PANINI'S

EIGHT BOOKS
OF
GRAMMATICAL SUTRAS:
EDITED
WITH AN ENGLISH TRANSLATION
AND COMMENTARY
BY
WILLIAM GOONETILLEKE.
VOLUME I. PART I.

YENBAY:
PRINTED AT THE
EDUCATION SOCIETY'S PRESS, BYCulla.
1882.
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ADVERTISEMENT.

I propose to publish, by subscription, the text of the sūtras of Pāṇini and the vṛitti of the Calcutta Panḍīts, as contained in the first volume of Dr. Otto Böhtlingk’s edition of 1839, now either out of print or become exceedingly scarce, together with an English translation, and a commentary founded principally on the Mahābāṣya of Patanjali, the Bhāṣyapradīpa of Kāyaṭa, the Paribhāṣenduśekhara of Nāgojībhaṭṭa, the Kāśikā of Vāmana and the Siddhānta Kaumudī of Bhaṭṭojidikṣita.

The errors in the vṛitti will be corrected and no pains will be spared in the endeavour to present to the student of Sanskrit as pure a text as can be expected.

The work will also contain an introduction, an alphabetical list of the sūtras, and an alphabetical glossary of technical terms with references to the sūtras in which they occur.

The portion of the work now issued, consisting of the śiva-sūtras and the first five sūtras of the first chapter of the first book or lecture, will enable the reader to form some idea of the work, but a few details in explanation of its plan and arrangement may here be given.
The sūtras, vṛttis, translation and commentary are not separately printed, but appear together in the following order, viz., the sūtras printed in large Devanāgarī type, the vṛtti in smaller Devanāgarī type, the translation in "English" size type, and the commentary in Pica.

The translation is that of the vṛttis, but the equivalents of words actually occurring in the sūtras are printed in the translation in small capitals, so that, while a separate translation of a sūtra is not given, the student will find no difficulty in making it out from the translation of the vṛtti.

Vārttikas Paribhāṣās and Kārikās, when necessary, are quoted, translated and explained, and are printed in different kinds of Devanāgarī type in order to give them due prominence.

A table showing the system of transliteration which I have employed is subjoined.

No correct estimate of the length to which the work may extend can be formed at present, but it is likely that the whole may be comprised in about 1,200 to 1,500 pages demy-octavo.

The work will be issued in monthly parts of, at least, 48 pages each, twelve such parts forming a volume. The price of each part is One Rupee to subscribers and One Rupee and a Half to non-subscribers exclusive of postage. Subscribers are
expected to pay for twelve parts or one volume in advance on their receiving notice that the list of subscribers is closed and that the work is in the press.

The present part is issued with the object of ascertaining whether a sufficient number of subscribers can be found to meet the expense of publication.

I am aware that many errors and imperfections may be found in my work, but fair criticism from scholars is earnestly invited and will be thankfully received and noticed when necessary.

In order to show the difficulties now experienced in mastering the sūtras of Pāṇini and the importance of these sūtras to the student of Sanskrit, I need do no more than select the following opinions of a few from among the large number of eminent Orientalists who have borne testimony to the superior character of Pāṇini’s work:—

Westergaard—"Pāṇini, quamquam non antiquissimus grammaticorum, grammaticae tamen quasi pater est, ejusque opus omnibus, qui accuratam linguæ Sanscritæ scientiam habere cupiunt, diligenter est perscrutandum et cognoscendum."

Böhtlingk—"Das älteste grammatische Lehrbuch, welches vollständig auf uns herabgekommen ist, sind die Sūtras des Pāṇini. Alle früheren grammatischen Werke scheinen durch sein Werk allmählich verdrängt und in Vergessenheit gerathen zu sein........Pāṇini, Kātyāyana und Patanjali sind die drei heilig gesprochenen Grammatiker der Inden. Einen höhern Schiedsrichter, als diese, giebt es nicht."
Colebrooke—"The studied brevity of the Pāṇiniya Sūtras, renders them in the highest degree obscure; even with the knowledge of the key to their interpretation, the student finds them ambiguous. In the application of them when understood, he discovers many seeming contradictions; and with every exertion of practised memory, he must experience the utmost difficulty in combining rules dispersed in apparent confusion through different portions of Pāṇini's eight lectures. He wanders in an intricate maze, and the clew of the labyrinth is continually slipping from his hands."

Goldstücker—"Pāṇini's Grammar is the centre of a vast and important branch of the ancient literature. No work has struck deeper roots than his in the soil of the scientific development in India. It is the standard of accuracy in speech,—the grammatical basis of the Vedik commentaries. It is appealed to by every scientific writer whenever he meets with a linguistic difficulty."

Ballantyne—"It is a great mistake to suppose that the marvellously condensed grammar of Pāṇini (the chief of the Sanskrit grammarians) is designedly obscure. The charge of intentional obscurity might with equal reason be brought against the Binomial Theorem, which Newton assuredly never intended as an enigma."

Max Müller—"There is no form, regular or irregular, in the whole Sanskrit language, which is not provided in the grammar of Pāṇini and his commentators. It is the perfection of a merely empirical analysis of language, unsurpassed, nay even unapproached, by anything in the grammatical literature of other nations. There are but few among our very best comparative philologists who are able to understand Pāṇini. Professor Benfey, whose powers of work are truly astounding, stands almost alone in his minute knowledge of that greatest of all grammarians. Neither Bopp, nor Pott, nor Curtius, nor Corssen, ever attempted to master Pāṇini's wonderful system."
Monier Williams—"Pañini’s extraordinary work consisted of about four thousand sūtras or aphorisms, composed with the symbolic brevity of the most concise memoria technica. Each aphorism, in itself more dark and mystic than the darkest and most mystical of oracles, was pregnant with an endless progeny of interpretations and commentaries, sometimes as obscure as the original. It cannot be wondered, when all the subtlety of the Indian intellect expended itself in this direction, that the science of Sanskrit grammar should have been refined and elaborated by the Hindūs to a degree wholly unknown in the other languages of the world."

Intending subscribers are requested to fill up the accompanying form and to send it to my address without delay, in order that the manuscript may be at once sent to the Publishers.

W. GOONETILLEKE.

Kandy, Ceylon, May, 1882.
SYSTEM OF TRANSLITERATION
EMPLOYED IN THIS WORK.

| अ   | a   | क   | kh  | th  |
| आ  | ā   | ḷ   | gh  | d   |
| इ   | i   | र   | g   | dh  |
| ऐ   | ī   | ऱ  | gh  | n   |
| उ   | u   | ऊ   | ñ   | p   |
| ऊ   | ū   | च   | c   | ph  |
| ऽ   | rī  | र   | ch  | b   |
| र   | ī   | ब   | j   | bh  |
| ल   | lī  | भ   | jh  | m   |
| ल   | ī   | भ   | ñ   | y   |
| व   | e   | त   | t   | r   |
| व   | ai  | थ   | th  | l   |
| व   | o   | ढ   | d   | v   |
| व   | au  | ढ   | dh  | s   |
| व   | an  | ण   | n   | s   |
| व   | ah  | त   | t   |  |
Salutation to Pāṇini, by whom a complete grammar was composed after having learnt the arrangement of letters from the Great Īśvara.

Salutation to Pāṇini, by whom the speech of men was cleansed with the limpid water of words and the darkness originating from ignorance was dispelled and destroyed.
THE ŚIVASŪTRAS.

अ ड उण् ॥ १ ॥ ओ लक् ॥ २ ॥ ए ओढ़् ॥ ३ ॥
ऐ ओढ़् ॥ ४ ॥ ह य व रट् ॥ ५ ॥ णण् ॥ ६ ॥
अ म ड ण नम् ॥ ७ ॥ ढ भण् ॥ ८ ॥ घ घण्
९ ॥ ज ब ग ड दश् ॥ १० ॥ ख फ छ ठ य छ ठ ग ठ तब् ॥ ११ ॥ क पय् ॥ १२ ॥ श प सर् ॥ १३ ॥ हल् ॥ १४ ॥

इति शिवज्ञान्यः। भाविन्यसेनेनीन्यकाव्यस्वास्तन्त्रासस्स्मान्येः।

अ I U ṇ ; R I LI K ; E O ṇ ; A I A UC ; H A Y A VA
R A T ; L A N ; QUIT MA ṇ A ṇ A N AM ; JHA BHA ṇ N ; GHA
DHA DHA S ; J A BA GA ṇ A ḍ A S ; KHA PHA CHA ṇ A
THA CA TA TAV ; K A PAY ; Ś A ṇ A SAR ; HAL.

These fourteen groups of letters are called विषम्बुत्राणि or महिष्वराणि, from a popular belief among the Hindus that they were revealed to Pāṇini by Śiva. The words "अविशेष महिष्वरात्," in the first introductory couplet given above, contain an allusion to this circumstance. The following stanza, having reference to the manner in which they were revealed, is quoted by Tārānātha in his edition of the Siddhānta Kaumudī published in Calcutta in 1870:

नुयावसाने नटराजराजो ननाद दक्क नवम्ब्रवागारः
उद्दुङ्कायः सनकादिसद्रामेन्द्रस्य शिवसूत्रवालम् gown.
Nāgojībhaṭṭa goes the length of seriously stating that these fourteen sūtras existed from eternity, and that Pāṇini was the author of only the sūtras in his eight lectures: तेषामयत्रपश्या पाणिनिकृतव्ययमिति भावः ||

The order of the letters in the foregoing scheme differs from that adopted in the common alphabetical arrangement, which is as follows:—

अ आइ उ ऊ ए ऐ ओ औ अः एः ऊः एः ओः ऐः
क ख ग घ च छ ज झ झ ट ठ ड ढ ण त थ ध ध न
ष ष व भ म य र ल व श ष स ह

In both arrangements the vowels are placed first. In the Śivasūtras, however, the long vowels and the anuvāra and visarga are omitted, and the consonants are arranged in the following order, viz., the aspirate, the semivowels, the nasals, the aspirated soft consonants, the unaspirated soft consonants, the aspirated hard consonants, the unaspirated hard consonants, the sibilants, and the aspirate inserted a second time.

The letter अ inherent in the terms र, &c., is to be left out of view, being merely retained for the articulation of the consonants र, &c. The Kāśika makes an exception in the case of the अ of the sixth Śivasūtra, लप्प, which will be noticed hereafter.*

The object of the scheme is to devise a plan by which several letters may be designated by a single syllable called a pratyāhāra, so that the necessity for naming them severally in a sūtra may be dispensed with. The 71st sūtra of the first chapter of the first book or lecture (I. 1, 71) teaches the mode of forming these syllables, namely, that any letter as an initial may combine with a final हि. The term हि, also called अनुवच, is not defined

* See page 7.
in any sūtra of Pāṇini. From his work we only know what letters should be regarded as īts. In the grammar of Candra we find the following sūtra defining the term: अनेकविष्टविनिमयत् || "An īt is a letter added as a mark, without forming a part of that to which it is added." (See under I. 3, 2.) According to Pāṇini I. 3, 3 the last consonant in an upadeśa is an īt.* The Siddhānta Kaumudi defines the term upadeśa as follows: उपदेश आद्योचारणम || "An upadeśa is an original enunciation," that is to say, any form of expression which is not an existing word in the language, but is invented and made use of in the language of grammarians. The Śivasūtras are therefore upadeśas, and their final consonants īts. Any letter in the scheme may form a syllable with an īt which appears after it; for instance, the letter अ, which stands at the head of the scheme, may form with the first īt, अ, the syllable अन. The sūtra I. 1, 71, referred to above, does not specify the letters of which a syllable formed in this manner is the name. The corresponding sūtra in Candra's Grammar, namely, आदितिता सम्बन्ध, is a decided improvement on Pāṇini’s sūtra. The defect in the latter has been remedied by Kātyāyana, as will be seen in the notes to I. 1, 71, and we are told that such a syllable is the name of the first letter and of the letters intervening between it and the īt. The sūtra I. 3, 9, enjoins that lopa should be substituted for an īt.† Lopa

* From this statement it must not be understood that the last consonant alone of an upadeśa is an īt. There are several other īt letters which will be noticed in their proper places (see I. 3, 2-8).

† According to the definition of īt by Candra a separate sūtra providing for the elision of īts is not necessary and is not given in his work. They are left out of view as they form no part of that to which they are added.
is defined by I. 1, 60, to be disappearance, and is equivalent to what, in the phraseology of European grammarians, is termed elision. In Pāṇini's system the operation is regarded as the substitution of a blank. The letter .setImage{height:320,width:320} is therefore elided, and the actual letters denoted by, or included in, अण् are अ and उ. In like manner the letters denoted by अङ्क् are अ र उ ओ and र, and by अङ्क all the vowels, and so on.

It will be seen that the letter उ occurs twice in the scheme as an .setImage{height:320,width:320}, once in the first Śivasūtra, and again in the sixth. This gives rise to certain ambiguities; for the pratyāhāra अण् may, according as it is formed with the first or second उ, denote either the letters अ र and उ, or these three and the letters from ओ to ल, both inclusive; and likewise the pratyāhāra इण् may denote either the two letters इ and उ or all the letters from इ to ल, also, both inclusive. The following pari-bhāṣā has reference to ambiguities like these:

\textbf{व्याख्यानो विशेषपतिपतिः हि सम्ब्हारलब्धगम्।}

"The precise meaning is ascertained from interpretation, for it does not follow that because there is a doubt there is no criterion to solve it."

Nāgojībhaṭṭa, in his paribhāṣendusēkha, observes that the interpretation referred to in this paribhāṣā is that of the learned, meaning Patanjali and others. Patanjali's interpretation, founded on reasons detailed in the Mahābhāṣya, is given in the following words:

\textbf{अणुदिस्वरणं परिहाय पुरुषाण्यहल्लणयथे ण्त्ययमिति व्याख्यायाम्।}

"We shall interpret that, except in the sūtra I. 1, 69, अण् is formed with the first उ and इण् with the second."
The Kāśikā states that the अ inherent in the ल of the sixth Śivasaṭras is a nasal vowel (which in an upadeśa is an ṭ as according to I. 3, 2), and that the pratyāhāra र is formed with the र of the preceding sūtra as an initial, and this र as a final ṭ, to denote the two letters र and ल. The reasons for this view are as follows: The sūtra I. 1, 51 requires that अग, namely, अ र and ल, substituted for क्र should be followed by र. The sūtra VI. 1, 87 teaches that a guṇa letter (I. 1, 2) should be substituted for अ and a dissimilar simple vowel following it. In कुणि + क्रहि; there is an occasion for the application of this rule. The proper guṇa substitute for अ and क्र is अ (see notes to I. 1, 3), and this substitute should, according to I. 1, 51, be followed by र। कुणि + क्रहि; will therefore become कुणिक्रहि। Suppose next the case to be अ followed by ल, as in तव + लक्षारः। Here too the guṇa letter अ should take the place of अ + ल, but there is nothing in Pāṇini’s Grammar to shew that ल should follow this substituted अ, as it ought to do in accordance with usage. The object of the Kāśikā is to remedy this defect, for, if क्र in I. 1, 51 be regarded as homogeneous with ल, and र as a pratyāhāra formed in the manner already explained, then क्र would imply ल, and र would include ल, and the rule VI. 1, 87 would properly and adequately apply to the case proposed, giving the legitimate result कुणिक्रहि। This, however, is a very ingenious and extremely subtle view, and we may say that Pāṇini himself could never have intended any such pratyāhāra; for in the first place, the pratyāhāra रण, formed in the same manner as all other pratyāhāras are formed, would denote र and ल, and if Pāṇini intended to use any pratyāhāra

* See pages 8 and 9.
at all to denote these two letters, he would have used र and not र; and, in the second place, Pāṇini had occasion to speak of the two letters र and ल in VII. 2, 2, but he does not use either pratyāhāra—he names the letters severally.

Although a great number of pratyāhāras may be formed in the way described above, yet forty-one only are made use of by Pāṇini in his work, and what these are we gather from the following Kārikā:—

एक्षान्‌निर्णयं द्वारा यं पतिर्य एव कण्माः स्युः ||
न्येति विनाय चतुर्भूतं रः प्रक्षुः वालो पद्यः ||

“The five इति र च ष (of the first Śivasūtra) र and र come after one letter; ष after two letters; षण (of the sixth Śivasūtra) and ष after three; ष and ष after four; र after five; and ष and ष after six.” The forty-one pratyāhāras referred to in the Kārikā are the following:—

एृ || वृ || अृ || छृ || अृ || झृ || भृ || खृ || चृ || षण || ष || षम || षम || षम || षम || षम || षम || षम || षम || षम || षम || षम || षम ||

A forty-second pratyāhāra, ध्र is met with in a vārtti to VIII. 4, 48.

It will be noticed that the long vowels are not given in the scheme, but the sūtra I. 1, 69 teaches that the letters included in the pratyāhāra भ्र (formed with the ष of the sixth Śivasūtra) shall be, except in certain cases, the representatives not only of themselves but also of the letters homogeneous with them. Homogeneity of letters is defined by I. 1, 9 to be their having the same organ and the same effort. As vowels have three quantities (I. 2, 27), namely, ह्र, short,
containing one mātrā or prosodical instant, दीर्घ, long, containing two mātrās, and दुर्ग, prolated, containing three mātrās; and as each of these three quantities may have three accents, namely, उदात्त (I. 2, 29), high or sharp tone, अनुदात्त (I. 2, 30), low tone, and स्वरूप (I. 2, 31), a combination of the high and low tones, we get nine varieties of a vowel; and as each of these may also be nasal, the total number of variations of a short vowel is eighteen. The vowel Ṣ has no long form, and the vowels ॲ, ॲ, ओ and ओ have no short forms, and hence the number of variations of each of these five vowels is twelve. All the eighteen variations of Ṣ are homogeneous with one another, because they have the same organ, namely, the palate, and the same effort, namely, विस्तृत open, and therefore the vowel Ṣ given in the scheme would represent them all. The same may be said of the vowel Ṣ, and, in fact, of all the other vowels except अ. All the eighteen varieties of अ are guttural, but this alone would not make them homogeneous, as homogeneity of letters does not depend solely on the condition of their having the same organ, but also on the additional condition of their having the same effort. The effort of short अ is संक्षिप्त, contracted, while that of long and prolated आ is विस्तृत, open. Patanjali, the author of the Mahābāṣya, says नेष्व लेके न च वे दे बिस्तृतेण अधारी भिन्नत | कौन्त्वं | संक्षिप्त: | "Neither in the secular language nor in the Vedic is the letter अ open. What is it then? Contracted.” And again he says: नेष्व लेके न च वे दे दीर्घं बिस्तृतेती संक्षिप्त: | कौन्त्वम् | बिस्तृतेण: | "Neither in the secular language nor in the Vedic are long and prolata vowels contracted. What are they then? Open.” From this it is clear that short अ is not homogeneous with the long and prolated आ, and hence the former, which
alone is given in the scheme, would not represent the latter. In order to meet this difficulty, and to make short अ represent the long and prolated आ, Pāṇini had recourse to what may be called a grammatical fiction, which Kātyāyana, the author of the vārttikas, expresses as follows:—

अकारस्य विस्तृतीपद्वा आकारमहणण्या: ||

"The letter अ is enunciated as open in order that it may represent the letter आ." The difficulty is thus got over, and अ is made the representative of its eighteen varieties. It was found necessary to regard अ as open throughout the whole of the work, in order that the rules depending on the homogeneity supposed to exist between अ and आ, such as VI. 1, 101, might not be invalidated. But, at the close of the work, Pāṇini, in order to restore अ to its natural rights, gives the aphorism "अ अ" which is the last in his work, and is interpreted to mean, "Let short अ be held to have its organ of utterance contracted now that we have reached the end of the work in which it was necessary to regard it as being otherwise."

Although आ and ए are heterogeneous, the former being cerebral and the latter dental, yet, for reasons which will be found explained under I. 1, 9, Kātyāyana directs that they should be regarded as homogeneous. (See vārttika 5 to I. 1, 9.) Each of these vowels therefore represents thirty modifications, that is to say, the eighteen of the first and the twelve of the second.

According to the definition of the homogeneity of letters ए would be homogeneous with ए, and आ with आ, inasmuch as each of the former two is guttural and
palatal and each of the latter two guttural and labial, and the effort of all four open: but the commentators of Pāṇini assert that they are not homogeneous—an inference drawn by them from the fact that Pāṇini has given Ṛ and Şi in the scheme in a separate sūtra which he would not have done had he regarded each pair as homogeneous, seeing that a vowel implies also its homogeneous variations. Hence these four vowels should not separately be taken as representing twenty-four modifications. Bhaṭṭoji Dikṣita, the author of the Siddhānta Kaumudi, states this in the following words:

एवेतोर्दैवेदोषं न मिष्ठ: सादेवभौमं || ऐ औषषिति स्वरारम्भसा-मय्यान् ||
			
tेणैवधतुङ्छितास्ते: संज्ञा: स्वरिति नापादनीयम् ||

If a vowel given in the scheme represents its homogeneous modifications, the question arises—how could the former alone be spoken of to the exclusion of the latter? The answer to this is furnished by I. 1, 70, according to which a vowel with the anubandha ्ञ placed before or after it, would imply only itself and the homogeneous variations of its own prosodical time. Thus अञ्ज, which occurs in I. 1, 2, does not represent the long and the prolated अ; nor does इञ्ज, which occurs in I. 2, 17, represent the long and the prolated इ.

As the letters ह ष्व ब and स are included in अष्व they would represent also the letters homogeneous with them as taught by the sūtra I. 1, 69 already referred to. Patanjali says that there are no letters homogeneous with ह and ब. The letters homogeneous with the remaining three letters ष्व ब and स are their nasals, which are written thus ्ष्व ्ब ्स. The sūtra VIII. 4, 59 teaches that when anusvāra, at the end of a pada, is followed
by a letter included in the pratyāhāra ṣr, a letter homogeneous with the latter should optionally be substituted for the former. In ॠ + यत्ता, ॠ + वस्त्र; and ॠ + लोकम there are occasions for the application of this rule, and the nasals of the three letters ॠ, ॄ and ॄ are substituted respectively for the anusvāras preceding them, as in सर्न्यन्ता | सर्न्यन्तर : | यद्वलोकम | and these nasals may be doubled by VIII. 4, 46 as in सर्न्यन्ता | सर्न्यन्तर | यद्वलोकम.||

The sūtra I. 1, 69 also teaches that a letter having the ॠ shall represent the letters homogeneous with it. Thus ॠ represents the guttural class, ॠ खु घु ङु ॠ, called कर्ग; ॠ the palatal class, ॠ छु जु ङु ॠ, called चर्ग; ॠ the cerebral class ॠ टु ॠ णु ॠ, called टर्ग; ॠ the dental class, ॠ ढु ॠ ङु ॠ called तर्ग; and ॠ the labial class, ॠ पु ॠ भु ॠ, called पर्ग. Pāṇini never makes use of the terms कर्ग, &c., though it would appear from IV. 3, 63 that he knew of their existence.

We miss in the scheme the visarjanīya, jīhvāmūliya, upadhmāniya, anusvāra and yama (see under I. 1, 9). These are called अन्योगवाह्य: and the following vārttika shews that they should be included in the pratyāhāra अर.||

अन्योगवाह्यानामद्वृत्तम् ज्ञवम्.||

"The ayogavāhās should be enunciated in अर for the purpose of the cerebral छ." || Thus in the examples उर्वर, उरस्रवर and उरस्वर, the cerebral छ has been substituted for the dental छ by VIII. 4, 2, as अर includes the ayogavāhas by this vārttika.

The vowel छ is not of frequent occurrence, being met with only in the root कृष, which, however, is written
THE ŚIVASŪTRAS.

कृपा in VIII. 2, 18. This sūtra requires that ल should be substituted for the र obtained by I. 1, 51, when अ is substituted for the vowel of the root. The vowel ल should also be substituted for र as will be explained hereafter.* These substitutions are asiddha, that is, they are to be considered as if they have not taken place, in regard to the sūtras preceding VIII. 2, 18 (see VIII. 2, 1), and hence the question arises—what the necessity was for inserting ल in the scheme. The following vārttika answers this inquiry:

लक्षारीयं शेत्रीयं यदृच्छिकत्रियानुकरणस्तुत्याद्यथः।

“The vowel ल is given in the scheme for the sake of yaddrichtā words, the imitation of words incorrectly pronounced, and the prolation, &c. of this vowel.”

Yaddrichtā words are those not derived from authority or not having any meaning, as तत्तक, a name of a man. Now, when this word, which begins with ल, follows a word ending in a vowel, the sandhi changes would not take place if ल had not been inserted in the scheme, as it would not then be included in the pratyāhāra अच. Thus in मधु तत्तकपदेहि, the द of मधु would become दे by VI. 1, 77, and would give मधुत्तकपदेहि only if ल had been included in अच, because the rule VI. 1, 77 does not teach that द should be changed to दे when a vowel follows, but when अच follows. Again, if the word तत्तक be incorrectly pronounced तल्क by, for instance, a Brāhmaṇ woman, one narrating this fact would say ब्राह्मणी तत्तक हत्याह. The द of ब्राह्मणि would become दे and give, ब्राह्मणि तत्तक by VI. 1 77, only if ल be included in अच. By the expression “prolation,” &c. is meant rules relating to the prakta quantity of vowels, the doubling of a

* See page 16.
letter, and the svarita accent. Thus, if ल् be not given in the scheme, it would not be an अच्, and therefore in कुम्बक्ष the first syllable would not become pluta by VIII. 2, 86; in कुम्बक्ष the प् would not be doubled by VIII. 4, 47; and in प्रकुम्बक्ष the second syllable would not become svarita by VIII. 4, 66 (see also VI. 2, 49 and VI. 1, 158); although in regard to these three sūtras the vowel ल् is not asiddha.

The letters ए ऐ and ओ औ were called by the former grammarians सन्यत्वनायणि, sandhi or joint letters, as they are each composed of two elements, ए and ऐ of अ and ए, and ओ and औ of ओ and ओ. In ए and ओ the elements अ + ए and ओ + ओ are combined in such a way that they are not separately perceivable, just as two elements which form a chemical compound are not seen separately; whereas in ए and ओ which are compounded of the same letters, viz. ए of अ + ए, and ओ of ओ + ओ these elements are separately perceivable and heard when these diphthongs are pronounced. Hence the diphthongs ए and ओ are called मध्यद्विक्कृति, and ए and ओ समाहारविक्कृति. * When, therefore, as it sometimes becomes neces-

* Dr. Goldstücker is of opinion that ए = ए and ऐ, and ओ = ओ and औ. (See his Pāṇini, page 41.) His authority for this view would appear to be the sūtra VI. 1, 88 by which ए is required to be substituted for अ + ए, and औ for ऑ + औ || That, however, is a sandhi rule, and it does not follow that a letter taught by such a rule as a substitute for two letters is composed of these two letters; or that two letters taught as a substitute for one letter are component parts or elements of that letter. The same rule VI. 1, 88 requires ए to be substituted for अ + ए, and औ for ऑ + औ, and it might with equal reason be said that ए is compounded of अ + ए, and औ of ऑ + ओ. Again ए is substituted for ए, and ओ for ओ by VI. 1, 78 when a vowel follows, but
sary in the formation of words, it is enjoined that a short vowel should be substituted for any one of these four letters, the question arises whether we should substitute for र and श halves of these letters;* for रे the letter अ or the letter र, and for शी the letter अ or the letter र. To clear this point Pāṇini gives the rule I. 1, 48, according to which a letter included in रे is to be substituted for one included in रे whenever a short vowel is to be substituted for it.

In reference to these diphthongs the question also arises—whether they do or do not represent the simple elements of which they are composed. We find the following vārttika on this subject.—

वर्णक्रेद्वर्णप्रप्रयोगः चेतस्वभावः समानात्सरविधिमतिशिषः ||

"If by the mention of a letter its members are also included, then a prohibition should be made against a diphthong representing the members of which it is composed." Thus the rule VI. 1, 101 should not

this does not warrant the conclusion that रे = अ + र, or शी = श + श. Professor Benfey states that रे is compounded of श + र, and शी of श + श || His reasoning was, perhaps, as follows:—

रे = अ + र VI. 1, 88

but र = अ + र VI. 1, 87

∴ रे = अ + अ + र

but अ + अ = श VI. 1, 101

∴ रे = श + र

In the same manner शी = श + श ||

* The vowels र and शी are never pronounced short in Sanskrit. In Pāli they are sometimes pronounced short before Sanyogas, but there are no separate characters for the short sounds. In Sinhalese and Tamil they are pronounced both short and long, and there are separate characters to represent the short as distinguished from the long.
apply to अ+इन्द्रम् or वायु+उदरम् and ई should not be substituted for ए+इ nor उ for ओ+उ. But if a letter is prohibited from representing a member of it, then an exception must be made in the case of the letter र in certain instances referred to in the following वार्त्तिका:

अग्रहणं चेदविमिलितशविनामित्विकारग्रहणम् ||

"If a letter should not represent its members, then र should nevertheless be made to represent क्र in rules enjoining the addition of the augment नुर, the substitution of र्र and of a cerebral letter." We shall illustrate this by the following examples:—

The sūtra VII. 4, 71 teaches that नुर shall be the augment of a root containing two consonants when it follows the अ mentioned in VII. 4, 70, thus आ + अर्द्ध = आनर्द्ध. For the purposes of this rule क्र shall be considered a consonant, it being a member of र, and therefore the augment नुर is added to the root क्र, and we get आनुर्द्ध: ||

The rule VIII. 2, 18, as already stated, enjoins the substitution of र्र for the र obtained from the root क्र by I. 1, 51, as क्रप्ति स. For a similar reason the vowel इ should be substituted for the vowel क्र as in क्रप्ति: ||

According to VIII. 4, 1 the cerebral र should be substituted for the dental र when the latter follows र or र्र in the same pada as in आत्त्विकम्. Here र represents क्र and the change should take place when र follows क्र as in मात्त्विकम्.

It will be seen that the consonant र occurs twice in the scheme, once between the vowels and semivowels and again at the end of the consonants. It is given in its first place in order that it may be included in the
pratýahāras अर्, अश्, हश्, and इश्; and in its second
place in order that it may be included in the pratýahā-
as वर, रर, शर, and चर. Thus महान हि becomes महा
हि by VIII. 3, 3 and 9; अहेन becomes अर्हेन by VIII. 4,
2; देवा हसन्ति becomes देवा हसन्ति by VIII. 3, 17; देवः
हसन्ति becomes देवः हसन्ति by VI. 1, 114, लिलिहिः बेदे
lililhị becomes लिलिहिः by VIII. 3, 79; in रुदिहि and रविहि, हि has taken
the augment द्र by VII. 2, 76; the forms लिलिहिः and अहेन are obtained by I. 2, 26; in अद्याप्य lopa has been
substituted for ल by VIII. 2, 26; in अलिखित the affix निः
has been substituted for लिः, after लिः by III. 1, 45.
These forms could not be obtained from these rules if
हि had not been placed twice in the scheme in the posi-
tions it has been made to occupy.

Some objections may be stated to the position of र in
the scheme, which, as it stands, is included in the pra-
tyahāras यर and यर. As र is included in यर, a nasal
may, by VIII. 4, 45, be substituted optionally for it
when it is at the end of a pada, and is followed by a
nasal, as in the case of मधुर + नयति, and when र follows
हि preceded by a vowel, it may be optionally doubled by
VIII. 4, 46, as in the case of मधुरहि. Again, as र is
included in यर, a letter homogeneous with it may, by
VIII. 4, 59, be optionally substituted for anusvāra final
in a pada which precedes it, as in the case of कुण्डे रवेन.
Patanjāli disposes of the first and third objections by
stating that there are no letters homogeneous with र,
and the second objection by stating that हि and र being
the causes of the doubling of a यर cannot themselves be
operated upon. The Kāśikā, however, is more full in
meeting the first and third objections. That com-
mentary states that, when, for instance, हि is substituted
for क, the substitute (अद्यत) and that in the room of
which it is substituted (अदिक्यन्) have the same organ, स्थान, and the same quality, गुण. If the अदिक्यन् has nothing in common with the proposed अदिक्य either as regards स्थान or as regards गुण, or if it has something in common with it only as regards स्थान or only as regards गुण, then such substitutes are not to be taken. The cerebral nasal ढ should not therefore be substituted for ढ because, although they are both cerebral, there is nothing common to them as regards गुण.
Let the letters ā, ai, and au be called vṛiddhī; as in ṛngah, aicchikāḥ, aupagavah.

In this sūtra there are, according to some authorities, two padas, namely, vṛiddhi and adṛḍha; according to others three, vṛiddhi, ātra and ēṇu. The ēṇu of ātra has been changed to ṛ by VIII. 2, 39.

The term ātra consists of the long vowel ā and the “i” or “anubandho” ṛ attached to it. ēṇu is a pratyāhāra denoting the two letters ṛ and ēṇu. It should have been written ēṇu according to the sūtra VIII. 2, 30, which requires that a letter of the guttural class should be substituted for one of the palatal class at the end of a pada (I. 4, 14). Patanjali accounts for this anomaly by stating that ēṇu is virtually included in the
gaṇa अवस्यादि, mentioned in I. 4, 20, and that it is therefore a bha (I. 4, 18). As, however, the sūtra I. 4, 20 refers to the Veda, Patanjali, in order to show that it is nevertheless applicable here, maintains that “sūtras are like the Veda”—छन्दोग्यसूत्राणि भवति || But if वेच be regarded as a bha and not as a pada, then, there should also be no change of its final च to the corresponding soft letter च, as required by VIII. 2, 39; when, for instance, the sūtra I. 1, 2 is read immediately after the present sūtra in ekayoga. In order to meet this difficulty, Patanjali holds that वेच should then be regarded as a pada and not as a bha; and, to show that there is no inconsistency here, he quotes the following passage from the Veda, where one and the same term is considered both as a pada and as a bha in one and the same place:—सुद्धवा स परक्ता गणन || Here the final of कचु has been changed to क because this term is a pada, but the further change of क to च has not taken place because कचु is a bha. In like manner, but in the reverse order, the final of वेच is not changed to च because वेच is a bha, but the change to च does take place because it is a pada.

The letter च inserted after आ might have been used, first, for the removal of the ambiguity to be presently mentioned; or secondly, in accordance with I. 1, 70; or thirdly, for the prevention of the hiatus caused by the concurrence of आ and वेच ||

As the combination आ + वेच would give वेच by VI. 1, 88, the sūtra before us could have been written ब्रह्मच || But if it were so written, a doubt would arise whether its last term may be the pratyāhāra वेच only, or the result of the combination mentioned above; or, in other
words, whether the letters दे and भी only or these and the letter आ may be called व्यन्ध. One might therefore suppose that the letter व is inserted after आ for the purpose of removing this doubt or ambiguity. This supposition, however, is incorrect, for, in the first place, if the सूत्र were written वृद्धिं ऋ, the वर्ण्यांति

quoted under the शिवसूत्रas would have applied to it, and the learned would have interpreted the term रेच to be the result of आ + रेच; and, in the second place, we actually find an example in VI. 1,93 of आ + आन्: being written आन्: and not अान्: notwithstanding the many ambiguities that would arise from it, namely, whether आन् may mean, first, the simple letter आ; or secondly, आ + आ; or thirdly, आ + आ; or fourthly, आ + आ; or fifthly, आ + आ।

In the second place, if the व is used in accordance with I. 1, 70, it may be taken either with आ which precedes it, or with ष्ठ which follows it, or with both; for the term ना in I. 1, 70 may be regarded not only as a बाहुव्र्ही compound, meaning “that which is followed by व” ; but also as a तत्पुरुषa compound meaning “that which follows ना.” In connection with this question कात्यायनa gives the following वाृत्तिका:

अथात्त्तखा वार्त्तिकाः।।

“ The object of the insertion of व after आ is to make आ represent the letters homogeneous with it,” that is to say, the six letters उदात्तa आ, अनुदात्ता आ, वरितa आ, and their nasals. No object could, however, be gained by such a step, as the वर्ण्यांति।।
teaches that "when the same letter has different qualities, these qualities do not render them different letters." The mere mention of any one of these, without a special effort, would include the others. If it were necessary to speak of any one of them in particular as distinct from the others, a separate qualifying word would be used, such, for instance, as the word udātta in VII. 1, 75. Hence the ṛ would serve no purpose here as an anubandha to ā. Then comes the question—whether any purpose is served by it as an anubandha to ṛ. The letters ṛ and ō being included in the pratyāhāra āṇu would, according to I. 1, 69, also imply or denote their prolated or pluta forms containing three mātrās; and, when, by VI. 1, 88, the diphthong ō is substituted for both the final of kṝ and the initial of ḍṝ, when the former is followed by the latter; then, according to the paribhāṣā sūtra I. 1, 50, the pluta ṛ should be the proper substitute because this letter, as it contains three mātrās, has a greater proximity to ā + ṛ, consisting of four mātrās, than the long ṛ which has only two mātrās (see under I. 1, 3). But if the letter ō is attached to ṛ, then the pluta forms would be excluded by I. 1, 70, and therefore would not be termed vyādhi by the rule now under consideration, and hence the substitute of ā + ṛ would be the long and not the prolated ṛ. Similarly, when kṝ + ōṇa makes kṝōṇa: the ōṇa is not prolated but only long. It might perhaps be asked whether the ō should not be taken to apply to ā also, for the purpose of preventing its representing the short ō and the prolated ā; but it must be remembered that ā, not being included in the pratyāhāra āṇu, does not in point of fact represent these letters, and that it is therefore not necessary to adopt
any means to prevent their implying them. From these observations it is clear that ्र is to be taken and read with ेत्र, and not with आ।।

Now, as regards the third point, it is plain that since the ्र has been used, as shown above, for a special purpose, its object is not the prevention of the hiatus referred to. In III. 3, 57 we find ्र used for the latter purpose, and there it serves only to facilitate pronunciation.

This sūtra is not to be regarded so much as defining the technical term vriddhi, of which the literal meaning is increase or prosperity, as giving that name to the three letters आ, ए and औ। In such sūtras the name given is termed संज्ञा and that to which it is given संज्ञिन्।। Thus in this sūtra वृद्धि is the संज्ञा, and अधिक the संज्ञिन्।। In a saṇjñā rule the संज्ञिन् is generally mentioned before the संज्ञा, as in I. 1, 2, but in this sūtra the reverse order is adopted, which Patanjali explains by saying that वृद्धि is mentioned first “मद्दमत्र,” “for the sake of auspices.”

The next question to be considered is—whether the collection of the three letters आ, ए and औ, or each of them separately is termed vriddhi. The two following paribhāṣās bear on this question:—

परिष्कर्ते बावक्षपरिसमाििः।।

“What is stated (in grammar, of several things,) must be understood (to have been stated thereby) of each of them separately”; and

कविन्नमुद्रते अधि।।

“Sometimes of all them collectively.”
In the case we are considering the first paribhāṣā applies, and hence each of the three letters आ, रे and शी is termed vriddhi. Under I. 1, 7 will be found an instance of the application of the second paribhāṣā.

Another question for consideration is—whether these three letters are termed vriddhi when occurring originally in a word or form, or only when they have been substituted for other letters in accordance with any rules of Pāṇini. It is clear that in the latter cases they are so termed from the very fact of vriddhi being enjoined by these rules. But are original letters also called vriddhi? The sūtra I. 1, 73 gives the name vriddham to any word or form of which the first vowel occurring in it is a vriddhi letter. If what is referred to here be not an original letter, then the prātipāda (I. 2, 45) शाला would not be a vriddham, and therefore the affix द could not be added to it in accordance with IV. 2, 114. But the word शालीय is formed in no other way than by the addition of this affix to शाला (VII. 1, 2; VI. 4, 148). It follows, therefore, that both original and substituted letters are called vriddhi.

In the examples given in the vrītti, the letters आ, रे and शी have been substituted for आ, रे and श respectively by VII. 2, 117.

अद्वृत्तः || रे ||

अ र शी एवं गुणवत्ता: स्तु: || अविन || एविन || अविनाति ||

Let the letters आ, रे, and शी be called GUNA; as in arti, eti, okhati.

This sūtra consists of the three padas अनु, एञ्ज्ञ and गुण; || The ध is changed to ध by VIII. 2, 39, as in the
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preceding sūtra. The term अत्र consists of short अ एक is a pratyāhāra including the letters ए and ऐ. The ए is to be taken with both अ, which precedes it, and एक, which follows it, that is to say with all the three letters अ, ए and ऐ. The long and the prolated ए, and the prolated ऐ and ऐ, which would otherwise be represented by अ, ए and ऐ respectively, as they are included in the pratyāhāra अए, are thus excluded, and the sūtra only contemplates short अ and long ए and ऐ. In इद्धे, formed of इ and द्धे, by VI. 1, 87, the ए, therefore, contains two mātrás; and the ऐ in इद्धद्धम, formed of इ and द्धम by the same rule, also contains only two mātrás.

For reasons already stated under I. 1, 1 it is not the collection of the three letters अ, ए and ऐ that is called guṇa, but the term is applied to each of them separately, not only when it is a substituted letter but also when it is an original letter.

Of the examples given in the vṛitti the first, अति, is not a real word in the language, but one made use of by Pāṇini in his sūtras to signify the root अ “to go,” from which it is formed by the mere addition to it of the affix वर्त (III. 4, 78). This and the other words in the vṛitti are examples of the substitution of guṇa by VII. 3, 84 and 86.

इको गुणवृद्धिः || २ ||

स्वाभाविक यत्र गुणवृद्धि विचारिते तत्र इक इति पदनाय पद-पुनर्भवते || तत्रति || मादि ||

Wherever (the substitution of) GUṆA AND VRI-DDHĪ is directed by means of these very words,
there the term ɪkaḥ, ending in an affix of the sixth case, is supplied or understood; as tarati, he crosses; mūrṣṭi, he cleanses.

This aphorism consists of two padas ṛ降低成本和 मुण्ड्री. The former is the genitive singular of ṛ, a pratyāhāra denoting the four letters ṛ, Ṛ, ॠ and ऌ, and the latter a dvandva compound consisting of the members मु and ढ्री. It is a paribhāṣā for interpreting or limiting rules directing the substitution of guṇa and vṛiddhi; and before we can understand it, it is necessary to ascertain what the guṇa and what the vṛiddhi of each letter of the alphabet would be. Pāṇini does not tell us directly what particular guṇa and what particular vṛiddhi letter is the actual substitute for any given letter, but he gives the paribhāṣā sūtra I, 50, from which we are enabled to ascertain this for ourselves. That sūtra teaches that when a common term including several significates is given as a substitute, that one of the significates which bears the greatest resemblance or has the greatest proximity to that in the room of which it is to come, is its proper substitute. Resemblance or proximity is determined by स्थान, organs of speech, or अर्थ, meaning, or मु, quality, or माण, quantity or prosodical time. When ascertaining the proper guṇa substitute of ṛ we find that, as regards स्थान, the guṇa letter ṛ has a greater proximity to it than either अ or ओ, both ṛ and ॠ being palatal; while, as regards माण, the proximity to it of अ is greater than that of either ॠ or ो, both अ and ॠ being short while ॠ and ो are long. Here a doubt arises whether we are to substitute for ṛ the guṇa letter ॠ or the guṇa letter अ. The special insertion of the word स्थाने in the paribhāṣā sūtra I, 1,
50, notwithstanding its being valid there from the preceding sūtra I. 1, 49, shews that resemblance or proximity in relation to स्थान should have preference to that in relation to वास्तव. This doctrine is expounded in the following paribhāṣā:

"Wherever there exist several kinds of proximity, there that proximity which has reference to the organs of speech is weightier than the others." The proper guṇa substitute of त is therefore त्. Similarly the guṇa of त् is त्. The letters क्र and ल are no correspondence with any of the guṇa or vṛddhi letters as regards the organs of speech, and their substitutes must therefore be determined by quantity. The letter अ is therefore their guṇa substitute, as अ, क्र and ल are short while त् and त् are long, and this letter, when a substitute for क्र or ल, should be followed invariably by the letters त् and त् respectively (I. 1, 51), and the combinations thus obtained, namely अत् and अत्, are regarded as the guṇa substitutes of क्र and ल respectively. In like manner it is clear that अ is the guṇa of अ, अ of उ, and अ of ा. The guṇa of a palatal consonant would be त् and of a labial consonant ा. As regards any other consonant, quantity should determine its guṇa substitute. As a consonant has only half a mātrā, the letter अ which has one mātrā would be its guṇa substitute, it being nearer to it than either त् or ा, each of which has two mātrās.

From these observations it will appear that अ is the vṛddhi substitute of अ and of any consonant except a palatal and labial, अ of त्, अ and a palatal consonant; ा
of औ and a labial consonant; आर of ाँ; and आत्म of य (आर and आत्म being the long forms of the guṇa substitutes of ाँ and य).

The meaning of this sūtra is that whenever any rule of Pāṇini enjoins the substitution of guṇa or vṛiddhi by the use in such rule of these very saījūēs, and not by the use of the letters themselves which are signified by them, the term यक; is to be supplied in it, and this term being in the genitive case would, according to I. 1, 49, indicate that the substitute is to take the place of a letter denoted by the pratyāhāra ık. For example, the sūtra VII. 3, 84 requires that guṇa should be substituted for a base when a sārvadhātuka (III. 4, 113) or an ārdhadhātuka (III. 4, 114) āffix follows; and VII. 2, 1 enjoins the substitution of vṛiddhi for a base when the āffix षच (III. 1, 44) followed by the parasmaipada āffixes (I. 4, 99) follows. According to I. 1, 52 the substitute takes the place of the last letter only, but in these sūtras the term यक; is supplied or understood, and guṇa and vṛiddhi are substituted for the last letter, only when it is one included in the pratyāhāra ık and not otherwise. Thus when the sārvadhātuka āffix ष (III. 1, 68) follows the root द “to cross” the final ाँ is changed to its guṇa ा by VII. 3, 84, as नरति “he crosses;” and when the ārdhadhātuka āffix षच followed by the parasmaipada āffixes follows the root वि “to collect” the final द is changed to its vṛiddhi ध by VII. 2, 1 as अच्छीपल ॥

From the fact that यक; is specially mentioned in the sūtra it follows that the substitution of guṇa for the other letters, namely, for the vowel अ as well as the diphthongs and consonants, does not take place as in
BOOK I. CHAPTER 1. SŪTRA 3.

यात्रा where या is followed by the ārdhadhātuka affix नाम् (III. 1, 33), स्वायते where मे is followed by the sārvadhātuka affix याम्, and उच्चिता where उपम् is followed by बालम्. This restriction is pointed out by the following vārttika of Kātyāyana:—

हर्षद्रणामार्सन्यासव्यवस्थनिविष्ययम्॥

If the rule “that the last letter alone should be subjected to the guṇa change whenever that letter is an इक्”, is to be invariably followed, then difficulties would arise in the following instances:—

(a) The sūtra VII. 3, 82 requires that guṇa should be substituted for मिद्र when an affix having श्र as an इक् follows, as मेवति।

(b) The sūtra VII. 2, 114 teaches that vṛiddhi should be substituted for मुर् as माधि।

The substitution of guṇa is also taught—

(c) by VII. 3, 86 (according to one possible explanation of it) for a base ending in त्रु (VII. 3, 36), and for one having a short penultimate vowel, when a sārvadadhātuka or an ārdhadhātuka affix follows, as दृष्यति।

(d) by VII. 4, 11 for कच्छ when जिद्र (III. 2, 115) follows as अकच्छ।

(e) by VII. 4, 16 for द्रम्ग when अद्र (III. 1, 52) follows as अदर्म्ग।

(f) by VI. 4, 156 for the first part of लिम and शुद्र left after eliding the last syllable र when यहन् (V. 3, 55) follows as शोपित।

With regard to these bases it might be said that, as it is the final इक of a base that should undergo the guṇa change, and as these bases end in a consonant, there
should be no guṇa change in them at all, and that therefore the sūtras referred to would be devoid of any meaning. Now, if this objection be answered by the statement that ḫk undergoes the guṇa change whether it is final or not, then other difficulties would arise in the following instances.

The substitution of guṇa is taught—

(a) by VII. 3, 83 for a base when ज्ञृ (III. 4, 108) follows as अज्ञृः।

(b) by VII. 3, 84 for a base when a sārvadhātuka or an ārdhadhātuka affix follows, as भवति। हति।

(c) by VII. 3, 108 for a base having a short vowel when sambuddhi (II. 3, 49) follows, as अधे।

(d) by VII. 3, 109 for a base having a short vowel when अन्त (IV. 1, 2) follows, as अधयः।

(e) by VII. 3, 110 for a base having the vowel Ṛ when खः (IV. 1, 2) follows as करृः।

(f) by VII. 3, 111 for a विः (I. 4, 7) when a case affix having Ṛ as an हृ follows as अधयः।

(g) by VI. 4, 146 for a base having the vowel Ṛ when it is a bha (I. 4, 18) and is followed by a taddhita affix (IV. 1, 76) as अपनयः॥

In all these examples we have seen that guṇa has been substituted for a final ḫk, but if such a principle as the one just laid down were to be accepted, then guṇa should be substituted

(a) for the vowel of निंश when ज्ञृ follows, giving the incorrect form अननिः: instead of the correct form अननिः।

(b) for the vowel of Ḫह when ते follows giving the incorrect form एहते instead of ईहते।

(c) for the penultimate vowel of अविचित when sam-buddhi follows, giving अविचित instead of अविचित।
(d) for the penultimate vowel of अभिनव when जस् follows giving अभिनवत instead of अभिनव ।

(e) for the penultimate vowel of मुख्त when कि follows giving मुख्ति instead of मुख्ति ।

(f) for the penultimate vowel of अभिविव when के (IV. 1, 2) follows giving अभिविवत instead of अभिविवत, and

(g) for the penultimate द of मुख्त giving वन्यान instead of सीनुरत ॥

These difficulties are removed by the following explanation.

In all these sūtras the word अभिविव is valid from VI. 4, 1, and when the term दत्त: is supplied in them a second genitive becomes manifest, and then there are two alternatives, viz., the guṇa may be of the इक of the bases, or it may be of bases ending in इक.

In the first case we qualify the इक by the base; but in the second the base by the इक. In the case of दित्, दृष्ट्, दूष्ट, लूष्ट, दृव्य, दृष्ट्, किण and दृश्त the first alternative applies, but in the case of दृष्ट, साक्षात्तुक, आक्षात्तुक, दृव्य &c. the second. This is expressed in the Māhābhāṣya as follows:—मिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरमिदरমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরমিদরमিদরমিদর

Or else it can be shewn that the sūtras VII. 3, 82; VII. 2, 114; VII. 3, 86; VII. 4, 11; VII. 4, 16; and VI. 4, 156 refer not to the bases but to the vowels denoted by दत्त occurring in them. Thus the sūtra निर्देशण: (VII. 3, 82) may be translated, “Let there be guṇa of the द of दित्” ॥ The term दित् is then considered as the genitive of दित् a tātpuruṣa compound of which the separate terms are “दित्” “of दित्” and “द.”
"the vowel Ṛ" || The term पुगनल्पुष्य in VII. 3, 86 is not explained as पुगनल्पुष्य पुष्य पुष्य च "of a base ending in पुष्य and of one having a short penultimate vowel," but thus पुगनल्पुष्य पुगनल्पुष्य पुगनल्पुष्य पुगनल्पुष्य पुगनल्पुष्य पुगनल्पुष्य पुगनल्पुष्य पुगनल्पुष्य पुगनल्पुष्य पुगनल्पुष्य पुगनल्पुष्य || "of a final (īk) followed by the augment पुष्य and of a penultimate short vowel."

For the manner in which the other terms are explained see under the sūtras in which they occur.

If it is only the letters denoted by the pratyāhāra Ṛ that should undergo the guṇa and vṛddhi changes, difficulties would also arise in the following instances.

We are to substitute—

(a) the letter र for हद्र, when a case affix follows, by VII. 2, 102;
(b) the letter आ for षष्ठिन्, when त (IV. 1, 2) follows, by VII. 1, 85; and
(c) the letter उ for दिर्, also when त follows, by VII. 1, 84.

The substitutes, as already stated, should take the place of the last letters, namely म, न and र. As र is a guṇa letter and आ and उ are vṛddhi letters, it may be contended that according to the present sūtra the term Ṛ should be supplied or understood in the sūtras VII. 2, 102, VII. 1, 85, and VII. 1, 84, that when this is done the substitutes should not take the place of म, न and र respectively, but of the vowel Ṛ occurring in the bases, just as guṇa is substituted for the Ṛ and not the र of षष्ठिन् and vṛddhi is substituted for the र and not the र of मद्र. || To meet this objection Kātyāyana interposes the following vārttika:—

संज्ञाय विधाने नियम: ||
"The restriction (of the substitution) to ık is when the substitutes are enjoined by the names or saśijaśa guṇa and vṛiddhi—not where the letters themselves are named as substitutes." This would appear from the fact that the terms guṇa and vṛiddhi are expressly mentioned in the sūtra before us when they might have well been omitted inasmuch as they are valid in it from the two preceding sūtras. The term ṛṇ is therefore not supplied in VII. 2, 102, VII. 1, 85 and VII. 1, 84 or in other similar sūtras, and hence the letters ṛ, ṛṇ and ṛṛ are substituted for the finals of ṛṇम, ṛवव and ṛṛ respectively, and not for the vowel ṛ occurring in them.

We find nowhere instances of guṇa substituted for any other letters than those included in the pratyāhāra ṛṇ, but we find vṛiddhi enjoined not only for ṛṇ but also for the other vowels. There is, however, this distinction that where no mention is made of a vowel, for which vṛiddhi is to be substituted, there ṛṇ must be supplied, while, when it is to be substituted for a short ā, the term āṇ is specially mentioned, as in VII. 2, 116; and when it is to be substituted for any vowel the term ṛṇ, the genitive singular of ṛṇ, a pratyāhāra denoting all the vowels, is mentioned as in VII. 2, 115.

न धातुलोप आर्पधातुके ॥ ५ ॥

भात्ववादलोपनिमित्त आर्पधातुके पर इको ये गुणवृज्जी ग्रामवक्षे
न सङ्गतः ॥ लोलुः ॥ पोपुः ॥ मरीमृजः ॥

When an Ardhadhatuka affix, which is the cause of the elision of a part of a root, follows there shall not be guṇa and vṛiddhi of
ik which would otherwise obtain; as loluvaḥ, popuvaḥ, marimrījaḥ.

The padas in this sūtra are न धातुनि आपि आपि ॥

"धातुनि" is a bahuvrihi compound which is solved thus in the Kāśikā:—धातुनभव्यः प्राप्तः॥ तस्य जेयो यथिरापि धातुसाधुतकः पादळोपयम् ॥

The root लृृत्र may take the suffix यन्न by III. 1, 22, and the form thus obtained is itself a root according to III. 1, 32. The ārdhadhātuka affix अञ्च taught in III. 1, 134 may be added to this form. The first portion of what ends in यन्न is reduplicated according to VI. 1, 9, and guru is substituted for the vowel of the first syllable of the reduplication by VII. 4, 82. The final consonants of लृृत्र यन्न and अञ्च are its according to I. 3, 3, and are elided by I. 3, 9. The affix अञ्च causes the elision (लृृत्र) of य by II. 4, 74. By this process we obtain लेन्तु + अ ॥ There is here an occasion for the application of VII. 3, 84, which requires that guru should be substituted for the final इ of a base when a sārvadhatu or an ārdhadhātuka affix follows. According to this rule the vowel of अ should be changed to ओ before the affix अ, but as this is an ārdhadhātuka affix and has caused the elision of य, a part of the root लृृत्र, the sūtra before us prohibits the operation of VII. 3, 84. The ओ of लेय is therefore not changed to ओ, but ओ is substituted for it by VI. 4, 77. Thus लेन्तु + अ becomes लेन्तु ॥ The base प्रेतु is obtained in exactly the same way from the root पू ॥

यन्न being added to the root मृञ्ज, and अञ्च to the form so obtained, and the root being re-duplicated in the way already explained, we get the following result:—मृञ्ज + मृञ्ज + यन्न + अञ्च ॥ The ओ of the first syllable is elided
by VII. 4, 60, and the augment इक्ष्य is added to it by VII. 4, 90. In this augment the इ is an it, the purpose of which is to shew that the augment is to be added after the syllable and not before it (I. 1, 46). अच्छ as already stated causes the elision of वत्र, and the form we get at this stage is मरीमृत्यु्+ अ। There is here an occasion for the application of VII. 2, 114, which requires the vṛiddhi change of the vowel of मृत्यु् but the present rule prohibits the operation of VII. 2, 114, and the form remains unaltered.

The examples in the vṛitti are obtained by adding तु, the affix of the first case singular, to the bases लोलृ, शोभ्व and मरीमृत्यु् (VIII. 2, 66, VIII. 3, 15.)

There are some words in the formation of which it would at first sight appear that this rule has been violated. A few examples in illustration of this may be given here:

(a) When the affix तास् with the augment इत followed by ज (II. 4, 85) follows the root लृ, the substitution of गुणa for ज by VII. 3, 84, is not prevented by this rule, although तास् is an ārdhadhātuka affix and ज is elided; because ज is no part of the root ज, and even if it be considered a part, its elision is not caused by the affix तास् but by virtue of its being an it (I. 3, 3, 9.) लृ + इता-ज्र + ज बecomes therefore लास्त्रा (VI. 4, 143, I. 1, 64.)

(b) The root रिच्छ takes the ārdhadhātuka affix रिच्छ by III. 2, 75. Lopa is substituted for the ज and च of this affix by I. 3, 9, and for its ज by VI. 1, 67, and thus the whole affix disappears. According to I. 1, 62, the affix still exerts its influence, and therefore it would, as if present, cause the substitution of गुणa for the vowel of रिच्छ by VII. 3, 86. The present rule does not pre-
vent the operation of VII. 3, 86 in this case, because it only contemplates the elision of part of a root and not the elision of an affix. चित्र + चित्र therefore gives र्रः (VIII. 2, 39, VIII. 4, 56.)

(c) When the root र्रः takes द्रः, the affix द्रः coming after it may optionally take the augment द्रः by VII. 3, 94, and the द्रः may be elided by II. 4, 74. The द्रः of द्रः is an it, and shows that the augment is to precede द्रः। The form द्रः + द्रः having been thus obtained, the question arises whether the substitution of guna for द्रः required by VII. 3, 84, would be prevented by the sūtra before us. This question is answered in the negative, because although the elision of द्रः, a part of the root द्रः, has been caused by the affix द्रः, yet this affix is sāvardhātuka and not ārdhadhātuka. Hence the result we get is र्रःर्रः (VI. 1, 78.)

(d) When the affix चित्र (III. 1, 66) follows the root द्रः the nasal is optionally elided by VI. 4, 33, leaving only द्रः. The affix चित्र, as it has the anubandha द्रः, would cause the vriddhi change of the vowel द्रः of द्रः by VII. 2, 116. This vriddhi change is not prevented by the present rule, because, although चित्र is an ārdhadhātuka affix and has caused the elision of द्रः, a part of the root द्रः, yet the rule we are considering prevents the vriddhi change of द्रः and not of any other vowel. We thus get the word अमाथः (VI. 4, 104.)

(e) When the root चित्र is followed by the ārdhadhātuka affix मन्नः (मन्) its final consonant द्रः is elided by VI. 1, 66. Here the guna change of the penultimate द्रः is not prevented by the present rule because the elision of द्रः, part of the root चित्र, is not caused by the affix मन्नः but by its first letter मः। We thus get अन्नमाणः
BOOK I. CHAPTER 1. SŪTRA 5.

शिरहिः ॥ ५ ॥

गितिकारित्वाभिन्नेण इरतकं गुणपूव्यी न स्त: ॥ गितः ॥

निर्प: ॥ कित् ॥ चित: ॥ भित्र: ॥ मित्र: ॥ बिनु: ॥ मुष्टः ॥

शुद्धतः ॥

And there are not guṇa and vriddhi, indicated by the term ik, when that which would otherwise cause the change has ġ or k or n' as an it or indicatory letter; as ḥiṣṇu, in which the affix has an indicatory ġ; cītaḥ, bhinnah, in which the affixes have an indicatory k; cinutaḥ, mristaḥ, mristāt, in which the affixes have an indicatory ū.

शिरहिः is the locative singular of शिरहिं, a bahuvrihi compound, meaning “that which has an indicatory ġ or k or ū.” Its first letter श has been substituted for श according to the sandhi rule VIII. 4, 55.

An explanation of the formation of the examples given in the vṛtti will illustrate the meaning and object of the sūtra.

श इ The sūtra III. 2, 139 teaches that the affix क्षु, in which the क्ष is an assimilated श (VIII. 4, 55), comes after the root वि. This श is an it as it occurs at the beginning of the affix (I. 3, 8); and by virtue of its presence in the affix the guṇa change of the vowel of वि, which would otherwise be caused by VII. 3, 84, is prevented by the present sūtra. वि + क्षु gives therefore विर्षु: (VIII. 3, 59, VIII. 4, 41) and not विर्षु: ॥

श इ When वि, the affix of the passive participle, in which the श is an it (I. 3, 8), follows the root वि, the guṇa change of the vowel of the root is prevented by
the sūtra we are examining, and the form obtained is विन:, not विनः. 

ए When the affix of the 3rd per. du. pres., follows the root चिन, and the vikaraṇa affix शु, (III. 1, 73) in which the शु is an it (I. 3, 8), is added to the latter, शु would cause the guṇa change of the final of the base चिन, and तत्स the guṇa change of the final of the base विनु. But as शु and तत्स are regarded as having an indicatory शु (I. 2, 4) the guṇa change of these vowels is prevented by the sūtra before us. चिन + शु + तत्स gives therefore विनुः. For a similar reason when the affix तत्स is added to मृद्ध the विर्द्धि change of the vowel of this root required by VII. 2, 114 is prevented, and मृद्ध + तत्स gives मृद्ध: (VIII. 2, 36. VIII. 4, 41).

The example मृद्धत् given in the vṛtти is formed by the addition to मृद्ध of तत्, a substitute taught by VII. 1, 35 for the affixes तु and द्वि. In तत् the penultimate अ and the final ः are indicatory letters (I. 1, 2, 3) and the true affix is तत्. The विर्द्धि change of मृद्ध, already referred to, being prevented by the indicatory शु of तत् according to the present rule, we get the form मृद्धत्. (VIII. 2, 36. VIII. 4, 41.)

It is not the guṇa and विर्द्धि change of final vowels only but of penultimate short vowels also that is prevented by the rule before us. Thus when the affix शु is added to चिन the शु of this root would be changed to guṇa by VII. 3, 86, but as the affix has an indicatory शु the present sūtra prevents the guṇa change, and चिन + शु gives चिनः: (VIII. 2, 42).

It must here be remarked that when an affix beginning with a vowel and having an indicatory शु or शु follows the root मृद्ध, the विर्द्धि change of its vowel is
only optionally prevented, as, for instance, when the affix लि (अर्थः योगं tr. 1, 3) follows मुन्. This affix is regarded as having an indicatory र (I, 2, 4), and would therefore prevent the व्रत्तिव व्रत्तिव change of the vowel of मुन्. As, however, the affix begins with a vowel, it prevents the change only optionally, and we therefore get the forms परम्परान्ति and परम्परावृत्ति. This is expressed thus in the काशिका:—

\[ मुन्न विचारणी सहस्रसेविना वृद्धिर्भावात् \]

It is only the गुण and व्रत्तिव change indicated by the term इक or, as it is called, the iglakṣaṇa गुण and व्रत्तिव, that is prevented by this rule. This will appear from the following illustrations.

When the affix लि, in which र and श are its (I, 3, 3, 7), follows the root क्रम as taught in III. 1, 30 the श of the affix would cause the vowel of the root to be changed to व्रत्तिव (VII. 2, 116). As this व्रत्तिव change is not indicated by the term इक the र of the affix would not prevent it by the present rule, and we get क्रम. Again the sūtra VI. 4, 146 teaches that when a taddhita affix follows a ब्ह (I, 4, 18) ending in ध, गुण is substituted for this vowel, as, for instance, when क्रः (अर्थः VII. 1, 2) follows लिङ्ग. The र of क्रः does not prevent the गुण change of ध by the present sūtra, because this गुण change is not indicated by इक and the form obtained is लिङ्ग:—

\[ लिङ्ग िक्षमार्यमिद्यक्षमार्यः \]

When र, which represents the tense affixes, has an indicatory लिङ्ग as लिङ्ग लिङ्ग र्गुण र्गुण one would expect that its substitutes taught in III. 4, 78 should also have
this indicatory letter according to the maxim laid down in I. 1, 56, and that these substitutes should therefore prevent, by the present sūtra, the guṇa change which they would otherwise cause in terms of VII. 3, 84 and 86, as, for instance, when अम् the substitute of यम् (III. 4, 101), which is itself a substitute of वृ (III. 4, 78), follows the base तु (तु with the vikaraṇa affix तु). We find, however, Pāṇini expressly enjoining by the sūtra III. 4, 103 that यामुर् shall be the augment of the parasmaipada substitutes of लिद् and that then these substitutes shall have an indicatory र॥ This is regarded as a jñāpaka, and the inference is drawn from it that the substitutes of a र having an indicatory र are not, on that account, regarded as having this indicatory letter by I. 1, 56, so far as operations caused by anything following which has an indicatory र are concerned. This doctrine is thus laid down in the following vārttika:—

लकारस्य तिल्वादिदेवशेषु स्थानित्वावबालसूक्त्ते इति चेचा-
सुटीप्रिट्वनासिद्धम् ॥

तु अम् would therefore give अमुनवम् (VI. 4, 71. VI. 1, 78).

The reading, given above, of this sūtra is as we find it in the Kāśikā and Siddhānta Kaumudi. Pāṇini, Kātyāyana and Patanjali appear to have written the first term with only one र. The same remark applies to the sūtra VII. 2, 11, in which the second term was written by the earlier grammarians “किति” and by the later “किति.” If these two sūtras were written as they had been by Pāṇini, several incorrect forms would result from the application of the sūtra III. 2, 139 already
quoted, which teaches that the affix कन्यु comes after the roots मि, जि, स्वा and ध्रु. The क in कन्यु must be regarded as an actual क and not as an assimilated ग if the two sūtras referred to were written in the way we find them in Pāṇini. It is true that this क would, by the sūtra now before us, prevent the gama change of the vowels of फिर and ध्रु, and, by VII. 2, 11, the addition of the augment द्र to the affix after ध्रु as required by VII. 2, 35, and enable us to obtain the correct forms ब्रह्मणु and मृग्नु: but when we proceed to add the affix to स्वा, we meet with a serious difficulty. The sūtra VI. 4, 66 teaches that when an affix beginning with a consonant and having an indicatory क follows स्वा, the vowel of this root should be changed to ह ॥ स्वा + कन्यु will therefore give the incorrect form स्व्रीणु: ॥ If we endeavour to get over this difficulty by stating that क is an assimilated ग, then there would be nothing in the affix to prevent the gama change of the vowels of फिर and ध्रु and the addition of the augment द्र to the affix, according to VII. 2, 35, when it follows ध्रु; and consequently we would obtain the incorrect forms ब्रह्मणु and मृग्नु: ॥ The later grammarians found a simple expedient for removing these difficulties. They regarded the क in कन्यु as an assimilated ग and added ग to किति in the present sūtra and to किति in VII. 2, 11. The ग then, while it does not cause the change of the vowel of स्वा to ह, does prevent, by the sūtra before us, the gama change of the vowels of फिर and ध्रु, and, by VII. 2, 11, the addition of the augment द्र to the affix when it is added to ध्रु.

* The augment द्र is not added to the affix after फिर, as this root has a single vowel and is anudatta. See VII. 2, 10.

† The word मृग्नु is also met with in the Veda, but it is formed with the affix ग्रु. See iii. 2, 138.