and consonants (except *y*), the gutturals were not originally palatalized. Hence roots which regularly have palatals before *a* and diphthongs, usually retain the guttural before *u* *r* and consonants. Thus from *ric-* 'leave', *rek-u-* 'empty', *rik-n-as-* 'property', perf. part. *ririk-vāns-*; 3. sing. pres. *rin̄k-ti*, 2. sing. perf. mid. *ririk-se* (but opt. *riric-yāt*); *ug-rā-* 'mighty', beside *ōj-as-* 'strength'; *ghn-* beside *han-* 'strike'. Nevertheless palatals appear by analogy before *u*, *r*, *n*, *m*, *r*, *v*:

a. initially: *r*. in the roots *ścut-* 'drip', *crt-* 'bind', *hr̥s-* 'rejoice', in which the unphonetic palatal before the low grade vowel⁵ is due to the phonetic palatal before the high grade vowels *o* (= IE. *ēu*) and *ar* (= IE. *ēr*).

2. in the reduplicative syllables *cu-*⁶ and *ju-* of the perfect and aorist (in RV. occurring only in *cyu-* 'shake', *gup-* 'guard', *gur-* 'praise') for older **ca-* **ja-* (*a* = *ē*, the IE. reduplicative vowel).

b. finally: *r*. in verbal inflexion, the palatal which appears before *a* and diphthongs always appears also before *u*, and nearly always before *m* and *r* (instead of the phonetic guttural); thus *sisic-ur* beside *sisic-atur*, *sisic-e*, from *sic-* 'pour'; *bubhuj-māhe* beside *bhun̄j-āmahe*, from *bhuj-* 'enjoy'; *añj-mas* beside *añj-ānti*, *an̄j-an* from *añj-* 'anoint'; *riric-rē* beside *riric-ē*, from *ric-* 'leave'; *ā-yuj-ran*, *yuyuj-rē* beside *yuyuj-ē*, from *yuj-* 'yoke'; *duh-rā-*, *duh-rate*, *duduh-rē*, *duh-rām* and *duh-ratām* (AV.) beside *duh-ē*, from *duh-* 'milk'.

The guttural, however, regularly remains before the *-nu* of the 5th class: *śak-nu-* 'be able', *sagh-nu-* 'be equal to', spreading thence to other forms⁷. Phonetic *k* remains before *m* in *vivak-mi* from *vac-* 'speak'; and before *r* in *vāvak-re* beside *vac-yāte*, *vāñc-ati* (AV. VS.) from *vāñc-* 'move crookedly'.

2. in nominal derivation the guttural as a rule remains⁸: e. g. *rug-nū-* 'broken', from *ruj-* 'break'; *ruk-mā-* 'brilliant', from *ruc-* 'shine'; *śuk-rā-*, *śuk-lā-* (AV.) 'bright', from *śuc-* 'shine'; *pak-vā-* 'ripe', from *pac-* 'cook'. The perf. part. for the most part follows this rule: e. g. *ru-ruk-vāns-*, from *ruc-* 'shine';

¹ Strictly phonetic (but rarer) is *dūgh-āna-* 'milking'; also *vāgh-āt-* (IE. *-nt-*) 'institute of a sacrifice'.

² The *k* in *sik-atā-* (AV. VS.) 'sand', is phonetic (IE. *-nta-*).

³ Beside *yāk-ri* (AV.) 'liver', and *śāk-ri* 'dung', the *k* is found in the stems *yak-an-*, *śak-an-*, but only in weak forms before *n* or *a* (= *ṇ*): *yak-nās*, *yak-nā* (VS.); *śak-nā* (VS.); *śak-nās* (AV.); *śāka-bhis* (TS.)

⁴ See above 38 d, 1; WACKERNAGEL I, 129.

⁵ The phonetic guttural, however, appears in *ghr̥s-ū-* 'lively', *gh̥r̥vi-* 'gladdening'; while

on the other hand the palatal appears unphonetically before *u* in the intv. part. *car-cūryā-māna-* from *car-* 'move'.

⁶ Otherwise *cu-* occurs only in the onomatopoeic *ni-cumpuṇā-* 'swell' — and in a few words suggestive of foreign origin: *cūmuri-*, N. of a demon; *cu-puṇikā-*, N. of a *kṛttikā* (TS.).

⁷ Also *dagh-nu-* 'reach', in a Brāhmaṇa passage of the Kāṭhaka, and *siḡh-nu-* 'mount', in a similar one of the TS.

⁸ COLLITZ, BB. 3, 230 f.; J. SCHMIDT, KZ. 25, 70 f.

vi-vik-vāms-, from *vic-* 'divide'; *ok-i-vāms-* (36 a), from *uc-* 'find pleasure' (but dat. sing. *ūc-ūṣ-e*).

The following are, however, exceptions: *ōj-man-* 'might'; *bhuj-mān-* 'fruitful'; *mih-ur* 'suddenly'; *druh-ū-* (AV.) 'injurer'; *yāc-ñyā-* (AV.) 'request'.

40. The old palatals (*ch*, *j*, *ś*, *h*).—The aspirate *ch*. This sound is, in pronunciation, the aspirate of *c*² and is therefore represented in reduplication by *c*. But in origin *ch* has nothing to do with *c*. The fact that after a mute it takes the place of *ś* in Sandhi shows that it is allied to *ś*. In fact, unlike *j* and *h*, it belongs exclusively to the old series of palatals; for it does not interchange with a guttural *kḥ*³. In the Avesta *ch* is regularly represented by *s* and in cognate European languages by a conjunct consonant beginning with *s* and standing for IE. *skh* (that is, *s* + palatal mute aspirate); e. g. *chid-* 'cut off', Gk. *σχιδ-*. This in Indo-Iranian probably became *śśh*, which differentiated into Avestic *s* and Vedic *ch*. In the inchoative suffix *-cha* (*gáčhati*, Gk. *βάσσω*) this palatal aspirate seems to represent IE. *skē*, a conclusion which is supported by the old inchoative verb *rapśate* 'is full' = *rap(s)śate*, where after the *s* has been dropped between two consonants⁴, *ś* = IE. *k* remained. Thus *ch* represents a double sound and metrically lengthens a preceding short vowel. Hence the RPr. (vi. 1) prescribes the doubling of *ch* (that is *c-ch*) between vowels. Though the Vedic Mss. almost invariably write *ch*⁵ and AUFRECHT's edition of the RV. and v. SCHROEDER's edition of the MS.⁶ follow this practice, the spelling *cch* is to be preferred.

a. In *śákhā-* 'branch', the initial *ś* probably stands for *ch* owing to the law by which two aspirates in the same syllable are avoided⁷.

b. In a few instances *ch* is a Prakritic representative of *kṣ* and *ps*: *-ṛcchārā-* (AV.) beside *ṛkṣālī-* (VS.)⁸, part of an animal's leg; *kṛcchrā-* 'distress', perhaps for **kṛpsrā-*, and allied to *kṛpale* 'laments', and *kṛpāna-* 'misery'⁹.

41. The old palatal *j*.—This *j* is the media of *ś* (while as a new palatal it is the media of *c*). It is recognizable as an old palatal by the following indications:

1. when there are parallel forms with *ś* before *t*, *th*, or a cerebral appears either as final or before mutes; e. g. beside *yāj-ati* 'sacrifices', *yāś-ty-* 'sacrificer', *iś-tá-* 'sacrificed', *a-yāṭ* 'has sacrificed'; similarly in the roots *bhrāj-* 'shine'; *mṛj-* 'wipe off'; *rāj-* 'rule'; *rej-* 'tremble(?)'; *vraj-* 'wander'; *srj-* 'send forth'; possibly also in *bhrajj-* 'roast'¹⁰.

2. when in the form in question or in cognate forms, sounds follow which do not palatalize gutturals¹¹, that is, *u r n m r v*; such are: *āj-ra-* 'plain'; *āj-ma(n)-* 'course'; *árjuna-* 'white', *rj-rá-* 'reddish'; *rj-l-* 'straight', *ṛj-īyas-*

¹ Under the influence of *ōj-īyas-* 'stronger' and *ōj-iṣṭha-* 'strongest', such nouns in *-man-* being often closely connected with comparatives and superlatives.

² In the Kāthaka *ch* is spelt *śch*, which is probably only a provincial assimilation, and not the survival of an older sound; cp. J. SCHMIDT, KZ. 27, 332.

³ *múrkhā-* 'dull', occurring in a B. passage of the TS., is probably a new formation analogous to *śókā-* (AV.) from *śócati*. Some scholars hold that there is an etymological connection between *chand-* 'appear', *chand-as-* 'song', and *skāndati* 'leaps'; between *chid-* 'cut off' and *khid-* 'press'; between *chā-* (AV.) 'cut off' and *kḥā-* (*khan-*) 'dig'. Cp. WACKERNAGEL I, 131, note, bottom.

⁴ Cp. above p. 25 note 6; cp. here *cch* = *t + ś*

in Sandhi and *duccḥinā-* for **dis-śunā-* 'misfortune'.

⁵ Except those of the Kāthaka, which write *śch* (cp. note 2).

⁶ Also ROTH's ed. of the Nirukta and MACDONELL's ed. of the Bṛhaddevatā; cp. AUFRECHT, RV², p. vi.

⁷ Cp. 32.

⁸ On AV. Ms. spelling *ch* for *kṣ* in two or three words, see WHITNEY, JAOS. 12, 92, 175.

⁹ On the origin of *ch*, cp. BRUGMANN, KG. 240; on the sound as a whole, WACKERNAGEL I, 133 f.

¹⁰ But cp. 38 c, and WACKERNAGEL I, 139.

¹¹ Apart of course from the exceptions due to analogy: see 39.

'straighter', *rāj-iṣṭha* 'straightest'; *jānu-* 'knee' beside *jñu-*; *jṛmbh-* 'yawn'; *jñā-* 'know'; *jmā-*, gen. *jm-ās* 'earth'; *jri-* 'go'; *jvārā-* 'suffering'; *paj-rā-* 'fat'; *maj-mān-* 'greatness'; *vāj-ra-* 'thunderbolt'; *jurāti*, *jāryati*, *jujur-vāms-*, *jūr-nā-*, from *jṛ-* 'grow old'.

3. when in inflexional forms, in which roots with a new palatal show a guttural, the *j* remains; e. g. *fajāna* from *jan-* 'beget'; *fajāsa* (AV.) from *jas-* 'be exhausted'; *jujōsa* from *juṣ-* 'like'; *jujur-vāms-*, *fajāra* (AV.), from *jṛ-* 'grow old'.

4. when *j* is the reduplication of an old palatal *j* or *h*; e. g. *fajāna*, *fajāra* (AV.), *juhōti*.

5. when it is shown to be an old palatal by the evidence of the cognate languages; thus in *ajā-* 'he-goat', *ajā-* 'goat'; *ajina-* (AV.) 'skin'; *ūrj-* 'nourishment'; *jāmhā-* 'course'; *jānghā-* 'leg'; *jambh-* 'chew up'; *jāmātr-* 'son-in-law'; *dhraj-* 'sweep'; *bhiṣaj-* 'heal'; *rajatā-* 'silvery'; *vāja-* 'swiftness'; *ṛjipyā-* 'going straight'.

a. It is uncertain whether *j* represents an old or a new palatal in the following words:

1. because the comparative evidence is conflicting: *vi-jāman-* 'related'; *jū-* 'hasten'; *jyā-*, *jināti* 'overpower'.

2. because the Vedic and comparative evidence is insufficient: *ubj-* 'coerce'; *kūj-* (AV.) 'hum'; *jāñjat-*, pres. part., of uncertain meaning (ā. l.); *jārate* 'approaches'; *jēhamāna-* 'panting'; *jihmā-* 'transverse'; *dhvāj-*, *dhvājā-* 'banner'; *paj-* 'be rigid' (in *āpa ... pāpaje* 'started back'); *pūjana-* 'honouring'; *bajā-* a kind of plant; *bīja-* 'seed'; *mūñja-* 'sedge'.

b. Irregular *j*.—1. As the two kinds of *j* were indistinguishable in pronunciation, a guttural sometimes intruded among the old palatals owing to the analogy of the new palatals; thus from *bhiṣaj-* 'heal', *bhiṣāk-tama-*, spv., *bhiṣāk-ti*, 3. sing. pres., *a-bhiṣnak*, 3. sing. impf. (like *anak-ti* from *añj-* 'anoint'); from *mṛj-* 'wipe': *nī-mṛg-ra-* 'attached', *apā-mārgā-* (AV.) a kind of plant, *vi-mṛg-varī-* (AV.) 'cleanly'; from *sṛj-* 'discharge', *asṛg-ram*, *asṛgran*, *āsasṛgram*, *sasṛgmāhe* (SV.) beside *sasṛjmāhe*; from *jṛ-* 'grow old', *jāgāra* (AV.) beside *iajāra* (AV.).

2. The guttural beside the palatal may be due to IE. dialectic variety in *gnā-* 'woman' beside *jan-* 'beget'; *gm-ās* beside *jm-ās* 'of the earth'; *bhārgas-* 'splendour', *bhṛgu-* a name, beside *bhrāj-* 'shine'.

3. In *jyōtis-* 'light', *jy* seems, by an old Prakritism, to represent *dy*, as the word is probably derived from *dyut-* 'shine'.

4. The media aspirate *jh*⁴ occurs only in one form, *jājhhāt-* (RV.¹), a pres. part. probably meaning 'laughing' as an epithet of lightning (a metaphor connected with lightning elsewhere also in the RV.); it appears to be derived, by an old Prakritism, from *has-* 'laugh': *jhjh* probably for *jjh*⁵ here = IE. *ǵzh*, which otherwise would become *kṣ-*, as in *jākṣ-at-*, part., 'laughing'.

42. The cerebrals.—The designation given to these sounds by the native phoneticians⁶, *mūrdhanya* 'produced in the head', indicates that they were pronounced at the highest point in the mouth nearest the (upper part

¹ In which only forms with *r* occur; cp., however, HÜBSCHMANN, KZ. 23, 393.

² The only instance of a new palatal (*c j h = k g gh*) before *ūr* (= IE. *r*) is *cārcūryā-māna-* (RV. x). For some more or less doubtful examples of old palatal *j*, see WACKERNAGEL I, 137 b note.

³ Op. cit. I, 137 c, note.

⁴ The other two old palatals *ś* and *h* will be dealt with below in their alphabetical order: 54, 58.

⁵ The Kashmir Ms. of the RV. reads *jājhhāt* for *jājhhāt* (v. 52⁶): SCHEFTZ-LOWITZ, WZKM. 21, 86.

⁶ See RPr. I. 19; APr. I. 32; TPr. II. 37.

of the) head. They are described by the Prātisākyas as pronounced by turning the tip of the tongue up to the roof of the mouth and bending it backwards. They were therefore pronounced farther back in the mouth than the palatals. This is also their pronunciation at the present day in India. An indication that it was such even in Vedic times is the fact that *ḍ* is sometimes found in the later Samhitās interchanging, between vowels, with *ḷ*¹ (which itself interchanges with *r*), and that in the RV. itself *ḍ* *ḥ* become *ḷ* *ḥ* between vowels. It is also to be noted that the Greeks reproduced *ḍ* not only with *δ*, but also with *ρ*². The cerebrals, however, were a specifically Indian product, being unknown in the Indo-Iranian period³. They are still rare in the RV., where they occur medially and finally only. According to most scholars, they are due to aboriginal, especially Dravidian, influence⁴. As a rule, they have arisen immediately after *ṣ* or an *r* sound from dentals. But before consonants and finally they may represent the old palatals *j* *ś* *h*.

a. The voiceless cerebrals *t̪* *th* take the place of the dentals *t* *th* after *ṣ* (= *s*, *ś* or *j*); e. g. *vr̥ṣ-ṭi* 'rain' (suffix *-ti*); *duṣ-tāra* 'invincible' (= *duṣ-tāra*); *n̄k̄iṣ te* (= *n̄k̄iṣ te*); *v̄ṣ-ṭi* 'wishes' (= *v̄ṣ-ṭi*); *m̄ṣ-tā* 'cleansed' (= *m̄ṣ-tā*)⁵. Similarly the voiced cerebrals *ḍ* *ḥ* take the place of the dentals *d* *dh* after **z* (= *s* or old palatal *j*, *h*), which has disappeared⁶; e. g. *n̄ḍā* 'nest' (= IE. *n̄sdō*); *dū-d̄hi* 'ill-disposed' (= *duṣ-d̄hi*); *īḍ-ē* 'I worship' (**iḷ-d̄* = *ij-d̄* for *yaj-d̄*); *ḍṛḍhā* 'firm' (= *ḍṛh-tā*). The preceding voiced sibilant **z* (= *ś* and *ṣ*) has (instead of disappearing) itself become *ḍ* in *ḍiḍiḍ-d̄hi* (from *dis̄* 'show') and *v̄iḍiḍ-d̄hi* (from *v̄iṣ-* 'be active')⁷.

a. When the dental here was immediately followed by an *r* sound, the cerebralization seems originally to have been stopped. Hence *ḍṛḍhrā* (= *ḍṛh-tra*), beside *ḍṛḍhā* (= *ḍṛh-ta*) 'firm'; and though *ṣr* occurs several times in the RV.⁸, the *r* seems to have been dropped in pronunciation, as the only stems ending in *-ṣra* which show a case-form with *n*, do not cerebralize it: *uṣṣrānām* and *r̥ṣṣrānām*, as if no *r* preceded. In TS. I. 2. 5⁹, *r* is actually dropped after *ṣ* in *tv̄ṣṣīmātī* 'accompanied by Tvaṣṭrī'.

b. In several instances a cerebral appears by an evident Prakritism, in place of a dental originally preceded by an *r* (or *ḷ*) sound; thus *vi-kāṣa* 'monstrous', beside *kr-tā* 'made'; *kāṣā* 'depth', beside *kartā*⁹ 'pit'; *avaṣā* (SV. VS.) 'pit', beside *avar̥*¹⁰ 'down'¹¹; and as shown by comparative evidence, *kāṣuka* 'sharp'; *kūḍayati* 'singes'; *kēvaṣa* 'pit'; *jūḍhu* 'dull'; *kūṣā* (AV. TS.) 'hornless'. In the following words, though cognate languages show *ḷ*¹², the cerebral is similarly based on Indian *r* or *r̥*¹³ + dental: *kūṣa* 'frontal bone'; *jaṣhāra* 'belly'; *taḍit* 'contiguous'; *tāḍa* (AV.) 'blow'; *piṇḍa* 'lump'; *kāṇḍa* (AV.) 'piece'¹⁴.

c. Cerebrals have in some instances supplanted dentals owing to the

¹ Cp. VPr. IV. 143; V. BRADKE, KZ. 28, 298.

² See WACKERNAGEL I, 143, note.

³ Op. cit. I, 144.

⁴ Ibid., note.

⁵ Cp. above 41, 1.

⁶ Cp. above 17, 5.

⁷ See WACKERNAGEL I, 145 a, note (end). Cp. 42 d (p. 34) end.

⁸ In *r̥ṣṣrā* 'dominion', *uṣṣra* 'buffalo', *deṣṣrī* 'Directress'; *d̄m̄ṣṣra* 'tooth'; *ṣṣr-* in *ā-ni-ṣṣra* 'not shaken off', *tv̄ṣṣr-mamī* 'accompanied by Tvaṣṭrī'; *n̄ḍr* in *kundr̥-nāḍ* 'house-lizard'(?).

⁹ WACKERNAGEL I, 146 a.

¹⁰ Cp. BARTHOLOMAE, IF. 3, 179.

¹¹ Perhaps also *reṇūka-kāṣa* 'stirring dust',

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if from *kr̥t* 'cut'; but see BARTHOLOMAE, IF. 3, 180 f.

¹² IE. *ḷ* by rhotacism became *r* in Ilr.

¹³ MS. II. 47 has the reading *jinva rāvāt* for that of TS. II. 4. 7¹ *jinvār āvāt* and K. XI. 9 *jinva rāvāt*. Cp. below p. 70, note 4.

¹⁴ The cerebral could be similarly accounted for in *kūṣa* (RV.) 'house'(?), if it is related to *kula* (pa-) 'family', and *kulāya* (AV.) 'nest'. In *dandā* 'staff' if identical with Gk. *δῆνδρον* (J. SCHMIDT, KZ. 25, 52, note 1) we seem to have an instance of a cerebral for a dental + following *r*, but such a change seems not to be in accordance with the phonetic laws of either Vedic (cp. *ḍṛḍhrā*, above a, a) or Prakrit. On two other examples of this supposed change, *āṇḍā*

analogy of similar words with phonetic cerebral. In *padbhis* 'with feet', and perhaps *pād-grbhi-*, N., it is due to *padbhis*, inst. pl. of both *pās-* 'look', and of *pās-* 'cord', and to *pādviśa-*, *pādviśa* (VS.) 'fetter', which is derived from *pās-* 'cord'. *Vāsaṭ* and *śrāusaṭ*, sacrificial calls, probably for *vāksaṭ* and **śroṣaṭ* (3. sing. aor. subj. of *vah-* 'convey', and *śru-* 'hear'), seem to owe their cerebral to the influence of the sacrificial call *vāt* (VS.), *vāt* (TS.), 3. sing. aor. of *√vah-*. The *q* of *purodās-* 'sacrificial cake' (from *dās-* 'worship'), is perhaps due to *dū-dās-* 'impious' (for *duḥ-dās-*)².

d. In a few instances a cerebral *ṭ* or *ḡ* appears in place of the cerebral sibilant *ś*. The phonetic representative of the latter before *bh* would be *ḡ* (parallel to *d* for IE. *z* before *bh*)³, where it appears in *viprūd-bhis* (VS.) 'with drops'. From here the cerebral spread to the nom. sing., where it appears in *vi-prūt* (AV.) 'drop', from *pruṣ-* 'sprinkle', and in *edhamāna-dvīṭ* 'hating the arrogant' (from *dviṣ-* 'hate').

The cerebral *ḡ* also appears before the *-dhi* of the 2. sing. impv. for *ś* in *aviḍḍhi* (= *avi-ś-dhi*) aor. of *av-* 'favour', and in *viviḍḍhi* (= *viviṣ-dhi*), red. aor. of *viṣ-* 'be active'. The phonetic form here would be **iḍh* (= *iṣ-dh*)⁴, instead of which *iḍḍh* appears under the influence, perhaps, of the cognate verbal forms with the short vowel (*aviṣtu*, *aviṣtām* etc.).

43. Cerebrals in many instances represent the old palatals *j ś ḥ*. They are found thus:

a. as final: 1. in nom. sing. m. f.: *bhrāt* 'lustre' (*bhrāj-*); *rāt* 'ruler' (*rāj-*); *vipaṭ*, N. of a river (*vipās-*); *viṭ* 'settlement' (*viś-*), *spāt* 'spying' (*spās-*); *śāt* 'overcoming' (*śāh-*); *vāt* 'conducting' (*vāh-*), *paṣṭhavāt* (VS.), *-vāt* (TS.). The guttural *k* would have been phonetic in this case, as the nom. sing. originally ended in *s*⁵, and even the old palatals became *k* before *s*; the cerebral must here therefore be due to the influence of forms in which it was phonetic.

2. in nom. acc. *śāt*, from *śās-* 'six'. As *k* might have been expected (IE. *sveks*), the cerebral is doubtless due to forms containing *śas-*, as *śaṣṭi-* 'sixty', *śaṣṭhā-* (AV. VS.) 'sixth'.

3. in the first member of a compound, where the final of the nom. sing. appears, in *śāt-* 'six', and *pād-* (from *pās-* 'cord', in *pād-bīśa-*).

4. in 2. 3. sing. aor. for the radical palatal after the endings have been dropped: thus *ā-bhrāt* (*bhrāj-* 'shine'); *yāt* (*yaj-* 'sacrifice'); *rāt* (*rāj-* 'shine'); *naṭ*, *ā-naṭ* (*naś-* 'reach'); *ā-prāt* (*praś-* 'ask' in *praś-nā-* 'question'); *ā-vāt* (*vah-* 'convey'). Here *ṭ* is phonetic in the 3. pers. only, standing for *ś-ṭ* (= IE. *k-t*). It has been transferred to the 2. sing., where *k* would be phonetic (standing

'egg', and *mandūka-* 'frog', see WACKERNAGEL I, 147, note.

¹ Op. cit. I, 148 a (p. 172, top).

² The form *vy-āvāt*, in MS. III. 49 (B.) beside *vy-āvāt*, AV. VIII. 121, from *vi-vas-* 'shine forth', is probably due to the influence of *a-vāt*, aor. of *√vah-*; but cp. BARTHOLOMAE, Studien I, 24, note. On the cerebral in *avatā-* (SV. VS.), beside *avatā-*, *naḍā-* 'reed', beside *naḍā-*, and in *kīṭā-* (AV.), *markāṣa-* (VS.) cp. WACKERNAGEL I, 148 b, note.

³ See below 44 a, 3.

⁴ Cp. above 17, 5.

⁵ This phonetic *k* for an old palatal is preserved in the nominatives *-dṛk* 'seeing' (*dṛś-*), *-spṛk* 'touching' (*spṛś-*), *-spṛk* 'desiring' (*spṛh-*), *an-āk* 'eyeless' (*-akṣ-*; *ās-* 'penetrate');

ṛvik 'sacrificer' (*√yaj-*); *ūrḥ* (VS.) 'nourishment' (*ūrj-*); *dik* (AV.) 'region' (*dit-*). For *-dṛk*, the later Samhitās have *-dṛn* also. In the n. nom. the m. f. form appears: *-dṛk*, *-spṛk*; but as there was no *s* here, it must be assumed that the cerebral was originally used in these neuter forms. In *bhīṣāj-* 'healer', the *k* has spread from the nom. to other cases, where it is not phonetic (cp. WACKERNAGEL I, 138). The original value of the palatal in *uṣij-* 'desiring', *uṣnih-* (AV. VS.), a kind of metre, which have *k* in the nom. is uncertain. The *k* in the nom. *nāk* 'night' is probably not based on an old palatal *ś* (cp. WACKERNAGEL I, 149 a, note).

for *k-s* = IE. *ks*). The reverse transference of *k* to the 3. sing. has taken place in *prá nak* beside *á-naṣ* (*naṣ*- 'reach') and in *d-srāk* (from *srj*- 'discharge').

b. before consonant suffixes:

1. the phonetic cerebral appears before case-endings beginning with *bh* in *paḍ-bhis*, from *pás*- 'look' and 'cord'; *viḍ-bhis* from *viś*- 'settlement'; *sarāḍ-bhyas* 'for the bees' (probably from **sarāk*-); *saḍ-bhis*¹. In *anaḍūd-bhyas* (AV.), from *anaḍ-vāh*- 'bull', *d* appears for *ḍ* by dissimilation; while the guttural of the nom. instead of the phonetic *ḍ* appears in *susamḍḡg-bhis* (from *drś*- 'see') 'fair to see' and in *dig-bhyās* (AV.) from *dis*- 'region'.

2. before the *-su* of the loc. pl. *k* is phonetic, and appears in *vik-sú*, from *viś*-, in spite of the unphonetic *ṣ* of the nom. *viṣ*. But owing to the influence of the other cases the unphonetic cerebral (in the form of *t* dissimilated for *ṣ*) appears in *anaḍūt-su*.

3. before the *dhi* of the 2. sing. impv. the cerebral is phonetic in *dididdhi*, from *dis*-²; also in *ṣ* (= *s*), which after cerebralizing the *dh* is dropped, leaving a compensating length, in *tādhi* from *takṣ*- 'hew' (= IE. *teǵzdhī*); also in *ṣo-dhā* 'sixfold' (for *ṣas-dhā*: *as*-, like *as*-, becoming *o* before a voiced mute)³.

c. The cerebrals in the following words have not been satisfactorily explained: *aghāṭi*- and *āghāṭā*- (AV.) 'striker', beside *-āghāta*- (VS.); *andā*- 'egg'; *iṭānt*- (x. 171⁴) 'wandering' (?), *kūṭa*- 'house' (?); *kūṭa*- 'frontal bone'; *kṛpīṭa*- 'fuel' (?); *mandūka*- 'frog'; *īta*- (AV.) 'reed'; *rārāṭa*- (VS.), *lalāṭa*- (AV.) 'forehead'. Some others, mostly containing *b*, may be suspected of non-Aryan origin: *bāt*, *baḍā*, interjections; *baṭurin*- 'broad' (?), *biriṭa*- 'troop' (?); *bekanāṭa*- 'usurer'; *aḍāmbara*- (VS.) 'drum'; *khadgā*- (VS. MS.) 'rhinoceros'; *cāṇḍālā*- (VS.) 'outcast'; *markāṭa*- (VS.) 'ape'.

44. The dentals.—The dentals are at the present day pronounced as interdental in India, but according to the Prātisākhya⁴ they were post-dental, being produced at the root of the teeth (*dantamūla*). They represent IE. dentals, corresponding to similar sounds in the cognate languages. When two IE. dentals met, there seems to have been a tendency to change the first to a sibilant⁵. A survival of this appears in some Vedic combinations of *d* or *dh* with *dh*, which point to an earlier *sdh*, viz. in *de-hi*, beside *dad-dhi* 'give'; *dhe-hi* (for **dhadh-dhi*) 'put'; *kiye-dhā* 'containing much', in all of which examples *e* is based on Ilr. *az*⁶.

a. Change of *s* to *t*. The dental sibilant as the final of roots or nominal stems becomes *t*⁷:

1. before the *s* of verbal suffixes (future, aorist, desiderative) in the three verbs *vas*- 'dwell', *vas*- 'shine', and *ghas*- 'eat'⁸: thus *avātsis* (AV.) 'thou hast dwelt'; *vāt-syati* (MS.) 'will shine'; *jighat-sati* (AV.) 'desires to eat', and *jighat-si*- (AV.) 'hungry'.

¹ From this phonetic change of *s* to *ḍ* before *bh* is to be explained the stem *iḍ*- 'refreshment', beside *iṣ*- (which occurs before vowel endings only): *iḍ-bhis* etc. would have led to the formation of *iḍ-ā*, etc. (inst. sing.), which then gave rise to *iḍ-ā* as an extension of *iḍ*-; cp. also *iḍāyata* (RV. I. 191⁶ MM., *ilāyata*, AUFRECHT); *ilāyati* (AV.) 'be quiet'.

² It is not phonetic in *avidḍhi* and *vividḍhi* (see above, 42 d). Cp. WACKERNAGEL I, 149 c (end).

³ The cerebral which in this paragraph represents (except before *s*) the old palatals, is based on an Ilr. *sh*- sound *ṣ* *ṣ* (as shown by the Avesta having *ṣ* *ṣ* in the

corresponding forms). This sibilant, Indian *s*, first became the cerebral mute *ḍ* before the *bh*-suffixes (as dental *s* became dental *ḍ*) when it first spread to the nom., and lastly to the loc. pl.

⁴ See RPr. I. 19; TPr. II. 38.

⁵ For example, Gk. *foiōba*, Av. *voistā*, beside *vēt-īha* 'thou knowest'. Cp. WACKERNAGEL I, 152 b.

⁶ Loc. cit., also note.

⁷ See discussion of attempted explanations in WACKERNAGEL I, 153, note.

⁸ All the other roots in *s* add the suffix with connecting vowel *i*.

2. before the *t* of the 3. sing. of a past tense: thus *vy-āvāt* (AV.) 'has shone forth', from *vi-vas-*. This is, however, probably not a phonetic change, but is rather due to the influence of the 3. sing. of other preterites with *-t*; **ā-vās-t* having thus, instead of **ā-vās*, become *ā-vāt*¹.

3. before case-terminations beginning with *bh*, and when final (in nom. acc. sing. neut.), in the perf. part. and in four other words: thus *jāgr-vād-bhis*, inst. pl., 'having awakened', *tatan-vāt*, acc. n., 'having stretched'; *uśād-bhis*, from *uśās-* 'dawn'; *mād-bhis*, *mād-bhyās* (AV.), from *mās-* 'month'; *svā-tavad-bhyas* (VS.), from *svā-tavas-* 'self-strong'. The change of *s* to *t* began before the *bh* endings (like that of *s* to *t* or *d*)² and was extended to the nom. acc. sing. neut. in the RV., but not till later before the *-su* of the loc. pl.³

a. Allied to the change of final *s* of roots and stems to *t*, is the apparent change of the medial dental sibilant to *d* in *madgā-* (VS.) 'diver', from *majj-* 'dive' (*jj* = IE. *zʒ*)⁴.

β. The substitution of dentals for other mutes is extremely rare. In consequence of dissimilation, a dental replaces a cerebral in *anaḍṣu* and *anaḍṣbhyas* (AV.), from *anaḍvāh-* 'bull'; in *drdhra-* 'firm', beside *drdhā-*; in *paṣṭhavāt* (TS.) 'four year old bull', beside *paṣṭhavāt* (VS.).

A dental seems to take the place of a labial in *ad-bhis*, *ad-bhyās*, beside *ap-* 'water': but this is probably due to the analogy of **nadbhis*, *nadbhyās*, beside *nāpāt-* 'grandson'⁵.

45. The labials.—These sounds as a rule represent IE. labials; e. g. *pitṛ-*, Gk. *πατήρ*; *bhāra* 'bear', Gk. *φέρε*. But owing to the great rarity of IE. *b*, there are very few Vedic examples of inherited *b*; e. g. *rambate* 'hangs down', Lat. *labī* 'glide'⁶.

a. The number of words containing *b* has been greatly increased by new formations. 1. Thus *b* replaces *p* or *bh* before other voiced mutes: e. g. *pi-bd-anā-* 'firm', beside *pad-ā-* 'place'; *rab-dhū-*, beside *rabhante* 'they take'.—2. It is the regular substitute for *bh* in reduplicative syllables or when initial aspiration is lost owing to a following aspirate; e. g. *ba-bhūva* from *bhū-* 'be', *bāhū-* 'arm', *bandh-* 'bind'⁷.—3. In a few examples it takes the place of or interchanges with *v*; thus *pādṛīsa-* (RV.), beside *pādṛīsa-* (VS.); *bānā-* beside *vānā-* 'arrow'; *-bālśa-* (AV.) beside *-valśa-* 'twig'; *bānā-* (AV.) 'music' beside *vānā-*; *-blina-* (AV.) 'crushed', beside *vlina-* (B.)⁸.—4. It further occurs in some new onomatopoeic words; *budbudī-* 'bubble'; *bāl* (AV.) interj. 'dash!'; *bata* interj. 'alas!' and *batī-* 'weakling'.—5. In one instance *b* seems to stand for *m* before *r*, in *brū-* 'speak', for **mrū-*⁹, originally appearing most likely after a pause or after a final consonant¹⁰.

b. In many words the origin of *b* is obscure. Most of these probably come from a foreign source: 1. owing to their meaning: *arbudī-* and *ārbuda-*, *balbūthā-*, *śāmbara-*, *śrībīnda-*, names of foes of Indra and of the Aryans; *brbū-*, a proper name; *bajā-* (AV.), *bālbaja-* (AV.), *bilvā-* (AV.), names of plants; *bākura-* and *bākūrā-*, a musical instrument.—2. owing to their phonetic form: *kilbiṣa-* 'sin'; *bīsa-* 'root-fibre'; *busi-* 'vapour'; *bāt* and *badāt*, interjections;

¹ Cp. WACKERNAGEL I, 154.

² See 42 d (p. 34).

³ Cp. WACKERNAGEL I, 155 a, note.

⁴ Op. cit. I, 155 b, note.

⁵ See 42 a α (p. 33).

⁶ The name *in-d-ra* and *nānān-dr-* 'husband's sister', are explained by some scholars as containing a Prakritic *d*. See WACKERNAGEL I, 157, note.

⁷ On some words (*sabar-*, *batā-*, *bāla-*, *balbūthā-*) in which *b* is regarded as IE. by

different scholars, see WACKERNAGEL I, 158 b, note.

⁸ See above 32 a, I, 2.

⁹ There is some confusion between forms of *brh-* 'be great', and *vrh-* 'tear'.

¹⁰ On some doubtful or wrong explanations of *b* for *v* (*ni-brh-* 'crush', *bāla-*, *bālbaja-*, *bāt*, *śabāla-*, *śāmba-*), see WACKERNAGEL I, 161, note.

¹¹ Cp. Gk. *βροτός* for **μροτός*.

¹² See WACKERNAGEL I, 159.

bandá-(AV.) 'crippled'; *bársva*-(VS.) 'socket'; *baškáya*-'yearling'; *báškiha*-(VS.) 'decrepit'; *bila*-'cave', *bilma*-'chip'; *bíriṭa*-'troop'(?); *bekanāṭa*-'usurer'.—3. for both reasons: *ilībisa*- and *bṛsaya*-, names of demons; *alābu*-(AV.) 'bottle gourd'.—4. Other words which if not of foreign origin, are as yet insufficiently explained: *bārjaha*-'udder'; *bastá*-'he-goat'; *básri*-'quickly'; *-bāra*-'aperture'; *bija*-'seed'; *bundá*-'arrow'; *brbád-uktha*-, an epithet of Indra; *chúbuka*-'chin'; *śabāla*-'brindled'; *sām̐ba*-, a weapon of Indra; *balāsa*-(VS. AV.), a disease; *bleška*-(K.) 'noose'.¹

46. The nasals.—There are five nasals corresponding, in regard to place of articulation, to the five classes of mutes. Each of them can only appear before a mute of its own class². Before sibilants and *h* the nasals do not appear³; before *l* only *m* is found; *ñ* does not appear finally any more than the palatal mutes.

a. The guttural nasal *ṅ* regularly appears before gutturals: e. g. *aṅká*-'hook'; *aṅkhāya*-'embrace'; *aṅga*-'limb'; *jāṅghā*-'leg'. Before other consonants or as a final, it appears only when a following *k* or *g* has been dropped, as in stems ending with *-ṅc*- or *-ṅj*- and in those compounded with *-dṛś-*; e. g. *pratyāñ*, nom. sing. of *pratyāñc*-'facing'; *yundhi* (= *yūñj-dhi*), 2. sing. impv. of *yuj*-'join'; *kī-dṛñ*, nom. sing. of *kī-dṛś-*-'of what kind?'.

b. The palatal nasal *ṇ* is found only before and after *c* or *j*, and before *ch*; e. g. *vāñcati* (AV.) 'wavers'; *yajñá*-'sacrifice'; *vāñchantu* 'let them desire'.

c. The labial nasal *m* as a rule represents IE. *m*; e. g. *māt-*-'mother', Lat. *māter*; *nāman*-'name', Lat. *nōmen*. It is by far the most common labial sound⁴, its frequency being greater than that of the four labial mutes taken together⁵. By some scholars *m* is regarded as representing an original *n* or *v* in certain instances⁶.

d. The dental nasal *n* as a rule represents IE. *n*; e. g. *ná* 'not', Lat. *-nē*; *mānas*-'mind', Gk. *μῆνός*. It is the commonest of the nasals, being more frequent than *m*, and about three times as frequent as the other three taken together⁷. The dental nasal also appears instead of dental mutes and of the labial nasal.

a. It appears in place of *d* before the nominal suffix *-na*, and of *t*, as well as *d*, before the *m* of secondary suffixes; e. g. *án-na*-'food' (*ad*-'eat'); *chin-ná*-'cut off' (*chid*-); *vidyūn-mant*-'gleaming' (*vidyūt*-'lightning'); *mīn-maya*-'earthen' (*mīd*- VS. 'earth'). This substitution is in imitation of Sandhi, as *dn tm dm* otherwise occur within words; e. g. *udnā* (from *udán*-'water'), *ātmán*-'breath', *vid-mā* 'we know'.

β. dental *n* regularly appears in place of *m*: 1. before *t*; e. g. from *yam*-'restrain': *yan-tír*- and *yan-tṛ*-'guide', *yan-trá*-'rein'; from *śram*-'exert oneself': *śrāntá*-'wearied'; 2. before suffixal *m* or *v*; e. g. from *gam*-'go': *á-gan-ma*, *gan-vahi*, *jagan-vāms*⁸; 3. when radically final, originally followed by suffixal *s* or *t*; e. g. from *gam*-'go', *á-gan*, 2. 3. sing. aor. (= *á-gam-s*, *á-gam-t*); from *yam*-'restrain', *a-yān*, 3. sing. aor. (= *a-yām-s-t*); from *dām*-'house', gen. (*pátir*) *dán*⁹

¹ Op. cit. I, 162.

² Excepting in a few instances when a mute has been dropped, as in *yundhi* = *yūñgdhi* (see a).

³ Excepting in a few instances *ñ* or *n* before the *-su* of the loc. pl.

⁴ Excluding the semivowel *v*.

⁵ Cp. WHITNEY 50 and 75.

⁶ Cp. WACKERNAGEL I, 177, note.

⁷ WHITNEY 75.

⁸ This change of *m* to *n* may be due to the influence of the cognate forms in which *m* phonetically becomes *n* when final (below 3).

⁹ On this explanation of *dán* (denied by PISCHEL, VS. 2, 307 ff.) see especially BARTHOLOMAE, IF. 8, in 'Arica' 229-249; also RICHTER, KZ. 36, 111-123, on *dām-pati*.

'of the house' (= *dam-s*). Here the change of *m* to *n* was evidently due (as in 1) to the dental *s* or *t* which originally followed¹.

47. The cerebral *n*.—This nasal, like the cerebral mutes, is an Indian innovation. It is for the most part the result of a regular phonetic development, but is also in a number of words due to Prakritic influence.

A. Besides regularly appearing before cerebral mutes, e. g. in *danḍā*- 'staff', the cerebral *n* phonetically takes the place of dental *n* after *r r s*², either immediately preceding, e. g. *nṛnām* 'of men', *vārṇa-* 'colour', *uṣṇā-* 'hot'; or when only vowels³, guttural or labial mutes⁴ or nasals, *y v* or *h*, intervene; e. g. *kṛpāna-* 'misery'; *krāmaṇa-* 'step'; *kṣōbhana-* 'exciting'. This rule is followed throughout within a word even when a *s* which it contains is produced by Sandhi⁵; thus not only *trpṇōti* (*trp-* 'be satisfied') and *grbhñāti* (*grbh-* 'seize'), but also *u suvānāḥ* (for *suvānāḥ*, IX. 107⁶). In *su-ṣumnā-* 'very gracious' (where the *s* is produced by internal Sandhi), the dental *n* remains probably owing to the influence of the simple word *sumnā-*.

a. The cerebralization of dental *n* takes place almost as regularly in verbs compounded with the prepositions *prā* 'before', *pārā* 'away', *pāri* 'round', *nir* (for *nis*) 'out'; as well as in nominal derivatives of these combinations. But the *r* does not cerebralize *n* when there is tmesis or any other preposition but *ā* intervenes⁶. The cerebralization takes place:

1. in the initial of roots; e. g. *prānak* (*naś-* 'reach'); *parāñide* (*nud-* 'thrust'); *pra-netṛ-* 'guide' (*nī-* 'lead'). But *n* remains if *r* or *kṣ* follows; hence *prānṛtyat* (AV.) from *nṛt-* 'dance', and *pāri nakṣati* 'encompasses' (*nakṣ-* 'reach'). The cerebralization is also absent, without this dissimilating cause⁷, in *abhi prā nonu-* (SV.) beside *abhi prā nonu-* 'shout towards', and in *prā-nabh-*⁸ (AV.) 'burst'.

2. medially or finally in the roots *hnu-* 'hide', *an-* 'breathe', *han-* 'strike' (though not in forms with *ghn*); thus *pāri-hñuṭā* (AV.) 'denied'; *prāñiti* 'breathes'; *nir hanyāt* (AV.), but *abhi-pra-ghnānti*.

3. in suffixal *n* the cerebralization fluctuates: it always takes place in the *n* of the 1. sing. subj., e. g. *nir gamāni*; not always in the pres. base of *hi-* 'impel'; e. g. *prā hinomi*, etc., but *pari-hinomi*⁹; never in that of *mināti* 'diminishes' or of *minōti* 'establishes'; it is also absent in *yāju ṣkannām* (X. 1813)¹⁰; but *-trṇna-* (VS.), from *trd-* 'pierce'.

b. In nominal compounds cerebralization takes place less regularly when there is *r r* or *s* in the first member, and *n* in the second:

1. an initial *n* is here nearly always cerebralized in the RV.: e. g. *dur-nāman-* 'ill-named'; *prā-ṇapāt-* 'great-grandson'; also *dur-nāśa-* (AV.) 'un-

¹ The dental *n* may stand for *l* in *carmanā-* 'tanner' (cp. *cārmāni mlātāni*): BR. According to BENFAY, it is used to fill the hiatus in declension, e. g. *kavi-n-ā*; and in the perf. red. syllable *ān-*, e. g. in *ānṛdūr*; cp. WACKERNAGEL I, 175 c, note.

² The cerebral mutes and nasal not only do not cerebralize a *n* separated from them by a vowel, but even stop the influence of a preceding *r r s*; thus in reduplication only the first *n* is cerebralized; e. g. *prā-nindāya* (*nī-* 'lead'); cp. *mañinā* inst. of *mañi-* 'pearl' (B.b.). This arises from a disinclination to pronounce cerebral mutes and nasals in successive syllables.

³ On the absence of cerebralization in *uṣṭrānām* and *rāṣṭrānām*, see above 42 a, a.

⁴ In some instances where the mute immediately precedes the *n*, the cerebralization does not take place; e. g. *vrtra-ghnē*; *kṣepnū-* 'springing'.

⁵ In one curious instance, *sām ... piṇāk* (beside *piṇaṣṭi*, from *piś-* 'crush'), the cerebral lost at the end of a syllable has transferred its cerebral character to the beginning of the syllable.

⁶ The preposition *ni* following another containing *r* is mostly cerebralized.

⁷ Cp. above 42 a, a.

⁸ Cp. *tri-nābhi-* 'three-naved', and *vrṣa-nābhi-* 'strong-naved'.

⁹ Cp. VPr. III. 87; APr. III. 88; IV. 95; TPr. XIII. 12.

¹⁰ Cp. WACKERNAGEL I, 167 b a.

attainable', *dur-nihita-* (AV.) 'ill-preserved'; but (because a *r* or *ṣ* follows) not in *nr-mṇa-* 'manhood', *niṣṭhā-* 'eminent'; *niṣṣidh-* 'gift'; *nirñij-* 'adornment'; nor (owing to the intervening *gh* and *m*) in *dīrghā-nītha-*, N., *yusmā-nīta-* 'led by you'. The cerebralization is further absent, without any preventing cause, in *akṣā-nāh-* 'tied to the axle' (beside *pari-nāh-* 'enclosure'); *tri-nākā-* 'third heaven'; *tri-nābhi-* 'three-naved', and *vīṣa-nābhi-* 'great-naved'; *pūnar-nava-* 'renewing itself' (but AV. *pūnar-nava-*); *dur-niyāntu-* 'hard to restrain'.

2. it is less frequent medially; e. g. *pūrvāhṇā-* 'forenoon'; *aparāhṇā-* (AV.) 'afternoon'; *nr-vāhaṇa-* 'conveying men'; *pra-vāhaṇa-* (VS.) 'carrying off'; *purīṣa-vāhaṇa-* (VS.) beside *purīṣa-vāhana-* (TS. K.) 'removing rubbish'; *nr-mānas-* 'kind to men', *vīṣa-manas-* 'manly-spirited', but *ṣṣi-manas-* 'of far-seeing mind'; *dru-ghanā-* 'wooden club', but *vṛtra-ghn-*, dat., 'Vṛtra-slaying'; *su-śumnā-*¹ 'very gracious'; *su-pra-pānā-* 'good drinking place'; *nr-pāna-* 'giving drink to men'; but *pari-pāna-* 'drink', *pari-pāna-* (AV.) 'protection'; *pary-uhyamāṇa-* (VS.) beside *pary-uhyamāna-* (*Vvāh-*).

c. Even in a closely connected following word cerebralization may take place after *r* or *ṣ* in the preceding one.

1. This is frequently the case with initial *n*, most usually in *nas* 'us', rarely in other monosyllables such as *nū* 'now', *nā* 'like'²; e. g. *sahó śú naḥ* (VIII. 7³²). Initial *n* occasionally appears thus in other words also; e. g. *pāri netā* . . . *viśat* (IX. 103⁴); *śṛṅga-vṛṣo napāt* (SV., *napāt*, RV.); *asthūrī nau* (VS., no RV. TS.); (*gōmad*) *ū śú nāsatyā* (VS.) *prā nāmāni* (TS.); *pūnar nayāmāsi* (AV.); *suhār naḥ* (MS.) = *suhārd naḥ*; *vār nāma* (TS. v. 6. 1³).

2. Medial *n* also occurs thus, most often in the enclitic pronoun *ena-* 'this'; e. g. *indra enam*. It occasionally appears in accented words also after final *r*: *gōr ohēna* (I. 180⁵); *nir dnasah* (AV.); *nṛbhir yemānāḥ* (SV., *yemānāḥ*, RV.); *pañibhir vīyāmānāḥ* (TS.)³. A final *n* is treated as medial and cerebralized thus in *tṛṇ imān* (MS.) and *akṣān āva* (MS.).

B. In a number of words *n* has a Prakritic origin.

a. It is due to a preceding *r* or *ṣ* which has been replaced by *a* or *i* or has disappeared through assimilation. This is indicated to be the case by the appearance beside them of cognate words containing *r* or *l* sounds: 1. in Vedic itself: thus *ānī-* 'pin of the axle'; *kānā-* 'one-eyed', beside *karnā-*⁴ 'crop-eared' (MS.); *kāna-* (AV.) 'particle': *kalā-* 'small part'; *jañjanā-bhāvan* 'glittering': *jūrñi-* 'glow' (*-jan-* probably = *jṛṇ-* from old pres. **jṛñāti*); *pūnya-* 'auspicious': *ṣṛ-* 'fill'; *phaṇ-* 'bound' (= **phṛn-*, **pharn-*) cp. *parpharat* 'may he scatter'; *dhānikā-* 'cunnus': *dhārakā-* (VS.), id.—2. in allied languages: *gaṇā-* 'crowd'; *paṇ-* (VS.) 'purchase'; *vañj-* 'merchant'⁵; *ānu-* 'minute'; *kūṇāru-* 'having a withered arm'; *pāñi-* 'hand'; *sthānū-* 'stump'⁶.

b. Owing to the predilection for cerebrals in Prakrit, which substituted *n* for *ṇ* throughout between vowels, even without the influence of neighbouring cerebrals, one or two words with such *n* seem to have made their way into Vedic: *mañi-* 'pearl' (Lat. *monile*); *amñāḥ* (MS.) 'at once': *amñāḥ* (AV.), id.⁷.

c. The exact explanation of the *n* in the following words (some of which may be of foreign origin) is uncertain: *kānva-*, N.; *kalyāṇa-* 'fair';

¹ See above 47 A (end).

² Cp. BENFEY, Göttinger Abhandlungen 20, 14.

³ *agnīr āvena* (I. 128⁵), Pp. *agnēh* | *āvena*, is probably wrong for *agnēh* | *raṇēna*. On the other hand, for *māno rūhānā* (I. 32⁸), Pp. *mānaḥ* | *rūhānāḥ*, the reading should per-

haps be *mānor ūhānā*. Cp. LANMAN, Sanskrit Reader, note on this passage.

⁴ See WACKERNAGEL I, 172 a (p. 192, mid.).

⁵ See FRÖHDE, BB. 16, 209.

⁶ Cp. WACKERNAGEL I, 172 d, note, 173, note.

⁷ On a few doubtful instances, op. cit. I, 173, note.

kāṇukā-, of doubtful meaning; *nicumpunā-*, of doubtful meaning; *ninik* 'secretly', *ninyā-*¹ 'inner'; *pañi-*, a kind of demon; *bāṇā-* 'arrow'; *vāṇā-* 'udder', 'arrow', 'music'; *vāñi-* 'music'; *vāñici-*, a kind of musical instrument; *śāṇa-* 'red'; *igana-* (SV. VS.), of doubtful meaning; *kūṇapa-* (AV.) 'corpse'; *gund-* 'division' (AV.); *cupunika-* (TS.), N.; *nicanikunā-* (TS.) and *nicunikuṇā-* (TS.), of doubtful meaning; *venū-* (AV.) 'reed'; *śānu-* (AV.) 'hemp'².

48. The semivowels. — The semivowels *y*, *r*, *l*, *v* have the peculiarity that each has a vowel corresponding to it, viz. *i* *r* *l* *u* respectively. They are called *anta(h)sthā* in the Prātiśākhya³, the term doubtless meaning 'intermediate', that is, standing midway between vowels and consonants.

a. *y* and *v* regularly represent the final *i* and *u* of diphthongs before vowels, *e* and *ai* becoming *ay* and *āy*, *o* and *au* *av* and *āv*. But while *y* and *v* are regularly written for *i* and *u* before vowels, they were often pronounced as *iy* and *uv*. This is shown by the fact that:

1. *iy* and *uv* are frequently written, beside *y* and *v*, in the inflexion of *i-* and *u-*stems. Thus from *dhi-* 'thought', there are several compounds, in some of which the stem is written with *iy* before vowels, as *itthādhīy-* 'very devout', in others with *y*, as *ādhy-* 'longing'. Similarly *jū-* 'hastening', regularly appears as *-jūv-*; but *-pū-* 'purifying', *-śū-* 'swelling', *-sū-* 'bringing forth', always as *-pū-*, *-śū-*, *-sū-*⁴. In the same way, the suffix *-ya* is often written *-iya*; e. g. *āgr-ya-* 'first', beside *āgr-ya-* (VS.); *ītv-ya-* and *ītv-ya-* 'regular'; *urv-iyā* and *urv-yā* (VS. TS.) 'widely'. This spelling is characteristic of the TS. Here *iy* is generally written where more than one consonant precede, almost invariably so in the inflexion of stems in *i* and *ī*; e. g. *indrāgnīy-ós* 'of Indra and Agni', *lakṣmīyā* 'by Lakṣmī'; very often also in the suffix *-ya*; e. g. *dśv-ya-* beside *dśv-ya-* (RV.) 'relating to horses'⁵. Similarly *uv* appears here for *v* in *sūvar-* and *sūvargā-* 'heaven', beside *svār* (RV.) and *svargā-* (RV.); in the inflexion of *tanū-* 'body', in some forms of *vāyī-* 'wind', *bāhū-* 'arm', *ūrī-* 'thigh'⁶. In the SV. and MS.⁷ there are two or three other examples of *iy* and *uv* for *y* and *v*⁸.

2. according to metrical evidence, *y* and *v* (though written as pronounced in classical Sanskrit) have a syllabic value in a large number of examples in the Vedic hymns⁹. This was recognized to be the case by the Prātiśākhya¹⁰.

3. *r* appears instead of *r* before the suffix *-ya*; e. g. in *pitr-ya-* 'paternal', from *pitṛ-* 'father'.

4. *ay* *āy* *ey* appear before the suffix *-ya*¹¹; e. g. *saha-śey-yāya*, dat., 'for lying together'. Here *yy* is always to be read as *y-iy* in the RV. (except in Book X and *dakṣāyya-* in I. 129²)¹².

¹ Perhaps from **nirṇaya-*, see BENFEY, GGA. 1858, p. 1627.

² On these words see WACKERNAGEL I, 174 b and 173 d, note.

³ RPr. I. 2; VPr. IV. 101; also Nirukta II. 2. Cp. WHITNEY on APr. I. 30.

⁴ Cp. WACKERNAGEL I, 181 a, note.

⁵ Several other examples, loc. cit.

⁶ Cp. WHITNEY on TPr. II. 25.

⁷ See WACKERNAGEL I, 181 a, note (p. 201, mid.).

⁸ On the other hand there are some isolated instances of *y* and *v* in the Vedas as compared with *iy* and *uv* in classical Sanskrit; see WACKERNAGEL I, p. 201, bottom.

⁹ In certain words and formatives *y* and *v* are regularly consonantal: in the relative *yā-*;

the present suffix *-ya*; the comp. suffix *-yas*; the gen. ending *-sya*, and the fut. suffix *-sya*; the initial *v* of suffixes; the *uv-* of the 5th class; in *dśva-* 'horse' and *tvāṣṭr-*, N. On the other hand the syllabic pronunciation is sometimes used artificially by the poets, as is apparent from the isolation of such occurrences. In some individual words the written *iy* and *uv* have to be pronounced as consonantal *y* and *v*: always in *sūvānā-*, pres. part. of *su-* 'press'; occasionally in *bhīyās-* 'fear', *hiyānā-* 'impelled'. Cp. WACKERNAGEL I, 181 b, note, bottom.

¹⁰ RPr. VIII. 22; XVII. 14.

¹¹ See GRASSMANN, Wb. 1711, columns 4 and 5.

¹² WACKERNAGEL I, 181 c 7.

That this syllabic pronunciation was not simply *i* and *u* (with hiatus), but *iy* and *uv*, is rendered probable not only by the spelling *iy uv* beside *y v*, but by the consideration that *y* and *v* are respectively the natural transition from *i* and *u* to a following dissimilar vowel.

b. In the RV. *y* and *v* are pronounced with a syllabic value under the following conditions:

1. almost invariably after a group of consonants and generally after a single consonant if preceded by a long vowel. Thus the ending *-bhyas* and the suffix *-tya* are regularly pronounced as dissyllables after a long vowel, but as monosyllables after a short vowel. Hence, too, *v* is pronounced as well as written in the forms *dauidhu-át*, *susv-ati*, *susv-āná*, *juhv-é*, *júhv-ati*¹.

2. after a single initial consonant at the beginning of a verse, or, within a verse, if the preceding syllable is heavy, in some half dozen words. Thus *tyá*- 'that', and *tvám* 'thou' are nearly always pronounced as they are written after a short vowel, but *tiyá*- and *tuwám* at the beginning of a Pāda or after a long vowel. The *y* is pronounced as *iy* in *jyā*- and *jyākā*- 'bowstring' only at the beginning of a verse or after a long vowel, in *jyāyas*- 'mightier' only after a long vowel. Finally *tva*- 'many', must generally be read as *tuva*- after a long vowel, but almost invariably *tva*- after a short vowel.

3. in the inflexion of the nouns in *ī* (nom. sing. *-ī-s*) and *ū*², where the stem has (with only six exceptions) to be pronounced with *iy* and *uv*.³

Thus the transition from *iy* and *uv* to *y* and *v* began in the RV., the traditional text writing for the *iy* and *uv* which was pronounced by the poets of that Veda, sometimes *iy* and *uv*, sometimes *y* and *v*.

49. The semivowel *y*.—This semivowel, when not derived from *i* before other vowels (48 a) within Vedic itself, is based either on IE. *ɨ* (= Gk. spiritus asper) or voiced palatal spirant (= Gk. *ζ*)⁴; e. g. *yá-s* 'who' (*ō-s*); *yaj-* 'sacrifice' (*ἄγ-ιος*); *yudh-* 'fight' (*ῥο-μίνη*); but *yáva-* 'corn' (*ῥεία*); *yas-* 'boil' (*ῥέω*); *yuj-* 'yoke' (*ῥύγ-*); *yūśán-* 'broth' (*ῥύ-μην*). It is probably due to this difference of origin that *yas-* 'boil' and *yam-* 'restrain', reduplicate with *ya-* in the perfect, but *yaj-* 'sacrifice', with *i-*.

a. This semivowel sometimes appears without etymological justification: 1. after roots in *-ā* before vowel suffixes; e. g. *dā-y-i*, 3. sing. aor. (*dā-* 'give'), *á-dhā-y-i* (*dhā-* 'put'), *á-jñā-y-i* (*jñā-* 'know'); *upa-sthā-y-am*, abs. 'approaching'; *ṛṣabha-dā-y-in-* (AV.) 'bestowing bulls'. This is probably due to the influence of roots in *-ai* (27 a), which have *ā-* before consonants, but *ay-* before vowels; e. g. *pai-* 'drink': *pā-tave*, *á-pā-y-i*, *pāy-ána-*.—2. owing to the influence of closely allied words or formations, in: *yū-y-ám* 'you' (for **yūśam*, Av. *yūšem*, cp. *yus-má-*, stem of other cases)⁵ because of *vay-ám* 'we'; *bhū-y-iṣṭha-* 'most' because of *bhū-yas-* 'more'; *bhāve-y-am*, 1. sing. opt. (for **bhāvayam*) because of *bhāves*, *bhāvet*, etc.

b. very rarely in the later Samhitās after palatals: *tiraścyè* (AV. xv. 3⁵) var. lect. for *tiraścé*, dat., 'transverse'; *śnyāptra-* (TS. 1. 2. 13³): *śnāptra-* (VS.) 'corner of the mouth'.

c. interchanging (after the manner of Prakrit) occasionally with *v*⁶ in

¹ On *vyūrnu-án*, *vy-ūrnu-ati* beside *apornu-ántas*, see WACKERNAGEL I, 182 a α, note.

² See below 375, 382 a.

³ For various explanations of this see WACKERNAGEL I. 182 a γ, note (p. 205).

⁴ See BRUGMANN, KG. I, 302.

⁵ Cp. WACKERNAGEL I, 86 c; 187, note.

⁶ In *khyā-* 'tell', *y* seems at first sight to be interchanged with the *ś* of *kīā-*, which occurs in the K. and the MS. (cp. v. SCHROEDER's ed., I, p. XLIII, 7); but the two verbs, though synonymous, have probably a different origin. Cp. WACKERNAGEL I, 188 c, note.

the Samhitās of the YV.; e. g. *atātāyīn-* (VS.) beside *atātāvin-* (TS.) 'having one's bow drawn'¹.

50. The semivowel *v*.—This sound was, at the time of the Prātiśākhya², a voiced labio-dental spirant like the English *v* or the German *w*. Within Vedic it is very frequently derived from *u*³. It seems otherwise always to be based on IE. *u*; there is no evidence that it is ever derived from an IE. spirant *v* which was not interchangeable with *u*⁴.

a. This semivowel is sometimes found interchanging with *b*⁵, with *y*⁶, and according to some scholars, with *m*⁷.

b. In two roots in which *v* is followed by *r*, an interchange of sonantal and consonantal pronunciation, together with metathesis takes place, *vr* becoming *ru*: hence from *dhvr-* 'bend' are derived both *-dhvr-t-* and *-dhri-*, *-dhri-t-*, *dhri-ti-*; from *hvr-* 'go crooked', *-hvr-t-*, *-hvr-ta-*, *-hvr-ti-* and *hru-nā-ti*, 3. sing., *hri-t-*, *-hru-ta-*. The root *rudh-* 'grow', may be a similar variation of *vrđh-* 'grow'⁸.

51. The semivowel *r*.—The liquid sound *r* must originally have been a cerebral, as is shown by its phonetic effect on a following dental *n* (47 A). By the time of the Prātiśākhya⁹, it was, however, pronounced in other phonetic positions also. Being the consonantal sound corresponding to *r* before vowels (like *y v* to *i u*), it is in that position correspondingly graded with *ār*; e. g. *ā-kr-an*, *ā-kr-ata*, beside *ā-kṛ-thās*: *ā-kar-am*, aor. of *kṛ-* 'do'; *dr-ū-*: *dār-u-* 'wood'.

a. *r* generally corresponds to *r* in the cognate languages, but not infrequently to *l* also; and where these languages agree in having *l*, the latter may in these instances be assumed to be the original sound. As old Iranian here invariably has *r*, there seems to have been a tendency to rhotacism in the Indo-Iranian period¹⁰. Words in which Vedic *r* thus represents IE. *l* are the following:

1. initially: *raks-* 'protect'; *ragh-ū-* 'swift'; *ramhate* 'speeds'; *rabh-* 'grasp'; *ramb-* 'hang down'; *rā-* 'bark'; *ric-* 'leave', *rip-* 'smear'; *rih-* 'lick'; *ruc-* 'shine', *ruj-* 'break'; *rudh-* and *ruh-* 'grow'.

2. medially: *āṅgāra-* 'coal'; *ajirā-* 'agile'; *aratni-* 'elbow'; *arh-* 'be worthy'; *iyārti* 'sets in motion'; *īr-* 'set in motion'; *ūrṇā-* 'wool'; *ūrmi-* 'wave'; *garūtmant-*, a celestial bird; *gardabhā-* 'ass'; *gārbha-* 'womb'; *cakrā-* 'wheel'; *car-* 'move'; *caramā-* 'last'; *cirā-* 'long'; *chardis-* 'protection'; *dhārū-* (AV.) 'sucking'; *paraśū-* 'axe'; *pīparti* 'fills'; *pūr-* 'fort'; *purī-* 'much'; *prath-* 'spread out'; *-pri-t-* 'swimming', *-pruta-* part. 'floating', *pravate* 'waves'; *mārdhātī* 'neglects'; *-marśana-* (AV.) 'touching'; *mūrdhān-* 'head'; *varā-* 'suitor', and various forms of *vr-* 'choose'; *vārcas-* 'light'; *śarandā-* 'protecting'; *śārman-* 'protection'; *śārkara-* 'gravel'; *śīśira-* (AV.) 'cold season'; *śri-* 'lean'; *śru-* 'hear'; *śrōṇi-* 'buttock'; *sar-* in forms of *sr-* 'run', and *sarirā-* (VS.) 'flood'; *sarplis-* 'clarified butter'; *sahāsra-* 'thousand'; *svār-* 'heaven'; *sūrya-* 'sun'; *harit-* and *hārīta-* 'yellow'; *hiranya-* 'gold'; *hrādūni-* 'hail'¹¹.

¹ Cp. BENFEY, GGA. 1852, 114 f.; WEBER, IS. 2, 28; WACKERNAGEL I, 188 c.

² See WHITNEY on APr. I. 26.

³ See above 48 a.

⁴ Cp. WACKERNAGEL I, 196; BRUGMANN, KG. I, 148 and 155.

⁵ See 45 a, 3.

⁶ 49 c. ⁷ 46 c.

⁸ For some other possible instances see WACKERNAGEL I, 18; b, note.

⁹ See WHITNEY on APr. I. 20, 28.

¹⁰ It seems as if the Vedic relation of *r* to *l* could only be accounted for by assuming a mixture of dialects; one dialect having preserved the IE. distinction of *r* and *l*; in another IE. *l* becoming *r* (the Vedic dialect); in a third *r* becoming *l* throughout (the later *Māgadhi*). See BRUGMANN, KG. I, 175, note.

¹¹ See WACKERNAGEL I, 189.