1. Prof. K. C. Chattopadhyaya in his article 'Did Pāṇini Envisage ‘A’ as a Close (samārta) Vowel?' [Charudeva Shastri Felicitation Volume, Delhi, 1974, pp. 194–205; henceforth: Chattopadhyaya (1974)] has dealt with the question of short a in Pāṇini’s system. His conclusion is that the short a, like long ā and extralong ā3, was an open (vivṛta) sound for Pāṇini, and that Kātyāyana and Patañjali are wrong in holding that the short a was a closed (samārta) sound for him. In support of his thesis, K. C. Chattopadhyaya has adduced arguments from the text of the Aṣṭādhyāyī, Prātiṣākhya, Śikṣās and Historical Linguistics. This is a very vital point in the history of Sanskrit language and in the history of the Pāṇinian tradition, and, therefore, I plan to discuss K. C. Chattopadhyaya’s arguments in detail. With all respect for the great scholar, I beg to differ from his conclusions. I hope the following discussion will help restore the true explanation of the sound a in Pāṇini’s grammar.

2. Before proceeding to examine K. C. Chattopadhyaya’s arguments, let us clearly understand the position of the Pāṇinian tradition.¹ The tradition believes that the sound a is a closed (samārta) sound, while ā and ā3 are open (vivṛta) sounds. In this context, the terms samārta ‘closed’ and vivṛta ‘open’ are used with reference to the size of the gap between the point of articulation (sthāna) and the articulator (karaṇa), and thus they refer to two types of internal effort (abhyaṅtara-prayatna). Thus the sounds a and ā differ in their internal effort. Pāṇini defines the term savarna ‘homogeneous’ in P.1.1.9 (tulyaśya-prayaṇatnaṁ savarṇam). This rule says that two sounds are homogeneous (savarṇa) with each other, if they share the same point of articulation and internal effort. [I have independently treated problems of defining and implementing the concept of homogeneity in Pāṇinian and non-Pāṇinian grammars and the traditions of the Prātiṣākhya and Śikṣās in a forthcoming monograph.²] Since a and ā do not share the same internal effort, they cannot be called homogeneous with each other by P.1.1.9.

² Madhav Deshpande, Critical Studies in Indian Grammarians, I, Theory of Homogeneity [savarṇa], and its Historical Development, to be published soon by the Center of South and Southeast Asian Studies, University of Michigan, Ann Arbor.

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P.1.1.69 (an-udit savarnasya cāpratyayah) says that an a-N sound and a sound marked with U stands for itself and its homogeneous sounds, if it is not an affix. Though a is an a-N sound, it would not be able to stand for ā and ā3. However, Pāṇini wants a to stand for ā and ā3. For that purpose, he needs to have all these to be savarnas. In order that a and ā should be savarṇa “homogeneous”, Pāṇini pronounces a as an open sound within the sphere of his grammar. The final rule of his grammar, P.8.4.68 (a a) prescribes that open a be replaced by a closed a. This rule is asiddha “as if non-existent” for the rest of the preceding grammar, but is siddha “effective” for the expressions in the object language, the final output of Pāṇini’s grammar. Thus, within the limits of his grammar, this fictional open a is of metalinguistic significance, while the fiction ends by P.8.4.68, and there is no open a in the object language. 3

K. C. Chattopadhyaya thinks that Pāṇini himself did not have this concept of closed a in the object language. His object language had an open a which was naturally homogeneous with ā and ā3. He thinks that the procedure described above is a creation of Kātyāyana and Patañjali or of someone preceding them.

3. The starting point of K. C. Chattopadhyaya’s argument is that the rule P.8.4.68 (a a) is not a genuine part of the original Astādhyaśī, which, he thinks, ended with P.8.4.67 (nodāttat-svaritodayan a-gārgya-kāśyapa-gālava-nām). In support of his argument, Chattopadhyaya quotes Patañjali’s discussions on P.1.1.1 and P.1.3.1.4 In P.1.1.1 (vṛddhir ad-aic), the logical order of words should have been ād-aic vṛddhiḥ, like P.1.1.2 (ad-en gunah), i.e. the sounds to be given a designation should come first and then the designation. On this rule, Patañjali says that Pāṇini changed the word order so that his grammar may begin with an auspicious word. 5 Patañjali, on P.1.3.1, makes a general observation that the Sāstras should begin with an auspicious word; in the middle they should have an auspicious word, and they should end with an auspicious word. 6 With this background, Chattopadhyaya says: 7

3 Deshpande (1972), pp. 230, 233.
6 On P.1.3.1 [bhūvādayo dhātaveḥ], Patañjali says: mangalādīni maṅgala-madhyaṁ maṅgalāntāṁ sāstraṁ prathante, “The sāstras are known to begin with an auspicious word, to contain an auspicious word in the middle and to end in an auspicious word.” Mahābhāṣya, Vol. I., Sec. II., p. 111.
It is to be noted that Pāṇini has used here (in P.8.4.67) and here alone the word *udaya* in place of the term *para* or *uttara* for what comes subsequendy. The word *udaya* has been used in this sense in the *Praśākhya*. *Udaya* also means 'rise', 'prosperity', the same as *vṛddhi*. It is thus a *mahgalārthaka* word. It is with this *śūtra* containing a *mahgalārthaka* word *udaya* that Pāṇini must have concluded his work.

To explain the addition of P.8.4.68 (*a a*), he says:

The *śūtra* 'a a' (8.4.68), therefore, was added by persons who were surprised that Pāṇini had assumed in his grammar that *a* was of the same character as *ə* and *ə̄*, whereas they pronounced it as a *saṁvṛta* vowel. Pāṇini was a native of Sālātura, near Attock in north-western India. His pronunciation must have been different from that current in eastern and southern India. Kātyāyana and Pātañjali could not have had the same habit of pronunciation which Pāṇini had in the extreme north-west. They, therefore, had no difficulty in accepting as genuine *śūtra* 'a a' (8.4.68).

Chattopadhyaya thus tries to drive home the point that Pāṇini had open short *a*, but in later times, in eastern and southern India, short *a* was pronounced closed (*saṁvṛta*). Hence the rule P.8.4.68 (*a a*) was invented and inserted in the *Aṣṭādhyāyī* in post-Pāṇinian times.

4. Before we examine Chattopadhyaya's argument, it may be mentioned that a similar argument had been given by H. Sköld to prove that P.8.4.68 did not belong to the original text of the *Aṣṭādhyāyī*. He went to the extreme that he rejected the latter half of P.8.4.67. He held that the *Aṣṭādhyāyī* ended with the word *udayam*, and hence the original P.8.4.67 was thought to be only *nodātta-svaritodayam*, the other part *a-gāṛgya-kāśyapa-gālavānām* being considered to be a later addition. This view is contradicted by Sköld's famous theory of *bhāṣye na vyākhyātam*: rules which were not commented upon by Pātañjali did not belong to the original *Aṣṭādhyāyī*. However, Kātyāyana and Pātañjali have both commented upon P.8.4.68. K. Madhava Krishna Sharma has a detailed refutation of Sköld's view's. This refutation, to some extent, applies also to Chattopadhyaya's arguments.

5. Chattopadhyaya is apparently satisfied with the fact that P.8.4.67 contains the word *udayam*, but, then, the text of the *Aṣṭādhyāyī* does not end with the word *udayam*. Chattopadhyaya has not gone to the extent of suggesting that the latter half of the rule P.8.4.67, i.e. *a-gāṛgya-kāśyapa-gālavānām*, is a later addition. If Pāṇini supposedly changed the word-order in P.1.1.1 to have the word *vṛddhi* first, why did he not attempt to have the word *udayam* placed at the end of P.8.4.67? Thus, Chattopadhyaya's

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9 H. Sköld (1926), pp. 2–8.
10 *Ibid*.
argument based on the concept of *marigalánta* 'auspicious ending' does not hold good for P.8.4.67.

On the other hand, P.8.4.68 (a a) itself could be considered as an auspicious ending of the *Aśṭādhyāyī*. Nāgęśabhaṭṭa, in his *Uddyota* on P.8.4.68, has brought out the auspicious character of the sound a. He says that a stands for Viṣṇu, and Pāṇini’s rule repeats this name of Viṣṇu twice. He also refers to a passage from the *Aitareya-Āranyaka*, which says that the sound a is all the speech itself, and being manifested through stops and sibilants it becomes manifold. To this may be added a passage from the *Bhagavad-Gītā* where Kṛṣṇa says that he is the sound a of all sounds. Nandikeśvara’s commentary *Kāśikā* on the *Śiva-sūtras* also brings out the auspicious significance of the sound a. Thus P.8.4.68 has a legitimate claim to be the auspicious end of the *Aśṭādhyāyī*.

6. After establishing the legitimate claim of P.8.4.68 (a a) to be the auspicious end (*marigalánta*) of Pāṇini’s grammar, we may turn to other arguments of Chattopadhyaya. He says:17 “A difference in pronunciation in different areas is as likely as in matters of accidence and syntax. . . . Hence it is quite possible that in Pāṇini’s time a was an open vowel in north-western India.” Apart from this vague general claim of possible regional differences in pronunciation of Sanskrit, Chattopadhyaya has not adduced substantial evidence that a in north-western India was an open sound in Pāṇini’s time. In modern times, except in Bengal, the short a sound is uniformly a closed sound. Chattopadhyaya has noted this fact himself. This also does not support his case.

P.8.4.68 is not only commented upon by Patañjali, but also by Kātyāyana.

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13 *evam śutra-kāreṇāpi viṣṇu-vācakākārasya dvir uccārāṇād dvir viṣṇu-smaraṇa-rūpaṁ maṅgalam ācaritam. kim ca ‘akāro vai sarvā vāk, saśā śparśoṣmabhīr vyayamānō nānā-rūpa bhavati’ iti śruter akārasya sarva-śabda-prakṛtītāt, a iti bhṛmetti śabda-brahma-rūpasya-śravanāc ca maḥā-maṅgalārthātā, “Thus by repeating twice the sound a which denotes Viṣṇu, the author of the śūtras has performed an auspicious act in the form of twice remembering Viṣṇu. Moreover, [the utterance of the sound a] has an exceedingly auspicious purpose, since the sound a is the primal material of all the sounds on the authority of the following Vedic passage: ‘The sound a is indeed all the speech; it becomes manifold being manifested through stops and sibilants’, and also because it is learned from the Vedic scriptures such as: ‘a is brahman’ that [the sound a] is of the nature of the śabda-brahman ‘sound as the ultimate reality’.” Uddyota on *Mahābhāṣya* on P.8.4.68, Vol. III., p. 511.

14 Ref. to fn. 13. The passage akāro vai sarvā vāk etc. is from *Aitareya-Āranyaka* 2.3.6.

15 *akṣarāṇāṃ akāroḥ smṛti, Bhagavad-Gītā* 10.33.


Kātyāyana mentions objections against this rule and attempts to find solutions to these objections. It seems that the rule was held to be an integral part of Pāṇini’s grammar long before Kātyāyana. Kātyāyana’s final vārttika on the Aṣṭādhyāyī tries to justify the form of the rule as it stands, and specifically refers to the rule as belonging to Bhagavati Pāṇini. Some of the modern scholars like Vidya Niwas Misra characterize this rule as an unimportant phonetic observation. However, Kātyāyana and Patañjali realized its functional value in Pāṇini’s grammar, and there is no reason to doubt Kātyāyana’s or Patañjali’s interpretation of the rule.

7. Patañjali says that an open a is not found either in the Vedas or in the common spoken language. Chattopadhyaya characterizes this as “an uninformed boast” and remarks: “There is ample evidence about its vivṛta character in the Vedas.” However, as we shall see, Chattopadhyaya’s evidence is absolutely inconclusive. He quotes instances of a and ā freely alternating in the Rgveda, and thinks that this could not be possible if one was closed and the other open [viśvāha (3 times), viśvāhā (14 times) and viśvāhā (15 times)]. Similarly, for metrical reasons, a is sometimes lengthened into ā [araik (in the Padapātha), āraik (in the Samhitā)]. These examples cannot prove that a must be open in the Rgveda. Even if a were a closed sound, still ā is the nearest vowel to alternate with it. We have alternations like sūrya/sūriya, despite the fact that y and iy do not have the same internal effort.

Chattopadhyaya points out that the Sanskrit diphthongs contain the sound a. Then he remarks: “The mutation of e (= a-i) into ā3i or of o (= a-u) into ā3u was possible because the first element a in these diphthongs was of the same nature as ā3, i.e. vivṛta.” Many texts support that diphthongs were more open than other vowels. We can agree that the element a in these diphthongs was an open sound, though there were phonetic traditions which held that a in ai and au was saṁvṛta-karaṇa-tara “with a more closed

20 ekāśa-s-nirdeśād vā svara-bhinnānām bhagavataḥ pāṇineḥ siddham, Vārttika 4 on P.8.4.68.
21 “Nevertheless Skölöd’s observation that the last sūtra (VIII.4.68) is extraneous to the Aṣṭādhyāyī seems to be well founded, as this sūtra gives a phonetic observation that is not relevant to the analysis.” V. N. Misra (1966), p. 20.
22 naiva loke na ca vede 'kāro vivṛto 'sti, Mahābhāṣya, Vol. I., Sec. I., p. 64.
24 Ibid.
25 Ibid.
27 For instance: Saunakīyā Caturādhyāyikā (i.34) [ekāraukarayaravivṛtatamam]; Rktantra (i.3) [vivṛtataram akāraukāraukaraṇām].
articulator”. However, this cannot prove in any logical way that a as an independent sound had to be open. Patañjali accepts components of diphthongs to be *vivṛtatara* ‘more open’, and yet he declares that a as an independent sound is open neither in the Vedic nor in the spoken language. Chattopadhyaya’s arguments seem to be based on analogy and are not sound. This may be compared with the sounds r and r. Some texts considered r as being *danta-mūlīya* ‘produced at the root of the teeth’, but r and l both as being *jihvā-mūlīya* ‘produced at the root of the tongue’. Other texts consider both r and r to be *mūrdhanya* ‘cerebral’. Yet the rules which give relations between r and r are the same. Despite the difference of opinion on the point of articulation of r and r, all texts agree that n changes to n, if preceded by r, r and s. Thus it would be a mistake to claim that one could infer exact phonetic details from grammatical features of written literature. Such inferences can never be stronger than the explicit statements of ancient Indian phoneticians.

8. Chattopadhyaya discusses the *Prātiṣākhya* and *Śīkṣā* to some extent and tries to conclude that these texts generally support his theory of open (vivṛta) short a. On this point there has been great difference of opinion from the time of Weber and Whitney. Traditionally, there is a dichotomy between different texts on this point. Texts which are held to stand for closed a and open a are the *Aṣṭādhyāyī*, *Vājasaneyi-prātiṣākhya* and the *Śaunakīyā Caturādhyāyikā*, while the *Ṛgveda-prātiṣākhya* and the *Taittiriya-prātiṣākhya* do not clearly distinguish the quality of a from that of ā. Whitney comments: “But it is very doubtful whether we are to regard the silence of these two treatises upon the point in question as any evidence that they are of notably earlier date than the others, as Weber seems inclined to do: their peculiarity is much more likely to be due to a local or a scholastic difference of pronunciation.

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28 Taittiriya-prātiṣākhya (ii.27) [śaṁvṛta-karana-taram ekesām].
29 yad atrāvarṇanāṁ vivṛtatāram tad anyasmād avarṇāt. ye apāvaṇavarne vivṛtate te anyābhyām īvaraṇavarṇābhyaṁ. “The a-vowel that is in here (i.e. in a diphthong) is more open than other a-vowels. Similarly, the i-vowel and the u-vowel that are [in here] are more open than other i-vowels and u-vowels.” Mahābhāṣya, on the Śīva-sūtra: e-o-N, Vol. I., Sec. I., p. 64. See fn. 22 for Patañjali’s statement on independent a being always a closed sound.
30 rkaralkarēv atha saṣṭha uṣmā jihvā-mūlīyaḥ prathamaḥ ca vargah. Ṛgveda-prātiṣākhya, 1.8 and danta-mūlīyas tu takāra-vargah, sakāra-repha-lakārās ca, Ṛgveda-prātiṣākhya, 1.9–10.
31 jihvā-mūle h-k-r, Ṛktaṇtra, 2.4 and repha (danta-)mūle vā, Ṛktaṇtra, 2.8.
32 Whitney , *Śaunakīyā Caturādhyāyikā*, p. 32.
ation, or they may have simply disregarded as of little account, the discordance of quality between a and ā." In this remark, Whitney has hinted at many different possibilities, without coming at a definite conclusion.³³ Max Walleser has considered these alternatives and he concludes as follows: ‘Mir scheint nun nur die an zweiter Stelle gegebene Erklärung angängig zu sein, nämlich die Annahme, dass der Unterschied in der Aussprache schon in der ältesten Zeit bestanden habe, aber erst nach der Zeit der Rk. und Taitt. Pr. bemerkt worden ist, und zwar aus vier Gründen: . . .’, Walleser (1927, p. 195). I tend to agree with his general conclusion, but, unfortunately, his ‘vier Gründe’ are not very convincing. He seems to believe that no sound changes are heard of or have been observed within the ‘Literaturschicht der Prātiśākhyan’, and that the Vedic speech being a dominating ‘Kultsprache’, any organic sound changes were generally unlikely. The arguments adduced by him to prove that the Sanskrit short a was a closed sound are based on the historical relationship of the Sanskrit ā with Indo-european a, e and o. The thrust of the argument is that the Sanskrit short a is the Indo-european Schwa, which is described by linguists as an ‘unbestimmten Vokal’ or as an ‘unnul-
kommen gebildeten Vokal’ (Ibid., p. 197). For this reason it as if concealed the distinctions of the Indo-european a, e and o. I am not yet convinced of the historical validity of this argument.

9. Chattopadhyaya says: ³⁴ “The Rk Prātiśākhya uses the terms vivṛta and samāvṛta about consonants only and not about vowels.” This is not quite correct. The Rgvedaprātiśākhya says ³⁵ that the glottis could be open (vivṛta), closed (samāvṛta), or in between. If it is closed (samāvṛta), then nāda ‘resonance’ is produced. If it is open (vivṛta), then śvāsa ‘unintonated breath’ is produced. If the glottis is in between, both of these are produced. The emission of nāda ‘resonance’ is shared by vowels (svāra) and voiced (ghosavat) consonants, while śvāsa ‘unintonated breath’ is shared by unvoiced (aghosā) consonants. Thus, the description of glottis being closed (samāvṛta) applies to all the vowels. However, this is not the same as samāvṛta-prayatna ‘closure as an internal effort’, which refers to a minimal gap between the articulator and the point of articulation. The Rgveda-prātiśākhya classifies vowels, sibilants and

³³ The chronology of the Prātiśākhyanas is still not settled definitively and that makes it hard to decide this question.
³⁵ vāyuḥ prāṇah kośṭhyam anupradānam kannhasya khe vivṛte samāvṛte vāla[pa]dyate śvāsaṁ nādatāṁ vā vekṛtāyāṁ ubhayaṁ vāntaro bhavati śvāsō ghośaṁ ātareśaṁ tu nādaḥ/Rgvedaprātiśākhya, 13.1—2. The word ātareśaṁ is explained by Uvaṭa with svarānm ghośaṁ ca ‘vowels and voiced consonants’. Also see: Taittiriya-prātiśākhya 2.8.
anusvāra as being asprāṣṭa ‘without contact’, stops as being spṛṣṭa ‘with contact’ and semi-vowels as being duḥspraṣṭa “with obscured contact.”

Thus a and ā are both asprāṣṭa ‘without contact’ between the articulator and the point of articulation. However, this does not necessarily mean that there could not have been a difference in the size of the gap. Despite having a small and a big gap, both could be classified as being ‘without contact’. Thus, we can never be sure if there was any difference or not in the size of the gap. The concept of non-contact does not permit any subclassification, but the concept of a gap or openness does permit such a subclassification.

10. The Rktantra, ascribed to Śākātyāyana, shows some terminological development. It uses the terms saṃvṛta and vṛṣṭa in the context of glottal aperture. But it extends the term vṛṣṭa to the gap between the articulator and the point of articulation. It replaces the older notion of asprāṣṭa “without contact” with vṛṣṭa ‘open’. It says that all vowels and sibilants are vṛṣṭa. It also says that akāra, e/aikāra and o/aukāra are vṛṣṭatarā ‘more open’. This is a very strange statement. Literally it means that a is more open than ā. Is it possible that the term akāra is used in the sense of avarṇa, or is it a misreading for ākāra? It is hard to answer this question. The stage of the Rktantra still seems to be quite primitive. There is no differentiation in the efforts of vowels and sibilants, and openness has only two types: open and more open. It is possible that this terminological underdevelopment is responsible for not differentiating a from ā qualitatively. For this reason, I cannot accept the Rktantra statements as indicating definitive identity of the internal efforts of a and ā.

11. The Taittirīya-prātiśākhya extends both saṃvṛta and vṛṣṭa from glottal aperture to internal efforts. It distinguishes the effort of vowels from that of all the other consonants. It describes all vowels as having

36 tad-vīṣeṣaḥ karaṇam spṛṣṭam asthitāṁ, duḥspraṣṭam tu prāgghakārāc caturṇāṁ. svaraṁvāroṣmanāṁ aspraṣṭaṁ sthitam, Ṛgveda-prātiśākhya, 13.3.

37 The asprāṣṭa ‘non-contact’ classification of vowels is probably the older classification, and it is gradually seen being replaced by the more advanced categories such as vṛṣṭa ‘open’, vṛṣṭatarā ‘more open’, vṛṣṭatarāma ‘most open’ and saṃvṛta ‘closed’. This is my personal judgement. However, in the available recorded documents, the term vṛṣṭa ‘open’ appears first. What is not clear is whether it stands for glottal openness or for openness as an internal effort. For details, cf. Madhav Deshpande, ‘New Material on the Kautsa-vyākaraṇa’, appearing in the Journal of the Oriental Institute, Baroda, (1975?).

38 saṃvṛto ghoṣaṁv, vṛṣṭo ghoṣaḥ, Rktantra, 1.3.

39 vṛṣṭaṁ svaroṣmaṁ, Rktantra, 1.3.

40 vṛṣṭatarāma akāraikāraukārāṇāṁ, Rktantra, 1.3.

41 saṃvṛte kaṃte nādāḥ kriyate, vṛṣṭe śvāsah, Taittirīya-prātiśākhya, ii.4–5.
upasainhāra 'approximation' between the point of articulation and the articulator, while all other consonants have sparśana 'contact'.\(^{42}\) It says that the middle of the articulator is vivṛta 'open' in the case of sibilants, while the rest of the articulator is still with sparśana 'contact'.\(^{43}\) This is what distinguishes sibilants from the other consonants. It states that according to some phoneticians a in ai and au is saṁvṛta-karana-tara 'with a more closed articulator'.\(^{44}\) This could mean that the normal a was saṁvṛta, despite Whitney's remarks to the contrary.\(^{45}\) Chattopadhyaya considers this rule (ii.27) to be an interpolation, because the word saṁvṛta-karana-tara is used without ever defining or using elsewhere the term saṁvṛta.\(^{46}\) This is a very weak argument. This text has used many terms without defining them, and it would be catastrophic to consider all such rules as interpolations. Pāṇini has also used many technical terms without defining them; such terms are ascribed to pītuśācyas 'previous teachers' by the commentators, implying that they were well established before Pāṇini wrote his grammar. The rule (ii.12) of the Taittirīya-prātiṣākhya literally says that in the case of a-vowels (avarṇa), lips and jaws are neither too closed, nor too much apart.\(^{47}\) Chattopadhyaya quotes Whitney on this rule to show that this rule does not indicate a as a closed sound.\(^{48}\) However, contrary to Whitney's comments, all the three available commentaries on the Taittirīya-prātiṣākhya interpret the rule to mean that a is not 'too closed', and a and ā are not 'too open'.\(^{49}\) This indicates that there is a possibility of a being closed and ā being open, despite the

\(^{42}\) svarānām yatropasainhāras tat sthānam, Taittirīya-prātiṣākhya, ii.31 and anyesān tu yatra sparśanaṁ tat sthānam ibid., ii.33.

\(^{43}\) karana-madhyaṁ tu vivṛtam, Taittirīya-prātiṣākhya, ii.45.

\(^{44}\) saṁvṛta-karana-taraṁ ekesāṁ, Taittirīya-prātiṣākhya, ii.27. The previous rule (ii.26) says that there is a half-mora quantity of a in the beginning of ai and au. The rule (ii.27) says that this half mora of a is 'a more closed' sound according to some. The natural interpretation of this would be that for others this a was not 'more closed'. The real question is whether it was 'open' or 'closed'. The comparative degree in the expression saṁvṛta-karana-tara can be better justified if normal a were a 'closed' sound, contrasting with this 'more closed' occurrence.

\(^{45}\) Whitney on the Taittirīya-prātiṣākhya, ii.27, p. 65.


\(^{47}\) avarṇe nāty-upasainhṛtam osṛg-haṁu nāti-vaṣṭam, Taittirīya-prātiṣākhya, ii.12. "In forming the a-vowels, the lips and jaws must not be too nearly approximated, nor too widely separated." Whitney's translation, Taittirīya-prātiṣākhya, p. 55.


\(^{49}\) akāre nāty-upasainhṛtam, akāre ca plute ca nāti-vaṣṭam, Tribhāṣya-śāstra on the Taittirīya-prātiṣākhya, ii.12, p. 55. akāre nāty-upasainhṛtah, akāre ca plute ca nāty-vaṣṭaḥ, Māheśya's Padakramasadana-bhāṣya on the Taittirīya-prātiṣākhya, (Madras edn.), p. 19, hrava avarṇe upasāṣeṣa-bhūyaśtvaṁ, dirgha-putayoṁ tu viśeṣa-bhūyaśtvam iti. ata eva "akāraṁ oṣṭham" (ii.21) iti atidekṣyati. na tva avarṇavat iti śīkṣāyam ca smaryate — "vivṛtam ṣuṣṭanāṁ svarāṇām ca, saṁvṛtaṁ akāraśya" iti, Vaidikābhārana on the Taittirīya-prātiṣākhya [Mysore edn.], p. 73. The commentary Vaidikābhārana has brought out an important piece of evidence to show that this text does differentiate a and ā qualitatively. The rule (ii.21) says that
explicit statement that they both have approximation (upasārīhāra) between the point of articulation and the articulator. There can be different degrees of approximation.\textsuperscript{49a}

12. The Śaunakīyā Caturādhyāyīkā most clearly says that \( a \) is samvṛta ‘closed’, while \( ā \) is the most open (vivṛtā) of all sounds.\textsuperscript{50} Chattopadhyaya has accepted this fact.\textsuperscript{51} This text is identical with the Vyākaraṇa ascribed to Kautsa.\textsuperscript{52} Patanjali has quoted this text in his Mahābhāṣya.\textsuperscript{53} Patanjali’s Mahābhāṣya refers to Kautsa as a student of Pāṇini.\textsuperscript{54} If this Kautsa is the same as the author of the Śaunakīyā Caturādhyāyīkā or Kautsa-vyākaraṇa, then this concept of \( a \) being samvṛta ‘closed’ can be traced to Pāṇini’s own disciple. However, this needs more historical research. Anyway, the text clearly distinguishes \( a \) from \( ā \). I have checked the manuscripts of this text in the Bhandarkar Oriental Research Institute, Poona, and the rules in question are found in all the manuscripts.

13. The Vājasaneyi-prātiṣākhya (I.72) [savarnavac ca] is normally interpreted to mean that \( a \) is closed, and yet is to be treated like a savarna “homogeneous sound” with respect to \( ā \) which is open. This is Uvaṭa’s explanation and has been accepted by Weber and Whitney.\textsuperscript{55} Chattopadhyaya says:\textsuperscript{56} “Whitney’s reference(s) to the close character of \( a \) according to sūtra 1.72 is

when no special directions are given, the lips are in a position similar to the production of the short \( a \), i.e. akāra. The commentary says that this rule differentiates the position of the lips in producing \( a \) from the position in producing \( ā \) and \( ē \). Thus the rule specifically refers to a short \( a \), and not to \( a-vowels \), which include \( a \) and \( ē \).

\textsuperscript{49a} The notion of upasārīhṛtātara ‘more approximated’ is seen in the rules Taittirīya-prātiṣākhya ii.14, 16 and 18. Similar gradations are seen in ii.15 and 27. These are different gradations in ‘non-contact’.

\textsuperscript{50} tato ‘py ākārasya, samvṛto kāraḥ, Śaunakīyā Caturādhyāyīkā, i.35–6.


\textsuperscript{52} Katre S. L. (1938). I have myself compared the two manuscripts of the Kautsa-vyākaraṇa in the Vaidika Saṁśodhana Maṇḍala, Poona, with the manuscripts of the Śaunakīyā Caturādhyāyīkā in this collection as well as in the collection at the Bhandarkar Oriental Research Institute, Poona. These two texts are virtually identical.

\textsuperscript{53} Mahābhāṣya on P.1.1.10, Vol. I., Sec. I., p. 160.

\textsuperscript{54} upasedivān kautsah pāṇinim, Mahābhāṣya on P.3.2.108, Vol. II., p. 172.

\textsuperscript{55} atrākārasya mātrikasya samvṛtaḥ-prayatnasya itātayoḥ ca vivṛtāḥ-prayatnayor dvi mātrika-trī mātrakayoḥ saha sāvarṇyam tulyaḥ na sambhavatīt tadārthaṃ ādau ābhāsante/sāvarṇavac kāryam bhavati, sāvarṇa-dirghatvan bhavitī arthaḥ/, Uvaṭa on the Vājasaneyi-prātiṣākhya, i.72, p. 29. dirghadhutayor avarńor vivṛtāvatm/sāvarṇaḥ hravaṣvatīt bhinn-prayatnatavena dirgādā┆m samāryābāvād vacanena sāvarṇaṃ abhilāhitam/, Anantabhatta’s Bhāṣya on the Vājasaneyi-prātiṣākhya, i.72, p. 29. Also see: Whitney on the Śaunakīyā Caturādhyāyīkā, i.36, pp. 31–2; Vājasaneyi-prātiṣākhya, ed. and tr. by Albrecht Weber, Indische Studien, Band 4, Berlin, 1958. pp. 118–9.

\textsuperscript{56} Chattopadhyaya (1974), p. 201.
wrong. ... Uvāta’s reference to the sañnavat character of a and the vivrta character of other vowels is against the text and has been imported from the Vārttika and the Mahābhāṣya.” Having thus discarded the older interpretation, Chattopadhyaya proposes a new interpretation for the rule 1.72. He says:57 “Sūtras I.65 to 71 all speak about the sthāna of vowels and consonants. ‘Savarnavac ca’ must mean in this context, that savarna vowels, such as a, ā, ā3, i, ī, ī3, u, ā, ā3, have the same sthāna of utterance.” It must be pointed out that this interpretation is not correct. In the system of the Vājasaneyi-prātiśākhya we do not need a rule to that effect. The rule I.63 [hrasva-grahane dīrgha-plutau pratiyāt] says that when in the following rules a short vowel is mentioned, it also stands for long and extra-long varieties. The rule of I.64 [prathama-grahane vargam] says that in the following rules the first of the stop-series stands for the series. Thus a rule like I.66 [icasēyās tālau] literally says: “the sounds i, c, ś, e and y are produced in the palate.” By the rule I.63, i stands for ī and ī3 also. Similarly, by I.64, e stands for c-varga. Thus I.72 need not say what Chattopadhyaya makes it say. Actually, Uvāta’s explanation is quite sound. The sound a continues from I.71 [ahavisarfan/īh kanthe] into I.72 [savarṇavac ca]. By I.63, a also stands for ā and ā3. Thus the rule naturally means: “The sounds a, ā and ā3 are also savarnavat ‘treated like savarna’.” This is a legitimate interpretation and implies that these sounds are not savarnas by the regular definition of I.43 [samāna-sthāna- karanāśya-prayatnah savarnah], which requires sounds to have the same point of articulation, the articulator and the internal effort. By I.71, a, ā and ā3 have kantha ‘throat’ as their point of articulation. The rule I.84 [kanthā madhyena] says that throatal sounds have hanumadhyaa ‘middle of the jaws’ as their articulator. Thus the only possible difference between a and ā is that of āśya-prayatna ‘internal effort’. Thus Uvāta’s explanation of the rule seems to be quite natural.

14. Chattopadhyaya quotes the versified Pāṇiniya-śikṣā to support his thesis of open a.58 The verse 21 says that vowels and sibilants are vivrta ‘open’, e and o are more open, and aī and au are most open.59 However, he ignores the verse 20ab: saṁvṛtam māṭrikam jñeyam, vivṛtam tu dvi-māṭrikam. This line is found only in the Rgveda version of the Pāṇiniya-śikṣā, and has not been explained by any of the commentaries.60 However, Chattopadhyaya quotes

57 Ibid.
59 saṁvarānām usmanām caiva vivṛtam karaṇām smṛtam, Pāṇiniya-śikṣā, 21ab, Śikṣā- saṅgraha, p 380.
60 Manmohan Ghosh (1938), p. 41. He translates this line as: “A saṁvṛta (close) sound is one māṭrā long, and a vivṛta (open) sound is two māṭrās long.” Ibid., p. 64. This is a
this line and yet does not seem to realize its significance.\(^{61}\) It can only refer to a closed \(a\) which is of one mora, and to an open \(ā\) which has two moras. The Ādiśā-sūtras ascribed to Āpiśāli explicitly refer to closed \(a\).\(^{62}\) The long and the short versions of the Pāniniya-Ādiśā-sūtras also refer to closed \(a\).\(^{63}\) Chattopadhyaya quotes the Cāndravarna-sūtras to show that there is no closed \(a\).\(^{64}\) This is a misrepresentation of these sūtras. Candragomin clearly refers to samvṛtatva 'closedness' as an internal effort.\(^{65}\) Chattopadhyaya himself quotes this rule.\(^{66}\) However, the edition of these sūtras used by Chattopadhyaya does not have a rule for stating that \(a\) is a closed sound. He uses the edition by K. C. Chatterji [an appendix to his two-volume edition of the Cāndravyākaraṇa, Deccan College, Poona, 1953, 1961]. It would be strange to have samvṛtta on the list of internal efforts, and not have any sound possessing it. I have checked three other editions of these sūtras, and all of them have the rule samvṛtatvam akārasya "the internal effort of \(a\) is samvṛtatva 'closedness'".\(^{67}\) Many other Ādiśās and grammatical traditions accept \(a\) as a closed sound.\(^{68}\)

15. The notion of an open \(a\) gained prominence among some of the Jaina grammarians. Among them, Sākaṭāyana alone speaks of \(a\) being a closed sound \(^{69}\) Hemacandra holds that \(a\) is an open sound, and says that others, i.e. the Pāniniyas, consider it to be a closed sound.\(^{70}\) Hemacandra's main source is the Śīkṣa of Āpiśāli, and it is not clear why he differed from Āpiśāli on this point. In the rules of the Jainendra-vyākaraṇa there is no indication of \(a\)

very neutral translation and does not clarify anything. If the terms samvṛta and vivṛta were to refer to glottal aperture, then this distinction of short and long cannot apply to this classification. This line has to refer to a closed \(a\) and an open \(ā\).


\(^{62}\) samvṛto kārah, Āpiśāli-śīkṣā-sūtra 11, antah-prat∂t-prakaraṇam, Śīkṣā-sūtrāṇi, p. 4.

\(^{63}\) samvṛtta tv akārah, Vṛddhā-prātāḥ of the Pāniniya-śīkṣā-sūtras, sūtra 12 in the antah-prat∂t-prakaraṇa, Śīkṣā-sūtrāṇi, p. 12. The same sūtra is found in the Laghu-pātha of the Pāniniya-śīkṣā-sūtras, Ibid., p. 21.


\(^{65}\) tarābhyaṁtaṁ; samvṛtatvam vivṛtatvam sprśatavam āsat-sprśatavam ca, Cāndravarna-sūtrāṇi, Śīkṣā-sūtrāṇi, p. 25.


\(^{67}\) Candragomin’s Varna-sūtras, an appendix to the Cāndravyākaraṇa, ed by Bechardas J. Doshi, Rajasthāna Purātana Grantha-māla, No. 39, 1967, p. 81.

\(^{68}\) Cāndrávarnasūtras, Śīkṣāsūtrāṇi, p. 25.

\(^{69}\) Cāndrávarnasūtras, appendix to the Pāniniyaśīkṣā, Manmohan Ghosh (1938), p. 45.

\(^{70}\) akārah samvṛto ity atare vivṛtāḥ, svārāḥ, Yajñavalkya-śīkṣā, 209ab, Śīkṣā-samgraha, p. 32; akārah samvṛto śīvṛtāḥ cētare svarāḥ, Varna-ratna-pradīpika-śīkṣā of Amareśa, 40ab, Śīkṣā-samgraha, p. 120. samvṛtatvam akārasya, Sarvasamttā-śīkṣā, 181a, Mss No: 383, 1833–84, Bhandarkar Oriental Research Institute, Poona, samvṛttaṁ cetv akārasya, Saṅgīrīya-śīkṣā, the Journal of Vedic Studies, Vol. 2., No. 2., August 1935, p. 3.

\(^{71}\) samvṛtatvam akārasyeti, Amoghavṛtti on the Śākaṭāyana-vyākaraṇa, 1.1.6, p. 3.

\(^{72}\) akārah samvṛto ity anye, Brhad-vṛtti on Hemaśabādanāśaana, 1.1.17, p. 4.
being an open sound. But Abhayanandin, the author of the *Mahāvṛttī*, holds
that a is an open sound, and criticizes Pāṇini for holding that a was open only
in grammar, while it was a closed sound in the real usage.\(^1\) Malayagiri also
accepts a as an open sound.\(^2\) None of the other grammars accept this view.

16. Chattopadhyaya believes that the closed a came to be used in Sanskrit
in post-Pāṇinian times. He says: \(^3\) "In view of these facts, it appears very
likely that in Pāṇini’s bhāṣā a differed from ā only in mātrā and was fully its
savarna and that a became a saṃvṛta vowel later or in the eastern and southern
parts of the country under the influence of Primitive Dravidian unaffected by
Sanskrit scholasticism.” He considers that the cerebral sounds in Sanskrit
show influence of Dravidian on ancient Sanskrit. There is little disagreement
on this point. But nobody has ever claimed that the closed a in Sanskrit is
due to Dravidian influence. As a new suggestion of Chattopadhyaya this is
certainly worth exploring. However, this argument cannot be used to prove
that a in Pāṇini’s time was open and it became closed later due to the
Dravidian influence. The cerebral sounds and Ĩ, which are ascribed to
Dravidian influence, appear already in the *Rgveda*, the oldest compositions in
Indo-Aryan. If we want to ascribe closed a to Dravidian sources, there is no
reason why it should not be coeval with cerebral sounds. By this line of
argument, we may have to push back the appearance of closed a to Rgvedic
times. This certainly goes against Chattopadhyaya’s thesis.

17. In conclusion, we may say that there is no evidence to show that the
traditional interpretation of Pāṇini’s system concerning phonetics of a is
wrong. On the other hand, there is overwhelming evidence to the contrary.
Chattopadhyaya thinks that a was originally an open sound, which later
became a closed sound. The evidence discussed above shows that it is more
probable that a has been a closed sound from early times, and that it became
an open sound only in a province like Bengal, and in some of the Jaina

\(^1\) *vivṛta-karanaḥ svarāḥ, ... anye saṁvṛtam akāram icchanti loke. śāstra-vyāvahāre tu
vivṛtam etac cāyuktam. loka-sāstrayor uccāraṇam praty aviseṣāt., Jainendra-mahā-vṛttī*
[on the *Jainendra-vyākaraṇa*, 1.1.2], p. 2.

\(^2\) Malayagiri’s *Sabdāṇuvāsana*, with the autocommentary, p. 5.

\(^3\) Chattopadhyaya (1974), p. 204. Contrast Chattopadhyaya’s overall assessment with
the following remark of Jules Bloch: “For example, even the grammarians have noted
that a was more closed than ā and this is confirmed in several ways, particularly by the
oppositions of timbre, which nowadays replace the ancient oppositions of quality, e.g.
Bengali ā, o opposed to a (written ā), European Romany e opposed to a.” *Indo-Aryan,
from the Vedas to Modern Times*, [tr. from the original French by Alfred Master], Paris,
1956, p. 34. If actually the closed a is due to Dravidian influence, it can be pushed back
to the shift from Indo-Iranian to Indo-Aryan. The existence of Brahui and Elamite in
the Iranian regions and other similar facts may lead us to believe that the migrating Aryans
might have come into contact with Dravidians even before they entered India proper.
traditions. We must be thankful to Chattopadhyaya for his novel suggestion that this closed a may be due to Dravidian influence on old Sanskrit. This certainly needs further exploration in the ancient linguistic history of Sanskrit, Iranian and Dravidian, and must be accepted at this stage only as a hypothesis.

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**BIBLIOGRAPHY**

*Original Sources:*


_Hema-sābānusādana_, by Hemacandra, _Hemacandra-granthābdhau trīyam grantharatnam_, ed. by Chandra Sagara Suri, Ujjain, _Vikrama Sanvīg 2007_.


_Rktantra_, by Śaṅkāyana, ed. by Surya Kanta, Lahore, 1933, reprinted from Delhi, 1970.

_Sabānusādana_, by Malayagiri, ed. by Bechardas Doshi, _Lalbhai Dalpatbhai Series No. 13_, Ahmedabad, 1967.


_Sīkṣā-saṃgraha_, _A Collection of Various Sīkṣā-texts_, _Banaras Sanskrit Series_, Banaras, 1893.

_Sīkṣā-sūtrāṇi_, by Āpiśāli, Pāṇini and Candragomin, ed. by Yudhishthir Mimamsak, Ajmer, _Sāṃjñā 2024_.

_Taittirīya-prātīṣṭākhya_, with the comm. _Tribhāṣyaratna_, ed. and tr. with Notes, W. D. Whitney, New Haven, 1868. [All page-references are to this edition, unless otherwise specified.]


_Taittirīya-prātīṣṭākhya_, with Māhīṣeya’s _Padakramasadanabhāṣya_, _Madras University Sanskrit Series_, No. 1., ed. by V. Venkatarama Sharma, Madras, 1930.

_Vaijāsāpyayā-prātīṣṭākhya_, ed. and tr. into German, by Albrecht Weber, _Indische Studien_, Band 4, Berlin, 1858.

_Vaijāsāpyayā-prātīṣṭākhya_, with the commentaries by Uvāṣa and Anantābhāṣa, _Madras University Sanskrit Series_, No. 5, ed. by V. Venkatarama Sharma, Madras, 1934. [All page-references are to this edition, unless otherwise specified.]

*Secondary Sources:*


GHOSH, Manmohan (1938), Pāṇinīya Śīksā, critically edited in all its five recensions with an Introduction, Translation and Notes, University of Calcutta, 1938.


SHARMA, K. M. K. (1968), Pāṇini, Kāryāyana and Patañjali, Delhi, 1968.

SKÖLD, Hannes (1926), 'Papers on Pāṇini, and Indian Grammar in General', Lunds Universitets Årsskrift, N.F.Avd.1., Bd.21., Nr.8., Lund, 1926.