Critical Studies in Indian Grammarians I

THE THEORY OF HOMOGENEITY (SĀVARṆYA)

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CRITICAL STUDIES IN

INDIAN GRAMMARIANS I:

THE THEORY OF HOMOGENEITY
[SĀVARṆYA]

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To my Gurus,

eastern and western

CONTENTS

There are few problems indeed
connected with Pāṇini that have
been solved as yet in such a way
as to make fresh investigations
or additional support superfluous.

PAUL THIEME

PREFACE

For the last few years, I have been interested in the
concept of homogeneity (sāvarṇya) in the Pāṇinian and non-
Pāṇinian traditions of Sanskrit grammar. In 1972, I published
"Pāṇinian Procedure of Taparakaraṇa: A Historical Investi-
gation," in Zeitschrift für vergleichende Sprachforschung,
Band 86. In this article, I had touched upon some aspects
of the notion of homogeneity, but that was not the focus of
the article. Afterwards, I continued my researches in the
evolution of this notion in Pāṇinian and non-Pāṇinian traditions
of Indian grammar. This has given me an opportunity to go
through each text carefully, and see how the notion of homo-
geneity is defined and implemented in different ways. I have
tried to be historical, not in the sense of arriving at a definite
chronology of various texts, but in the sense of attempting
to find the most natural interpretation of the texts as far as
possible. After having studied different systems individually,
I have tried to present the possible evolution of this concept.

To some of the readers it may appear that I could
have presented this material in a more condensed form.
However, after having taught Pāṇini in the West for some
years, I have realized the need for being more explanatory.
The traditional Indian pundits remember the whole rule,
if only the first word is mentioned. That is, however, not
the case in the West. Except for a few really good scholars,
reading a work on grammar is still very difficult for most
Westerners. The arguments are involved. The traditional
writers take many things for granted. In order to make such
texts intelligible to non-traditional readers, it is very necessary
to provide the background material with as much clarity as
possible. I have tried my writing on my advanced graduate
students, and have attempted to find out exactly what kind of
"explanation" they really need, in order to understand the
arguments clearly. Coming from India, and having studied
grammar traditionally, I used to take too much for granted.
But thanks to my Western students, I have had the opportunity

xi

to come down to the earth, and discuss many points in detail. Therefore, I have striven to make my exposition as "readable" as possible, and have purposefully refrained from "unreadable condensation." I hope it serves its purpose.

I thank Mr. Jame Bare with whom I have discussed most of the material presented here. Having a student like him was certainly more than pleasure to me. He often raised more questions than I could find answers for. It may be mentioned that his Ph. D. dissertation "Phonetics and Phonology in Pāṇini," just submitted to the Department of Linguistics, the University of Michigan, is, in many respects, a continuation of the same line of research, and contains a good deal of discussion of homogeneous-representation. I have continued my own research in this field, after the completion of this book, and the results of that research are gradually being published in the form of independent articles. [Ref. "The Scope of Homogeneous-Representation in Pāṇini," appearing in the Annals of Oriental Research, University of Madras; "Phonetics of /V/ in Pāṇini," appearing in the Annals of the Bhandarkar Oriental Research Institute, Poona; "Phonetics of short /a/ in Sanskrit," appearing in the Indo-Iranian Journal; and "New Material on the Kautsa-Vyākaraṇa," appearing in the Journal of the Oriental Institute, Baroda.]

I am also thankful to my friend and colleague Dr. Peter Hook for having gone through some portions of this work, and for insisting that I should explain more, rather than condense the arguments. I thank Prof. S. D. Joshi, Poona, and Prof. George Cardona, Philadelphia, whom I occasionally consulted. Prof. Cardona also helped me with some of the most rare books from his personal collection. I am grateful to Prof. Alton Becker, Director, Center for South and Southeast Asian Studies, University of Michigan, for providing me a research grant to visit India during the summer of 1974. I am also indebted to Prof. R. N. Dandekar, Secretary, Bhandarkar Oriental Research Institute, Poona, and to Dr. Trivikram Dharmadhikari, Secretary, Vaidika Saṁśodhana Maṇḍala, Poona, for allowing me to use their rich manuscript collections, and obtaining microfilms of

the necessary materials. I must express my gratitude to
Prof. K. V. Abhyankar, Poona, for letting me use copies of
some of the unpublished manuscripts in his possession.
Finally, I thank the Publications Committee, CSSEAS,
University of Michigan, for accepting this work for publication.

Madhav Deshpande
Ann Arbor
29 September 1975

Note: Due to the technical problems in underlining dotted
Sanskrit letters, they have been left without the underline,
while other letters in a word have been underlined. Since
single dotted letters could not be underlined, no single letters
have been underlined, but they have been put in between
vertical slashes, e.g. /a/. This does not, in this book,
have the normal linguistic significance of "a phoneme,"
but just refers to that particular Sanskrit sound. The same
convention has been followed for the short-forms in Pāṇini's
grammar, e.g. /a-Ṇ/.

xiii

PART ONE

THE PĀṆINIAN TRADITION

CHAPTER 1

PRINCIPLES OF HISTORICAL INVESTIGATION

1.1.   Grammatical procedures in Pāṇini's grammar have
undergone a variety of interpretations at the hands of Kātyāyana,
Patañjali and their followers. At each step in the tradition
we encounter conflicts between the older grammarians
(prācīna) and the neo-grammarians (navya) . These are
relative terms and their referents keep on changing with
time. The chief criterion of validity in the Pāṇinian tradition
is that every explanation must be ultimately in consonance
with Patañjali's Mahābhāṣya. Franz Kielhorn explains this
principle:

> Where there is a difference of opinion between
> Pāṇini and Kātyāyana, or between Kātyāyana
> and Patañjali, or between all the three, the
> native grammarians attach a higher value to
> the views of Kātyāyana to those of Pāṇini, and
> a higher value again to those of Patañjali to
> those either of Kātyāyana or Pāṇini. That such
> should be the case is not unnatural. [1]

The well known traditional maxim of the Pāṇinians says:
yathottaram munīnām prāmāṇyam "The later the sage, the
greater his authority." The grammarians belonging to a
later period in history are bound to have more information.
They possess knowledge of the earlier grammars and also
knowledge of the linguistic changes which took place later on.

1.2. However, this principle is unhistorical from a different
point of view. The original meaning of the rules of an ancient
grammar is gradually lost under the weight and supposed
authority of later interpretations. S.K Belvalkar succinctly
points out this element of unhistoricity:

3

> They (the more orthodox grammarians) accord-
> ingly tried to invent new maxims of interpretation,
> tending to show, after a very diligent analysis
> of the works of the three great sages, that such
> defects as Chandragomin and others tried to
> find in the Pāṇinian grammar were in it already
> implicitly provided for. This procedure was
> no doubt unhistorical, but so was that of
> Kātyāyana or of Patañjali.[2]

While studying the works of the ancient Indian grammarians,
a modern scholar has to take care that he is not himself
trying to impose any unhistorical interpretation on these
works.

1.3. In the course of the historical investigation into the
tradition of Indian grammarians, we shall follow a principle
which is laid down by Patañjali in his oft-quoted statement:
siddhaty evam, apāṇinīyaṁ tu bhavati "The correct result
is established thus, but the method becomes un-Pāṇinian."
In this statement, Patañjali draws a line of demarkation
between notions of theoretical or applicational effectiveness
of an interpretation and its historical validity or its conformity
with Pāṇini's intentions. With this distinction, it is possible
to make a fourfold system of classifying various interpretations
in the Pāṇinian tradition.

[A] siddhyaty evam, pāṇinīyaṁ ca bhavati: "The correct
result is established thus, and the procedure is also
Pāṇinian."

[B] Siddhyaty evam, apāṇinīyaṁ tu bhavati: "The correct
result is established thus, and yet the procedure
becomes un-Pāṇinian."

[C] naivaṁ siddhyati, pāṇinīyaṁ tu bhavati: "The correct
result is not established thus, and yet the procedure
is Pāṇinian."

[D] naivaṁ siddhyati, apāṇinīyaṁ ca bhavati: "This way
the correct result is not established, nor is the
procedure Pāṇinian."

The types [A], [B] and [D] are quite clear, but [C] needs

some clarification. This is usually the reason why
Kātyāyana feels like proposing changes, additions etc. in
Pāṇini's rules. In many cases, Kātyāyana believes, with
ample justification, that a certain formulation of Pāṇini is
bound to lead to some incorrect results.[3]

1.4. The two aspects of each of these classifications are
not contradictory to each other, but they are significantly
different. The aim of a historian of the Pāṇinian system
is not to prove Pāṇini's grammar to be absolutely perfect,
complete and free of errors. His function is to see how
Pāṇini stands in his own right. If an ancient king lost a
battle, no historian can make him win that lost battle.
Similarly a historian should not refrain from recording
inconsistencies and inadequacies in Pāṇini's grammar.
It is the hard duty of a historian to detach later interpretations
from Pāṇini. At the same time, he must look at different
successive interpretations from the point of the historical
development of the grammatical system. An un-Pāṇinian
interpretation could very well be a significant step in the
development of grammatical theory and it must be given
the credit that it deserves. Paul Thieme, whose work on
Pāṇini is perhaps the best example of this historical approach,
clarifies the methodology of historical research:

> In the end, we have to return to Pāṇini's
> formulations themselves, to compare his
> work, so to speak, with its own method, and
> to wring evidence from its weaknesses, which
> will betray something of its historical limi-
> tation: the merciless eye of the historian
> will not heed the beauty of the edifice in its
> entirety, but will be intent on looking for
> unassimilated elements which disturb its
> harmony, for flaws that might be due to the
> author being influenced by older sources,
> or not yet having reached certain stages
> of development.

1.5. In studying the theory of homogeneity (savarṇa) and
its historical development, we shall not limit ourselves to

6

the Pāṇinian tradition alone, but will undertake a thorough investigation of the entire range of the grammatical and phonetic science in India. We will first study this conception in the Pāṇinian tradition, and then pass on to the Prātiśākhyas, Śikṣās and post-Pāṇinian grammatical systems. We shall study not only the definitions of homogeneity in these systems, but in each case, we must also study its implementation in those respective systems. With identical definitions, we do find quite different implementation of this conception, and this involves different kinds of historical relationships among various systems.

PĀṆINIAN THEORY OF HOMOGENEITY

2.1. Pāṇini's grammar is headed by the well known fourteen Śiva-sūtras, the rules which are traditionally believed to have been given to Pāṇini by the Lord Śiva. Most of the modern scholars now believe in Pāṇini's authorship of these rules and their genetic relationship with the formation of his grammar.[5] There rules are as follows:

1) /a/ /i/ /u/ /Ṇ/

2) /ṛ/ /ḷ/ /K/

3) /e/ /o/ /Ṅ/

4) /ai/ /au/ /C/

5) /h(a)/ /y(a)/ /v(a)/ /r(a)/ /Ṭ/

6) /l(a)/ /Ṇ/

7) /ñ(a)/ /m(a)/ /ṅ(a)/ /ṇ(a)/ /n(a)/ /M/

8) /jh(a)/ /bh(a)/ /Ñ/

9) /gh(a)/ /ḍh(a)/ /dh(a)/ /Ṣ/

10) /j(a)/ /b(a)/ /g(a)/ /ḍ(a)/ /d(a)/ /Ś/

11) /kh(a)/ /ph(a)/ /ch(a)/ /ṭh(a)/ /th(a)/ /c(a)/- /ṭ(a)/ /t(a)/ /V/

12) /k(a)/ /p(a)/ /Y/

13) /ś(a)/ /ṣ(a)/ /s(a)/ /R/

14) /h(a)/ /L/.

These serve as a fundamental reference catalogue of certain sounds, arranged in a particular order conducive to the proper and concise formulation of the grammatical rules. Its purpose

7

is not to give an inventory of all Sanskrit sounds, nor to
teach correct pronounciation, but purely to facilitate concise
formulation of rules.[6]

2.2. The rule P.1.3.3 (hal-antyam), in its final interpretation,
says: "[In the instruction] , a final consonant [is termed it] ,"
and the rule P.1.3.9 (tasya lopah) says: "There is deletion
of that [which is termed it] ." Thus, all consonants occurring
at the end of the Śiva-sūtras are termed it. The other term
for it is anubandha. An it sound is a metalinguistic marker
attached to a grammatical element. These markers will be
given in capital letters and are unconditionally deleted.
Though they are deleted and never appear in the object
language, their functional significance still continues to
operate. The rule P.1.1.71 (ādir antyena sahetā) says:
"The initial [sound of a group] together with a final it
[denotes the intervening members and itself] ." Applying
this rule to the Śiva-sūtras, we can formulate shortforms
(pratyāhāra) such as /a-K/, /i-K/ etc. The shortform
/a-K/, for instance, stands for all sounds from /a/ to /K/,
excluding the markers. Thus /a-K/ stands for /a/, /i/,
/u/, /ṛ/ and /ḷ/.[7]

2.3. Then comes the notion of savarṇa "homogeneous
sound." This term is sometimes rendered as "homorganic
sounds," but that should be a more appropriate translation
of the term sasthāna. The notion of savarṇa involves things
in addition to the organs. Paul Thieme believes that the term
savarṇa was borrowed by Pāṇini from some ancient Śikṣā
text,[8] while Burnell holds that Pāṇini took over this term
from the ancient Aindra grammar and redefined it.[9] Whatever
be its source, Pāṇini offers us a definition. The rule P.1.1.9
(tulyāsya-prayatham savarnam), in its traditional interpre-
tation, means: "[A sound having in common with another
sound a] similar internal effort [at a point] in the mouth
[is termed] homogeneous [with respect to the other sound] ."
As we shall see, this is what the rule must mean.

2.4. Kātyāyana found the wording of this rule to be unsatis-
factory. Following the usage of his times, Kātyāyana interpreted
the term āsya-prayatna to stand just for internal effort.

Then he objected that such a definition would make two sounds homogeneous, if only they had the same internal effort, despite the difference in their points of articulation. [10] This is undesirable, since this would make the sounds /j/, /b/, /g/, /d/ and /ḍ/ homogeneous with each other. He answered this objection by reformulating the rule:[11] "The correct result is, however, established by [defining] a homogeneous sound [as the one which shares with another sound] the same point of articulation (deśa) and [the same] internal effort (prayatna) in the mouth (āsya)." This is what Pāṇini ought to teach and probably intended to teach.

Instead of accepting Kātyāyana's formulation, Patañjali reinterprets Pāṇini's rule to get at the same meaning. The word āsya normally means "mouth," but Patañjali explains it to be a taddhita-formation: asye bhavam [āsya+yaT] "that which lies in the mouth," i.e. the point of articulation and internal effort. But the latter has been already mentioned by Pāṇini by the word prayatna. Thus finally the word āsya stands for "point of articulation" and prayatna stands for "internal effort."[12] These are the two conditions for homogeneity.

2.5. Though we know what the rule ought to teach, the historical situation still remains unclear. In the Śikṣās and the Prātiśākhyas, the term āsya-prayatna stands only for internal effort.[13] Breloer handled this term in the same way.[14] In his early work, Paul Thieme believed that "Pāṇini's terminology is yet less developed. His expressions āsya-prayatna and mukha-nāsikā-vacana seem to betray that he did know the doctrine of sthāna and karaṇa, which is familiar to the Prātiśākhyas."[15] However, Pāṇini, who uses terms like mūrdhanya "cacuminal, retroflex" (P. 8. 3. 55) and oṣṭhya "labial" (P. 7. 1. 101), could not have been unfamiliar with points of articulation. Yet we may agree with Thieme's following statement: "Auch sthāna wird von Pāṇini nicht in dem technischen Sinn 'Artikulationsstelle' vervendet, sondern heisst ein fach 'Platz, Stelle.' "[16] Later on Thieme gave an explanation of āsya-prayatna, which seems more probable:

10

Paninis Fassung der Definition lässt vermuten, dass
er den Ausdruck prayatna noch nicht in dem späteren
Sinne von 'Artikulationsweise' (spṛṣṭa, īṣat-spṛṣṭa,
vivṛta usw.) gebrauchte, sondern in einem weiteren,
so dass er auch die Artikulationsstelle ein begriff
(der āsya-prayatna von k würde demnach kaṇṭha-spṛṣṭa,
der von p oṣṭha-spṛṣṭa gewesen sein unsw.). Diese
Annahme liegt um so näher, als Pāṇinis Sprachgebrauch
auch sonst mit der phonetischen Terminologie der
Prātiśākhya nicht in Einklang zu stehen scheint.[17]

However, this involves some assumptions about the meaning
of the term prayatna being different in Pāṇini. This is
doubtful, since he uses the term again in P.8.3.18 (vyor
laghu-prayatnataraḥ śākatāyanasya), which has its parallels
in the Prātiśākhyas. [Whitney, APr, p. 83.] Actually,
there is perhaps even an easier explanation of Pāṇini's āsya-
prayatna. We could interpret the word āsya "mouth" as a
general term covering all points on the vocal tract. This is
evident from his parallel usage of mukha in P.1.1.8 (mukha-
nasikā-vacano'-nunāsikaḥ). No anunāsika "nasal" sound is
produced in the whole of the mouth, but it uses some point of
articulation along with nāsikā "nose." For such a general
conception of points on the vocal tract, Pāṇini used the
general terms mukha and āsya.

In Sec. 11.7, we shall see that the term āsya-prayatna
had a different meaning in the pre-Kātyāyana times. It
included not only the internal effort, but also points on the
vocal tract. Pāṇini was not alone in this usage and there
were ancient Śikṣā-texts with the same usage. This will
help us revise Thieme's oft-repeated notion that P.1.1.9
(tulyāsya-prayatnam savarṇam) is concise but not precise,
and that the vārttika on this rule, i.e. siddham tv āsye
tulya-deśa-prayatnam savarṇam, alone is both concise
and precise. [Thieme (1935), p. 93.]

By the time of Kātyāyana, the term āsya-prayatna
became restricted to internal effort alone. This restricted
notion is seen in the Vājasaneyi Prātiśākhya 1.43 (samāna-
sthāna-karaṇāsyaprayatnaḥ savarṇaḥ). This created a

problem for Kātyāyana and, therefore, he reformulated
P.1.1.9 to fit the terminology of his days. Patañjali's
interpretation of āsya as āsye bhavam is only partially
correct, because he says that āsya in this extended meaning
stands for both sthāna "point of articulation" and karaṇa
"internal effort" [MB, Vol. I. Sec. I. p. 155]. [The term
karaṇa here does not stand for "articulator" or "active
organ," see: Sec. 10.5.5.] If that were the case, then
P.1.1.9 would be mentioning the internal effort twice.
Actually Kaiyaṭa and Nāgeśa do realize this problem, but
somehow try to explain it away. [MB-P, and MB-P-U, Vol. I
Sec. I. p. 155.] From a historical perspective, thus,
Pāṇini was concise and precise in his definition, and does
not stand in need of any reformulation or reinterpretation.

2.6. Thus, two sounds are homogeneous with each other, if
they share the same points of articulation and internal effort.
Thieme points out the relation of the term savarṇa with the
term varṇa in its abstract sense.[18] Patañjali clarifies that
the notion of savarṇa is based on difference (bheda) between
sounds. He says that if the term "homogeneous" were to
apply to those sounds alone, which have all identical features,
then the designation would be useless.[19] Thus, the homo-
geneous sounds must agree with respect to two features, but
may differ in other respects, i.e. the external efforts,
quantity, nasality and pitch. Patañjali says that the term
āsya also qualifies the term prayatna, thus excluding those
efforts which lie, in some sense, outside the mouth (āsyād
bāhyāḥ).[20]

2.7. In Pāṇini's grammar, nasality does not affect homo-
geneity of sounds. But this exclusion of nāsikā "nose" from
the conditions of homogeneity poses some problems. Nāgeśa
has a long argument on the status of nāsikā "nose." Does
it fall within āsya "mouth?" Is it a point of articulation or
an internal effort or an articulator? According to the
Pāṇinīya-Sikṣā, nāsikā "nose" is a point of articulation.
Nāgeśa says that in P.1.1.8 (mukha-nāsikā-vacano'nunāsikaḥ),
Pāṇini mentions nāsikā along with mukha "mouth." Therefore,
for the purpose of grammatical considerations, nāsikā is
excluded from mukha. Since the words mukha and āsya are

synonyms, the same applies to āsya.[21] Whether this reasoning
is true or false, the conclusion is certainly right. A conclusive
proof that nasality does not affect homogeneity in Pāṇini is
offered by the fact that he includes semi-vowels in his procedure
of savarṇa-grahaṇa "representation of homogeneous sounds"
[P.1.1.69]. This is only to enable them to cover their
nasal counterparts.

2.8. There is also another important doctrine concerning
homogeneity which must be mentioned here. This is the
doctrine of sarva-sthāna-sāmya "identity with respect to
all points of articulation." If a sound has two points of
articulation, say x and y, then it can be homogeneous only
with that sound which has x and y as its points of articulation.
It cannot be homogeneous with a sound that has only x, or
only y, or x and z as its points of articulation. Though,
nāsikā "nose" is considered to be a point of articulation by
the Pāṇinians, it is not taken into account. According to the
later Pāṇinian tradition, /v/ and /l/ are both dental (dantya),
but /v/ is also labial (oṣṭhya). Thus they cannot be homo-
geneous. Actually, there is a greater chance of /v/ being
only oṣṭhya "labial" for Pāṇini, Kātyāyana and Patañjali,
rather than being dantyoṣṭhya "labio-dental" as believed
by the Kāśikā-vṛtti and the later tradition. [For details,
see my article "Phonetics of v in Pāṇini," appearing in the
Annals of the Bhandarkar Oriental Research Institute.]
Similarly, the sound /ai/ is both kaṇṭhya "produced in throat"
and tālavya "palatal." The sound /au/ is both produced in
throat and labial (kaṇṭhauṣṭhya). Though they share one
common point of articulation, they differ in the other and
hence they are not homogeneous. Though this principle is
not explicitly stated by Pāṇini, it can be deduced from his
rules.

2.9. With this background, let us take a brief survey of
the phonetic categories adopted by the Pāṇinian tradition.
Since Pāṇini's rules do not contain elaborate phonetic details,
we have to depend on the traditional account, and then examine
it critically. According to the points of articulation, sounds
are classified as spṛṣṭa "with contact of the articulator and
the point of articulation," īṣat-spṛṣṭa "with slight contact,"

viv<u>r</u>ta "open, without contact" and sa<u>mv</u><u>r</u>ta "closed." The
category of viv<u>r</u>ta "open" was later subdivided by Patañjali
into ī<u>s</u>ad-viv<u>r</u>ta "slightly open," viv<u>r</u>ta "open," viv<u>r</u>ta-tara
"more open" and viv<u>r</u>ta-tama "most open." This is an
important subclassification and it played a great role in
later dialectic. Here we need not go into the details of the
external efforts and other minor points, since our discussion
does not concern them.

2.10. For Pāṇini, the sounds termed ū<u>s</u>man, i.e. /ś/, /ṣ/,
/s/ and /h/, and vowels have the same internal effort. They
are all viv<u>r</u>ta "open." Thus, there is a possibility of some
vowels being homogeneous with certain ū<u>s</u>mans. To counter
such a possibility, Pāṇini formulated P.1.1.10 (<u>nājjhalau</u>)
which says that the sounds denoted by the shortforms /a-C/
and /ha-L/ are not mutually homogeneous. This rule actually
intends to deny homogeneity of all vowels and consonants with
each other. However, its interpretation poses certain grave
problems, which will be considered later in detail. Since
Pāṇini's definition was clearly couched in featural terms,
it created another problem for him. The short /a/ was a
sa<u>mv</u><u>r</u>ta "closed" sound, but long and extra-long varieties
were viv<u>r</u>ta "open." In order to get their homogeneity,
Pāṇini ruled that the short /a/, within the grammatical
system, is an open sound. The final rule of his grammar,
P.8.4.68 (a a), reinstates the closed /a/ sound in the
object language. K. C. Chattopadhyaya (1974) holds a
different opinion on this point. He thinks that Pāṇini had an
open (viv<u>r</u>ta) short /a/, which was natually homogeneous
with /ā/ and /ā3/. In post Pāṇinian times, under the
influence of Dravidian languages, the short /a/ became a
closed sound. To account for this short /a/, later Pāṇinians
inserted P.8.4.68 (a a). He tries to show that most of
the Prāti<u>s</u>ākhyas and <u>S</u>ik<u>s</u>ās support his argument. I disagree
with Chattopadhyaya, and have dealt with his argument in
my article "Phonetics of Short <u>A</u> in Sanskrit," appearing
in the Indo-Iranian Journal.

After thus defining the term savar<u>n</u>a, Pāṇini introduces
a procedure, which is well known as savar<u>n</u>a-graha<u>n</u>a
"representation of homogeneous sounds." The rule P.1.1.69

(aṇ-udit savarṇasya cāpratyayaḥ) says: "A sound [which is
denoted by the short-form] /a-Ṇ/ [with /Ṇ/ in the Śiva-sūtra
/1(a) Ṇ/], or a sound with the marker /U/ stands for its
homogeneous sounds and for itself, unless it is an affix."
This is widely used in the rules of Pāṇini. Its details will
be discussed later on.

2.11. Apart from P. 1.1.9 (tulyāsya-prayatnaṁ savarṇam)
and P. 1.1.69 (aṇ-udit savarṇasya cāpratyayaḥ), Pāṇini uses
the term savarṇa in eight rules. They are as follows:

1) P. 1.1.58 (na padānta-dvirvacana-vare-yalopa-
svara-savarṇānusvāra-dīrgha-jaś-car-vidhiṣu)
2) P. 6.1.101 (akaḥ savarṇe dīrghaḥ)
3) P. 6.1.102 (prathamayoḥ pūrva-savarṇaḥ)
4) P. 6.1.127 (iko'savarṇe śākalyasya hrasvaś ca)
5) P. 6.4.74 (abhyāsasyāsavarṇe)
6) P. 7.1.39 (supāṁ suluk pūrva-savarṇāccheyādādyāyā-
jālaḥ)
7) P. 8.4.58 (anusvārasya yayi para-savarṇaḥ)
8) P. 8.4.65 (jharo jhari savarṇe)

In some of these cases, the term savarṇa or the compound
with that term continues into the following rules. The term
is mostly used in the context of vowels, semi-vowels and
stops, except in a few cases. For instance, in the rule
P. 8.4.65 (jharo jhari savarṇe), it is also used with respect
to /ś/, /ṣ/ and /s/. These sounds have no homogeneous
sounds other than themselves.

Another point that needs to be noted is that P. 1.1.69
does not mean that all the sounds incorporated in the shortform
/a-Ṇ/ must have homogeneous sounds other than themselves.
The sounds /h/ and /r/ have no homogeneous sounds other
than themselves. The rule says that the /a-Ṇ/ sounds
stand for their homogeneous sounds, if they have any. [22]

Kunhan Raja (1967) has raised the question of the
limit of /a-Ṇ/ in P. 1.1.69. He argues that /a-Ṇ/ even in
this rule is limited only to the first Śiva-sūtra. In my
article "The Scope of Homogeneous-Representation in Pāṇini"

[appearing in the Silver Jubilee Volume of the Annals of Oriental Research, University of Madras], I have extensively dealt with this question. The conclusion of this article is that /a-N/ in P.1.1.69 certainly extends to /N/ in the Śiva-sūtra /l(a)-N/; however, no practical purpose is served by the inclusion of semi-vowels in P.1.1.69. The theoretical purpose is quite obvious. [Also see Appendix A.]

2.12. To sum up, we might say that the procedure of savarṇa-grahaṇa "homogeneous-representation" is a procedure built of five steps discussed earlier. There are many differences of opinion concerning the exact interpretation of these five stages. At times we have proposals for additional postulates which make some of these stages unnecessary. Some of the differences are rooted in the differences between alternative priciples of interpretation.

2.13. Here it is necessary to see how a difference in theoretical axioms affects the final output of a grammar. Let us consider two hypothetical situations.

> Situation [A] : Suppose that we have a rule R_1 which contains the term a. Is it possible to apply the rule R_1 to the term a in the same rule? Let us say that the rule R_1 is as follows: "a stands for a, b and c." If the rule R_1 applies to itself, then the term a in the rule itself could stand for a, b and c. Thus, the rule could be rewritten as: "a, b and c stand for a, b and c." This could mean that each one of them could stand for all of them. If the rule does not apply to itself, then a stands for a, b and c; b stands for b, and c stands for c.

> Situation [B] : If there are two rules, R_1 and R_2, such that R_2 presupposes R_1, is it possible that R_2 could apply to R_1 or a part of it? This gives us two alternatives. Either R_2 may apply to R_1, or it may not apply.

By combining the alternatives in [A] with those in [B], we could get several possible ways. Most of these alternatives

are reflected some way or the other in the discussions in the Pāṇinian tradition, along with certain other postulates.

CHAPTER III

KĀTYĀYANA'S THEORY OF ĀKṚTI-GRAHAṆA

3.1. As an alternative to Pāṇini's procedure of savarṇa-grahaṇa "representation of homogeneous sounds," Kātyāyana proposes the philosophical procedure of ākṛti-grahaṇa "mention of a sound-universal." He says: "[The desired morphophonemic procedure] is established by understanding the sound-universal [as being mentioned in the Śiva-sūtras and elsewhere]," and Patañjali explains this as: "[In the Śiva-sūtras and elsewhere], the universal of the sound /a/ is taught and it will cover the whole class of /a/ sounds [including long and extra-long varieties]. Similarly are [taught] the universals of the sounds /i/ and /u/."[23] In this view, the particular sounds uttered in the Śiva-sūtras could be understood as tokens standing for the types or sound universals which cover all the particular sounds belonging to that type or sharing that universal. This is like the sentence: "A brahmin should not be killed." The statement does not mean that, leaving aside one brahmin, the rest of them could be killed, but rather that anybody who belongs to the class of brahmins or shares the universal brahmin-ness should not be killed. Thus what is intended is not a single brahmin, but the universal brahmin-ness.[24] Kātyāyana adds that this notion of a universal extends to consonants also.[25] Just as the universal of /a/ covers /ā/, similarly the universal of /y/ covers /ȳ/. However, the universal of /k/ does not cover /kh/ and other members of that varga. Kātyāyana clearly points out that this universal-mention is not an explanation of Pāṇini's homogeneous-representation, but an alternative to it. If one is adopted, the other is almost unnecessary. Kātyāyana says: "In P.1.1.69, the /a-Ṇ/ sounds need not be mentioned, since the sound universals are mentioned [in the Śiva-sūtras]."[26] Thus, in the theory of universal-mention, no homogeneous-representation is necessary for vowels and semi-vowels,

17

but it is still necessary for the homorganic groups of stops
(varga). Thus, Kātyāyana is proposing a partial modification
of Pāṇini's system.

3.2. The distinction between these two procedures needs
to be clearly understood. According to the theory of universal
mention, the sounds listed in the Śiva-sūtras are a type
listing, without P.1.1.69. On the other hand, Pāṇini lists
individual sounds and then states P.1.1.69 whereby they
could stand for their homogeneous sounds.[27] Recently,
Scharfe[28] and Ghatage[29] seem to have fused one into the
other. Biardeau[30] discusses savarṇa in the context of
ākṛti, but leaves an impression that she does not consider
them to be different alternatives. On the background of
this, a clear differentiation of these two seems to be of
vital importance. Kātyāyana is bringing a non-Pāṇinian
notion into Pāṇini's grammar. This new notion of varṇākṛti
"sound-universal" is a philosophical interpretation of the
old class-conception of varṇa, the real sound, where features
of quantity, nasality and accent were non-distinctive for
inclusion in a varṇa. Thus a-varṇa could cover /ā/ and
/ā3/, the varṇa of /y/ could cover /ȳ/. However, the
varṇa of /k/ could not cover /kh/ and other homorganic
stops. For this purpose, the notion of varga was used along
with -varṇa. Pāṇini's expanded definition of savarṇa was
a sophisticated attempt to cover both of these older notions
under a single generalization. Kātyāyana brought back the
older notions in a new philosophical form. Thus his notion
of ākṛti worked for the older notion of varṇa, while he still
retained Pāṇini's savarṇa-grahaṇa to account for the older
notion of varga. A detailed discussion of this older notion of
varṇa is taken up later in the context of the Prātiśākhyas.

3.3. As it has been already explained, Kātyāyana's theory
partially replaces Pāṇini's homogeneous-representation.
The fact that this new theory does not belong to Pāṇini is
realized by the traditional commentators. Bhaṭṭoji Dīkṣita
says: "This view [of universal-mention] is not intended
by the author of the sūtras, since he incorporates [the
term] /a-Ṇ/ [in P.1.1.69]."[31] He further states: "The
author of the sūtras does not formulate [his rules] after

having seen the vārttikas [of Kātyāyana]."[32] Nāgeśa and
some of the later commentators on his works clearly bring
out this historical development.[33] The commentary
Cidasthimālā on Nāgeśa's Laghu-śabdendu-śekhara says
that if we accept the rules related to the procedure of
savarṇa-grahaṇa, then there is no ākṛti-grahaṇa.[34]

3.4. The theory of universal-mention needs to be subjected
to a critical examination, both for its merits and drawbacks.
Pāṇini clearly defined savarṇa in featural terms, but there
is no clear definition of a sound-universal found anywhere in
Kātyāyana's vārttikas. Patañjali explains that the universal
of /a/ is mentioned [in the Śiva-sūtras] and it will cover
the whole family of /a/ sounds.[35] Bhartṛhari, in his
Mahābhāṣya-dīpikā, sheds some light on this notion:

> The desired [coverage of many varieties] is established
> by universal-mention. In shortforms and in other
> rules, a universal is prescribed, and not an individual.
> Resorting to an individual [in order to mention a
> universal] is like this: It is thus advised to an
> inhabitant of the Nārikela island: "This is a bull.
> You should not touch him with your feet." Though
> he is advised actually with respect to a young, black
> and skinny bull, still he does not touch even an old,
> tawny and fat bull.[36]

Thus when one hears /a/, he develops a notion of some
generic features. When he hears /ā/, he recognizes the
same generic features in /ā/. This is how a person identifies
the same universal in different instances. This seems to
be the import of Bhartṛhari's explanation.

3.5. Since there is no clear definition of a universal, nor
of any standard way of recognizing its presence, this notion
certainly seems to be very impressionistic. We are not
sure if the origin of this notion lies in phonetic considerations,
or somewhere in the realm of realistic metaphysics. Perhaps
this is an outcome of a combination of different influences.
Kātyāyana himself uses frequently the grammatical terminology
of the Prātiśākhyas, which was replaced by Pāṇini with new terms.

In this old terminology, we have a conception of varṇa which stands for "the real sound" or class of sounds which differ only in features like quantity, nasality and pitch. There also existed a conception of varga "group of homorganic stops" alongside with the class-conception of varṇa. Kātyāyana was obviously familiar with this conception. At the same time, early schools of Mīmāṁsā were coming up in pre-Kātyāyana days. He was deeply interested in their philosophical speculations, and quoted their controversies in great detail. The two important names are those of Vyāḍi, who held Vyakti-vāda "doctrine of individuals," and Vājapyāyana, who held the opposite doctrine of Ākṛti-vāda "doctrine of universals." Most probably, under the influence of Vājapyāyana's thoery of universals, Kātyāyana reinterpreted the old conception of varṇa and came up with the doctrine of varṇākṛti "sound-universal." Even in this new philosophical form, the notion still remained very much impressionistic or conventional.

The system of Mīmāṁsā considers sounds (varṇa) to be eternal, and these eternal sounds are manifested by physical sounds which are not eternal. However, the relation between non-eternal physical sounds and eternal linguistic sounds is not that between a universal and individuals which share that universal. The eternal sound is like an eternal individual.[37] The notion of sound-universals is found used in the system of Nyāya. This system believes that the sounds of a language are not eternal, their existence being limited by their production and disappearance. Yet we have a perception of identity each time we hear certain sounds: "It is the same /g/ sound, which I heard before." This perception of identity is due to the common universal shared by many instances.[38] Kaiyata's explanation of the sound-universal /k/-ness is very similar to the Nyāya view. He says: "The universal /k/-ness etc. pertains to individual sounds or is manifested by specific instances of sounds.... The [sound] individuals are infinite and they are produced [in contrast to the eternal universals] ."[39] It must be remembered, however, that Kātyāyana's notion belongs to a very ancient period of philosophy, and most of the systematic works in different philosophical schools are certainly post-Kātyāyana.

3.6. The ambiguity concerning how many varieties a certain sound-universal can cover is reflected in several discussions in Kātyāyana's own vārttikas and in Patañjali's Mahābhāṣya. In his introductory remarks on Pāṇini's grammar, Kātyāyana has raised questions as to the purposes of the Śiva-sūtra listings. One of the alleged purposes is the proper teaching of all the sounds in Sanskrit. [40] To this Kātyāyana presents an objection by saying that if this is the purpose, Pāṇini should list all the varieties of sounds differing in pitch, quantity and nasality. [41] A reply to this objection is given by saying that the Śiva-sūtras are a list of sound-universals, which would naturally cover all these varieties. [42] Then comes an objection to this reply: "If [one says that] the desired [coverage of necessary varieties] is established by the mention of sound-universals, then a prohibition of [vowels that are possessed of] constriction of mouth or other similar faults has to be laid down."[43] This objection amounts to saying that just as a sound-universal covers all the correct or unfaulty (śuddha) instances, similarly it would also cover those instances which involve faults. A sound-universal is shared by correct as well as by incorrect instances, and there is no philosophical reason why a sound-universal could represent only the correct instances. Patañjali observes that if one accepts this doctrine of universal-mention, one may have to make an all out effort to reinstate the correct varieties of sounds. [44] The upholder of universal-mention suggests that these faulty varieties of sounds could be given metalinguistic functions, and could then replace the whole system of marker-sounds in Pāṇinian rules. [45] Patañjali says that this could be done, but then the procedure becomes un-Pāṇinian. [46] Even though it is easy to talk of constructing rules for reinstating the correct varieties, in actuality, it would be a very difficult task. Compared to the correct varieties, faults are too many to count. This is surely not an advisable procedure.

3.7. Patañjali then continues the argument of the upholder of universal-mention. He asks as to where could these faulty varieties occur. They could not occur in augments (āgama), substitutes (vikāra), affixes (pratyaya), verb roots (dhātu) or nominal stems which are either derivable from the

22

enlisted smaller items or which are directly listed by
Pāṇini. Pāṇini taught all these items with correct
pronounciation. The only items which are left are the
nominal stems which are underivable and are not listed by
Pāṇini. It is suggested that even these should be listed in
order to teach their proper pronounciation. [47] K. V.
Abhyankar explains the purport of this suggestion:

> This is the final conclusive solution to the difficulty
> raised above, viz. that if in the formation of words
> faulty utterances are made for signifying grammatical
> operations, those faults would remain in the words
> after their formation also. The author says here
> that the original crude bases of words are uttered
> faultless and thereafter in the process of formation,
> augments, substitutes, affixes and the like are also
> uttered faultless; as a consquence no occasion arises
> for formed words being attended with faulty utterances. [48]

It is doubtful if it is a conclusive solution. It is quite clear
that it is a suggestion for a complete listing of underived
nominal stems, which does not exist in Pāṇini. Patañjali,
in other contexts, makes it clear that such a listing of
underived nominals involves prolixity (tad guru bhavati,
see n. 47). Bhartṛhari suggests that finally we have to rely
on the usage of the natural speakers of Sanskrit (śiṣṭa) to
determine correctness of words, and the same reference
is to be the authority in excluding these faulty varieties. [49]
Thus the procedure of universal-mention finally involves
too many assumptions.

3.8. There are many other problems which confront the
upholder of universal-mention. According to Pāṇini, the
original root in the forms kalpate and klḷpta is √kṛp. From
this root, we first derive the forms karpate* and kṛpta*,
and then /r/ and /ṛ/ are replaced by /l/ and /ḷ/. For
both the changes, there is only one rule, P.8.2.18 (kṛpo
ro laḥ), which literally means: "/r/ of [the root] √kṛp is
replaced by /l/." The constitution of /r/ and /l/ is such
that they contain vocalic and consonantal elements fused
together. Thus:

$$/\underset{.}{r}/ \text{ is } \tfrac{1}{4}/ə/ + \tfrac{1}{2}/r/ + \tfrac{1}{4}/ə/ \text{ and}$$

$$/\underset{.}{l}/ \text{ is } \tfrac{1}{4}/ə/ + \tfrac{1}{2}/l/ + \tfrac{1}{4}/ə/.$$

If parts of a composite sound are looked upon as independent
sounds and could be represented by independent sounds,
then there is no problem in the present case. The sound
/r/ in the rule would stand for independent /r/, as well
as for /r/ that forms a part of /r̥/. The same would apply
to /l/.[50] But if the so-called parts of a composite sound
have no independent reality and cannot be represented by
independent sounds, then we may have to have a separate
rule for substituting /r̥/ by /l̥/.[51]

At this stage, Patañjali offers two solutions which
would avoid formulation of an additional rule. The second
solution runs as: "Or, rather, it should be understood
that in both [the cases, i.e. rah and lah] , only the class-
sound (sphoṭa) is mentioned. Thus the sound heard as /r/
(ra-śruti) is replaced by a sound heard as /l/ (la-śruti)."[52]
This passage has given rise to many interpretations in the
context of the celebrated theory of sphoṭa. However, we
shall restrict ourselves only to those considerations which
are pertinent in the context of the notion of sound-universals.

3.9. Bhartṛhari explains the above argument as follows:
"Or, the word sphoṭa-mātra indicates that this is a universal-
mention.... The purpose of universal-mention is that it covers
both /r/ sounds, one which is independent and the one which
forms part of /r̥/."[53] Thus, the universal of sound /r/
covers, according to Bhartṛhari, the sound /r/ which forms
part of /r̥/. Kaiyata expresses the same view.[54] Thus
the rule says: "In the case of the root √kṛp, the universal
of /r/ is replaced by the universal of /l/.[55] Nāgeśa, on
the other hand, is not ready to accept a sound-universal
which covers independent and dependent varieties.[56]

3.10. Just as there is a consonantal element in /r̥/,
similarly there is also a vocalic element which is called
ac-bhakti "a split vowel."[57] Just as /a/ covers long and

extra-long varieties by homogeneous-representation (p. 1.1.69), similarly one may extend this coverage to the vocalic particles in /r̥/ and /l̥/. This objection could also be raised in the theory of universal-mention. The universal of /a/ might be said to cover these vocalic particles.[58] But Bhartr̥hari says that /a/ in no way can stand for these vocalic particles. He remarks: "This vocalic particle of quarter-mora quantity is not found anywhere else. There is no homogeneity. A part [of a composite sound] does not have a phonetic effort and points of articulation, independent from those of the whole. This vocalic particle is also incapable of manifesting the sound-universal of /a/ etc."[59] Kaiyaṭa points out that the perception of this vocalic particle is very indistinct and is not capable of manifesting any sound-universal.[60] Nāgeśa agrees with Kayaṭa's judgement.[61]

3.11. In Pāṇini's Śiva-sūtra: r̥-l̥-K, the sounds /r̥/ and /l̥/ are listed separately. No two sounds directly listed in the Śiva-sūtras are mutually homogeneous with the only exception of stops. A similar argument is offered by Bhaṭṭoji Dīkṣita for /e/ and /o/ not being homogeneous with /ai/ and /au/.[62] Kaiyaṭa clearly says that /r̥/ and /l̥/ are not homogeneous with each other for Pāṇini, though they are so for Kātyāyana.[63] In the real usage, the sound /l̥/ occurs only in the forms of √kl̥p. This is noted by Patañjali, all of whose other examples are pure fabrications.[64] Thus, Pāṇini did not need separate rules for guṇa and vr̥ddhi changes of /l̥/, since he took care of the only occurrence of /l̥/, the root √kl̥p, by the above explained way.

Literally, P. 1.1.51 (ur aṇ ra-paraḥ) says: "The /a-N/ replacements of /r̥/ are immediately followed by /r/." Based on this rule is the notion of some modern authors that the guṇa for /r̥/ is /ar/, and its vr̥ddhi is /ār/. Actually for Pāṇini, the term guṇa applies only to /a/, /e/ and /o/, while the term vr̥ddhi applies only to /ā/, /ai/ and /au/. But /a/ and /ā/ which replace /r̥/ are immediately followed by /r/.[65] To derive kalpate, we start from karpate* and replace /r/ by /l/. Thus there is no occasion for /l̥/ being directly changed to /al/. Thieme is certainly right when he points out that there is no guṇa to /l̥/ in Pāṇini's system.[66]

3.12. Kātyāyana proposes that /r̥/ and /l̥/ be considered mutually homogeneous.[67] These sounds actually have different points of articulation and they would not normally become homogeneous in Pāṇini's system. Kātyāyana imposes this homogeneity, for specific purposes.[68] If /r̥/ is homogeneous with /l̥/, /r̥/ can stand for /l̥/ also. Thus the rule P.1.1.51 (ur aṇ ra-paraḥ) would mean: "The /a-N/ sounds which replace /r̥/ and /l̥/ are immediately followed by /r/." Patañjali sees this situation arising.[69] He counters such a possibility by saying: "I shall rule that [the /a-N/ substitutes of] /l̥/ will be followed by /l/. This provision has to be given. [This provision] would be prescriptive, if the term 'homogeneous' is not [applied to /l̥/ with respect to /r̥/]. The same [provision] would help avoiding [the possibility of the /a-N/ replacements of /l̥/ being followed by] /r/, if [the term 'homogeneous'] is applied [to /l̥/ with respect to /r̥/]."[70] This is a very significant statement. Patañjali suggests here that if /r̥/ and /l̥/ are not homogeneous, as in the view of Pāṇini, there is no fear of the /a-N/ substitutes of /l̥/ being followed by /r/. But then Pāṇini does not provide that they will be followed by /l/ either. Such a proviso has to be made to account for the fictitious examples, or grammatical expressions involving /l̥/.

3.13. Now a question arises as to how to understand Kātyāyana's statement on homogeneity of /r̥/ and /l̥/, in the light of his doctrine of universal-mention. Kātyāyana does not give us any direction in this case. Patañjali is also silent. Coming down to Bhartṛhari, we find the following explanation:
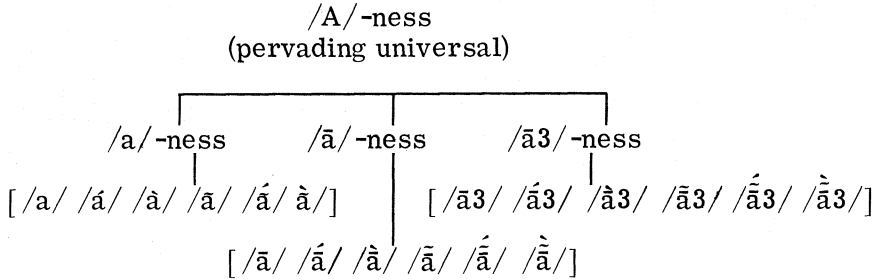
> When we accept the statement that /r̥/ and /l̥/ are homogeneous, and also when P.1.1.69 is rejected due to universal-mention, then, despite the difference of the sound [/r/ and /l/ in /r̥/ and /l̥/], they [i.e. /r̥/ and /l̥/] have the same universal, just as short and long [corresponding vowels have the same universal].[71]

Bhaṭṭoji Dīkṣita refuses to accept that /r̥/ and /l̥/ have the same sound-universal. According to his view, /r̥/ cannot cover /l̥/ unless we make a special provision. [72] He suggests that we should take out the term /a-Ṇ/ from P.1.1.69, following Kātyāyana, and put in /r̥/ in its place. Thus P.1.1.69 should be rewritten as /r̥/-udit savarṇasya etc. [73] This way /r̥/ will cover /l̥/. He also suggests that homo-geneity between /r̥/ and /l̥/ has to be optional, or otherwise it would create several other problems. [74]

Nāgeśa accepts a different doctrine. He thinks that Kātyāyana's statement imposes the same universal on /r̥/ and /l̥/. [75] Some of the commentaries on Nāgeśa's Laghu-śabdendu-śekhara try to show that the word savarṇa itself could be interpreted to mean "having the same universal" (sajātīya), since the word varṇa is sometimes synonymous with jāti in the sense of "caste."[76] In fact, Liebich does interpret the word savarṇa as: "von gleicher Kaste" [see n. 344]. Hari Dīkṣita refers to poetic interchange-ability of /r/ and /l/ and says that for these reasons the sounds /r/ and /l/ could have the same universal. [77] Of course, Kātyāyana had a very specific purpose in prescribing their homogeneity, i.e. obtaining a general rule for guṇa and vṛddhi of /l̥/ being followed by /l̥/. This seems to have been his only limited purpose. He needed this to explain usages with /l̥/, which came about through incapability of proper pronounciation (aśaktija) and imitation of such usages (anukaraṇa) etc. No traditional grammarian ever clarified this limited purpose of this imposed homogeneity, except for the fact that Bhaṭṭoji Dīkṣita thought it to be optional and not obligatory throughout the grammar.

3.14. There is another kind of ambiguity involved in the notion of universal-mention, which has been discussed at some length by some of the later commentators. They classify universals into pervading universals (vyāpaka-jāti) and pervaded universals (vyāpya-jāti). The universal of the sound /a/ of which Kātyāyana and Patañjali speak covers the whole class of /a/ sounds (sarvam a-varṇa-kulam), and this is the pervading universal. However, there are also pervaded universals, such as the restricted /a/-ness,

which covers only the short varieties. Similarly, we can
have /ā/-ness pervading only the long varieties, and /ā3/-ness
pervading only the extra-long varieties. [78] Thus, we have
the following scheme of coverage:

/A/-ness
(pervading universal)

/a/-ness   /ā/-ness   /ā3/-ness

[/a/ /á/ /à/ /a̋/ /á̧/ à̧/]   [/ā3/ /ā́3/ /ā̀3/ /ā̋3/ /ā̧́3/ /ā̧̀3/]

[/ā/ /ā́/ /ā̀/ /ā̋/ /ā̧́/ /ā̧̀/]

It has also been discussed whether the Śiva-sūtras contain
the pervading universals or the pervaded universals. Each
of these alternatives has a different implication. If the
Śiva-sūtras contain the pervading universals, then there is
no need of the procedure of homogeneous-representation in
those cases. But if they contain the pervaded universals,
then we still need that procedure. Suffice it to say that
Kātyāyana intended the first alternative.

3.15. As a merit of this theory of universal-mention, it
should be pointed out that its acceptance helps us to get
rid of the rule P. 1. 1. 10 (nājjhalau). This rule intends to
deny any possible homogeneity between vowels and consonants.
In the theory of universal-mention, vowels and consonants
have different universals and hence there is no scope of
homogeneity or co-universality of any vowels with consonants.
Thus, despite the fact that /ā/ and /h/ have the same internal
effort and point of articulation, [79] they do have different
universals, and hence there is no problem. This has been
noticed by some of the commentaries on Nāgeśa's Laghu-
śabdendu-śekhara. [80] Another benefit could also be derived
from this theory. Despite the difference of internal effort
between /a/ and /ā/, they share the same universal, and
hence we do not need anything like Pāṇini's pronounciation
of /a/ as vivṛta "open," within the system, and its reinstate-
ment to saṃvṛta "closed" by P. 8. 4. 68 (a a). As far as I

know, no grammarian has noticed this point. As we shall
see later, those grammatical traditions, which accepted
the impressionalistic notion of varṇa and savarṇa, were
never faced with this problem. Kātyāyana's notion of
universal is equally based on such conventional impressionism,
and he, therefore, did not have to face the problem that
Pāṇini was faced with.

3.16. Pāṇini's rule P.1.1.69 (aṇ-udit savarṇasya cāpratyayaḥ)
says: "The /a-Ṇ/ sounds and the sounds marked with /U/
represent their homogeneous sounds along with themselves,
if they are not affixes."[81] By this rule, the process of
homogeneous-representation applies to vowels, semi-vowels
and stops. In the view of universal-mention, however, a
universal of /k/ cannot cover the homorganic stops.[82]
Kātyāyana is aware of this short-coming and he only suggests
removal of /a-Ṇ/ sounds from homogeneous-representation.
Thus he still retains homogeneous-representation for stops.
This means, we would still need the rule: udit savarṇasya.
Since this rule contains the term savarṇa "homogeneous,"
we still need the definition of homogeneity (P.1.1.9), which
still remains a general definition and covers even those
sounds, which are already covered by universal-mention.
Thus the procedure of universal-mention cannot function
by itself, and needs assistance of homogeneous-represen-
tation. On the other hand, the latter can very well function
by itself. The difficulty in accepting both the procedures
simultaneously is that both of them presuppose opposite
philosophical doctrines. Nāgeśa points out that P.1.1.69
is based on vyakti-vāda "doctrine of individuals," and on
distinctiveness of pitch, nasality and quantity.[83] The
principle of universal-mention, on the other hand, presupposes
that a sound, by nature, stands for its universal, which
naturally covers varieties differing in pitch, nasality and
quantity. What is intended is a universal, and an individual
is given simply because there is no other way of expressing
the universal.[84]

3.17. Even if we decide to follow universal-mention and
omit /a-Ṇ/ from P.1.1.69, we still do not achieve simplicity
of description. The condition apratyayaḥ "non-affixal"

in P. 1. 1. 69 says that affixal sounds cannot stand for their homogeneous sounds. Nāgeśa points out that we still need this condition in universal-mention. [85] This is comparable to Kātyāyana's treatment of P. 1. 1. 70 (taparas tat-kālasya) which says that a vowel followed by the marker /T/ stands only for homogeneous varieties of the same quantity. [86] Kātyāyana says that this rule operates even in universal-mention. [87] Patañjali explains that a vowel without /T/ may cover all co-universal (sajātīya) varieties. To restrict this, wherever we need, to varieties of the same quantity, we must use the marker /T/. [88] Nāgeśa realizes similarity between this argument and the restriction made by the condition apratyayaḥ in P. 1. 1. 69. [89]

3.18. Finally, we should investigate some of the subtle problems created by universal-mention, which can certainly be avoided by a proper interpretation of Pāṇini's savarṇa-grahaṇa. In the final interpretation of P. 1. 1. 69, only the /a-Ṇ/ sounds as they are listed in the Śiva-sūtras have the capacity of representing their homogeneous sounds. Thus, /a/ can represent varieties of /ā/ and /ā3/, but /ā/ cannot represent either /a/ or /ā3/. [90] By P. 1. 1. 70 (taparas tat-kālasya) a vowel followed by /T/ stands only for homo-geneous sounds of the same quantity. Thus, in the case of /a-Ṇ/ sounds, this rule becomes restrictive, while it becomes prescriptive for non-/a-Ṇ/ sounds. [91]

In universal-mention, in principle, any instance stands for its universal and that universal covers all co-universal varieties. Thus, the difference between /a-Ṇ/ and and non-/a-Ṇ/ sounds would be obliterated. If every vowel can represent, through its universal, all co-universal varieties, then the meta-element /T/ becomes universally restrictive (niyāmaka), and does not remain prescriptive (vidhāyaka) in any case. Thus /ā/ could also represent eighteen co-universal varieties, like /a/.

Bhartṛhari and Kaiyaṭa do realize this problem. [92] They claim that /ā/ would not stand for /a/, because /ā/ involves additional effort. If /a/ and /ā/ both can represent all co-universal varieties, then why would one use /ā/

instead of /a/? This is a very good practical argument, but it has no philosophical value.

3.19. Nāgeśa quotes a view held by some of the earlier grammarians. These grammarians think that /a/ expresses the pervading universal (vyāpaka-jāti), but /ā/ expresses only a pervaded universal (vyāpya-jāti). This pervaded universal /ā/-ness covers only long varieties.[93] But actually this does not work.

For instance, P.7.2.84 (aṣṭana ā vibhaktau) prescribes the replacement /ā/ for the final /n/ of aṣṭan under certain conditions. Historically, the condition apratyayaḥ "non-affixal" in P.1.1.69 (an-udit savarṇasya cāpratyayaḥ) restricts only affixes from homogeneous-representation, and does not apply to substitutes.[94] Thus, if /ā/ can cover six co-universal varieties, including the nasal varieties, then by P.1.1.50 (stāne'ntaratamaḥ), a nasal /ā̃/ would be substituted for the nasal /n/ of aṣṭan. Kātyāyana himself realized this difficulty. He answered it by pointing out that /ā/ is a non-/a-N/ sound, and hence it cannot stand for its homogeneous sounds by P.1.1.69. Therefore, only a non-nasal /ā/ will be substituted for /n/ in aṣṭan.[95] But this solution would not really work in the procedure of universal-mention, if /ā/ were to stand for a pervaded universal (vyāpya-jāti), covering all the long varieties.

3.20. There is another example which shows Pāṇini's preciseness of formulations, which would be totally disturbed in universal-mention. P.3.1.111 (ī ca khanaḥ) prescribes the substitute long /ī/ for /n/ in the root khan and also an affix KyaP. Thus we have khan + KyaP leading to kha+ ī + ya, and finally to kheya. It seems strange that Pāṇini should give long /ī/ as the substitute, instead of giving short /i/. Even Bhaṭṭoji Dīkṣita felt that Pāṇini should have given short /i/.[96] As it is mentioned earlier, historically, substitutes in Pāṇini's grammar could represent their homogeneous sounds. Even Kātyāyana realized this fact, but it was later obscured by discussions in Patañjali.[97] If Pāṇini were to give short /i/ as the substitute for /n/

in <u>khan</u>, this short /i/ being an /a-Ṇ/ sound would represent its homogeneous varieties, including nasal varieties. Thus, /n/ would be substituted by a nasal /ī/, finally leading to an undesirable nasal /ē/ in <u>khēya</u>*. Since Pāṇini realized this, he gave long /ī/ as the substitute for /n/. This is not an /a-Ṇ/ sound and hence it cannot represent any homogeneous sounds. Thus, there is no possibility of obtaining the undesirable form <u>khēya</u>*. If we accept universal-mention, then /ī/ could also cover its co-universal varieties and that would lead to the above mentioned problem.

3.21. From the above given analysis of universal-mention, it will be clear that it is not sufficient to replace Pāṇini's homogeneous-representation, unless a grammarian accepting this theory is prepared to build another structure of rules which would properly control its over-extensions. Kātyāyana seems to have given only a rough hypothesis. However, Kātyāyana's theory did not go unnoticed in the history of Sanskrit grammar. He had two illustrious followers, namely Candragomin and Śākaṭāyana. These two grammarians tried to develop Kātyāyana's suggestions in different ways. Their grammars will be studied later in Chapter XII.

CHAPTER IV

PATAÑJALI'S PROPOSAL OF PRAYATNA-BHEDA

4.1. Pāṇini's rule P.1.1.9 (tulyāsya -prayatnaṁ savarṇam) says that two sounds having the same points of articulation and internal effort are mutually homogeneous. Then he formulates P.1.1.10 (nājjhalau) which denies mutual homo-geneity to sounds denoted by the shortforms /a -C/ and /ha -L/. No vowels denoted by /a -C/ are homogeneous with any consonants denoted by /ha -L/. Since Pāṇini formulates this rule, we must assume that at least some vowels and consonants have the same internal effort. The tradition believes that, according to Pāṇini, vowels and ūṣmans, i.e./ś/, /ṣ/, /s/ and /h/ are vivṛta "open."[98] There are many Śikṣās and other texts which do not sub-classify these two groups according to their internal effort.[99] Thus, /ā/ and /h/ are both kaṇṭhya "produced in the throat" and open. Similarly, /i/ and /ś/ are both palatal and open. Thus these sounds would be mutually homogeneous, unless prevented by P.1.1.10 (nājjhalau).[100]

4.2. Kātyāyana and Patañjali discuss problems concerning the interpretation of P.1.1.10. In the prima facie view (pūrva -pakṣa), it is assumed that homogeneous-representation (P.1.1.69) applies to the terms /a -C/ and /ha -L/ in P.1.1.10. Kaiyaṭa explains that, if P.1.1.69 is applied to P.1.1.10, then /i/ included in /a -C/ could stand for its homogeneous sounds including /ś/.[101] Similarly, /a/ could stand for /h/. Normally, an exclusion rule applies first, and then the general rule applies. However, in this case, the negation rule has yet to come into being. We cannot deny homogeneity of /a -C/ sounds with /ha -L/ sounds, before interpreting these very terms, and there that denial cannot apply. Now if /i/ in /a -C/ stands for /ś/, and /ś/ also occurs in /ha -L/, then /ś/ would be non-homogeneous with itself. Similarly, /h/ included in /ha -L/ is an /a -N/ sound, and

33

hence by P.1.1.69, it could stand for all varieties of /a/. This would result in non-homogeneity of all the varieties of /a/ with each other and with themselves.[102]

4.3. Kātyāyana realized this problem. Thus, he says: "In the prohibition [of homogeneity] between /a-C/ and /ha-L/ sounds, the prohibition [of homogeneity] of /ś/ [with /ś/ obtains], since [/ś/ is both] an /a-C/ sound and a /ha-L/ sound."[103] Patañjali explains that /ś/ is an /a-C/ sound because it is represented by /i/, and it is a /ha-L/ sound because it is so listed in the group.[104] P.8.4.65 (jharo jhari savarne) prescribes deletion of a sound included in the group /jha-R/, if it is followed by a homogeneous sound from the same group, and preceded by any consonant. Patañjali points out that non-homogeneity of /ś/ with itself would prohibit deletion of /ś/ followed by /ś/.[105]

4.4. To this difficulty, Kātyāyana offers two solutions. Here, we shall only be concerned with the first solution: "The desired result is achieved, since [/ś/] is not an /a-C/ sound."[106] This statement is given without any supporting reasons.[107] However, we have an explanation from Patañjali:

> The desired result is achieved. How? [It is achieved], since [/ś/] is not an /a-C/ sound. Why is [/ś/] not an /a-C/ sound? [Consider the following:] The articulator of stops is in contact [with the point of articulation]. [The articulator] of semi-vowels is in slight contact. [The articulator] of ūṣmans is with a gap, i.e. open. Here the word "slight" continues. [The articulator] of vowels is also open. Here the word "slight" is not continued.[108]

By subclassifying ūṣmans as īṣad-vivṛta "slightly open" and vowels as vivṛta "open," Patañjali avoids homogeneity of /i/ and /ś/. Thus /i/ cannot stand for /ś/, and hence the undesired non-homogeneity of /ś/ with /ś/ does not result.

4.5. Patañjali's subclassification of vivr̥ta "open" removes
the particular problem, but at a great cost. It makes P.1.1.10
(nājjhalau) totally redundant. If ūṣmans and vowels differ
in their internal effort, then actually there is no possibility
whatsoever of any vowel ever being homogeneous with any
consonant. Thus, there is no need for Pāṇini to make any
rule such as P.1.1.10. Kaiyaṭa realizes that Patañjali's
suggestion leads to the rejection of P.1.1.10.[109] This
realization is also shared by later grammarians like Bhaṭṭoji
Dīkṣita.[110] But some of the later texts like the Laghu-
siddhānta-kaumudī of Varadarāja adopt this subclassification
in their phonetic description.[111]

The tradition clearly attributes this subclassification
to Patañjali.[112] Actually, some later grammarians ascribe
to Patañjali a sevenfold classification of internal effort by
incorporating four subdivisions of vivr̥ta, i.e. īṣad-vivr̥ta
"slightly open," vivr̥ta "open," vivr̥ta-tara "more open and
vivr̥ta-tama "most open."[114] These distinctions are seen
also in several other Śikṣās and Prātiśākhyas.[115]

Patañjali himself uses these distinctions to avoid
homogeneity of /a/ [which is presumed to be open within
the grammar] with /e/ and /o/ which are said to be more
open.[116] There are again differences of opinion in this
respect. Nāgeśa holds that these subclassifications must
be accepted to give a phonetic explanation of why /e/ and
/o/ are not homogeneous with /ai/ and /au/.[117] Otherwise,
one must say that they are not homogeneous simply because
Pāṇini lists them separately in the Śiva-sūtras.

4.6. Some of the later commentators show a clear awareness
of the historically Pāṇinian view in this matter. Thus,
Bhaṭṭoji Dīkṣita says that ūṣmans and vowels have the same
internal effort.[118] Hari Dīkṣita warns us that we should
not believe that Pāṇini intends the distinctions given by
Patañjali.[119] Nāgeśa declares that the subclassifications
of "open-ness" are not distinctive as far as homogeneity
is concerned, and this is indicated by the fact that Pāṇini
gives P.1.1.10.[120] In one place Nāgeśa thinks that P.1.1.10
echoes Patañjali's subclassifications,[121] but later comes

36

back and says that these distictions constitute a virtual
rejection of P.1.1.10.[122]

4.7. Historically, the question we may ask is if Patañjali
invented this subclassification, or he just adopted an already
established doctrine. Franz Kielhorn says:

> Patañjali, in his comments on the vārttika: siddham
> anactvāt on P.1.1.10, appears (in the words:
> spṛṣṭaṁ karaṇaṁ sparśānām/ īsat-spṛṣṭam
> antaḥsthānām/ vivṛtam ūṣmaṇām/ svarāṇāṁ ca
> vivṛtam) to quote a Śikṣā which may have resembled
> the Āpiśali, --unless indeed the rules given by him
> should have been quoted from the Atharvaveda
> Prātiśākhya I, 29-32 (spṛṣṭaṁ sparśānāṁ karaṇam/
> īṣat-spṛṣṭam antaḥsthānām/ ūṣmaṇāṁ vivṛtaṁ ca/
> svarāṇāṁ ca)."[123]

The Āpiśali-śikṣā-sūtras which have come down to us read
as follows: spṛṣṭa-karaṇāḥ sparśāḥ/ īṣat-spṛṣṭa-karaṇā
antaḥsthāḥ/ īṣad-vivṛta-karaṇāḥ ūṣmāṇaḥ/ vivṛta-karaṇāḥ
svarāḥ/... saṁvṛto'kāraḥ/.[124] Comparing this text with
the text quoted by Patañjali, it is clear that he has not
quoted the Āpiśali-śikṣā-sūtras. There is a definite
resemblance between the text quoted by Patañjali and the
Atharvaveda Prātiśākhya. Thieme actually holds that
Patañjali is quoting the APr, and hence must be later
than the APr.[125]

It is, however, not clear if the APr exactly intends
what Patañjali's interpretation seems to speak. On the
APr I.31 (ūṣmaṇāṁ vivṛtaṁ ca), Whitney says:

> The final ca of the rule indicates, according to the
> commentators, that īsat-spṛṣṭam is also to be
> inferred from the previous rule: in the formation of
> the spirants, the organ is both in partial contact and
> open --a rather awkward way of saying, apparently,
> that its position is neither very close nor very open.[126]

The APr thus may not exactly be speaking of Patañjali's
iṣad-vivṛta, but it certainly differentiates spirants from
vowels in their internal effort.

4.8. This brings us to a new possible historical link. We
have been using the name "Atharvaveda Prātiśākhya,"
along with Thieme and others, for a text, which actually
bears the title Śaunakīyā Caturādhyāyikā, in the solitary
Berlin MS from which it was edited by Whitney. Whitney
gave it the title of APr. But new manuscripts bearing the
title "APr" have come up, which are quite different from
Whitney's APr. Important to us is the discovery of a
manuscript titled Kautsa-vyākaraṇa by Sadashiv L. Kātre,
in 1938 [ref. "Kautsa-Vyākaraṇa: A Detailed Notice,"
New Indian Antiquary, Vol. I, 1938-9, pp. 383-396].
This article gives all deviations of this Kautsa-vyākaraṇa
from Whitney's APr. Despite some minor divergences,
these two texts are identical. This is extremely important.
If this Kautsa is identical with Kautsa who is Pāṇini's
disciple [ref: Mahābhāṣya on P.3.2.108: upasedivān
kautsaḥ pāṇinim], that could substantially add to our
knowledge of the historical development of the Pāṇinian
tradition.

4.9. Hypothetically accepting Kautsa's identity as a student
of Pāṇini, we may speak of some continuous historical
development. Pāṇini did not subclassify vivṛta "open,"
and thus has composed P.1.1.10. Then came his disciple,
Kautsa, who in his Prātiśākhya did subclassify spirants
and vowels. Then, we find Kātyāyana giving two alternatives
to solve problems in P.1.1.10, i.e. a) anactvāt "since
spirants are not vowels," and b) vākyāparisamāpter vā
"incompletion of a sentence." As we shall see later, the
second alternative is based on retaining P.1.1.10, which
implies that vowels and spirants have the same effort. The
first alternative, however, distinguishes spirants from vowels.
What is not clear is the ground on which this distinction
is made. It is possible that Kātyāyana was aware of the
distinctions made by Kautsa. We may find some tentative
support to conclude that Kātyāyana knew the difference
concerning internal effort of vowels and spirants. Thieme

has almost conclusively proved the identity of Kātyāyana, the Vārttikarkāra, and Kātyāyana, the author of the Vājasaneyi Prāriśākhya [see: n. 284]. The definition of savarṇa in the VPr [see: 10.5.2] is virtually identical with P.1.1.9, and yet there is no homogeneity of any vowels with spirants, since, as Uvaṭa points out, vowels are asprṣṭa "without contact" and spirants are ardha-sprṣṭa "with halfway contact." With the same assumption, perhaps, Kātyāyana differentiated vowels and spirants in his vārttika: anactvāt on P.1.1.10. However, realizing that this is not Pāṇini's view, he offered the other explanation: vākyāparisamāpter vā. Finally, Patañjali came out with explicit discussion of this problem. Thus, this suggestion of prayatna-bheda can be ascribed to Patañjali, only in the sense that he came out with this explicit discussion for the first time in the Pāṇinian tradition.

4.10. Anyway, Patañjali does not stand alone in differentiating the internal effort of spirants from that of vowels. The Yajus recension of the Pāṇinīya-śikṣā (verse 30) considers vowels to be asprṣṭa "without contact" and spirants to be nema-sprṣṭa "with halfway contact."[127] But the preceding verse itself considers vowels and spirants to be vivṛta "open."[128] The Pāṇinīya-śikṣā-sūtras say that spirants may be considered either īṣad-vivṛta or vivṛta.[129] These sūtras which are probably of a late origin seem to record both the traditions. The Āpiśali-śikṣā-sūtras, without option, consider spirants to be īṣad-vivṛta.[130] This has prompted certain scholars to consider this Śikṣā to be post-Pāṇinian.[131] Uvaṭa's commentary on the VPr,[132] the Yājñavalkya-śikṣā[133] and the Varṇa-ratna-pradīpikā-śikṣā of Amareśa[134] consider spirants to be ardha-sprṣṭa "with halfway contact." The terms nema-sprṣṭa and ardha-sprṣṭa seem to combine the notion of the APr that spirants are both īṣat-sprṣṭa "with slight contact" and vivṛta "open." The term īṣad-vivṛta seems to have originated with Patañjali's discussion.

CHAPTER V

A NON-TRADITIONAL APPROACH

5.1. By a non-traditional approach, I intend the following
axioms: a) A rule can apply to itself, and b) a rule can
apply to another rule, even if the first presupposes the
second. In the present context, this would mean that
P.1.1.69 applies to itself, and it also applies to P.1.1.10.
In the Pāṇinian tradition, no one has adopted this view,
which amounts to a criticism of the notion of vākyāparisamāpti
"incompletion of a sentence," a procedure adopted by
Kātyāyana and the rest of the Pāṇinian tradition. The
details of this procedure will be discussed in the following
chapter, but basically it says that P.1.1.69 cannot apply
to itself, nor to P.1.1.10. S. P. Chaturvedi (1933) launched
a heavy criticism of this traditional way of interpreting
Pāṇini. He says that the procedure of vākyāparisamāpti
"which is propounded by Bhāṣyakāra Patañjali...should be
regarded as ekadeśi-bhāṣya and not as a siddhānta-bhāṣya"
[Chaturvedi (1933), p. 168]. He further says:

> This doctrine cuts at the very root of the Pāṇinian
> system and its acceptance will lead to many compli-
> cations. The Aṣṭādhyāyī of Pāṇini is a whole inter-
> connected work. For the formation of a single word,
> we have to apply sūtras from various parts of the
> work. Each sūtra should be interpreted in the light
> of what we know from the other sūtras. It is wrong
> to maintain that at the time of interpretation of
> nājjhalau-tulyāsya-prayatnaṁ savarṇam (I.i.9, 10),
> we connot take help from the sūtra aṇuditsavarṇasya
> cāpratyayaḥ (I.i.69), its meaning being still unknown
> to us according to vākyāparisamāptinyāya. When we
> interpret the pratyāhāra 'ac' in nājjhalau, we should
> do so as we interpret other pratyāhāras in the
> Aṣṭādhyāyī. [Chaturvedi (1933), p. 170]

39

40

With this argument, Chaturvedi criticizes Bhaṭṭoji Dīkṣita
and proposes that either we should apply P.1.1.69 to
P.1.1.10 and abandon vākyāparisamāptinyāya or accept the
subclassification of vivṛta "open" [Chaturvedi (1933), p. 173].
p. 173]. As we shall later discuss in detail, Chaturvedi's
argument is wrong on several counts. The vākyāparisamāpti
precedes Patañjali and is found in Kātyāyana, who uses it
in many contexts as the only explanation of apparent problems
in Pāṇini's rules. [Sec. 6.14-15]

No other scholar has openly accepted a view like
Chaturvedi's, but there are many cases of implied acceptance.
For instance, S. C. Vasu translates P.1.1.69 as:

The letters of the pratyāhāra a-Ṇ, i.e. the vowels
and semi-vowels, and a term having u for its indicatory
letter refer to their own form as well as to their
homogeneous letters, except when they are used
as pratyayas.[135]

With this goes the comment:

The pratyāhāra a-Ṇ in this sūtra includes all the
vowels (underlining mine) and liquids.[136]

This is clearly applying P.1.1.69 to P.1.1.69. Let us
also glance at Vasu's translation of P.1.1.10.

There is, however, no homogeneity between vowels
and consonants.[137]

Colebrook, Böhtlingk and Renou have exactly parallel
translations.[138] The term /a-C/ in P.1.1.10 cannot mean
all vowels, unless P.1.1.69 is applied to P.1.1.10.
Without its application, /a-C/ would stand only for /a/,
/i/, /u/, /ṛ/, /ḷ/, /e/, /o/, /ai/ and /au/ as they are
listed in the Śiva-sūtras. This would indicate that these
scholars have applied P.1.1.69 to P.1.1.10.

5.2. Recently, S. D. Joshi has provided some discussion
of P.1.1.69 and its interpretation. Kaiyaṭa quotes an

older maxim: grahanān-grahane grahanābhāvah, which is
rendered by S. D. Joshi as: "(One can) not (apply the
principle of) grahaṇa (i.e. P.1.1.69) to the term /a-Ṇ/
in the grahaṇa rule (itself)."[139] In a footnote to this, he says:
"The pratyāhāra /a-Ṇ/ includes all vowels (underlining
mine), semi-vowels and /h/."[140] This is quite similar to
Vasu's comment and implies that Joshi is applying P.1.1.69
to itself. In fact, S. D. Joshi is quite aware of the exact
meaning of the traditional maxim and of some of the effects
of not accepting it. This is what he has to remark:

> The quotation is probably from the lost part of
> Bhartṛhari's Mahābhāṣya-Dīpikā. The term /aṆ/
> in P.1.1.69 refers only to those vowels which are
> included in the pratyāhāra /aṆ/. The rule P.1.1.69
> states that these vowels represent their homorganic
> varieties also. Now if P.1.1.69 is applied in
> P.1.1.69 itself, it would give the meaning that the
> vowels included in /aṆ/ and their savarṇa (homorganic)
> varieties stand for their savarṇa varieties. This
> means that the vowels long /ā/ etc. also represent
> the corresponding short varieties.[141]

The reader is not sure if S. D. Joshi prefers applying the
rule to itself, as his footnote would have us believe, or he
is simply explaining what would happen if the rule applies
to itself. In view of this confusing state of affairs, we need
to go into a detailed examination of this alternative. Some
of the alleged examples of a rule applying to itself are
P.1.3.3 (hal-antyam) and P.7.3.119 (ac ca gheh). We shall
discuss these cases critically and study the question of a
rule applying to itself in more general terms.

5.3. P.1.3.3 (hal-antyam) literally means: "The final
hal is termed it." Does the term hal in the rule stand for
the Śiva-sūtra: /ha-L/, or does it represent the shortform
/ha-L/? The rule which forms shortforms, i.e. P.1.1.71
(ādir antyena sahetā), says: "The initial sound, along with
the final it sound, stand for the initial sound and the sounds
which are in between." This rule presupposes the definition
of it, i.e. P.1.1.3. On the other hand, if /ha-L/ in P.1.3.3

is to be a shortform, it presupposes P.1.1.71. This is a
case of interdepencence.[142] Kātyāyana's final solution to
this problem runs as: "[The desired result is established]
alternatively by [considering hal in P.1.3.3 to be] a mention
[of both the Śiva-sūtra: /ha-L/ and the shortform /ha-L/]
by a single-remainder transformation (ekaśeṣa)."[143]
Patañjali says that hal in the rule, by single-remainder,
stands for two words of the same shape.[144] For instance,
the dual rāmau is derived, in Pāṇini's system, from two
singulars, i.e. rāmaḥ and rāmaḥ, which have the same
phonetic shape and the same case, by P.1.2.64 (sarūpāṇām
ekaśeṣa eka-vibhaktau). Kaiyaṭa believes that the first
word /ha-L/ is a genitive Tatpuruṣa compound meaning "/l/
near /ha/" (hasya laḥ). The second word /ha-L/ is a
shortform.[145] Thus the first interpretation of P.1.3.3 is:
"The sound near /ha/, /l/, is it." Then by P.1.1.71, we
can form the shortform /ha-L/ beginning with /h(a)/ in
the Śiva-sūtra: /h(a)/ /y(a)/ /v(a)/ /r(a)/ /T/ and ending
in the marker /L/ of the Śiva-sūtra: /h(a)/ /L/. This
covers all consonants. With this shortform /ha-L/. we
come back to P.1.3.3. Now the rule means that all consonants
occurring at the end of given units are termed it. Nāgeśa
doubts Kaiyaṭa's interpretation of genitive compound,[146]
and thinks that Patañjali has actually opted for repeating
the rule. This is the interpretation of Bhaṭṭoji Dīkṣita.[147]

This repetition of the rule and separate interpre-
tation of the two instances of P.1.3.3 is designed to avoid
mutual dependence with P.1.1.71, as well as for avoiding
the so-called application of P.1.3.3 to itself. What we have
are two rules with the same wording, and not one and the
same rule being applied to itself. It is clear that the two
interpretations of P.1.3.3 do not apply to each other, and
also they do not apply within themselves.

5.4. Another alleged instance is P.7.3.119 (ac ca gheḥ).
In the rule, we have the form gheḥ, genitive singular of
the stem ghi-. The technical term ghi- stands for nominal
stems ending in short /i/ and /u/, excluding sakhi- and
those nominals which are termed nadī (P.1.4.7 (śeṣo ghy
asakhi)). The word ghi- itself fulfills all the conditions for

the technical designation g̲h̲i̲ -. The commentators admit
that only because g̲h̲i̲ - is termed g̲h̲i̲ -, can we have g̲u̲n̲a̲
replacement of /i/ in g̲h̲i̲ in the form g̲h̲e̲ḥ by P. 6. 1. 1̅1̅1̅
(g̲h̲e̲r̲ ṅi̲ti̲). [148] Thus the technical term g̲h̲i̲ applies to
g̲h̲i̲ - itself.

5. 5. This is quite different from saying that a rule applies
to itself. We have to make a distinction between the
expression of a rule and its contents. If the theoretical
contents of a rule apply to themselves, then it is a case of
a rule applying to itself. However, if the contents of a rule
apply to the expression of itself, then this is a different kind
of dependence. As linguistic utterances, there is actually
no difference between the expression of a grammatical rule
and a sentence in a drama. The traditional grammarians
have squarely dealt with this problem. For instance, in
terms of contents, P. 6. 1. 101 (akaḥ s̲a̲v̲a̲r̲ṇe̲ dīrghaḥ):
"If an /a-K/ sound is followed by a homogeneous sound,
both are replaced by a long variety" is dependent on P. 1. 1. 9
(tu̲l̲y̲ā̲s̲y̲a̲ -p̲r̲a̲y̲a̲t̲n̲a̲ṁ s̲a̲v̲a̲r̲ṇa̲m̲) which defines homogeneity.
However, in the expression of P. 1. 1. 9, we have a s̲a̲n̲d̲h̲i̲
of t̲u̲l̲y̲a̲ and ā̲s̲y̲a̲, which depends on the contents of P̅.̅ 6̅.̅ 1̅.̅ 101.
Bhaṭṭoji discusses this example and points out that as
linguistic utterances illustrating a certain grammatical
feature, there is no difference between the expressions
tu̲l̲y̲ā̲s̲y̲a̲ and d̲a̲ṇ̲d̲ā̲d̲h̲a̲k̲a̲. [149] Thus, P. 7. 3. 119 is not an
example of a rule applying to itself.

5. 6. Some grammarians held that s̲a̲n̲d̲h̲i̲ rules do not
apply to the Śiva -sūtras because the s̲a̲n̲d̲h̲i̲ rules have yet
to come into being. The expression of s̲a̲n̲d̲h̲i̲ rules depends
on shortforms, which depend on the Śiva -sūtras. Nāgeśa
points out that this is a false argument. The rule which
applies in u̲p̲e̲n̲d̲r̲a̲ should also apply in /a-i-u-Ṇ/. The
reason there is no s̲a̲n̲d̲h̲i̲ is that it would create a lot of
confusion in identifying the sounds in the list. This is the
real reason. [150]

5. 7. We have already considered the undesirable effects
of applying P. 1. 1. 69 to P. 1. 1. 10, in Sec. 4. 2-3. Here we
shall discuss the effects of applying P. 1. 1. 69 to itself.

44

We already have some hints from S. D. Joshi. Here we
have also to consider P. 1. 1. 70 (taparas tatkālasya). This
rule says: "A sound marked with /T/ stands only for the
homogeneous varieties of the same quantity." If we do
not apply P. 1. 1. 69 to itself, then we have the following:

[A]   [1] /a/ stands for eighteen varieties.
        [2] /ā/ stands for itself.
        [3] /aT/ stands for six short varieties.
        [4] /āT/ stands for six long varieties.

If we apply P. 1. 1. 69 to itself, then we have the following:

[B]   [1] /a/ stands for eighteen varieties.
        [2] /ā/ stands for eighteen varieties.
        [3] /aT/ stands for six short varieties.
        [4] /āT/ stands for six long varieties.

This shows the difference between the two alternatives.
The alternative [B] is very much like Kātyāyana's theory
of universal-mention. If /ā/ or any non-/a-Ṇ/ sound could
represent its homogeneous varieties, that creates problems
which are common with Kātyāyana's universal-mention.
[cf. Sec. 3.18].

5.8. There are also other implications of applying P. 1. 1. 69
to itself. In this alternative, the difference between /a-Ṇ/
sounds and non-/a-Ṇ/ sounds is obliterated. The same
would apply to sounds marked with /U/, and sounds
represented by sounds marked with /U/. Non-/a-Ṇ/ vowels
and semi-vowels would be capable of representing their
homogeneous sounds. Similarly, sounds marked with /U/
and sounds represented by such sounds would also be capable
of representing their homogeneous sounds. Just as /ā/
could represent all the eighteen varieties, similarly /kh/
could also represent /k/, /kh/, /g/, /gh/ and /ṅ/. The
same would happen to other series of stops.

5.9. Though this is obviously not what Pāṇini intended,
such an implication seems to follow from V. N. Misra's
translation of P. 1. 1. 69:

> A member of the /a-Ṇ/₂ group (vowel, semi-vowel
> and /h/) or of the groups /kU/, /cU/, /ṭU/, /tU/,
> /pU/, stands for itself as well as for its homorganic
> correspondents, but only when it is not a component
> of a suffix.[151]

Misra speaks of the group /a-Ṇ/₂ as "vowel, semi-vowel
and /h/" and not just sounds as listed in the Śiva-sūtras.
Thus, he is certainly applying P.1.1.69 to itself. Misra
goes even further. The other part of his translation could
mean two things. It may mean that each of the groups /kU/
etc. stands for itself and its homorganic correspondents,
or any member of any of these groups stands for itself and
for its homorganic correspondents. Both of these are
inaccurate statements.

5.10. All the above discussed implications of applying
P.1.1.69 to itself would come to mean that all vowels,
semi-vowels and stops are capable of representing their
homogeneous varieties. If this were Pāṇini's intention,
he could have formulated the shortform /a-Y/ to cover all
these sounds and could have formulated P.1.1.69 as: ay
savarṇasya cāpratyayaḥ. Actually such an interpretation of
P.1.1.69 would seriously put Pāṇini's entire grammar in
jeopardy. This searching analysis would show that the
alternative of applying P.1.1.69 to itself is neither historically
Pāṇinian, nor theoretically effective, and hence must be
abandoned.

CHAPTER VI

BACK TO PĀṆINI

6.1. After considering the un-Pāṇinian alternatives, we now come back to an interpretation, which in all probability is Pāṇinian. On P.1.1.10, Kātyāyana first presents a prima facie view that P.1.1.69 applies to P.1.1.10. The problems resulting from this have been discussed in Sec. 4.2. To solve these problems, Kātyāyana offers two solutions. The first solution and its interpretation by Patañjali are also discussed in Sec. 4.3-4. The second solution given by Kātyāyana initiates the procedure of vākyāparisamāpti "incompletion of a sentence." Kātyāyana says: "[The desired result that /ś/ is homogeneous with itself, and is not homogeneous with /i/ is established] alternatively by [adopting the procedure of] incompletion of a sentence."152 On this Patañjali gives the following explanation:

> What is this incompletion of a sentence? First
> there is the teaching of sounds [in the Śiva-sūtras].
> [The definition of] the term it [in P.1.3.3] follows
> the teaching of sounds. [The definition of] a
> pratyāhāra "shortform" [i.e. P.1.1.71] follows
> [the definition of] the term it. [The definition of]
> the term savarṇa "homogeneous" [in P.1.1.9]
> follows [the definition of] shortforms. [The
> definition of] savarṇa-grahaṇa "homogeneous-
> representation" [in P.1.1.69] follows [the definition
> of] the term "homogeneous." By this complete and
> interlinked sentence, there is representation of
> homogeneous sounds elsewhere [but not within any
> link of this sentence].153

The Pāṇinian procedure of homogeneous-representation is built up of five stages, each of which is dependent on the

47

previous stage, and all the five stages are linked together like clauses of a complex sentence. To some extent, this linking could be compared with an inferential process, where the product of a previous inference becomes the premise of the next inference. The Naiyāyikas consider stages within an inference to be like clauses of a sentence, and hence the expression of a full inference used to convince others (parārtha) is called a "five-limbed sentence" (pañcāṅgika-vākya).[154] Representation of homogeneous sounds is the cumulative effect of this ordered sequence of rules, and the procedure does not apply to any rule within the closed group.

6.2. Patañjali says that the definition of the term savarṇa "homogeneous" follows the definition of shortforms. This is at first confusing. P.1.1.9 (tulyāsya-prayatnam savarṇam) does not involve any shortforms, and does not depend on the definition of shortforms (P.1.1.71). However, as Bhaṭṭoji Dīkṣita points out, P.1.1.10 needs to be interpreted before P.1.1.9. P.1.1.10 (nājjhalau) literally means: "The sounds denoted by the shortforms /a-C/ and /ha-L/ are not mutually homogeneous." This rule involves two shortforms. According to the Pāṇinian tradition, an exception rule is to be interpreted before interpreting the general rule. The same sequence belongs to their application.[155] If we first have mutual homogeneity of /a-C/ and /ha-L/ sounds by P.1.1.9, and then deny it by p.1.1.10, it would be like asking a man who has already eaten not to eat.[156] Thus, the definition of homogeneity indirectly depends on the definition of shortforms. We cannot interpret P.1.1.69 before interpreting P.1.1.9, since we cannot interpret the procedure of homogeneous-representation before defining "homogeneous." This ordered dependence of rules is the essence of incompletion of a sentence, for any rule within the structure.[157]

6.3. The reason why P.1.1.69 cannot apply to P.1.1.10 is that we cannot understand P.1.1.69 before interpreting P.1.1.9, and P.1.1.9 cannot be interpreted before inter-preting P.1.1.10. Thus, in a way, P.1.1.69 does not exist, while interpreting P.1.1.10.[158] Hari Dīkṣita points out that what counts is the logical or cognitive sequence of

rules in terms of their dependency requirement.[159] Thieme explains this situation:

> Bezüglich der in Pān.1.1.10 (<u>nājjhalau</u> "ein '<u>ac</u>' und ein '<u>hal</u>' sind nicht gleichlautig") genannten <u>pratyāhāra</u> hat zwar 1.1.69 nicht statt, da erst nachdem die Definition der 'Gleichlautigkeit' vollständig gegeben ist, der Ausdruck <u>savarṇasya</u> in 1.1.69 verstanden werden kann. An anderen Stellen der Grammatik, wo ein <u>pratyāhāra</u> genannt wird, hat jedoch 1.1.69 statt, und nennen die in den <u>pratyāhāra</u> enthaltenen Laute auch ihre 'gleichlautigen' Partner, z.B. das in <u>akaḥ</u> in 6.1.101 enthaltene /i/ auch langes /ī/.[160]

Thus, P.1.1.69 does not apply to P.1.1.10.

6.4. Similarly, P.1.1.69 cannot apply to itself. Bhartṛhari explains the logic behind this:

> However, here in P.1.1.69, there is no homogeneous-representation by P.1.1.69. What is the reason? In this rule (i.e. P.1.1.69), the relation of a sound with the designated items (i.e. homogeneous sounds) is not yet established. [Thus] the rule of homogeneous-representation does not apply to the shortform /a-Ṇ/ in the same rule, because [a] the procedure of representation has not yet come about, [b] there is no other rule of such representation, and [c] an action [of a thing] is contradicted with respect to the same [thing].[161]

Thus, while interpreting a statement, we cannot take for granted its own meaning. Otherwise, we would be involved in the fallacy of circularity. Finally, Bhaṭṭoji Dīkṣita points out two historical aspects of this procedure. In this procedure, both P.1.1.10 and P.1.1.69 are necessary, and vowels and spirants have the same internal effort.[162] Compared to other alternatives, these aspects make this alternative more historically true to Pāṇini's system.

6.5. At this point, we have to dive deeper into some of
the most fundamental aspects of Pāṇini's theory of homo-
geneity. He felt the necessity of adopting this procedure
of homogeneous-representation, because the features of
pitch, nasality and quantity are basically distinctive. On
P.1.1.1 (vṛddhir ād-aic), Kātyāyana says: "The marker
/T/ is attached to /ā/ [In P.1.1.1] to obtain [representation
of] homogeneous sounds [of the same quantity]. Since
pitch is a distinctive feature, [the non-/a-N/ sound /ā/
cannot by itself stand for any of its homogeneous sounds]."[163]
The sound /ā/ as uttered by Pāṇini must have had some pitch,
and it must be distinct from /ā/ sounds with a different
pitch. Thus, /ā/ with a certain pitch, by itself, cannot
stand for /ā/ with a different pitch. Since /ā/ is a non-/a-N/
sound, P.1.1.69 cannot help it. Thus, addition of the marker
/T/ is the only solution.

Patañjali, on the other hand, holds a different view.
He counters Kātyāyana's explanation with the following
comment:

> The only correct view is that [for Pāṇini] the
> features [of pitch etc.] are not distinctive. What
> is the basis for such a view? The reason is that
> [Pāṇini] specifically states a certain vowel to be
> highpitched in P.7.1.75 (asthi-dadhi-sakthy-akṣṇām
> anaṅ udāttaḥ). If the features were distinctive,
> then he might have simply uttered the highpitched
> vowel.[164]

If these features are not distinctive, it does not matter
with what feature Pāṇini pronounced /ā/ in P.1.1.1; it will
still represent other varieties of /ā/, without P.1.1.69.
Patañjali clearly says: "Thus, the marker /T/ in P.1.1.1
is simply to remove doubts,"[165] and has no prescriptive
function as interpreted by Kātyāyana.

6.6. Despite Patañjali's arguments, Kātyāyana's view
has a richer significance. It represents the historical
truth as far as Pāṇini's original system is concerned.
Pāṇini needed homogeneous-representation, because basically,

pitch, nasality and quantity are distinctive. This has been
brought out by Kātyāyana: "Because of the difference of
[sounds on account of] pitch, nasality and quantity, [Pāṇini
made the rule that] an /a-Ṇ/ sound represents its homo-
geneous sound."[166] Kātyāyana consistently maintains his
view throughout. A sound cannot stand for another sound
with different features, unless such a capacity is invested
by P.1.1.69, or by the marker /T/. Bhartṛhari testifies
that this was Pāṇini's view.[167] The later tradition mostly
follows Patañjali's view, but some grammarians have
exhibited a historical attitude. Nāgeśa points out that
Pāṇini's rule P.1.1.69 is made with a view that features
are distinctive and that a sound basically stands only for
itself (vyakti-vāda).[168] Nīlakaṇṭha Dīkṣita says that the
maxim abhedakāḥ guṇāḥ "Features are not distinctive" is
not universally valid, because of Pāṇini's inclusion of the
/a-Ṇ/ sounds in P.1.1.69.[169]

6.7. In fact, both the so-called opposite views do not
contradict each other, if understood in a specific manner.
Pāṇini starts with the real pronounced sounds of the object
language, where the features of pitch, quantity etc. are
phonemically distinctive. For instance, the final sounds in
śyāma and śyāmā are phonemically different. Similarly,
the two Vedic words, i.e. bráhman and brahmán are
phonemically distinct from each other. This is the level
Kātyāyana is talking about, when he considers these features
to be distinctive.

However, those features which are phonemically
distinctive are not necessarily so in morphophonemics.
For instance, both /a/ and /ā/ in śyāma and śyāmā take
the same guṇa replacement /e/, if they are followed by /i/
in iti, yielding śyāmeti. Thus, the feature of quantity is
not distinctive with reference to this morphophonemic
operation. Similarly, in a large number of rules in Pāṇini's
grammar, these features are morphophonemically non-
distinctive. This is what Patañjali intends to say. Nāgeśa
rightly interprets Patañjali's view to mean that the features
like pitch do not cause non-homogeneity of sounds.[170]
Thus, Kātyāyana's view belongs to a pre-homogeneity
stage, while Patañjali's view, in this moderate

interpretation, belongs to a post-homogeneity stage.

In fact, Patañjali seems to agree with Kātyāyana, when he says: "The designation 'homogeneous' is founded on the difference [between sounds, in features other than the point of articulation and internal effort]. If it were to apply [to sounds] where there is total identity [of features], the designation 'homogeneous' would serve no purpose."171

6.8. Thus, there is no contradiction in saying that a feature such as pitch is phonemically distinctive, while it is morpho-phonemically non-distinctive. This has been achieved by Pāṇini through his conception of savarṇa "homogeneous" and savarṇa-grahaṇa "homogeneous-representation." Each /a-Ṇ/ sound in the Śiva-sūtras is phonemically distinct from other homogeneous sounds, because of the difference of pitch, nasality and quantity. However, through the procedure of homogeneous-representation, it becomes morphophonemically non-distinct from other homogeneous sounds. Thus a morphophonemic operation prescribed with respect to /a/ also applies to /ā/, unless prevented by /T/.

When Pāṇini wanted certain sounds to be marked with distinct features even in morphophonemics, he used special devices like the condition apratyayaḥ "non-affixal" in P.1.1.69, the marker /T/ defined by P.1.1.70 to limit the quantity of the represented homogeneous sounds, and specific mention of accentual features in rules such as P.7.1.75. Thus, homogeneous-representation is a process of selecting features which are common to a group of sounds undergoing identical morphophonemic operations, and of keeping aside the phonemically distinctive features which are morphophonemically not pertinent.

6.9. After this question, we need to investigate a still deeper question. This is the basic notion of identity and difference between sounds. Can a sound /a/, say low-pitched, non-nasal and short, stand for another low-pitched, non-nasal and short /a/, without the help of P.1.1.69? For instance, is /a/ in /a/-/i/-/u/-/Ṇ/ able to cover /a/ in P.7.4.32 (asya cvau), without P.1.1.69? Are the

two /a/-s identical or are they different? P.1.1.69 is
prescribed with reference to /a/ in /a/-/i/-/u/-/Ṇ/, and
if this /a/ is different from /a/ in P.7.4.32 (asya cvau),
then P.1.1.69 may not apply to /a/ in P.7.4.32. Kātyāyana,
on the first Śiva-sūtra, does foresee this objection: "In the
secondary references, there would be no representation of
homogeneous sounds, because they might not be regarded
to be /a-Ṇ/ sounds." In the course of a long winding
discussion, Kātyāyana proposed three solutions to this
problem. They are as follows:

[A] The desired result is established, since there is only
     one single real /a/ sound.[173]
[B] The desired result is established, since there is
     universal-mention.[174]
[C] [The desired result is established] alternatively by
     relying on identical features [of different sounds].[175]

The explanation [B], the procedure of universal-mention,
has already been discussed at length. It is historically
un-Pāṇinian, since it constitutes a total rejection of
P.1.1.10 and a partial rejection of P.1.1.69.[176] In what
follows, we shall discuss the other two alternatives and
search for a clue in Pāṇini's rules.

6.10. ONTOLOGICAL IDENTITY THEORY. The alternative
[A] says that the sound /a/ in /a/-/i/-/u/-/Ṇ/ and in
P.7.4.32 is a numerically identical single real sound, which
is manifested time and again. The same real sound appears
in the Śiva-sūtra, secondary references and verb-roots etc.[177]
This view is based on the dichotomy between a real eternal
sound, and its various non-eternal manifestations. In order
that two manifestations should represent the same real
sound, they must have identity with respect to all distinctive
features. However, Kaiyaṭa says that the difference of pitch
belongs to the manifesting sounds and not to the real sound.[178]
It is doubtful if Kātyāyana meant this. The arguments
offered by Kātyāyana to defend identity of a real sound through
different manifestations are very similar to those found in
Śabara.[179] It is possible that Kātyāyana developed this
theory of identity of a real sound on the basis of Vyāḍi's

doctrine of <u>Vyakti</u>-<u>vāda</u>, which he quotes extensively. The standard example is that of the sun. The same sun at the same time happens to be seen in different places. The other example is that of Indra. Indra, being invoked simultaneously by a hundred different sacrificers, appears in all those different places at the same time. These arguments are used to extablish the unitary character (<u>ekatva</u>) and eternality (<u>nityatva</u>) of the real sounds. The manifesting sounds, however, are infinite and are non-eternal. Thus, there are eighteen real /a/ sounds.[180] There is no necessary relation between eternality and unitary character of a sound. Bhartṛhari says that there were some philosophers who held that sounds were eternal and unitary, while others held that they were unitary but not eternal.[181]

Kaiyaṭa is aware that P.1.1.69 is formulated on the basis of <u>vyakti</u>-<u>vāda</u> "doctrine of individual."[182] Nāgeśa also acknowledges that this is the solution for applying P.1.1.69 to /a/ in P.7.4.32 (<u>asya</u> <u>cvau</u>).[183] This doctrine of eternal real sound-individuals, like the doctrine of eternal sound-universals, is dependent on a great deal of metaphysical argumentation. Kātyāyana probably took it from the early school of Vyāḍi's <u>Mīmāṁsā</u>, and it is later seen adopted with much more sophistication in Jaimini's <u>Mīmāṁsā</u>.

6.11. FEATURAL IDENTITY THEORY. Kātyāyana also presents the opposite doctrine, namely that /a/ in /a/-/i/-/u/-/Ṇ/ and in P.7.4.32 are actually two different sounds, and that each instance constitutes a different sound. The two /a/ sounds have to be different sounds, since they could be separated by time, by other sounds and be simultaneously in different places.[184] Patañjali gives the example <u>daṇḍa</u> <u>agram</u> to show two /a/ sounds separated by time, and the example <u>daṇḍaḥ</u> to show two /a/ sounds separated by other sounds. If/a/ were only one real sound, it could not be seen simultaneously in different words. Devadatta cannot be simultaneously in the cities of Srughna and Madhurā.[185] Though /a/ sounds in /a/-/i/-/u/-/Ṇ/ and P.7.4.32 are different sounds, they do not differ in any distinctive features, and hence are featurally identical with each other. Though there is no real identity, as in the

previous view, still there is featural identity. On the basis
of this featural identity, both are considered to be /a -N̩/
sounds. The examples given by Patañjali are very interesting.
One of the examples is: "We eat the same rice [here] ,
which we used to eat in the Magadhas."[186] Obviously it is
not the same rice, but the varieties of rice do not differ in
any essential features. Bhartṛhari further clarifies the
philosophical basis of this alternative:

> How is this a solution? Some grammarians explain
> as follows: Even if there is no universal property
> (ākṛti), still there is no problem. Just as there is
> no universal property in different coins; but you have
> a coin in the city of Mathurā and it is still an item
> of money.[187]

In terms of grammar, this means that a low-pitched, short,
non-nasal /a/ naturally covers /a/ with the same features.
This view does not presume any universals. It also does not
presume eternal sound-individuals. Thus, it is philosophically
a non-commital view, and depends more on common sense.
This featural identity is much more exacting than the
conditions of homogeneity. Homogeneity requires identity
of only two distinctive features, while the argument here
requires total featural identity. The sounds with such total
identity of distinctive features may, however, differ in
features such as speed (vṛtti). Features like these are
considered to be phonemically non-distinctive by Kātyāyana.[188]

6.12. There are certain hints in Pāṇini's grammar which
indicate that Pāṇini favoured the non-ontological alternative
of total featural identity (rūpa-sāmānya), instead of committing
himself to either eternal sound-individuals or eternal sound-
universals. The rule P.1.1.68 (svaṁ rūpaṁ śabdasyāśabda-
saṁjñā) says that a word in grammar stands for its own form
or phonetic shape (rūpa), and not for its conventional meaning,
unless it is a technical term in grammar (śabda-saṁjñā).
Here, Pāṇini has utilized the notion of rūpa "phonetic shape
or form" of a word. Pāṇini also uses the notions of sarūpa
"with identical phonetic shape" and asarūpa "with different
phonetic shape." [P.1.2.64 (sarūpāṇām ekaśeṣa eka-

vibhaktau) and P.3.1.94 (vā'sarūpo'striyām)]. The words
rāma₁ "Rāma, the son of Daśaratha" and rāma₂ "Paraśurāma,
the son of Jamadagni" differ in meaning and yet they are
sarūpa "with identical shape." However, rāma and ramā
are asarūpa "with different phonetic shape." Similarly
the affixes /aN/ and /Ka/ are sarūpa, because markers do
not cause difference in the phonetic shape of the affix. In
all these cases, the features of quantity etc. are distinctive.
Thus, /á/ and /á/ are sarūpa "with identical phonetic shape,"
but /á/ and /ā̃/, or /á/ and /ā̃/ are not with identical
phonetic shape. Thus, we may say that if two sounds are
sarūpa "with identical phonetic features," then we do not
need homogeneous-representation for one to cover the other.
This is the direct implication of P.1.1.68. However, if
two sounds are asarūpa "without having all identical phonetic
features," and if they have the same point of articulation and
internal effort, then they are homogeneous with each other,
and by the procedure of homogeneous-representation
(P.1.1.69) one may cover the other. There seem to be thus
two principles in Pāṇini's grammar, i.e. sārūpya "total
featural identity" and sāvarṇya "homogeneity, or identity of
two features."

This may indicate that Kātyāyana's third alternative
in fact represents the view held by Pāṇini. This is also a
justification for Kātyāyana's view that, in Pāṇini, the features
of quantity etc. are basically distinctive, and hence Pāṇini
needed the procedure of homogeneous-representation.[189]
Kātyāyana says that difference in speed (vṛtti) does not
affect duration of real sounds (varṇa), which are fixed in
their duration (avasthitāḥ).[190] This indicates that the
difference in quantity does differentiate sounds from one
another, while speed does not. This is clearly understood
by Kaiyaṭa who says that short, long and extra-long sounds
are basically different sounds, and are manifested by different
physical sounds. Hence, the difference in quantity is real
difference.[191] Kumārila, in his Śloka-vārttika, quotes
this view: "Some held that [short], long and extra-long
are in fact different sounds (varṇāntaratvam evāhuḥ kecid
dīrgha-plutādiṣu)."[192]

6.13. Bhartṛhari has developed further the philosophy of
language, which is seen only in its infancy in the works of
Kātyāyana and Patañjali. However, Bhartṛhari sometimes
soars beyond the empirical grammatical conception of
language. Bhartṛhari says that the real sound (sphoṭa) in
/a/, /ā/ and /ā3/ is the same.[193] The duration-difference
pertains to the primary manifesting sounds (prākṛta-dhvani),
and not to the real sound (sphoṭa). However, the duration-
difference of the primary manifesting sounds is imposed
(upacaryate) on the real sound. The difference in speed is
attributed to secondary manifesting sounds (vaikṛta-dhvani),
which are prolongations of the primary manifesting sounds.
The difference of speed is not imposed on the real sound.
Bhartṛhari also notes that some thinkers identified the level
of real sounds with what he considers to be primary
manifesting sounds. In that case, the short, long and extra-
long sounds are different real sounds. This seems to be
the view of Kātyāyana and, perhaps, of Pāṇini also.

On the level of empirical linguistics, however,
Bhartṛhari's views are not in any real contradiction with
Kātyāyana. In fact, Bhartṛhari's real sound (sphoṭa) stands
on a supra-mundane level and is not a part of analytical
grammar. The level of analytical grammar is reflected in
Bhartṛhari's primary manifesting sounds, whose distinctions
of quantity are imposed on the timeless real sound. This
imposition has a functional value in grammar. It shows that
these features of quantity etc. are not distinctive on the
supra-mundane level of real sounds, but are distinctive on
the level of analytical grammar. On the other hand, the
distinctions of speed, belonging to secondary manifesting
sounds, are not imposed on the real sound. This shows that
they are not distinctive for analytical grammar. Thus, there
may be a difference between Bhartṛhari and Kātyāyana on
the level of sphoṭa "real sounds," but they fully agree on
the fact that features such as quantity are basically
distinctive in Pāṇini's grammar.

6.14. This procedure of Pāṇinian homogeneous-representation
radically differs from Kātyāyana's proposal for universal-
mention. In universal-mention, a term, by nature, stands

for the type or universal, while Pāṇini lists the sounds and then states the rule P. 1. 1. 69, whereby the sounds listed are terms standing both for themselves and sounds homogeneous with them. Thus, we have a basic division of sounds, i.e. a) sounds which are directly listed in the Śiva-sūtras, and b) sounds which are represented by the listed sounds. Only the listed /a-Ṇ/ sounds and consonants marked with /U/ stand for their homogeneous sounds, while the represented sounds (i.e. non-/a-Ṇ/ sounds) are not capable of representing their homogeneous sounds. Thus, /a/ stands for all the eighteen homogeneous sounds, while /ā/ stands for itself. Here "itself" naturally covers those varieties or instances which are totally identical in distinctive features with /ā/. In a number of instances, Kātyāyana shows that the non-/a-Ṇ/ sounds in Pāṇini just stand for themselves. These are some of the cases:

[A] On P. 1. 1. 1 (vrddhir ād-aic), Kātyāyana says that the marker /T/ added to /ā/ is necessary for the coverage of homogeneous varieties of the same quantity, since pitch is distinctive, and without /T/, /ā/ would not cover varieties differing in pitch. 194

[B] The Śiva-sūtra /a/-/i/-/u/-/Ṇ/ contains an open (vivrta) /a/. In P. 8. 4. 68 (a a), open /a/ is replaced with a closed /a/. The second /a/ being a closed /a/ is not an /a-Ṇ/ sound. Kātyāyana is afraid that this closed /a/ might not cover any homogeneous varieties. To resolve this problem, he proposes that /T/ should be added to this closed /a/, so that it can cover six short closed varieties. 195

[C] Kātyāyana points out that /ā/ in P. 7. 2. 84 (astana ā vibhaktau) which is a substitute for /n/ in astan is a non-/a-Ṇ/ sound and hence it cannot represent its nasal homogeneous varieties. Thus, there is no undesired possibility of /n/ being substituted by a nasal /ā/. 196

All these cases show that for Kātyāyana the non-/a-Ṇ/ sounds in Pāṇini are incapable of representing their homogeneous sounds, and this is the result of the procedure of Vākyāparisamāpti.

6.15. In these cases, Kātyāyana is not proposing a new
theory of his own, but is trying to answer objections against
Pāṇini by explaining Pāṇini's own position. Even the addition
of /T/ proposed in [C] above is in accordance with the
procedure of Vākyāparisamāpti. Many of the Vārttikas of
Kātyāyana are not codanās "objections" or "new injunctions,"
but are rather anvākhyānas, in Thieme's words, "explanation(s)
of the purpose of Pāṇini's rule as given by a teacher to a
student, who left to himself, might or might not have missed
the point."[197] For a historical insight into the Vārttikas
of Kātyāyana, Thieme proposed the following:

> The explanations said to be 'recited' by Kātyāyana
> are, of course, meant to be memorized by the
> students. They are part of the scholastic training.
> Yet, important as they are for the correct under-
> standing of Pāṇini, they are routine answers of
> anonymous origin, they may even be imagined to go
> back to Pāṇini himself. Kātyāyana recites them
> because he did not invent but only repeats them as
> part of the exegetic tradition. They must, to say it
> again, be clearly distinguished from those vārttikas
> that contain a vacana, an original 'teaching,' where
> Kātyāyana places himself on the same level with
> Pāṇini and opposes or adds his own scientific formu-
> lation to that of the Aṣṭādhyāyī. A vacana, too, is
> meant, of course, to be 'recited' by teacher and
> pupil, but it has a much higher dignity: in this
> instance, the teacher does not merely 'recite,' he
> 'speaks' as an individual, a self-thinking, creative
> scholar.[198]

Kātyāyana's explanation of problems in Pāṇini's grammar on
the basis of the procedure of vākyāparisamāpti seems to be
a part of the routine exegetical tradition which precedes
Kātyāyana, and may go back to Pāṇini himself. On the other
hand, Kātyāyana's proposal of universal-mention or of
splitting the internal effort of vowels from spirants belong
to himself.

CHAPTER VII

PROBLEMS IN VĀKYĀPARISAMĀPTI

7.1. A TRADITIONAL APPROACH

7.1.1. In the view of vākyāparisamāpti, P.1.1.69 does not apply to the shortforms /a-C/ and /ha-L/ in P.1.1.10, and hence the sounds denoted by these shortforms cannot further represent their homogeneous sounds.[199] This makes /a-C/ and /ha-L/ mutually exclusive classes and thereby avoids problems like /ś/ being non-homogeneous with itself [ref: Sec. 4.2-3]. But the following also results:

[1]   /ā/ and /ā3/ are still homogeneous with /h/.
[2]   /ī/ and /ī3/ are still homogeneous with /ś/.
[3]   /r̥/ and /r̥3/ are still homogeneous with /ṣ/.
[4]   /l̥3/ is still homogeneous with /s/.[200]

According to the Pāṇinian tradition, this is the ineveitable logical conclusion of the procedure of vākyāparisamāpti.

7.1.2. This has created many problems for the traditional grammarians. For instance, P.6.1.101 (akaḥ savarṇe dīrghaḥ) literally means: "Whan an /a-K/ sound [i.e. /a/, /ī/, /u/, /r̥/ and /l̥/] is followed by a homogeneous sound, both are replaced by a homogeneous long sound." By P.1.1.69, /a-K/ stands for all the varieties of the denoted sounds. P.1.1.10 also applies to /a-K/ sounds, so that it does not represent any consonants.[201] Let us see what happens in the example kumārī śete. Here /ī/ is an /a-K/ sound. It is represented by /ī/ included in /a-K/. Though by P.1.1.10, /ī/ is not homogeneous with /ś/, /ī/ is still homogeneous with /ś/. Thus, in kumārī śete, an /a-K/ sound is followed by a homogeneous sound, and both /ī/ and /ś/ together would be replaced by /ī/. So finally we might derive the undesirable form kumāryete*. Similarly,

61

from kanyā hasati, we might derive the undesirable form
kanyāsati*. Surprisingly, this point has not been noted by
Kātyāyana and Patañjali.

Bhartṛhari noticed this difficulty for the first time
and answered it by relying on the continuation of the word
aci in this rule.[202] With the addition of this word, P.6.1.101
means: "when a homogeneous /a-C/ sound follows."
Though /ś/ is homogeneous with /ī/, it is not a homogeneous
/a-C/ sound, since /i/ in /a-C/ is not homogeneous with
/ś/ and will not represent /ś/. Looking at the text of the
Aṣṭādhyāyī, we find aci in P.6.1.77 (iko yaṇ aci). The gap
between P.6.1.77 and P.6.1.101 is too wide to justify
continuation of aci, unless it is continued through all the
intervening rules. The word aci does not continue through
all of these intervening rules. This makes Bhartṛhari's
suggestion historically very doubtful. However, if it is
accepted, it solves the problem in P.6.1.101. This solution
has been followed by all the later commentators.[203] Bhaṭṭoji
Dīkṣita and Nāgeśa say that we need not continue aci in
P.6.1.101, if we accept subclassification of vivṛta "open."[204]
Otherwise, they approve Bhartṛhari's proposal.

7.1.3. Bhartṛhari's solution does not solve all the problems.
If /ā/ and /ī/ are homogeneous with /h/ and /ś/, is it
possible that /ā/ and /ī/ could stand for /h/ and /ś/? This
does not happen because, /ā/ and /ī/ are non-/a-Ṇ/ sounds,
and hence they cannot stand for any homogeneous sounds.
Even /āT/ and /īT/ cannot stand for /h/ and /ś/, because
the marker /T/ enables a sound to stand for homogeneous
sounds of the same quantity. Similarly, /ś/ cannot stand
for /ī/, because /ś/ is a non-/a-Ṇ/ sound, and it is not
marked with /U/. The only loophole left is that /h/ is an
/a-Ṇ/ sound, and it would be able to stand for /ā/ and /ā3/.

7.1.4. The realization of the problem that /h/ is an /a-Ṇ/
sound and that it might undesirably represent /ā/ and /ā3/
is seen in the commentaries on the Kāśika-vṛtti. P.8.3.59
(ādeśa-pratyayayoḥ, iṇ-koḥ from 57) says that /s/ is replaced
by /ṣ/, if /s/ is either a substitute or a part of an affix, and
if it is preceded by /i-Ṇ/ sounds or by /kU/ sounds (i.e.

/k/ series of stops). The shortform /i-Ṇ/ is formed with
/Ṇ/ in /l(a)-Ṇ/, and hence it covers /h/ which might stand
for /ā/ by P.1.1.69. The Kāśikā-vṛtti, on P.8.3.57 (iṇ-
koḥ), gives dāsyati as a counter example. This creates a
prima facie problem, which is answered by the Nyāsa of
Jinendrabuddhi as follows:

> How is this counter-example justified, while /h/
> included (in /i-Ṇ/) stands for /ā/ by P.1.1.69?
> The sound /ā/ is homogeneous with /h/, because
> they have the same point of articulation and internal
> effort. As the sounds /a/, /kU/ (/k/-series), /h/
> and /ḥ/ are produced in throat (kaṇṭhya), these two
> have the same point of articulation. As the internal
> effort of spirants and vowels is 'open,' their internal
> effort is also the same. Thus, by the rule P.8.3.57
> (iṇ-koḥ), the retroflex substitute [/ṣ/ for /s/]
> obtains [in dāsyati], because P.1.1.10 does not
> prohibit the designation 'homogeneous' [to /ā/
> and /h/]. If this is the problem, there is no
> difficulty, because he (Pāṇini) uses [the word
> vayasyāsu] in P.4.4.127 (vayasyāsu mūrdhno matup),
> where he does not change /s/ after /ā/ to /ṣ/.
> From this it is inferred that /h/ does not represent
> /ā/. Otherwise, he would not have made use of the
> form vayasyāsu.[205]

Thus, in the view of the Nyāsa, /h/ and /ā/ are homogeneous,
but as it can be inferred from Pāṇini's own usage, /h/ does
not stand for /ā/. The other commentary, Padamañjarī
of Haradatta, gives a different explanation:

> Just as homogeneity of /ī/ and /ś/ is not prohibited
> [by P.1.1.10], so also of /ā/ and /h/. So what?
> Would there be a possibility of the substitution of
> /ṣ/, because /h/ would stand for /ā/? There is no
> problem. The sound /h/ is vivṛta 'open,' but /ā/
> is vivṛta-tara 'more open.'...This justifies [Pāṇini's]
> usages like vayasyāsu."[206]

While Patañjali would have /h/ to be slightly open and /ā/

to be open, Haradatta has /h/ open and /ā/ more open. The effect is the same. This works well, but is obviously un-Pāṇinian, since it would make P.1.1.10 without purpose.

7.1.5. Then comes Bhaṭṭoji Dīkṣita, whose subtle analysis brings out more problems due to homogeneity of /h/ and /ā/. He gives about ten examples where this might create problems.[207] He also goes a step further and points out that /h/ would also stand for /ā3/ and would create problems in some cases.[208] In his Śabda-kaustubha, Bhaṭṭoji discusses at length various solutions to this problem. Along with the solutions of universal-mention and subclassification of open-ness, he proposed the following new solution: In the view of vākyāparisamāpti, we have to imagine an insertion of /ā/ in P.1.1.10. By combining /ā/ and /ā3/, we get /ā/. Then we split nājjhalau as na āc-halau, where /āc/ is to be explained as /ā/+/ā3/+/aC/. Thus this rule specifically denies homogeneity of /ā/ and /ā3/ with consonants, and gets rid of all the problems.[209] Bhaṭṭoji mentions P.3.3.163 (kāla-samaya-velāsu tumun) where the term velāsu occurs. If /ā/ and /h/ were homogeneous for Pāṇini, he would have used the expression velāsu*. Bhaṭṭoji takes this usage as a sanction for his insertion of /ā/ in P.1.1.10.[210]

7.1.6. Later grammarians like Hari Dīkṣita and Nāgeśa are faced with evaluating Bhaṭṭoji's suggestion. Both of them realize that they have two alternatives.[211] We may either have an independent rule saying that, in Pāṇini, /ā/ and /h/ are not mutually homogeneous, or we may accept Bhaṭṭoji's insertion of /ā/ in P.1.1.10. With their typical traditional outlook, they feel that adding a rule to Pāṇini's grammar involves the fault of prolixity, while Bhaṭṭoji's explanation has the merit of brevity.

Actually, P.1.1.10 could be interpreted as Bhaṭṭoji does by following the normal rules of sandhi. But this interpretation is still far from being historically valid. However, we have to accept Bhaṭṭoji's inference from velāsu in P.3.3.163 that Pāṇini did not want /h/ to represent /ā/. Bhaṭṭoji's suggestion solves the problems pointed out by him, but then the whole picture of homogeneity still remains very much distorted. Neither Bhartṛhari nor Jinendrabuddhi

and Bhaṭṭoji can avoid homogeneity of /ī/ with /ś/ etc. All
that they do is to try to avoid practical problems. With all
respect to these great grammarians, one still feels doubtful,
if this distorted picture of homogeneity was intended by
Pāṇini. Or might there be another interpretation which is
lost to us?

7.1.7. Looking at the problem from within the Pāṇinian
tradition, this is what we can say. The procedure of
vākyāparisamāpti was the procedure of Pāṇini. It was so
realized by Kātyāyana and was utilized to answer many
objections to Pāṇini's formulations. This procedure apparently
did not pose any problems of its own either for Kātyāyana or
for Patañjali, and they show no awareness of any loopholes
in it.

     This, however, does not mean that for Pāṇini,
Kātyāyana and Patañjali, it was fine if, for instance, /h/
represented /ā/. Jinendrabuddhi and Bhaṭṭoji have given
valid inferences from Pāṇini's own usages to the contrary.
In Kātyāyana's theory of universal-mention, long vowels
and ūṣmans have different universals. Patañjali, as we
have seen, subclassifies open-ness and avoids homogeneity
of vowels with consonants. Patañjali makes a clear statement:
"The ūṣmans and /r/ have no homogeneous sounds [other
than themselves]."[212] K. V. Abhyankar comments:

> This is an axiomatic assertion of the Bhāṣyakāra,
> based on a careful observation and scrutiny of words
> and letters used in the language. Grammar is to
> follow language, language is not to follow grammar.[213]

This comment implies that Patañjali's statement, though
true, does not follow from Pāṇini's rules. Whether this
is true can only be decided if we ever unearth a pre-
Kātyāyana commentary on Pāṇini.

7.2. A NEW APPROACH

7.2.1. The discussion in the previous section puts us into
a serious problem. The silence of the great Pāṇinians on

problems of vākyāparisamāpti may be an indication that for
them there were no problems with P.1.1.10, and that there
was probably some normal explanation of P.1.1.10.
Unfortunately, the works of Kātyāyana and Patañjali deal
mainly with problems in Pāṇini's grammar, and they did
not concern themselves with those rules which to them were
perfectly normal and without problems. This task was left
to the conventional Vṛttis. Some of these commentaries did
exist even before Patañjali, but they are now lost to us. The
first rule-to-rule commentary that is available to us is the
Kāśikā-vṛtti, which in some respects preserves the older
traditions,[214] but is itself a very late work, and is influenced
by the grammar of Candragomin.[215] It is quite possible
that many normal explanations were already lost by the time
of the Kāśikā-vṛtti.

7.2.2. Let us look at the modern interpretations of P.1.1.10.
The earliest interpretation of P.1.1.9 and P.1.1.10 that we
have goes back to Colebrook:

> P.1.1.9: Letters articulated near the same organ
> of speech and with the same aperture for the voice,
> are homogeneous; P.1.1.10: but a vowel and a
> consonant are not so.[216]

S. C. Vasu translates P.1.1.10 as follows:

> There is however no homogeneity between vowels
> and consonants, though their place and effort be
> equal.[217]

Louis Renou's translation runs as:

> Les phonêmes 'a...c' (=les voyelles) et 'ha...l'
> (=les consonnes) (même étant dans les conditions
> requises sous 9) ne sont pas (homophones entre
> elles).[218]

Otto Böhtlingk renders P.1.1.10 as:

> Ein Vocal (ac) und ein Consonant (hal) sind einander
> nicht homogen. [219]

No scholar says anything as to how the meaning that he gives
is derived, though the intuitively given meaning is what the
rule ought to teach. Instead of just depending on intuition,
the Pāṇinian grammarians tried to give their own explanations.
We may disagree with their explanations, but it at least
shows that there lies a rule which still needs a rational
explanation.

7.2.3. Another partial hypothesis about P.1.1.10 has
occurred to me. We shall briefly discuss it here. The
argument is as follows. If $a=b$ and $a \neq c$, then obviously
$b \neq c$. Similarly, if /a/ is homogeneous with /ā/, and is not
homogeneous with /h/, then it should naturally follow that
/ā/ is not homogeneous with /h/.

On the face of it, this seems quite sound. However,
this is not exactly the case with Pāṇini's rules. By P.1.1.9,
we get the following three statements:

[1] /a/ is homogeneous with /ā/.
[2] /a/ is homogeneous with /h/.
[3] /ā/ is homogeneous with /h/.

These statements are quite independent of each other and
each case fulfils the conditions of homogeneity laid down in
P.1.1.9. The statement [3] is not deduced from [1] and
[2], but stands on its own grounds. Now by P.1.1.10, we
get denial of the statement [2]. Since the other two statements
are in no way dependent on [2], the denial of [2] cannot in
any way lead to the denial of either [1] or [3]. The
statements [1] and [3] still fulfill the conditions of P.1.1.9,
and there is nothing in Pāṇini's rules to stop [3] from being
true, except of course the inferences of Jinendrabuddhi and
Bhaṭṭoji. Though such inferences have a definite practical
value, the system as such still remains faulty on account of
its loopholes.

7.2.4. In what follows, an explanation is offered, which by

no means is claimed to be the historical explanation, but,
in a modest way, to be an explanation which is more probable
than the others seen before.

Before going to P.1.1.10, let us go back to P.1.3.3
(hal-antyam). The circularity in this rule can be removed
only by reading the rule twice and giving a different
interpretation to each reading. This case has been discussed
in detail in Sec. 5.3. It has also been critically studied by
Thieme.[220] This solution goes back to Kātyāyana, and it
is quite possible that it even precedes him.

The same procedure may be extended to P.1.1.10.
This removes all the problems in the procedure of
vākyāparisamāpti. For the sake of interpretation, the order
of rules should be as follows:

[1]   na ac-halau P.1.1.10A.
[2]   P.1.1.69.
[3]   P.1.1.10B.

If interpreted in this order, the second reading, i.e.
P.1.1.10B, gives us the final meaning of the rule, just as
the second reading of P.1.3.3 gives its final meaning.

P.1.1.10A means: "The /a-C/ sounds, as listed in
the Śiva-sūtras, are not homogeneous with /ha-L/ sounds."
With this we interpret P.1.1.69: "The /a-N/ sounds and
sounds marked with /U/ stand for their homogeneous sounds,
unless they are affixes." By this rule, /a/ can stand for
all its homogeneous sounds, but not for /h/, since P.1.1.10A
has already denied homogeneity of /a/ and /h/. We then use
P.1.1.69 to interpret P.1.1.10B, which then means: "Sounds
represented by /a-C/ and /ha-L/ sounds are not mutually
homogeneous." Here, /a/ in /a-C/ stands for all varieties
of /a/, including /ā/, but not for /h/. Thus, finally,
P.1.1.10B means to say: "No vowels are homogeneous
with any consonants." In this interpretation, the picture
of homogeneity becomes straightened out.

7.2.6. Though we may not be able to say that this is the

historically true interpretation, this very procedure seems
to have been implicitly followed by all the modern scholars,
whose translations are given earlier. All of them clearly
interpret P.1.1.10 as denying homogeneity between the
classes of all vowels and all consonants. These classes
cannot be obtained without applying P.1.1.69 to P.1.1.10.
However, if we apply P.1.1.69 to P.1.1.10 before denying
homogeneity of /a-C/ sounds with /ha-L/ sounds, then
the classes represented by /a-C/ and /ha-L/ overlap. None
of the scholars intends such overlapping. This means they
implicitly applied P.1.1.69 to P.1.1.10 after non-homo-
geneity of /a-C/ and /ha-L/ sounds was already established.
Thus it seems that these scholars implicitly considered
P.1.1.10 on two different levels, and without ever clarifying
their intuition, they arrived at the right conclusion. An
interpretation similar to this might have existed in the early
centuries of Pāṇinian interpretation. However, no historical
claims can be made for lack of any real substantiating
evidence.

CHAPTER VIII

RESTRICTIONS ON
HOMOGENEOUS-REPRESENTATION

8.1. In this chapter, we shall discuss the question of
the interpretation of the condition apratyayaḥ in P.1.1.69
and certain problems related with P.1.1.70. I have devoted
a long article to these problems. However, as these
considerations are very important in understanding the
function and implementation of homogeneity in Pāṇini's
rules, we shall discuss here the main arguments. For
the details, the reader is referred to the original article.
["Pāṇinian Procedure of Taparakaraṇa: A Historical
Investigation," Zeitschrift für vergleichende Sprach-forschung,
Band 86, Heft 2, 1972, pp. 207-254.]

8.2. By P.1.1.69, the non-affixal sounds denoted by the
shortforms /a-Ṇ/ and sounds marked with /U/ stand for
themselves and their homogeneous sounds. The expression
apratyayaḥ "non-affixal" occurs in two other rules of Pāṇini
and five vārttikas of Kātyāyana in the sense of "non-affix"
or "excluding affixes."[221] Kātyāyana has no doubt about its
meaning, nor any objections to raise.

Patañjali, however, reinterprets P.1.1.69 and derives
a general maxim: bhāvyamānena savarṇānāṁ grahaṇaṁ na
"There is no representation of homogeneous sounds by a
sound which is itself introduced by a rule." [MB, Vo. I,
Sec. I, p. 370-1.] Henceforth we shall refer to this maxim
as Maxim [1]. Patañjali tries to show that Pāṇini could
not have meant "affix" by the term pratyaya in P.1.1.69.
An affix is a meaning-bearing unit and it will not represent
its homogeneous sounds, simply because they will not convey
the same meaning. Then, a prima facie solution is given to
this question. Some sounds are directly known (pratīyante),
while other homogeneous sounds are made known or

71

represented (pratyāyyante) by the sounds which are directly
known. Thus, apratyayaḥ may mean that the represented
sounds do not represent their homogeneous sounds. But
Pāṇini need not say this, since a long /ā/ would not represent
the short variety, because it requires an additional effort
for its pronounciation. It also may not represent the extra-
long varieties, because the long variety itself is a non/a-Ṇ/
sound. Thus the condition apratyayaḥ apparently seems to
be redundant and hence Patañjali takes it to be an indication
(jñāpaka) of the above mentioned Maxim [1].

The term bhāvyamāna in the Maxim [1] is rendered
as "introduced elements." If a rule is: "If preceded by A
and followed by D, B is replaced by C," then C is the intro-
duced element, while A, B and D are not introduced elements.
They are conditioning elements and substituendum. In
Patañjali's argument, the term "introduced elements"
refers to affixes, substitutes and augments. The later term
for bhāvyamāna is vidhīyamāna.

8.3. Kaiyaṭa on this discussion almost misunderstands
Patañjali. For Patañjali, the condition apratyayaḥ does
not mean "non-introduced elements," but is simply an
indication of the Maxim [1]. Kaiyaṭa says that pratyaya
means vidhīyamāna, because the verbs pratīyate and vidhīyate
have the same meaning [MB-P, Vol. I, Sec. I, p. 370;
SK, p. 3]. Nāgeśa points out that this is quite untenable:

> In fact, the literal meaning of the Bhāṣya is that
> Pāṇini implies the Maxim [1], by allowing a portion
> [of the introduced elements, namely the affixes, to
> be without the capacity of homogeneous-representa-
> tion]. What Kaiyaṭa says is doubtful, since pratīyate
> is not found used in the meaning of vidhīyate.
> [MB-P-U, Vol. I, Sec. I, p. 371.]

8.4. Patañjali's argument deviates considerably from
Pāṇini's original scheme, and the Maxim [1] is Patañjali's
addition. We shall see later that this suggestion might
actually be pre-Patañjali, but post-Kātyāyana. Patañjali
holds that in Pāṇini's rules, substitutes (ādeśa) and augments

(āgama) along with affixes (pratyaya) lack the capacity to represent their homogeneous sounds. However, it is doubtful if this was Pāṇini's own intention, since he uses the marker /T/ with about fifty substitutes[222] in restrictive and prescriptive functions. As the word pratyaya simply stands for affixes, P.1.1.69 must be effective with all non-affixal /a-Ṇ/ sounds, including substitutes and augments. This is the understanding of the Kāśikā-vṛtti.[223] So is Louis Renou's rendition:

> Les phonèmes /'a-ṇ'/ (=voyelles et semi-voyelles) et ceus à exposant /u/--désignent les homophones (en même temps que leur forme propre), excepté si ce sont des affixes.[224]

8.5.   These two views about apratyayaḥ in P.1.1.69 affect the interpretation of P.1.1.70 (taparas tat-kālasya). There are two major interpretations of P.1.1.70:

> Interpretation [A]: If the term /a-Ṇ/ in P.1.1.69 is carried over into P.1.1.70, then it comes to mean that /a-Ṇ/ sounds followed by /T/ represent the homogeneous varieties of the same quantity. Here, as in P.1.1.69, the term /a-Ṇ/ stands only for the sounds as they are listed in the Śiva-sūtras. Thus, /T/ has restrictive function (niyāmakatva) with respect to /a-Ṇ/ sounds, but has no function with respect to non-/a-Ṇ/ sounds. Since Pāṇini uses /T/ with a large number of non-/a-Ṇ/ sounds,[225] this interpretation appears insufficient.

> Interpretation [B] : The term /a-Ṇ/ in P.1.1.69 is not continued into P.1.1.70. Thus, P.1.1.70 means that any vowel followed by the marker /T/ represents homogeneous sounds of the same quantity. In the case of /a-Ṇ/ vowels, this rule becomes restrictive (niyāmaka), while in the case of non-/a-Ṇ/ sounds, the rule becomes presecriptive (vidhāyaka). Without /T/, a non-/a-Ṇ/ sound can stand only for itself, and cannot cover other varieties of the same quantity.

74

Of these two interpretations of P.1.1.70, [B] seems to be
the historically Pāṇinian interpretation, since this alone
explains the cases of non-/a-Ṇ/ sounds with the marker /T/
in Pāṇini's rules.

8.6.   Taking into account the major divergent interpretations,
it is possible to discern two prominent views concerning the
function of the marker /T/.

> View [A] : apratyayaḥ = "non-introduced elements."
> The introduced elements, i.e. affixes, substitutes
> and augments do not represent their homogeneous
> sounds, and hence there is no need to attach a
> restrictive marker /T/ to these elements. In the
> case of non-introduced elements, namely conditioning
> elements, the /a-Ṇ/ and non-/a-Ṇ/ sounds with the
> marker /T/ stand for homogeneous sounds of the
> same quantity.

> View [B] : apratyayaḥ = "non-affixal." Excepting
> the affixes, all the /a-Ṇ/ sounds as given in the
> Śiva-sūtras are capable of representing their homo-
> geneous sounds by P.1.1.69. The /a-Ṇ/ and non-
> /a-Ṇ/ sounds with /T/ stand for homogeneous sounds
> of the same quantity. Without /T/, /a-Ṇ/ sounds
> represent all their homogeneous sounds, while the
> non-/a-Ṇ/ sounds represent only themselves.

Of these two views, the View [A] is held by almost the whole
tradition of Pāṇinians beginning with Patañjali, or rather
with Vyāḍi, while the View [B] is what Pāṇini must have
intended and is so understood by Kātyāyana. This has been
conclusively demonstrated after studying every rule with
/T/, in Deshpande [1972].

8.7.   If we accept the View [A] or the Maxim [1], then no
substitutes are capable of any representation, since every
substitute is an introduced element, and hence there is no
need to attach the marker /T/ to restrict homogeneous-
representation. Patañjali [MB, Vol. I, Sec. I, p. 370]
considers the Maxim [1] to be necessary to avoid

representation of homogeneous sounds in P. 2. 3. 3 (idama
iś).[226] However, there are several arguments which go
against Patañjali's view. There are about fifty examples of
substitutes with /T/ in Pāṇini's rules, against only about
twenty cases of vocalic substitutes without /T/.[227] These
statistics themselves stand as a proof for the unhistoricity
of the Maxim [1]. Pāṇini could not have attached the marker
/T/ to so many substitutes without any significance. The
significance of /T/ with substitutes has to be explained
according to P. 1. 1. 70, and not according to P. 6. 1. 185
(tit svaritam), since they are not affixes.[228] In a number
of rules such as P. 7. 4. 66 (ur at),[229] it is clear that the
substituenda are long vowels, while the substitutes are
short vowels, and Pāṇini rightly thinks that, in the absence
of /T/, the non-affixal substitutes will represent their
homogeneous sounds. Then only the long vowels will be
effected as the substitutes by P. 1. 1. 50 (sthāne'ntaratamaḥ)
"In the place [of a substituendum] a most-similar substitute
is effected." Thus, the marker /T/ has a positive restrictive
function with these substitutes. Sometimes, even the Kāśikā-
vṛtti accepts this restrictive function of the marker /T/
with substitutes.[230]

8. 8. On P. 7. 2. 84 (aṣṭana ā vibhaktau), Kātyāyana says:
"In the case of [the substitution of] /ā/ for [the final /n/
of] aṣṭan, jan etc., pathin and mathin, there is a possibility
of a nasal [/ā/ being substituted], because it is most similar
[to the nasal substituendum /n/]."[231] This objection is
answered as follows: "[The desired result that only a non-
nasal /ā/ will be substituted for nasal /n/] is achieved,
since [the substitute /ā/ is] a non-/a-Ṇ/ sound, [and hence
it does not represent any homogeneous varieties]."[232]
This shows that, for Kātyāyana, a substitute does represent
its homogeneous sounds, if it is an /a-Ṇ/ sound. This shows
that the Maxim [1] is of post-Kātyāyana origin.[233] Kātyāyana
himself uses /T/ in his vārttikas with substitutes. For
instance, /T/ is attached to the substitute /i/ in vt 6 on
P. 7. 3. 1, (vahīnarasyed-vacanam), and to the substitute /ī/
in vt 1 on P. 8. 2. 17, (īd rathinaḥ).

8. 9. Patañjali accepts the Maxim [1] first, and then to

explain a single rule, he has to introduce another maxim, henceforth Maxim [2], which runs as: bhāvyamāno'py ukāraḥ savarṇān gṛhṇāti: "An introduced /u/ sound also represents its homogeneous sounds."[234] This is an exception to Maxim [1]. Once the Maxim [1] is accepted, then /T/ attached to /u/ in rules such as P.6.1.131 (diva ut) and P.6.1.111 (ṛta ut) becomes technically redundant. This has been taken as an indication by Patañjali and later grammarians for Maxim [2]. Then it is used to explain that the substitute /u/ in P.7.2.80 (adaso'ser dād u do mah) is without /T/ and hence it desirably represents its homogeneous sounds.

All this deductive logic sounds very convincing, if one accepts validity of Maxim [1]. The unhistoricity of that maxim has already been pointed out. If an occurrence of /T/ with an introduced /u/ indicates that an introduced /u/ can represent its homogeneous sounds, then by the same line of argument, the occurrence of /T/ with introduced /a/, /i/, /ṛ/, /ā/, /ī/, /ū/, /e/, /o/ and /au/, in Pāṇini's rules,[235] should also indicate that these also represent their homogeneous sounds. It is a fact that Pāṇini uses /T/ with all these introduced sounds. This cuts at the very root of Maxim [1]. Similarly, if one accepts Maxim [2], it creates very intricate problems which are neither discussed nor solved by Patañjali.[236]

Once the View [B] is accepted as truly the Pāṇinian view, all the difficulties disappear. For Pāṇini, the /a-Ṇ/ substitutes are capable of representing their homogeneous sounds, as they are non-affixes. Similarly, the marker /T/ with substitutes has its normal restrictive and prescriptive functions. In the rule P.6.1.131 (diva ut), Pāṇini attaches /T/ to /u/, since only short /u/ is intended to be the substitute. In P.7.2.80 (adaso'ser dād u do mah), he does not attach the marker /T/ to /u/, since representation of long /ū/ is desired. There is nothing exceptional about this rule.

8.10. There is a clear possibility that these two maxims may in fact belong to pre-Patañjali times. Maxim [1] is identical with Maxim 30[237] and Maxim [2] is identical with Maxim 31[238] in a text called Paribhāṣā-sūcana, which is

ascribed to Vyāḍi. According to the tradition, Vyāḍi is the
first author on the paribhāṣās "maxims." The style of this
work is very similar to the Mahābhāṣya, but it never refers
to Patañjali. This would be strange if Vyāḍi were posterior
to Patañjali. We can certainly agree with K. V. Abhyankar
when he argues that Vyāḍi, the author of the Paribhāṣā-sūcana,
is not posterior to Patañjali.[239] However, K. V. Abhyankar
also regards this Vyāḍi to be prior to Kātyāyana. Kātyāyana
certainly refers to a grammarian named Vyāḍi.[240] But the
author of the two maxims could not be pre-Kātyāyana, since
there is no trace of these maxims in the vārttikas of Kātyāyana,
and Kātyāyana's explanations clearly go against them.[241]
It is possible that there were several persons named Vyāḍi.

8.11. That Patañjali's innovations are historically un-Pāṇinian
does not deprive him of his significant contribution which
lies in his attempts to bring uniformity and simplicity of
description in Pāṇini's grammar. Representation of homo-
geneous sounds is not at all needed in any of the rules
prescribing affixes, augments and substitutes, except in
P. 7.2.80. On the other hand, Pāṇini has to use the marker
/T/ to stop such representation in many cases. This prompts
Patañjali to make Pāṇini's system more uniform. He almost
suggests that /T/ is not necessary after any substitutes, and
it could be eliminated, if we say that substitutes do not
represent any homogeneous sounds. Such representation is
needed only in one rule. If varieties differing in pitch,
accent etc. are needed, they can be obtained by considering
these features to be non-distinctive.

However, a critical distinction must be made between
any attempts of simplifying Pāṇinian procedures and those of
understanding them as they stand in their own right. Worth
noting is S. D. Joshi's remark:

> This will prevent us from committing the same
> mistake which was made by Patañjali and the
> commentators following after him, when they read
> later developed theories into Pāṇini and Patañjali
> respectively.[242]

Patañjali's suggestion was certainly valuable as a reform in Paṇini's grammar. Some of the later systems like Jainendra-Vyākaraṇa follow Patañjali's suggestion and incorporate it into their rules. [ref: N. 358.]

CHAPTER IX

VYĀDI ON
HOMOGENEOUS-REPRESENTATION

9.1. The name Vyāḍi is more known, in the Pāṇinian
tradition, for the now lost magnificent Saṃgraha, an encyclo-
pedic work on grammar, than for the Paribhāṣā-sūcana, a
compendium of grammatical maxims, which is more-over
similar to the well known Paribhāṣenduśekhara of Nāgeśa.
The great antiquity of this work, its probable pre-Patañjali
date, increases its importance for the history of Pāṇinian
interpretation. As we have already seen, this work is
probably post-Kātyāyana in origin, or at least parts of it
are of post-Kātyāyana origin. This historical place of
Vyāḍi's Paribhāṣāsūcana enhances the value of its comments
on homogeneity and its function in Pāṇini's grammar.

9.2. The Maxim 55 in this text runs as: udit sva-vargam
eva gṛhṇāti, na savarṇa-mātram: "A sound marked with
/U/ stands only for the members of its varga 'group of
homorganic stops,' and not for all the homogeneous
sounds."243 Vyāḍi's commentary on this maxim gives the
reasoning behind this statement:

> A sound marked with /U/ stands only for its varga,
> and not for all its homogeneous sounds. How is this
> known? [We know this] , because he [Pāṇini]
> independently mentions /s/ in the rule P.1.3.4(na
> vibhaktau tu-s-māḥ), while the mention of /tU/
> would have been sufficient [to include /s/] . What
> is the purpose in indicating this [maxim] ? In the
> rule P.8.2.30 (coḥ kuḥ), the mention of /cU/ does
> not cover /ś/, and hence [/ś/] does not happen [to
> undergo the substitution] by /kU/ sounds. Thus,
> the correct form viḍ is derived.244

This statement of Vyāḍi needs to be carefully analysed in order to get at its implications. It means to say that unless we restrict a sound marked with /U/ to stand only for its varga, it will stand for all its homogeneous sounds. As Vyāḍi's examples indicate, /tU/ might cover /s/, and /cU/ might cover /ś/. This implies that Vyāḍi does not want /tU/ and /cU/ to stand for /s/ and /ś/ respectively, but, according to him, by Pāṇini's definition of homogeneity, /t/ and /c/ are respectively homogeneous with /s/ and /ś/. No other grammarian in the tradition ever suspected that P.1.1.9 could lead to such homogeneity of /t/ and /s/, and /c/ and /ś/.

9.3. According to Vyāḍi, however, P.1.1.9 somehow leads to homogeneity of /t/ and /s/, /c/ and /ś/. The internal effort of /t/ and /c/ is, according to all the traditions, spr̥ṣṭa "with contact." Depending on the interpretation we accept, /s/ and /ś/ are either vivr̥ta "open" or īṣad-vivr̥ta "slightly with a gap, slightly open." Thus, /t/ and /c/ differ from /s/ and /ś/, in respect of internal effort. They, however, share the same point of articulation. Thus, /t/ and /s/ are dental, while /c/ and /ś/ are palatal.

This leaves us with only two alternatives: either,
[A] Vyāḍi considered that P.1.1.9 only requires two sounds to have the same point of articulation, or
[B] for him, stops and spirants had the same internal effort.
The term āsya-prayatna in later days did only stand for internal efforts, but there is no conceivable way to interpret it to mean only sthāna: "point of articulation." Thus, the alternative [A] cannot be right as a correct description of the Pāṇinian conception of homogeneity. The alternative [B] also has no support either in the Pāṇinian tradition or elsewhere.[245]

9.4. Patañjali does not mention this maxim of Vyāḍi. In the later tradition of Paribhāṣā-works, three authors have commented on this maxim. The reading in Sīradeva's Br̥hat-paribhāṣā-vr̥tti is somewhat different from Vyāḍi's reading: udit savarṇaṁ gr̥hṇāti, na savarṇa-mātram:

"A sound marked with /U/ stands only for its homogeneous sounds, but not for all homogeneous sounds."[246] On the face of it, this does not make any sense. However, Sīradeva's explanation is worth noting:

> By P.1.1.69, a sound marked with /U/ stands only for those homogeneous sounds, which share [the same] point of articulation and internal effort, and not for all homogeneous sounds. Thus, in the rule P.8.2.30 (coh kuh), the mention of /kU/ does not include /h/. The indication [for this maxim] is provided by the [separate] mention of /s/, in spite of that of /tU/, in P.1.3.4 (na vibhaktau tu-s-māh). This fact, which actually follows naturally is explained through an indication (jñāpaka), for the sake of easy comprehension.[247]

Like Vyāḍi's work, Sīradeva is also ambiguous as to what conception of homogeneity is being rejected. The examples of Sīradeva are parallel to Vyāḍi's examples.

9.5. Haribhāskara Agnihotrin has the same reading as Sīradeva, but his explanation goes a step ahead:

> A sound marked with /U/, by P.1.1.69, stands only for those homogeneous sounds, which are identical with respect to the point of articulation and internal effort, and not for all those homogeneous sounds which only share the same point of articulation. [This is established either] by the indication of the separate mention of /s/, along with /tU/, in P.1.3.4, or by the fact that P.1.1.69 teaches the designation 'homogeneous' only of a sound which shares the [same] point of articulation and internal effort.[248]

Thus, the wrong notion of homogeneity, according to Haribhāskara Agnihotrin, is conditioned only by identity of the point of articulation, but he does not think that it is an interpretation of P.1.1.69. Thus, this notion of homogeneity as being identical with the notion of sasthāna "homorganic, with the same point of articulation" is of some

82

non-Pāṇinian origin. It is possible that some grammarians before Vyāḍi tried to bring this notion into Pāṇini's grammar, and that Vyāḍi's maxim was an attempt to prohibit application of such a notion of homogeneity. Within the Pāṇinian tradition, however, we do not need this maxim.

9.6. Nīlakaṇṭha Dīkṣita gives the final blow to this maxim. He gives the same interpretation, but includes it among those maxims, which are classed as spurious and baseless. This is what he says:

> Since this maxim is not seen in the <u>Mahābhāṣya</u>, and since the designation 'homogeneous' is made [by P.1.1.69] of only those sounds which are qualified [by both, the same point of articulation and internal effort], this [maxim] is spurious.[249]

With all respect for Vyāḍi's name, we must agree with Nīlakaṇṭha Dīkṣita's assessment.

PART TWO

NON-PĀṆINIAN TRADITIONS

CHAPTER X

PRĀTIŚĀKHYAS ON SAVARṆA

10.1. In the intitial stages of Indological research, Martin Haug arrived at the conclusion that the Śikṣās are decidedly older than the Prātiśākhyas, and that the doctrines contained in the former were incorporated and further developed in the latter. [250] A. C. Burnell agrees with Haug and further says: "The Śikṣās and Prātiśākhyas represent, so far, one side of the oldest form of the Aindra Grammar--the phonetic analysis of the language." [251] These scholars held that the views expressed in these texts preceded Pāṇini's grammar, which is supposed to have superceded the now lost Aindra School of Grammar.

Franz Kielhorn, with ample new evidence, proved conclusively that the Śikṣās that have come down to us are certainly posterior to the Prātiśākhyas. [252] He is not ready to consider these texts as either pre-Pāṇinian or productions of a school of grammarians. [253] Paul Thieme rightly accepts a high antiquity of the branch of the Śikṣā literature, but as far as the Śikṣā texts available to us are concerned, his views agree with those of Kielhorn. Thieme says: "They are all of them, young, elaborations of the definitions laid down in the Prātiśākhyas." [254] This prompts us to consider the conception of savarṇa in the Prātiśākhyas, before passing on to the Śikṣās and other non-Pāṇinian systems of grammar. Without delving into the debatable question of the relative chronology of the Prātiśākhyas, we shall briefly study their conception of savarṇa, and its implementation. [255] The question whether the Prātiśākhyas are pre-Pāṇinian or post-Pāṇinian is still highly debated, and yet there is no doubt that the Prātiśākhyas do represent a grammatical tradition, which is certainly pre-Pāṇinian.

85

10.2. THE ṚGVEDA-PRĀTIŚĀKHYA

10.2.1. The RPr considers the long and short corresponding vowels [e.g. /a/, /ā/; /i/, /ī/; /u/, /ū/; /r̥/, /r̥̄/] to be savarṇas, and no featural definition of this term is given. It says that when a short vowel is mentioned, it stands for the short and long savarṇa sounds.[256] This seems to exclude consonants, extra-long vowels, diphthongs and /l̥/ from the scope of the term savarṇa.[257] Though this conception does not seem to cover the groups of homogranic stops, the RPr does have the notion of varga "group of five homorganic stops."[258]

10.2.2. After this, the RPr uses the term savarṇa only once, and that also in the context of consonants. The term savarṇa-pūrva "preceded by a savarṇa" is used in the context of stops.[259] The example given by Uvaṭa is yad devāḥ, where /d/ in devāḥ is preceded by /d/, which is a savarṇa "identical varṇa." If it were preceded even by /n/, still it would not fulfill the condition. This means that /d/ is savarṇa only with /d/, and not with any other sound.

10.2.3. Thus, for the RPr, /a/, /i/, /u/ and /r/ are respectively savarṇa with /ā/, /ī/, /ū/ and /r̥̄/, and /d/ is savarṇa with /d/. Looking at these examples, we might be able to dig out a general conception of savarṇa, which basically seems to mean "belonging to the same varṇa." The term varṇa functions on two levels. Its primary meaning is just a "sound." In its extended meaning, it stood for an abstraction, which may be characterized as "the real sound" or "class of sounds sharing some essential features." Thus, in the primary sense of the term, /a/ and /ā/ are different varṇas "sounds," but in the extended sense, they both belong to the same varṇa. The origin of this extended notion of varṇa can be traced in the idea that a long vowel is essentially the same as the short vowel, but which has been prolonged. Thus quantity, nasality and pitch were in some sense added features to a given common factor. It was this common factor which came to be designated by the term varṇa. Then the term savarṇa can be explained as directly based on this extended notion of varṇa. Thus, /a/ and /ā/ are savarṇas

"belonging to the same varṇa." This extended notion of
varṇa, however, did not change very much with consonants.
Thus, the term savarṇa used with respect to consonants
stood moreover for "identity of the sound." The sounds
/k/ and /kh/ did not belong to the same varṇa, and hence
could not be grouped under the conception of savarṇa. This
was the reason for having the concept of varga "group of
homorganic stops" side by side with the concept of savarṇa
"belonging to the same varṇa."

Of course, the RPr adopted this background notion of
savarṇa to its own needs, and restricted it to simple vowels.
There also it excluded /l/ and extra-long vowels. This is
based on the pratircular needs of this particular system.
The RPr used the term in the context of consonants in the
sense of "identity of varṇa." Thus, from this particularized
conception of savarṇa, we have to infer the background
conception.

10.2.4. Though there is no comprehensive rule of homo-
geneous-representation like P.1.1.69, still we find the
following system of representation in the RPr:

[1] A short simple vowel also stands for its long varieties.
[2] No other vowel can stand for other varieties.
[3] The terms /ka/-varga etc. stand for the respective
       groups of homorganic stops.
[4] Otherwise, a consonant stands for itself.

The RPr seems to be in a more primitive stage compared
to other Prātiśākhyas, where these things are stated in the
form of explicit rules.

10.2.5. The concept of savarṇa is not used very frequently
by the RPr, and many rules are formulated with terms like
sasthāna "having the same point of articulation," where other
Prātiśākhyas use the term savarṇa. For instance, the rule
of the substitution of a long vowel for two consecutive simple
homogeneous vowels is formulated with the term sasthāna
"homorganic."260

Since the term savarṇa is used in a very limited
sense, and is not defined in featural terms, there are no
problems such as P.1.1.10. There is no concept of mutual
homogeneity of /r̥/ and /l̥/. There seems to be no problem
of how to make /a/ and /ā/ savarṇas of one another. There
are two reasons for this. The first reason is that savarṇa is
not featurally defined, but depends on the impressionistic
and conventional notion of varṇa. The other reason is that
the RPr considers all vowels including /a/ to be aspr̥ṣṭa
"without contact."[261]

10.3. THE TAITTIRĪYA-PRĀTIŚĀKHYA

10.3.1. The TPr contains more points of interest than the
RPr. The rule TPr (1.3) says: "The corresponding two
sounds, short and long, are homogeneous (savarṇa)."[262]
As the commentary Tribhāṣya-ratna explains, the sequences
such as /a/-/a/, /a/-/ā/, /ā/-/ā/, and /ā/-/a/ are sequences
of homogeneous vowels.[263] This definition applies only to
the simple vowels (samāna), and there are nine of these
according to the TPr, i.e. /a/, /ā/, /ā3/; /i/, /ī/, /ī3/;
/u/, /ū/ and /ū3/.[264] Thus, this conception of savarṇa is
restricted to short and long /a/, /i/ and /u/. The TPr (1.4)
says that a simple vowel preceding an extra-long vowel is
not savarṇa with the latter.[265] This prevents the undesired
lengthening.

The commentary points out that the only purpose of
the term savarṇa is to formulate a rule for savarṇa-dīrgha
"homogeneous lengthening." This is the rule TPr (x.2)
(dīrghaṁ samānākṣare savarṇa-pare) "If a simple vowel
is followed by a homogeneous sound, then both are replaced
by the corresponding long vowel."[266] The exclusion of /r̥/
from the scope of the term savarṇa is quite understandable,
because "in fact, no case occurs in the Vedic text in which
two of them are fused into one."[267]

10.3.2. The commentator says that "the term (savarṇa) is
self-explanatory. Homogeneity means similarity. Thus
there should be no suspicion of /a/ being regarded homo-
geneous with /i/ etc., since they have different points of

articulation and internal effort."[268] The description of
savarṇa sounds here seems to be quite influenced by the
notions in the Pāṇinian system (P. 1.1.9). However, such
a general conception is not intended by the TPr.

10.3.3. Though there is no rule in the TPr based on
homogeneity like P.1.1.69, still the TPr has its own devices:

Rule (i. 16): A sound followed by the affix -kāra is the name
       of that sound.
Rule (i. 20): A short vowel, with the word -varṇa after it,
       is the name of the three vowels [short, long and
       extra-long].
Rule (i. 27): The first mute, followed by the word -varga
       is the name of the series.[269]

Thus, /a/-kāra stands only for a short /a/, /ā/-kāra stands
for only long /ā/, but /a/-varṇa stands for /a/, /ā/ and
/ā3/. But there is no such a thing as /ā/-varṇa. This
corresponds to the non-/a-N/ vowels in Pāṇini, in some
respects. Similarly, only /ka/-varga can stand for the whole
series, but /k/ by itself cannot. This is also similar to
Pāṇini's treatment of the sounds marked with /U/. While
the TPr keeps the notions of savarṇa and grahaṇa quite apart,
Pāṇini builds an inter-dependent procedure of savarṇa-
grahaṇa.

    In the TPr, there is neither /ṛ/-varṇa, nor /ḷ/-varṇa.
Whitney rightly says:

    As our treatise acknowledges no protracted /ṛ/,
    and neither a long nor a protracted /ḷ/, it does not
    admit the compounds /ṛ/-varṇa and /ḷ/-varṇa: of
    the other three it frequently avails itself.[270]

In this respect, the procedure of the TPr differs from
Pāṇini's, as the latter does bestow the capacity to stand
for their savarṇas on /ṛ/ and /ḷ/, by P.1.1.69.

10.3.4. The problem of homogeneity in the TPr is made
complex by the fact that it keeps on using the term savarṇa,

even in the context of consonants. In the context of syllabi-
fication, the TPr (xxi. 7) (nāntaḥsthā-param asavarṇam) says:
"If a consonant is followed by a semi-vowel and is asavarṇa
'non-identical' with that semi-vowel, then it does not belong
to the preceding vowel, [but belongs to the following
vowel]."272 On this rule, the commentary Tribhāsya-ratna
explains the word asavarṇa with vilakṣaṇa "different."272
Whitney explains this usage as follows:

> 'Dissimilar' is simply explained by vilakṣaṇa, 'of
> diverse characteristics, different,' it excludes
> from the operation of the rule doubled semi-vowel
> itself, and would also exclude the nasal semi-vowel
> into which /n/ and /m/ are converted before /l/,
> and /m/ before /y/ and /v/ (v. 26, 28), if these
> occurred where the rule could apply, which is not
> the case.272

If asavarṇa can thus mean "different," savarṇa should then
mean "non-different, the same." The TPr does use the
term savarṇa in this sense. For instance, the TPr (xiv. 23)
(savarṇa-savargīya-paraḥ) says: "A sound followed by the
same sound (savarṇa), or by a sound of the same series of
stops (savargīya) is not duplicated."274 Here the term
savarṇa stands for identity of form, and not just identity of
the point of articulation and internal effort. This rule draws
for us the important distinction between savarṇa "identity
of a sound" and savargīya "belonging to the same series of
homorganic stops." Thus, /p/ and /p/ or /y/ and /ỹ/ are
savarṇas, but /k/ and /kh/ are only savargīyas "belonging
to the same series."275 In the Pāṇinian conception of
savarṇa, which is far more expanded, this distinction is
dissolved. There, the savargīyas are also savarṇas.

10.3.5. The distinction between savarṇa and savargīya
affects the rule-formation of the TPr. Where Pāṇini can
have just one rule, the TPr needs two rules:

[1] TPr (v. 27) (makāraḥ sparśa-paras tasya sasthānam
     anunāsikam): "The sound /m/, when followed by a
     stop, becomes a nasal of the same point of articulation
     with it."

[2] TPr (v. 28) (antaḥsthā-paraś ca savarṇam anunāsikam):
"Followed by a semi-vowel, /m/ becomes an identical
nasal [semi-vowel] ."[276]

The reason why the TPr needs these two rules is quite
clear. According to its conception, /y/ and /ȳ/ are savarṇas
"the same sound," but /t/ and /n/ are not. They are only
sasthānas "sharing the same point of articulation." With
his expanded notion of savarṇa, Pāṇini needs only one rule,
i.e. 8.4.58 (anusvārasya yayi para-savarṇaḥ).

10.3.6. An overview of the TPr shows that its conception
of savarṇa is basically the same as that of the RPr, discussed
in Sec. 10.2.3. It is based on the expanded notion of varṇa,
which can be clearly seen in the convention of affixing -varṇa
to short vowels to stand for long and extra-long varieties.
In this extended notion of varṇa, the features of quantity,
nasality and pitch seem to become non-distinctive for inclusion
in a varṇa. Such a background conception of varṇa is used in
the notion of savarṇa "identity of a varṇa." Such a general
notion of savarṇa is then restricted to particular needs of
our treatise. As far as vowels are concerned, the TPr
restricts the notion of savarṇa only to short and long /a/,
/i/, and /u/, while the RPr, as already shown, included
long and short /r̥/ also. This would indicate that the same
background conception of savarṇa was adopted for their
particular needs by different works.[277]

10.4. THE ATHARVAVEDA-PRĀTIŚĀKHYA

10.4.1. The text which we shall consider under the name
APr is the Śaunakīyā Caturādhyāyikā edited by Whitney,
which is the same as the Kautsa-Vyākaraṇa [see: Sec. 4.8].
In this text, the term savarṇa occurs only once. The APr
(iii. 42) (samānākṣarasya savarṇe dīrghaḥ) says: "A simple
vowel followed by a savarṇa vowel becomes long [along with
the following] ."[278] This rule is not too different from the
TPr (x. 2) (dīrghaṁ samānākṣare savarṇa-pare), except in
the conventions of rule-formation. The TPr expresses the
substitute in accusative case, while the substituenda are
expressed in the nominative case. This is the convention

of the older tradition, which is later continued by the
Kātantra grammar. This is quite different from Pāṇini's
grammar, where the substitute is expressed in the nominative
and the substituenda are expressed in the genitive case.
[P.1.1.49 (ṣaṣṭhī sthāne-yogā).] The APr has followed
the same convention. But this single rule by itself would
not help us understand the general notion of savarṇa in
the APr.

10.4.2. On the APr (i.27), the unnamed commentary
supplied by Whitney quotes a verse from some ancient
Śikṣā: samānāsya-prayatnā ye te savarṇā iti smṛtāḥ.[279]
This line means to say that those sounds which are produced
with a like effort [at a point in] the mouth are styled homo-
geneous. The expression of this definition is notably identical
with P.1.1.9 (tylyāsya-prayatnaṁ savarṇam). The definition
of this Śikṣā could not really be interpreted by taking the
term āsya-prayatna to stand just for internal effort, and
hence, this definition becomes quite identical with Pāṇini's
rule, and probably belongs to a very ancient date. At the
same time, it must be pointed out that this is not the notion
of savarṇa in the APr. Whitney comments:

> The term savarṇa 'similar,' applied to sounds
> differing in quantity only, and not in quality, is
> used but once in our treatise (iii.42), and is not
> defined by it: The cited definition is almost the
> same with that of Pāṇini (i.1.9): that of the Vāj
> Pr. (i.43) is more explicit: the other treatises,
> like our own, employ the word without taking the
> trouble to explain.[280]

10.4.3. We are left to ourselves to figure out the conception
of savarṇa in the APr. Could it be more like the RPr and
TPr, or more like P.1.1.9? A close study of the APr shows
that the former is the case. Though the APr, unlike TPr,
does not define the conventions of the usage of -kāra,
-varṇa and -varga, behaviorally we can see that the same
distinctions hold true in the APr. The affix -kāra appended
to a vowel makes it stand for itself. For instance, /a/-kāra
in the APr (ii.92) excludes /ā/.[281] The affixation of

-varna helps short simple vowels to stand for their varieties
differing in quantity. Thus, we have /a/-varna, /i/-varna,
/u/-varna, /r/-varna etc. [282] But the long simple vowels
and diphthongs always go with -kāra, e.g. /ā/-kāra (iii.38),
/ī/-kāra (i.74), /ū/-kāra (i.74), /e/-kāra (i.34), /o/-kāra
(i.34), /ai/-kāra (i.41) and /au/-kāra (i.41). With consonants,
if there is affixation of -akāra, they stand for themselves;
but the sound /k(a)/, /c(a)/ etc. affixed with -varga stand
for the respective series of homorganic stops. We also see
that, unlike Pāṇini, but like the RPr and the TPr, the APr
widely uses the concept of sasthāna "having the same point
of articulation," where Pāṇini uses savarna. [283] This would
show that the notion of savarna in the APr must be similar
to that in the RPr and TPr. For other reasons, we may
agree with Thieme and Liebich that "the author of the AVPr.
did draw upon Pāṇini's grammar," [284] but we do not have to
identify the two conceptions of savarna.

10.4.4. Since the notion of savarna in the APr is more
like the two other Prātiśākhyas, based on identity of varna,
conventional and impressionistic, it is not faced with many
problems, which Pāṇini was faced with. Thus, there is no
problem similar to P.1.1.10. [285] The APr considers the
short /a/ to be closed (samvrta), and other vowels to be
open (vivrta). [286] Still it does not create problems similar
to P.8.4.68 (a a). [287] If the notion of the APr were like
P.1.1.9, there would have been all these problems. The
very fact that there are no problems like this in the APr is
a negative proof that its notion of savarna is different from
Pāṇini's. The VPr, which defined savarna like P.1.1.9,
is faced with all these problems, and had to make specific
efforts to get out of them.

10.5. THE VĀJASANEYI-PRĀTIŚĀKHYA

10.5.1. The VPr goes under two other names, i.e. Śukla-
yajuḥ-prātiśākhya and Kātyāyana-prātiśākhya. There is a
pointed controversy whether the same Kātyāyana wrote
vārttikas on Pāṇini and this Prātiśākhya. [288] We shall not
deal with this vexed question here, but will limit our inquiry
to comparing and contrasting various definitions of savarna.

10.5.2. The VPr (i.43) defines savarṇa as follows: samāna-
sthāna-karaṇāsya-prayatnaḥ savarṇaḥ: "A sound which has
the same point of articulation, articulator and the internal
effort [with another sound] is termed savarṇa 'homogeneous'
[with respect to that other sound] ."[289] This is clearly a
featural definition. Of the three conditions, the first two,
i.e. the points of articulation and articulators, are discussed
in detail in the VPr.[290] However, the āsya-prayatnas or
internal efforts are not discussed by the VPr. If we follow
Uvaṭa's commentary, there are six āsya-prayatnas: samvṛta
"closed" for /a/, vivṛta "open" for other vowels, aspṛṣṭatā
"lack of contact" for vowels, spṛṣṭatā "contact" for stops,
īṣat-spṛṣṭatā "slight contact" for semi-vowels and ardha-
spṛṣṭatā "half-way contact" for spirants and anusvāra.[291]

Since vowels and spirants have different internal
efforts, they are not savarṇas of each other, and thus there
is no need for any rule like P.1.1.10. However, /a/ is
closed, while other vowels are open, and hence /a/ would
not be homogeneous with /ā/. The VPr is aware of this
problem and explicitly says (i.72) that they should be treated
as if they are homogeneous (savarṇa-vat).[292] "It contains
in words what is implied in the procedure of Pāṇini; who has
used the ingeneous device of pronouncing in his grammar a
sound different from what it is like in the actual language."[293]
Pāṇini pronounces /a/ as an open sound in his grammar, so
that it should be homogeneous with the open /ā/ and /ā3/.
In the final rule of his grammar, P.8.4.68 (a a), he reinstates
the closed /a/. This is the final operation in any derivation,
and hence we never get open /a/ in the object language.

10.5.3. There is apparently a problem still left in. The
sounds /i/ and /e/ are produced in the same point of articu-
lation (tālavya "palatal")[294] and their articulator is the
middle of the tongue,[295] and both are open sounds. Similarly,
/u/ and /o/ are both labial (oṣṭhya),[296] and their articulator
is also the lips.[297] These two are also open sounds. Thus,
/i/ would be homogeneous with /e/, and /u/ would be homo-
geneous with /o/. However, this does not seem to be
intended by the VPr. This could be avoided, perhaps, by
considering /i/ and /u/ as vivṛta "open" and /e/ and /o/

as vivṛta-tara "more open," as has been done by many Śikṣās and Prātiśākhyas.[298]

10.5.4. The definition of the VPr needs to be compared with P.1.1.9 and Kātyāyana's vārttika on it. P.1.1.9 conditions homogeneity by āsya-prayatna, which in Kātyāyana's days came to stand only for internal effort. However, if homogeneity is conditioned by internal effort alone, then the sounds /j/, /b/,/g/, /ḍ/ and /d/ could also be homogeneous. With such an objection, the Vārttikakāra Kātyāyana rephrases P.1.1.9 as follows: siddham̐ tv āsye tulya-deśa-prayatnam̐ savarṇam "The correct result is established by stating that a sound is homogeneous [with another sound, if they share] the same point of articulation and internal effort in the mouth." [For details: Sec. 2.4.] This reformulation speaks of two conditions, while the definition of the VPr has added identity of the articulator as the third condition. Thieme considers P.1.1.9 to be "concise, but not precise," the VPr definition to be "not concise, but precise" and the vārttika reformulation to be "both precise and concise."[299]

10.5.5. In his "Pāṇini and the Veda," Thieme says that according to Patañjali "the place of articulation (deśa) is formed by the passive (sthāna) and active organ (karaṇa)."[300] If this is the meaning of the word deśa in the vārttika, then both the vārttika and the VPr (i.43) would be quite synonymous with each other.

This is doubtful. In fact, Patañjali does not explain the word deśa with any other word. Instead of accepting Kātyāyana's reformulation, which leads to breaking up Pāṇini's rule, Patañjali proposes to reinterpret Pāṇini's words as they stand. Thus, he interprets the word āsya as meaning not just mouth, but as something that lies in the mouth [āsye bhavam]. Then he asks the question: "What is it that lies in the mouth?" The reply is: sthānam̐ karaṇam̐ ca "The point of articulation and karaṇa."[301] This passage was taken by Thieme as an interpretation of the word deśa. The term karaṇa here is explained by Kaiyaṭa as standing either for internal effort or for the active organ.[302] It can be conclusively proved that here Patañjali only intends

internal effort. This is what Patañjali says:

> If the designation savarṇa were simply based on
> some similarity with some difference, then such a
> designation would be obtained for /ś/ and /ch/,
> /ṣ/ and /ṭh/, and /s/ and /th/. These [sounds in
> each pair] have identity in all other respects,
> except karaṇa. [303]

The sounds /ś/ and /ch/ have the same articulator, but
they differ only in their internal effort. The same is true
of the other pairs. Thus, the term karaṇa in this context
can only stand for internal effort. Thus, Thieme's
explanations need to be revised.

10.5.6. Thus the term deśa in Kātyāyana's vārttika stands
only for sthāna "point of articulation." Thieme himself,
from quite different considerations, comes to accept this
view in his later writings:

> Formerly ["Paṇini and the Veda," p. 92, n. 3] , I
> suggested that Kātyāyana's deśa was meant as a
> comprehensive term for sthāna and karaṇa. I do not
> uphold this conjecture: it is hard to believe that
> Kātyāyana could have expected to be understood when
> introducing such usage without further explanation.
> It is more probable that (in contradistinction to the
> view taken in the Vāj. Prat.) he thought of the
> mentioning of karaṇa in the definition to be dispensable,
> since the definition is, indeed, unambiguous without
> it. In fact, the definition of the vārttika conforms to
> the pattern of a true lakṣaṇa, which is not a character-
> izing description, but a restrictive characterization,
> as was lucidly set forth by A. Foucher, "Compendium
> des Topiques" (Paris 1949) pp. 8 ff. [304]

Whether we agree with Thieme's views on the relationship
of the two texts, i.e. the vārttikas and the VPr, or we
disagree with him, his characterization of the vārttika
definition is quite significant.

10.5.7. Now, we enter into a problem which needs to be critically analysed. Thieme says: "A full and complete analysis of what Pāṇini obviously meant by the expression āsya-prayatna is given in Vāj. Pr. I.43."[305] He also thinks that the term karaṇa "articulator" in the VPr definition is not essential, and therefore, Kātyāyana took it out in the vārttika on P.1.1.9.

Whether karaṇa "articulator" as the third condition is non-essential needs to be tested by referring to the usage of the VPr. According to the VPr, nāsikā "nose" is an articulator of the nasal sounds.[306] If the difference of articulator is to cause non-homogeneity, then /a/ and /ā/, /y/ and /ȳ/, /k/ and /ṅ/ would be non-homogeneous. For Pāṇini, these sounds are obviously homogeneous, and he uses the term savarṇa in the context of these sounds. Thus, in the sequences /ṁ/-/y/, and /ṁ/-/k/, /ṁ/ changes into /ȳ/ and /ṅ/ respectively, such that /ȳ/ and /ṅ/ are para-savarṇas "homogeneous with the following sounds."[307] But the VPr uses the term para-sasthāna "having the same point of articulation with the following sound," in this very context.[308] It also says that /m/, followed by a stop, changes into the fifth of the series of the following.[309] Even here, the term savarṇa is not used. Is it, then, possible, that for the VPr, /y/ and /ȳ/ are only sasthāna, but not savarṇa? Similarly, is it possible that /k/ and /ṅ/ belong to the same series, but are not savarṇa?

10.5.8. Despite the arguments in the previous section, it is hard to believe that nasality causes hon-homogeneity in the VPr. If /a/ is not homogeneous with /ā/, then we may not be able to apply the VPr (iv. 50) (siṁ savarṇe dīrghaḥ)[310] to a sequence like /a/-/ā/ to derive /ā/. We cannot say that such a combination is not desired by the VPr, because the very next rule says: (VPr iv.51) (anunāsikavaty anunāsikam) "In case the following vowel is a nasal, [the resulting vowel] is nasal."[311] This clearly allows that kind of combination. Similarly, we cannot say that /y/ and /ȳ/ are not homogeneous. The rule VPr (iv.110) (savarṇe) says: "[Doubling does not take place] when a homogeneous consonant follows."[312] The example given by Uvaṭa includes

the sequences /ȳy/ and /v̄v/, where there is no duplication.[313]

Thus, in summary, we must say that inclusion of karaṇa in the definition is not carried to its logical conclusions, and hence, in view of the requirements, it is unnecessary. Thieme is certainly right in regarding it to be dispensable. That karaṇa "articulator" is dispensable is clearly stated, later, by Hemacandra [ref: Sec. 12.7.2].

10.5.9. Uvaṭa, on the VPr (i.43), says that even the sounds /r/ and /l/ can be combined in a savarṇa-dīrgha, if an example is found in the Vedic usage.[314] This, actually, seems to be an extension of Kātyāyana's vārttikas into the VPr, but has no basis. The sounds /r/ and /l/ have different points of articulation, and articulator, and hence they cannot be homogeneous.[315] Nor is their homogeneity imposed by the VPr. In fact, Uvaṭa himself indicates that /l/ never figures initially or finally in the object language.[316] Thus, there is no possibility of such savarṇa-dīrgha.

10.5.10. Though the conception of savarṇa in the VPr seems to be identical in scope with P.1.1.9, the VPr does not utilize this conception as extensively as it is used by Pāṇini. The VPr still follows the tradition of the Prātiśākhyas in formulating its rules. Thus, there is no rule of savarṇa-grahaṇa like P.1.1.69, and the VPr follows other Prātiśākhyas in their conventions of -kāra, -varṇa and -varga. The usage of -kāra, in the expressions like /a/-kāra, /ka/-kāra etc. is clearly defined.[317] The VPr defines that a short vowel stands for long and extra-long vowels, and a first consonant of a series stands for the series in the section where points of articulation are explained.[318] This is somewhat similar to P.1.1.69, but this is restricted to a very small number of rules. The VPr continues to utilize affixation of -varṇa and -varga. It still uses terms like sasthāna, where its own conception of savarṇa could have been used. Thus, the VPr resembles Pāṇini's grammar only in its definition of savarṇa, but not in its implementation.

10.5.11. Finally the question that we ought to ask is whether the VPr needs the kind of definition of savarṇa it has given

to account for its own usage of this term. The rule VPr
(iv. 110) (savarṇe) requires /y/, /v/ and /l/ to be homo-
geneous with their nasal counter-parts. The third and last
rule using the term savarṇa is the VPr (iii. 8) (pratyaya-
savarṇam mudi śākaṭāyanaḥ). This rule says that /ḥ/
followed by /s/, /ś/ or /ṣ/ changes to a sound homogeneous
with the following. Here /s/, /ś/ and /ṣ/ are required to
be homogeneous with themselves. These are the only three
rules in the VPr which use the notion of savarṇa.

   If we look at the examples closely, it will be instantly
clear that they can be savarṇas simply because they show
identity of the varṇa, and fit well in the notion of savarṇa
of the other Prātiśākhyas. Thus, the definition of savarṇa
in the VPr is unnecessarily over-extensive, and compared
to its own requirements, it is quite superfluous. It may be
the case, that the author of this Prātiśākhya came under a
heavy influence of Pāṇini's grammar, and hence gave the
expanded definition of savarṇa. However, while writing
his rules, he faithfully followed the tradition of the other
Prātiśākhyas.

10.6. THE SĀMAVEDA-PRĀTIŚĀKHYAS

10.6.1. There are four texts which go under the general
category of the Sāmaveda-prātiśākhyas, i.e. the Ṛk-tantra
attributed to the pre-Pāṇinian Śākaṭāyana, the Sāma-tantra
ascribed to Audavraji, the Puṣpasūtra ascribed to Puṣparṣi,
and the Akṣaratantra. Of these four texts, only the Ṛk-
tantra has general discussion of phonetics, while the other
texts are concerned more with the particular problems of
Sāman-recitation. The Ṛk-tantra shows the tendency of
shortening the grammatical terms, e.g. māsa for samāsa,
rga for varga, gha for dīrgha etc. The term savarṇa is
never used in any of these texts. The term sva is used in
the Ṛk-tantra occasionally for identity of an element [e.g.
kānt sve, Ṛk-tantra 155, kān-śabdaḥ sve pratyaye sakāram
āpadyate/ kāṁs kān ha jayati, comm. p. 34]. The Ṛk-tantra
[25, sparśaḥ sve] says that a stop followed by a sva belongs
to the preceding vowel. Here sva seems to cover sounds of
the same varga [see: Notes to Ṛk-tantra, by Surya Kanta,

p. 14, n. 25] . Within a particular section of the Ṛk -tantra, a stop stands for its varga [sparśe ṛgasya, Ṛk -tantra 13, sparśa -grahaṇe vargasya grahaṇaṁ vijñeyam, comm. p. 7] . Thus, /k/, /c/, /ṭ/, /t/ and /p/ stand for the respective vargas in the rules [4] jihvā -mūle ḥkṛ, [5] tāluni ścye, [6] mūrdhani ṣaṭau, [7] dante tslāḥ and [9] oṣṭhe vohpū [see: Ṛk -tantra, pp. 5-6] . In one case, /ṛ/ seems to stand for /r̄/ [jihvā -mūle ḥkṛ, Ṛk -tantra 4, jihvā -mūlīyasthā jihvā -mūla -sthānāḥ kakāra -rkāra -r̄kārāḥ, comm. p. 5] . In some rules, /e/ and /o/ seem to stand also for /ai/ and /au/ [tāluni ścye, Ṛk -tantra 5, tālu -sthānāḥ śakāra -cakāra - yakāra -ikāra -īkāra -ekārāḥ, comm; and oṣṭhe vohpū, Ṛk - tantra 9, oṣṭhya -sthānā vakāra -okāra -aukāra -upadhmānīya - pakāra -ukāra -ūkārāḥ, comm, p. 6] . The commentary seems to be somewhat inconsistent in including /au/ in rule 9, but in not including /ai/ in rule 5. It is important to note that Śākaṭāyana, who is supposedly pre -Pāṇinian, accepts vowels and spirants to be both open [vivṛtaṁ svaroṣmaṇām, 1.3, p. 3] . The same tradition might have continued up to Pāṇini forcing him to construct P. 1.1.10 (nājjhalau). But in contrast to Pāṇini, Śākaṭāyana accepts /a/ and /ā/ to be both open, or rather more open [vivṛtataram akāraikārau - kārāṇām, 1.3, p. 3] . [Note: In this statement, akāra seems to cover ākāra also.]

10.6.2. The Puṣpa -sūtra has nothing parallel to savarṇa. It uses the term sva [= svakīya] in connection with sāmans belonging to a group [see: Puṣpa -sūtra, Einleitung, p. 507] . Expressions with -kāra and -varṇa are quite frequent, and the notion of savargīya "belonging to the same varga" is occasionally used [Puṣpa -sūtra, pp. 636, 639, 667] . The Sāma -tantra ascribed to Audavraji is very important from the point of view of ancient grammatical terminology, but it has no notion of savarṇa. It uses the term ga for varga [see: na ga -prathama -cu, 3.5.6., na varga -prathamādir mandram āpadyate, comm., Sāma - tantra, p. 89] . In one place, /ṭ/ seems to stand for ṭa - varga [see: au ṭi, 5.5.9., p. 156] . Unfortunately I have not been able to obtain the Akṣara -tantra, but from its description, it seems to be very much similar to the Sāma - tantra. Thus, as far as the notion of savarṇa is concerned,

the Prātiśākhyas of the Sāmaveda have many unfinished
ideas, but no conclusive development. In some ways, they
may reflect a more ancient state of grammatical development,
compared to the Prātiśākhyas belonging to the other Vedas.
However, the exact dates of these texts are not as yet
definitely known. The Mātrālakṣaṇa, an ancillary text of the
Sāmaveda, uses the term savarṇa once (1.9) in the context
of homorganic varieties of /a/, /i/, /u/ and /ṛ/.
[Mātrālakṣaṇa, ed. B. R. Sharma, Kendriya Sanskrit
Vidyapeetha, Tirupate, 1970.] However, nothing is known
about the author or the date of this text.

CHAPTER XI

ŚIKṢĀS ON SAVARṆA

11.1. As it has been already discussed in Sec. 10.1.,
the class of the Śikṣā-texts is extremely old to have been
mentioned in the Upaniṣads, and it is older than the
Prātiśākhyas and Pāṇini. However, it must be remembered
that the Śikṣā texts which are available to us today are
certainly not these old Śikṣās, but are all younger than the
Prātiśākhyas and Pāṇini [see: Sec. 10.1].

11.2. The main purpose of the Śikṣās is phonetics, pure
and applied, and not grammar. Thus, the Śikṣās extensively
deal with the articulatory process in all its aspects and
classify sounds accordingly. These phonetic considerations
have been utilized by the grammarians to define certain
grammatical categories. The notion of savarṇa is based on
these phonetic considerations, but serves a purpose which
is more grammatical. The difference in phonetic consider-
ations can lead to problems in the definition and implementa-
tion of savarṇa. When one reads through the available
Śikṣā texts, one comes across different notions of savarṇa,
which may be put together and studied carefully. What
follows is an attampt in this direction. At this stage, we
shall not see how phonetics here affects the notion of savarṇa
elsewhere, but rather what the Śikṣās themselves have to
say on this notion.

11.3. The metrical version of the Pāṇinīya-śikṣā does not
use the term savarṇa, but the Pāṇinīya-śikṣā-sūtras contain
two statements involving this term. They are as follows:
[1] "The spirants and /r/ have no savarṇas," and [2] "A
member of a varga (group of homorganic stops) is savarṇa
with other members of the same varga."[319] The first
statement is identical with a statement found in the
Mahābhāṣya, and its significance has been discussed in

103

Sec. 7.1.9. The Pāṇinīya-śikṣā-sūtras seem to have taken
this statement from Patañjali.[320] They appear to be post-
Patañjali, because we find that the rule (3.6) says: "the
spirants have their articulator with a slight gap," while the
rule (3.7) says: "or they might be regarded open."[321]
This seems to be an attempt to accomodate views of both
Pāṇini and Patañjali. Similar rules are also to be found
in the Śikṣā-sūtras ascribed to Āpiśali.[322] [For a different
view, see n. 124.]

11.4. The Varṇa-ratna-pradīpikā-śikṣā of Amareśa apparently
presents quite a strange notion of savarṇa. It says:

> Whatever is the point of articulation (sthāna) and
> articulator (karaṇa) of a sound, [if it is the same
> with another sound, then] it should be accepted as
> savarṇa [with respect to the other sound] . [Their]
> internal effort (āsya-prayatna) may, however, be
> different.[323]

Thus, identity of the point of articulation and the articulator
defines homogeneity, and the internal effort is not to be
taken into account. This Śikṣā clarifies the reason for
adopting such a view:

> Let there be homogeneity of long /ā/ and short /a/,
> despite the difference of internal effort. Therefore,
> [homogeneity] is thus defined.[324]

The short /a/ sound is closed, while the long /ā/ is open,
and hence there might not be homogeneity of these two sounds,
if internal effort is one of the conditions.

For this very problem, Pāṇini pronounces open
/a/ in his grammar, and reinstates the closed sound /a/
at the end of his grammar (P.8.4.68). The VPr makes a
special rule to consider /a/ and /ā/ as if they are homo-
geneous. [Sec. 10.5.2.] These measures seem to be very
careful, but modifying the general definition as is done by
the Varṇa-ratna-pradīpikā-śikṣā creates a lot of problems.
For instance, this conception could make /i/, /c/-series,

/y/ and /ś/ homogeneous with each other. However, it
is not clear how this conception was meant to be utilized,
because the term is used only once again, where /ś/, /ṣ/
and /s/ are required to be homogeneous with themselves.[325]
This Śikṣā also defines a convention that a sound affixed
with -varṇa stands for its homogeneous sounds.[326]

11.5. The Prātiśākhya-pradīpa-śikṣā comments on the rules
of the VPr containing the term savarṇa, without really
explaining the term.[327] On one occasion, the term savarṇa
is rendered by sadṛśa "similar."[328] This Śikṣā advocates
homogeneity of /r/ and /l/, quoting the vārttika of Kātyāyana
(r-l-kārayoḥ savarṇa-vidhiḥ) (on P.1.1.9). This homo-
geneity is used to interpret a rule from the Pratijñā-sūtra.
The Pratijñā-sūtra prescribes that /r/ should be pronounced
as /re/. Thus, kṛṣṇa and ṛtviya are to be pronounced as
kreṣṇa and retviya. The Śikṣā extends this rule to /l/ and
says that klpta should be pronounced as klepta.[329]

The Keśavī-śikṣā of Keśava Daivajña says that a
rule that applies to /r/ also applies to /l/, because they
are savarṇa "homogeneous."[330] This is a somewhat different
context. This rule requires that the svara-bhakti of /r/ in
some places is pronounced as /re/. Thus the word barhiṣe
is pronounced as barehiṣe. The Keśavī-śikṣā extends this
to /l/, and says that valhāmasi should be pronounced as
valehāmasi.

11.6. F. Kielhorn quotes the definition of savarṇa given by
the Vyāsa-śikṣā: tulya-rūpaṁ savarṇam syāt "Sounds with
identical form are savarṇas."[331] Unfortunately, I have not
been able to reach the original text of this Śikṣā, which has
been published in the Journal of the University of Madras
(1929).[332] Heinrich Lüders' study "Die Vyāsa-śikṣā,
besonders in Ihrem Verhaltnis zum Taittirīya-Prātiśākhya,"
[Göttingen, 1894] is very detailed, and provides some help
on the conception of savarṇa in the Vyāsa-śikṣā. In his
"Inhaltsübersicht der Śikṣā," Lüders provides the following
description:

Verse (5): "Definition von varga," and "Bildung des

106

Namens eines varga."
Verse (10): "Definition von savarna."
Verse (13): "Bildung der Namen von Vokalen mit
varna, mit kāra und t."
Verse (14): "Bildung der Namen von Konsonanten
mit -akara."[333]

This system looks very much like the Prātiśākhyas, and hence the definition of savarna (tulya-rūpaṁ savarṇam) seems to stand basically for identity of a varna.

That the Vyāsa-śikṣā is very much in the tradition of the Prātiśākhyas can be determined by studying several of its rules which involve the notion of savarna. The verse (166) is described as: "Behandlung des /i/-Vokals und des /u/-Vokals vor nicht homogenen (asavarna) Vokalen."[334] This seems to be the change of /i/ to /y/ and /u/ to /v/ before a-savarna "non-homogeneous" vowels. The verse (172) is described as: "Verschmelzung der ersten acht Vokale mit einem folgenden gleich-artigen."[335] This i̇s parallel to VPr (iv.50, siṁ savarṇe dīrghah), APr. (iii.42, samānākṣarasya savarṇe dīrghah) and TPr (x.2, dīrghaṁ samānakṣare savarṇa-pare); and it is different from P.6.1.101 (akah savarṇe dīrghah) in its structure. The verse (269) is described as: "Zugehörigkeit des Konsonanten vor ungleich-artigem Halb-volkal."[336] This rule discusses the syllabic relationship of a consonant with the following asavarna semi-vowel, and it is comparable to the TPr (xxi.7, nāntahsthā-param asavarṇam) [Sec. 10.3.4]. Lüders has systematically brought home the point that this Śikṣā is almost a versified version of the TPr. Thus, the notion of savarna in the Vyāsa-śikṣā is generally not different from the Prātiśākhya-type of definition.[337]

11.7. An unnamed commentary on the APr quoted by Whitney cites a verse from a Śikṣā text: samānāsya-prayatnā ye te savarṇā iti smṛtāh, and comments "the cited definition is almost the same as that of Pāṇini" [ref: Sec. 10.4.2]. Literally this line says that two sounds having the same āsya-prayatna are savarṇas. The use of the term āsya-prayatna, in this verse, is of historical significance.

No text, other than P.1.1.9, uses the term āsya-prayatna
to stand for both the points of articulation and internal effort.
But this Śikṣā uses the term to stand for both of these
conditions, like Pāṇini. If it were to stand only for the
internal effort, that would be quite a novel conception of
homogeneity. Thus, this Śikṣā seems to be very ancient
and perhaps older than all those texts which use the term
āsya-prayatna to stand just for internal effort. It may even
be pre-Pāṇinian. Thus, Pāṇini was not alone in his usage
of the term āsya-prayatna to stand for both the point of
articulation and internal effort.

The Nāradīya-śikṣā belonging to the Sāma-veda uses
the term savarṇa twice. It says that /m/ followed by /y/,
/v/ or /l/ changes to a para-savarṇa "sound homogeneous
with the following."338 This does not help us get a clear
notion of savarṇa, since this rule could be formulated in
the Pāṇinian conception of savarṇa as well as in the
Prātiśākhya conception. The term savarṇa is also used
with respect to yama (e.g. nasal /k̃/, /g̃/ etc. found in
Vedic). This yama is said to be savarṇa "homogeneous"
with the preceding sound.339 The commentary of Bhaṭṭa
Śobhākara on this verse explains savarṇa by sadṛśa
"similar."340 In the Pāṇinian grammar, yamas do not
play any important role. They are not listed in the Śiva-
sūtras, nor are they considered to be homogeneous with
any consonants. Bhartṛhari says that the yamas are neither
represented through homogeneous representation, nor through
universal-mention.341 The Nāradīya-Śikṣā seems to use
the term in a very general sense of identity of the varṇa
and similarity.

11.8. The concept of savarṇa in some of the Śikṣās seems
to come very close to the Pāṇinian conception. The Śaiśirīya-
śikṣā says that a word-final /m/, followed by a stop, changes
into a nasal sound homogeneous (savarṇa) with the following
stop [antya-sthāne makāro'yam pūrvaḥ sparśe padāntagaḥ/
udaye tat-savarṇaḥ syāt sarvasminn anunāsikaḥ//, verse
281, Journal of Vedic Studies, Vol. II., No. 2., 1935, p. 15].
This verse makes /n/ and /t/ homogeneous with each other,
which is very similar with Pāṇini's procedure. A similar

usage of the term savarṇa is seen in the Vyāsa-śikṣā [see: n. 337] and Sarva-sammata-śikṣā [see: sparśānāṁ yavalānāṁ ca makāraḥ pūrva-sthitaḥ/ teṣām avāpnuyāt śliṣṭe savarṇam anunāsikam//, verse 16; the commentary of Alamūcu Mañcibhaṭṭa on this verse says: samāno varṇaḥ savarṇaḥ, tulya-sthāna-karaṇaḥ; Bhandarkar Oriental Research Institute, Poona, MS. No. 383 of 1883-84, folio 7] . The Kauṇḍinya-śikṣā uses a triple distinction of terms: savarṇa in the context of savarṇa-dīrgha, sarūpa ''with identical form'' for ''identity of sound'' and savargīya ''belonging to the same stop-series. '' [See: na sarūpa-savargīya-paro varṇo dvir ucyate, verse 68; savarṇa-dīrgha in verses 87 and 89. Prof. K. V. Abhyankar, Poona, has a copy of this Śikṣā made from the single MS which exists in a private collection in Hyderabad. This is planned to be published in the Annals of the Bhandarkar Oriental Research Institute.] The Śikṣādhyāya of the Bharatabhāṣyam by Nānyabhūpāla says that some scholars considered /l/, /h/ and /r/ to be savarṇas of each other because they have the same point of articulation and internal effort. It also refers to Nārada's opinion that /u/ is savarṇa with /v/ and /ś/ is savarṇa with /s/ [Bharatabhāṣya, Śikṣādhyāya, verses 48-9, p. 21] . The context indicates that the term has been used for nothing more than ''similar sounds. ''

CHAPTER XII

NON-PĀṆINIAN GRAMMARS

ON SAVARṆA

12.1. A comprehensive study of the conception of savarṇa
cannot be complete without considering its definitions and
implementation in the non-Pāṇinian systems of Sanskrit
grammar. There is an extensive published literature of
these systems, and they have drawn some attention of
scholars. Among the studies on these systems, noteworthy
are Liebich's translation of the Kātantra ["Das Kātantra,"
Zur Einführung in die indische einheimische Sprachwissen-
schaft I, Heidelberg, 1919] and his Konkordanz Pāṇini-
Candra [Breslau, 1928]. Also noteworthy is A. C. Burnell's
Essay on the Aindra School of Sanskrit Grammarians
[Mangalore, 1875].

Many scholars have devoted articles to non-Pāṇinian
systems of Sanskrit grammar, but Franz Kielhorn is perhaps
unique in this field in having worked with so many different
systems, even before they were published. His articles
include: 1) "Indragomin and other Grammarians" [Indian
Antiquary, vol. 15, 1886, pp. 181-3]; 2) "On the Jainendra-
Vyākaraṇa" [Indian Antiquary, vol. 10, 1881, pp. 75-9];
3) "The Chāndra-Vyākaraṇa and the Kāśikā-Vṛitti" [Indian
Antiquary, vol. 15, 1886, pp. 183-5]; 4) "On the Grammar
of Śākaṭāyana" [Indian Antiquary, vol. 16, 1887, pp. 24-8];
5) "Scheinbare Citate von Autoritäten in grammatischen
Werken" [Festgruss Böhtlingk, 1888, pp. 52-3]; 6) "A
Brief Account of Hemachandra's Sanskrit Grammar" [Wiener
Zeitschrift, vol. 2, 1888, pp. 18-24]; 7) "Malayagiri's
Saṁskṛit Grammatik" [Göttinger Nachr., 1892, pp. 318-327];
and 8) "Die Śākaṭāyana-Grammatik" [Göttinger Nachr., 1894,
pp. 1-14].

109

110

Also noteworthy are the following articles: 1) "Das
Cāndra-Vyākaraṇa," Bruno Liebich [Nachrichten von der
Königl. Gesellschaft der Wissenschaften zu Göttingen, Phil.
Hist. Klasse, 1895]; 2) "The Text of the Jainendra-Vyākaraṇa
and the Priority of Candra to Pūjyapāda," K. B. Pathak
[Annals of the Bhandarkar Oriental Research Institute,
vol. 13, 1931-2]; 3) "Ist Candragomin der Verfasser der
Cāndra-vṛtti?" R. Birwé [Mélanges d'Indianisme à la
mémoir de Louis Renou, Paris, 1968]; 4) "Über die
Grammatik Kātantra," Otto Böhtlingk [ZDMG, Vol. 41,
1887]; 5) "Kātantra und Kumāralāta," Heinrich Lüders
[BSB, Phil. Hist. Kl., 1930, also included in Philologica
Indica, Göttingen, 1940]; 6) "Moggallānas Saddalakkhaṇa
und das Cāndra-Vyākaraṇa," Otto Franke [Journal of the
Pali Text Society, Vol. 53, 1903]; 7) "Das Verhältnis von
Candra's Dhātupāṭha zu den Pāli Dhātupāṭhas, Otto Franke,
[Ibid.]; 8) "A Glimpse into the Kāśakṛtsna School of Sanskrit
Grammar," G. B. Palsule [Proceedings and Transactions
of the All India Oriental Conference, 17th Session, 1953];
9) "The Technical Terms of the Harināmāmṛta-Vyākaraṇa
of Jīva Gosvāmin," G. B. Palsule [CASS Studies, No. 2.,
University of Poona, Poona, 1974]; 10) "Kāśakṛtsna,"
K. C. Chatterjee [Indian Historical Quarterly, Vol. VIII,
1932]; 11) "A Note on Āpiśali," V. Pisani [Journal of the
Oriental Institute, Baroda, Vol. 5, 1956]; 12) "Aspects of
pre-Pāṇinian Sanskrit Grammar," Batakrishna Ghosh
[B. C. Law Comm. Volume]; 13) "The Relation of Pāṇini's
Technical Devices to his Predecessors," Mangala Deva
Shastri [Proceedings of the 4th All India Oriental Conference,
1926]; 14) "Les 'innovations' de la grammaire de Candra-
gomin," Louis Renou [Études de Grammaire Sanskrite,
Paris, 1936]; 15) The Sanskrit Dhātupāṭhas, a Critical
Study, G. B. Palsule [Poona, 1961], (a comparative study
of the Dhātupāṭhas of the various systems of Sanskrit
Grammar); 16) Geschichte und Kritik der einheimischen
Pāli-Grammatik und -Lexicographie, Otto Franke [Strassburg,
1902], (contains material on various systems of Sanskrit
Grammar in comparison with Pāli grammatical systems);
17) Robert Birwé's extensive introduction to the edition of
the Śākaṭāyana-vyākaraṇa [Bhāratīya Jñānapīṭha Prakāshan,
Banaras, 1971], (which discusses a great many historical

problems); and 18) Ācārya Hemacandra aur unakā
Śabdānuśāsana: Eka Adhyayana, Nemichandra Shastri
[Banaras, 1963].

Apart from such specialized studies, general accounts
of these systems are found in Colebrooke's "On the Sanskrit
and Prakrit Languages" [Asiatic Researches, Vol. VII, 1803,
pp. 199-231]; Belvalkar's Systems of Sanskrit Grammar
[Poona, 1915]; K. V. Abhyankar's Introductory Volume
[Vol. VII] (Prastāvanā-Khaṇḍa) to his father's complete
Marāthī translation of the Mahābhāṣya [Poona, 1954];
Yudhisthir Mimamsaka's Vyākaraṇa-śāstrakā Itihāsa
[Ajmer, 1961-2] in three volumes; and Gurupada Haldar's
Vyākaraṇa Darśanera Itihāsa [Calcutta, 1350 Bengali Era,
1943 A.D.]. Several texts in several editions on these non-
Pāṇinian systems have been published in India and abroad,
and there is enough material available for a comparative
study. In our study of the conception of savarṇa in these
systems, we shall follow approximately the order of systems
given in the "Chronological Conspectus of the Different
Schools" in S. K. Belvalkar's Systems of Sanskrit Grammar.
Though this "Conspectus" could certainly be improved, we
shall not deal here with matters of pure chronology.

12.2. ĀPIŚALI ON SAVARṆA Pāṇini refers to Āpiśali in
P.6.1.94 (vā supy āpiśaleḥ). Though Āpiśali's grammar
has not come down to us, there are Śikṣā-sūtras ascribed
to him. These do not provide a definition of savarṇa, but
use the term twice. This Śikṣā says that the spirants and
/r/ have no homogeneous sounds, and that a member of a
varga is homogeneous with other members of the same
varga.[342] From these two statements we are left to infer
Āpiśali's conception of savarṇa. Since /k/, /kh/, /g/,
/gh/ and /ṅ/ are considered to be savarṇas, the point of
articulation must be one of the conditions. However, it
could not be the only condition, because, in that case, /k/
would be homogeneous with /h/. This has been denied by
this text. Thus, /k/ and /h/ are not savarṇas. This might
indicate that internal effort was also included in the definition
of savarṇa. According to this Śikṣā, the spirants are īṣad-
vivṛta "slightly open," while stops are spṛṣṭa "with
contact."[343]

Since spirants are slightly open, and vowels are open, there is no need of any rule such as P.1.1.10 (nājjhalau). It also speaks of saṁvṛta "closed" short /a/.[344] This would create the problem of non-homogeneity of /a/ with /ā/, That would indicate that Āpiśali must have had some way to get around this difficulty. This close similarity with Pāṇini's grammar makes us wonder why Pāṇini did not follow Āpiśali in considering spirants to be slightly open? That would have spared him the trouble of formulating P.1.1.10. Most of the later grammars have accepted this subclassification. It is somehow hard to think that this subclassification existed before Pāṇini and yet Pāṇini took the trouble of formulating P.1.1.10. It may be that the Śikṣā ascribed to Āpiśali is actually a late work in that tradition, which accepted the classification made by Patañjali. [For a different view, see: n. 124.] There is yet no decisive evidence to prove that this text is older than Pāṇini.

12.3. THE KĀTANTRA AND KĀŚAKṚTSNA-VYĀKARAṆA

12.3.1. Burnell believed that terms like savarṇa were taken by Pāṇini from the Aindra School of grammar.[345] Burnell also believed that the Kātantra system reflects this ancient school.[346] The Kātantra takes for granted its list of sounds (varṇa-samāmnāya), where the first fourteen sounds [i.e. /a/, /ā/, /i/, /ī/, /u/, /ū/, /ṛ/, /ṝ/, /ḷ/, /ḹ/, /e/, /o/, /ai/, /au/] are vowels; and of these the first ten are termed samāna "simple vowels."[347] Then the term savarṇa is introduced: Kāt (1.1.4) "Of these [simple vowels] , two by two are savarṇa with each other."[348] Liebich explains this term as "von gleicher Kaste."[349] In fact, more than "Kaste," the term savarṇa is related to the linguistic meaning of varṇa. Then the term is used in the following rules. Kātantra (1.2.1) says: "A simple vowel followed by a homogeneous vowel is lengthened and the following vowel is deleted."[350] Though the procedure here is different from the single-substitute (ekādeśa) procedure followed by the Prātiśākhyas, still it is termino-logically closer to them than to Pāṇini. The rules (1.2.8-11) say that before an asavarṇa vowel, the /i/-vowels, /u/-vowels, /ṛ/-vowels and /ḷ/-vowels are respectively changed to

/y/, /v/, /r/ and /l/, and the following sound is not
deleted.[351] The rule (3.4.56) says that /i/-vowels and
/u/-vowels of the first element of the root-reduplication are
replaced by /iy/ and /uv/, before an asavarṇa vowel.[352]
These are the only occurrences of the term savarṇa in the
Kātantra-vyākaraṇa. Thus, we might say that the notion of
savarṇa here is quite in the tradition of the Prātiśākhyas,
except that it is extended here to /l̥/ and /l̥̄/.[353] But the
Prātiśākhyas use this concept of savarṇa also with consonants,
in the sense of "identity of varṇa." The Kātantra does not
use this term with respect to consonants. The conventions
of using the affixation of -kāra, -varṇa and -varga are the
same as in the Prātiśākhyas.

12.3.2. The original Kātantra system makes independent
rules for /r̥/ and /l̥/ and thus there seems to be no notion
of their homogeneity.[354] However, as Eggeling points out:
"Between 4 and 5, the Laghuvr̥tti adds two sūtras, or rather
vārttikas (a) r̥kāra-l̥kārau ca and (b) vargyaḥ sva-
vargyeṇa."[355] This seems to be a later introduction in the
Kātantra under influence of Kātyāyana's vārttikas. These
two statements mean that /r̥/ and /l̥/ are homogeneous with
each other, and that members of a varga are homogeneous
with each other. The second statement seems to bring the
Kātantra notion of savarṇa closer to Pāṇini's notion. This
is also a late attempt. The commentary of Trilocanadāsa
on this system points out that homogeneity of /r̥/ and /l̥/
is established on the basis of worldly usage of these
sounds.[356] This conception of Trilocanadāsa is refuted by
the Laghubhāṣya by saying that people do not identify /r̥/
and /l̥/.[357]

12.3.3. The Kātantra-paribhāṣā-sūtra-vr̥tti of Bhāvamiśra
contains the following maxim: varṇa-grahaṇe savarṇasyāpi
grahaṇam.[358] This is an explanation of the affixation of
-varṇa to short simple vowels, so that they also stand for
the long varieties. This is the principle of grahaṇa
"representation" followed by the Kātantra system.

12.3.4. We may here refer briefly to the grammar of
Kāśakr̥tsna. In 1952, A. N. Narasimhia published the

Kāśakṛtsna -Śabdakalāpa -Dhātupāṭha of Cannavīrakavi
[Sources of Indo -Aryan Lexicography: 5, Deccan College,
Poona, 1952]. It contains a Dhātupāṭha ascribed to
Kāśakṛtsna, with a brief Sanskrit and Kannada commentary.
This commentary quotes a few rules of Kāśakṛtsna's grammar.
[For a survey of views on Kāśakṛtsna's date, see my review
of S. D. Joshi and J. A. F. Roodbergen, Vyākaraṇa-
Mahābhāṣya, Karmadhārayāhnika, Publications of the Centre
of Advanced Study in Sanskrit, University of Poona, Class C,
No. 6, 1971 (review forthcoming in Orientalistische
Literaturzeitung, Leipzig).] G. B. Palsule (1953) has
presented an interesting study of Kāśakṛtsna's grammar
based on the above mentioned Dhātupāṭha and the rules found
in the commentary thereon. Kāśakṛtsna is most probably
post -Pāṇinian and pre -Kātyāyana [Palsule (1953), p. 350].
We have to mention Kāśakṛtsna in the context of the Kātantra
system, because "excepting one or two solitary cases
Kāśakṛtsna agrees entirely with the Kātantra in the matter
of the technical terms" [Ibid., p. 352]. Kāśakṛtsna uses
the terms like samāna, nāmin, varga, sandhyakṣara, -kāra,
which show that he belongs to the general class of the Aindra
type, which is seen in the Prātiśākhyas and the Kātantra.
Yudhisthir Mimamsaka (1961-2, Vol. I, p. 113) claims
that the Kātantra is in fact a summary of Kāśakṛtsna's
grammar. This question still needs to be investigated
further.

12.4. THE JAINENDRA -VYĀKARAṆA

12.4.1. The Jainendra -vyākaraṇa of Devanandin defines
the term sva [= savarṇa] as: (1.1.2) "[A sound is termed]
sva 'homogeneous' [with respect to another sound, if they
share] the same point of articulation and internal effort."[359]
This is quite parallel to P.1.1.9. The Mahāvṛtti of
Abhayanandin on this rule gives extensive details of phonetics
and also of the scope of the term sva. According to the
Mahāvṛtti, spirants are slightly open, and vowels are open.[360]
This follows Patañjali's subclassification. Thus there is no
need of a rule like P.1.1.10. Similarly, there is no question
of how /a/ and /ā/ can become homogeneous. Abhayanandin
says that the view [of the Pāṇinians] that /a/ is closed in

the object language, but is open in grammar is false. There should be no difference of pronounciation in the object language and grammar.361 He explains that /r/ and spirants have no homogeneous sounds, but members of a varga are homogeneous among themselves.362 All this is quite parallel to the Pāṇinian conception.

12.4.2. This system has a procedure which is identical with Pāṇini's savarṇa-grahaṇa (P.1.1.69). The rule (Jain.1.1.72) says: " An /a-Ṇ/ sound and a sound marked with /U/ stands for itself and for its homogeneous sounds, except if it is an introduced sound (bhāvya) or is marked with /T/."363 This rule combines several things in the Pāṇinian system. It combines P.1.1.69 with P.1.1.70 and the maxim: bhāvyamānena savarṇānāṁ grahaṇaṁ na [Sec. 8.2]. This shows that while constructing his grammar, Devanandin attempted to follow the late phase of Pāṇinian interpretation. Patañjali's suggestions are followed verbatum. The corre-spondence of this system with Pāṇini is so strong, that for almost every Pāṇinian rule with savarṇa, we find a rule with sva.364 Due to the acceptance of Pāṇini's Śiva-sūtras with some minor modifications, with almost the same system of markers and metatheoretic conventions, rules of the Jainendra grammar look like a revised edition of Pāṇini's system.365 To add to this, this system accepts homogeneity of /r/ and /l/, following Kātyāyana.366

12.5. THE CĀNDRA-VYĀKARAṆA

12.5.1. The system of Cāndra-vyākaraṇa of Candragomin follows Kātyāyana's suggestion of universal-mention, instead of following Pāṇini's homogeneous-representation. While commenting on his modified version of the Śiva-sūtras, Candragomin says that these sounds are intended to stand for their universals.367 Thus, there is no definition of savarṇa nor is there any procedure like P.1.1.69.

12.5.2. Kātyāyana himself thought that even in universal-mention, a rule of representation would have to be retained for the classes of stops. Thus, he suggested that only /a-Ṇ/ sounds should be omitted from P.1.1.69, retaining the rule

udit savarṇasya. [Sec. 3.16.] But this would make it
necessary to have a definition of homogeneity like P.1.1.9.
Candragomin found a better way out. He ruled that the initial
sound of a varga, marked with /U/, stands for the respective
varga (1.1.2).[368] Thus he resorted to the older notion of
varga, which Pāṇini had replaced with his expanded definition
of savarṇa. He reformulated Pāṇini's rules in such a way
that he could avoid using the term savarṇa.[369] Instead, he
made use of the older terms like sasthāna, which are self-
expressive (anvartha) and do not need any definition.[370]
Candragomin has shown independence in not following
Patañjali, but in following Kātyāyana's suggestions. As we
shall see later, there were other systems which followed
Kātyāyana's suggestions, but Candragomin was the pioneer
in this direction.

One thing, however, is not very clear. Why did
Candragomin accept the theory of universals, which is not
accepted by any Buddhist school of philosophy? The Jain
grammarians, right at the outset, say that their grammars
are based on the Jain doctrine of anekānta "many-faced
nature of reality." Thus, they accept individualism (vyakti-
vāda) and universalism (ākṛti-vāda) as the need be. But
Candragomin apparently has accepted a non-Buddhist
philosophical theory. It is possible that he accepted only
the conceptual-reality of these universals.

12.6. THE ŚĀKAṬĀYANA-VYĀKARAṆA

12.6.1. Under this name, we shall consider the work of the
Jain Śākaṭāyana, who is clearly post-Pāṇinian. The grammar
of the pre-Pāṇinian Śākaṭāyana is now lost to us, unless he
is the author of the Ṛk-tantra. The system of Śākaṭāyana
also tries to fuse together the Pāṇinian notion of homogeneity
with Kātyāyana's notion of universal-mention.

On his modified version of the Pāṇinian Śiva-sūtras,
Śākaṭāyana says in his Amoghavṛtti that the vowels listed
here also stand for long, extra-long and nasal varieties,
since they share the same universal (sāmānya = ākṛti).[371]
This is quite parallel to Kātyāyana's proposal of universal-

mention. A short vowel stands for long and extra-long varieties sharing the same universal, unless it is either an introduced sound (bhāvya)[372] or marked with /T/.[373] This rule is somewhat similar to Jainendra (1.1.72), in accepting the maxim of introduced sounds, and incorporating it into the rules of grammar. But the Jainendra does not accept universal-mention.

12.6.2. At the same time, Śākaṭāyana gives a comprehensive definition of sva (= savarṇa), which is quite parallel to P.1.1.9. Homogeneity is conditioned by identity of the point of articulation and internal effort.[374] The discussion of this definition in the Amoghavṛtti involves certain problems. It considers /a/ to be closed and /ā/ and /ā3/ to be open.[375] It is clear as to how Śākaṭāyana tried to get around this problem. Since there is universal-mention, he does not need them to be homogeneous. The Amoghavṛtti says that the sound /i/ etc. have eighteen varieties, while about the /a/-vowels, it says that /a/-kāra is six-fold, while the long and extra-long varieties are twelve in all.[376] The reason behind this separation is not clearly stated. The only conceivable way seems to be that even if /a/ and /ā/ are not homogeneous, still they share the same universal. This would overcome many problems. The spirants are classified as slightly open, and vowels are classified as open, and hence there is no need of a rule like P.1.1.10.[377] This system follows Patañjali in his subclassification, and the conclusion is also stated that /r/ and spirants have no homogeneous sounds.[378]

12.6.3. Though Śākaṭāyana accepts universal-mention for vowels, he does not accept it for stops. The universal of /k/ does not cover /kh/, /g/, /gh/ and /ṅ/. This is quite parallel to Kātyāyana's understanding [Sec. 3.16]. Thus, he makes the rule (1.1.2) that a sound marked with /U/ stands for its svas "homogeneous sounds."[379] While Candragomin's rule (Cāndra. 1.1.2, utā sva-vargasya) is based on the notion of varga, Śākaṭāyana's rule, like P.1.1.69, is based on the notion of homogeneity. However, the Amoghavṛtti seems to redefine the rule in terms of the notion of varga.[380]

118

Śākaṭāyana consistently carried out Kātyāyana's
suggestion for homogeneity of /r̥/ and /l̥/. He accepts
their homogeneity repeatedly in his grammar, and reformu-
lates the Śiva-sūtra r̥-l̥-K by r̥-K.[381] He clearly says that
the rules which apply to /r̥/ also apply to /l̥/, and offers the
fictional examples of /l̥/, which are so commonplace in the
later Pāṇinian tradition.[382]

12.6.4. Though Candragomin and Śākaṭāyana both tried out
Kātyāyana's suggestion for universal-mention, in a way,
Śākaṭāyana is closer to the spirit of Kātyāyana. Candragomin
made a vigorous effort to get rid of the notion of savarṇa,
but Śākaṭāyana replaces only certain parts of savarṇa-grahaṇa.
This is very similar to Kātyāyana, who suggests removal of
only /a-N/ sounds from P.1.1.69, and retaining udit
savarṇasya. Thus, Śākaṭāyana retained the term sva in
many rules, while Candragomin tried to get rid of it.[383]
The commentary Cintāmaṇi of Yakṣavarman and the Prakriyā-
saṁgraha of Abhayacandrasūri follow the interpretations
given by the Amoghavṛtti and have very little new to add.

12.7. THE HEMACANDRA-ŚABDĀNUŚĀSANA

12.7.1. Hemacandra's Śabdānuśāsana with his auto-
commentary Bṛhad-vṛtti represent a peculiar fusion of the
Pāṇinian notion of homogeneity and the rest of the technical
terminology which mostly comes from the Kātantra system.
Nemichandra Shastri has pointed out this mixed nature of
Hemacandra's technical terminology,[384] though his extensive ˙
comparisons have not touched the details of Hemacandra's
conception of sva and its application in his system.

12.7.2. Hemacandra defines sva "homogeneous" as: (1.1.17)
"[A sound is termed] sva [with reference to another sound,
if it has] the same point of articulation and internal
effort."[385] This definition is clearly identical with P.1.1.9.
Hemacandra's Bṛhad-vṛtti presents a very extensive and
systematic account of phonetics. Hidden in the comments
of the Bṛhad-vṛtti, there lies, perhaps, a historical suggestion
that Hemacandra based his definition not on P.1.1.9, but
rather on the VPr (i.43, samāna-sthāna-karaṇāsya-prayatnaḥ

savarṇaḥ). Hemacandra uses the term sthāna for the points
of articulation, and āsya-prayatna for internal effort. Of
the three conditions of the VPr, Hemacandra omitted the
second condition, i.e. karaṇa "articulator." The Bṛhad-
vṛtti says: "Karaṇa 'articulator' which is the root, middle,
forward and the tip of the tongue does not differ when the
point of articulation and internal effort are identical."[386]
This comment of Hemacandra actually supports Thieme's
conclusion that karaṇa in the definition of the VPr is logically
superfluous [Sec. 10.5.6].

12.7.3. Hemacandra quotes extensively from the Āpiśali-
śikṣā-sūtras. He accepts Patañjali's subclassification of
"open."[387] Thus there is no need of a rule like P.1.1.10.
Similarly, Hemacandra subscribes to the view that short
/a/ is open, and says that according to others, short /a/
is closed.[388] Thus, for him there is no problem of /a/
being non-homogeneous with /ā/.

12.7.4. However, there is no rule exactly parallel to
Pāṇini's homogeneous-representation (P.1.1.69) in
Hemacandra. On the contrary, he follows the Prātiśākhyas
and the Kātantra in their conventions of affixing -kāra,
-varṇa and -varga. He has defined the usage of -kāra and
-varga,[389] and the affixation of -varṇa, though undefined,
is quite uniform. Thus, the rules in this system look more
like rules in the Kātantra, than like Pāṇini's rules.[390]

12.7.5. Hemacandra's grammar must be clearly distinguished
from the VPr. The VPr defines savarṇa with scope equal to
P.1.1.9, but the rules where the term savarṇa is used do
not need such a broad conception. Such is not the case with
Hemacandra. Hemacandra needs this broader conception of
savarṇa for some of his rules. Hemacandra's rule (1.2.21)
says that /i/-vowels etc. are respectively replaced by /y/,
/v/, /r/ and /l/, if followed by a non-homogeneous vowel.[391]
This rule does not need the broader conception. But the
rules given below require this conception.

    Hem. (1.3.14) says that an augment /m/ and a word-
final /m/, if followed by a consonant, are replaced by a sound

homogeneous with the following (para-sva).[392] By this rule
/m/-/y/ is changed to /ỹ/-/y/, and /m/-/k/ is changed to
/ṅ/-/k/. The second case requires the broader notion of
homogeneity. This is quite similar to Pāṇini's procedure.[393]
The other rule which needs the broader conception is Hem.
(1.3.48): "If a non-nasal stop, /ś/, /ṣ/ or /s/ is preceded
by a consonant and followed by a homogeneous sound from
this very group, it may be optionally deleted."[394] Thus, in
the sequence -/ṇ/-/ḍ/-/ḍh/-, /ḍ/ might be optionally
deleted. This requires homogeneity of /ḍ/ and /ḍh/, which
can only be obtained by the broader conception. This is
also parallel to Pāṇini.[395]

12.7.6. The notion of /ṛ/ and /ḷ/ being homogeneous does
not seem to have been accepted by Hemacandra. He always
treats them separately and sometimes even writes separate
rules.[396] However, this notion seems to have entered his
system through later commentators. Hemahaṁsagaṇi, in
his Nyāya-saṁgraha, mentions the following maxim: "An
operation prescribed with reference to /ṛ/ also applies to
/ḷ/."[397] This seems to be based on the supposed homogeneity
of /ṛ/ and /ḷ/.

12.7.7. A comparison of Pāṇini's grammar with Hemacandra
shows that though the broader conception adopted by
Hemacandra is not unnecessary, still his terminological
dependence on the Kātantra did not allow him to fully utilize
the power of this conception. Thus, compared to Pāṇini,
Hemacandra's utilization of sva is more restricted.

12.8. THE ŚABDĀNUŚĀSANA OF MALAYAGIRI

12.8.1. Malayagiri's Śabdānuśāsana is not available to us
in its entirety, but a substantial portion of it has been
recovered and published recently by Bechardas J. Doshi.
Fortunately, this portion is sufficient to give us a complete
idea of his conception of homogeneity. Following his Jain
predecessors, Malayagiri prefers the term sva for savarṇa.
Malayagiri (dvitīya-sandhi, 1) defines sva as based on
identity of the points of articulation and internal effort.[398]
He considers spirants to be slightly open and avoids any

rule such as P.1.1.10.[399] Similarly, he considers /a/ to
be open, and hence there is no problem of non-homogeneity
of /a/ and /ā/.[400]

12.8.2. However, Malayagiri does not have a rule of savarṇa-
grahaṇa like P.1.1.69. Like Hemacandra, Malayagiri is also
terminologically dependent on the Kātantra to a great extent.
The conventions for the affixation of -kāra, -varṇa and -varga
are similar to the Kātantra. He also rules that a consonant
marked with /U/ stands for its varga.[401] He does not use
the notion of sva in this rule. Malayagiri is also dependent
on the Śiva-sūtras of Pāṇini and the modified version of
Śākaṭāyana. He defines short and long /a/, /i/ and /u/ to
be /a-Ṇ/; short and long /i/, /u/, /ṛ/ and /ḷ/ to be /i-K/;
/e/ and /o/ as /e-Ṅ/; and /e/, /o/, /ai/ and /au/ as
/e-C/.[402] This definition of /i-K/ is based on Pāṇini's
Śiva-sūtras, and not on the modified version of Śākaṭāyana,
because he has only /ṛ-K/.[403] It could have been based on
Jainendra's version, but there is no certainty about that
version. However, Malayagiri defines /y/, /v/, /r/ and /l/
by the term /ya-Ñ/.[404] This is clearly based on Śākaṭāyana's
version, where we have /ha-/-/ya/-/va/-/ra/-/la/-/Ñ/,
which is different from Pāṇini.[405]

12.8.3. With this mixed terminology, Malayagiri still needs
the broader conception of sva. Though some of his rules
could certainly use the restricted conception of the Kātantra,
other rules require the broader notion. For instance, the
rule (tṛtīya-sandhi, 2) says: "/i-K/ sounds are replaced by
[the corresponding] /ya-Ñ/ sounds, if followed by a non-
homogeneous vowel."[406] This rule does not need the broader
conception of savarṇa. Similarly, the rule (tṛtīya-sandhi, 5)
says: "A simple vowel, if followed by a homogeneous vowel,
is replaced by a long vowel, along with the following."[407]
This also does not need the broader conception.

But there are other rules, which need the broader
conception. These rules require homogeneity of /g/ and
/ṅ/, /ḍ/ and /ṇ/, /t/ and /n/ etc., which can only be obtained
in the broader conception of sva.[408] Malayagiri draws an
important distinction. He uses the term sarūpa for total

identity.[409] This is different from sva. In general,
Malayagiri's treatment of sva is very similar to Hemacandra.

12.9. THE MAGDHABODHA-VYĀKARAŅA

12.9.1. The Magdhabodha-vyākaraṇa of Bopadeva shortens
the term savarṇa by rṇa, by retaining the last syllable of
the older term. This is similar to his usage of the terms
sva, rgha etc. for hrasva and dīrgha. The term pluta is
reduced to plu.[410] Not only is this shortform different
from other systems, this conception itself is quite different
from other conceptions.

12.9.2. Bopadeva defines rṇa as: (Mugdh. 6): "Similar
(sama) stops (ñapa) and simple vowels (/a-K/) are rṇa with
each other [within the groups]; and /ṛ/ and /ḷ/ [/ṛ-K/,
though dissimilar] are also [rṇa with each other]."[411]
Bopadeva explains similarity (sāmya) in terms of identity
of the points of articulation.[412] This is quite a different
conception, and reflects Bopadeva's independent thinking.
The condition of identity of the points of articulation applies
separately to stops and simple vowels, and hence there is
no need of a rule like P.1.1.10. As an exception to this
identity of points of articulation, homogeneity of /ṛ/ and
/ḷ/ is specifically given. The definition is very clear and
does not leave any doubt about Bopadeva's intentions.

12.9.3. With this definition, Bopadeva gives us his rule of
rṇa-grahaṇa: (Mugdh). 7): "The sounds capa (i.e. /c/, /ṭ/,
/t/, /k/ and /p/), if marked with /U/, and the sound /a-K/
(i.e. /a/, /i/, /u/, /ṛ/ and /ḷ/), if without any marker,
stand for their homogeneous sounds."[413] Thus, /cU/,
/ṭU/, etc. stand for the respective vargas, and short simple
vowels stand for the respective long and extra-long varieties,
if they are not marked with /T/ etc. The sound /ṛ/ also
stands for /ḷ/. This is the total extent of rṇa-grahaṇa,
which is smaller compared to Pāṇini's homogeneous-
representation, where diphthongs and semi-vowels also stand
for their homogeneous sounds.

12.9.4. Bopadeva has extensively used the procedure of

rṇa-grahaṇa, but the term rṇa occurs only once more. The
rule (Mugdh. 22) says: "When [a vowel] is followed by a
rṇa 'homogeneous' sound, both are replaced by a long
variety."[414] This is the only rule where the term rṇa is
used.

The fact that the Kātantra uses the term savarṇa only
with simple vowels, and that, on other occasions, it has
successfully used the notion of sasthāna,[415] seems to have
influenced Bopadeva's thinking. At the same time, he must
have realized the benefits of the Pāṇinian procedure of
homogeneous-representation over the Kātantra and others,
in reducing the expression of the rules. Thus, Bopadeva
adopted a reduced version of P.1.1.9 and P.1.1.69. In
this conception of homogeneity, Bopadeva stands alone.

12.10. THE SĀRASVATA-VYĀKARAṆA

12.10.1. The Sārasvata-vyākaraṇa of Anubhūti-svarūpācārya
seems to have been constructed by combining features of
Pāṇini and the Kātantra. It uses terms like samāna and
nāmin, which come from the Kātantra, but it has its own
modified version of the Śiva-sūtras, which is used to formulate
shortforms. There is no general featural definition of
savarṇa, but short, long and extra-long varieties of simple
vowels are considered to be savarṇa.[416] Except for the
inclusion of extra-long vowels, this seems to be parallel to
the Kātantra notion of savarṇa. The Vṛtti explains conventions
for affixation of -kāra, -varṇa and /-t/, which are similar
to the Kātantra.[417] The Sārasvata defines the terms /kU/,
/cU/ etc. for the respective vargas.[418] The notion of
savarṇa is used mostly with vowels.[419]

12.10.2. Though the term savarṇa is not defined with respect
to consonants, one rule uses it in such a context. Sārasvata
(990) says: "If a jhas sound [i.e. non-nasal stops, /ś/, /ṣ/
and /s/] is followed by a savarṇa sound from the same
group, and is preceded by a has sound [i.e. a consonant],
then it is deleted."[420] This requires the expanded notion
of savarṇa, which does not exist in the Kāntantra. The Vṛtti
quotes a statement: "The members of a varga are savarṇas

among themselves."[421] This brings in the Pāṇinian notion of
savarṇa, by the back door. Looking at the total implementation
of the term, we can say that the scope of the concept of savarṇa
in the Sārasvata is the same as in the Mugdhbodha. But the
latter has given a definition of [sava]rṇa, and has the
procedure of rṇa-grahaṇa, which does not exist in the former.

12.10.3. The Sārasvata rules in homogeneity of /ṛ/ and /ḷ/
vowels.[422] This system goes further and also speaks of
homogeneity of /r/ and /l/; and quotes the view of the
Ālaṃkārikas that /ḍ/ and /l/, /ś/ and /s/, and /b/ and /v/
are also homogeneous.[423] This actually refers to dialectal
variation in the Middle Indo-Aryan. This device has been
frequently used in Sanskrit poetry.

12.11. SOME MINOR SYSTEMS

12.11.1. The Sarasvatī-kaṇṭhābharaṇa of Bhojadeva closely
follows Pāṇini, with certain minor differences. Bhoja's
definition of savarṇa is identical with P.1.1.9, except that
he uses clearer terminology. He uses sthāna for the point
of articulation and āsya-prayatna for internal effort.[424]
Bhoja also accepts P.1.1.10 (ṇājjhalau) as his rule
1.1.102.[425] This is the only non-Pāṇinian system that has
accepted this rule. However, Bhoja splits Pāṇini's savarṇa-
grahaṇa. His rule 1.2.2 (utā savargaḥ) says that a sound
marked with /U/ also stands for its varga. Then the rule
1.2.4 (avidhīyamāno'ṇ sasavarṇaḥ) says that an /a-Ṇ/ sound
which is not being ruled in stands for itself and its homogeneous
sounds. Both of these rules are covered by P.1.1.69. In
making use of the notion of varga, Bhoja seems to be combining
the Kātantra with Pāṇini.

12.11.2. We shall also briefly look at the Pāli grammars
of Moggallāna and Kaccāyana, since Burnell thinks that
they show influence from the lost school of the Aindra
grammar.[426] The Moggallāna grammar starts with the
list of 33 sounds, and says that the first ten of them are
vowels (sara), i.e. /a/, /ā/, /i/, /ī/, /u/, /ū/, /e/, /ai/,
/o/ and /au/.[427] Then it says that among them two by two
are termed savaṇṇa (= savarṇa) with each other.[428] This

only refers to the simple vowels. This fits well with the Kātantra type of system. The sounds /r̥/ and /l̥/ do not appear in Pāli. The sounds /ai/ and /au/ also do not appear in Pāli, but are listed with other sounds.

12.11.3. The Kaccāyana grammar clearly declares that the technical terms of the Sanskrit grammatical systems have been adopted. [429] The Kaccāyana grammar uses the term savaṇṇa without defining it. It is used only once in the rule Kacc. (1.2.3). [430] This rule explains a usage like na upeti changing into nopeti. It says that when /a/ of na is deleted before /u/ of upeti, /u/ changes to /o/ which is asavaṇṇa with /u/. Here the term asavaṇṇa seems to have been used in the sense of "different." The commentary Kaccāyana-vaṇṇanā says that short vowels are mutually homogeneous with the respective long vowels, and explains the term savaṇṇa with sarūpa "having identical form." [431] Though this last explanation may not stand with the Sanskrit grammarians, the previous one is within the influence of the Kātantra. Thus, both the grammatical systems show influence of the Kātantra, which may ultimately be traced back to Burnell's Aindra school of grammar.

I shall briefly refer to some of the non-Pāṇinian systems where my information comes from secondary sources. G. B. Palsule (1974, p. 26) discusses technical terms from the Harināmāmṛta-vyākaraṇa of Jīva Gosvāmin. The term for simple vowels in this system is daśāvatāra "ten incarnations, ten simple vowels," i.e. /a/, /ā/, /i/, /ī/, /u/, /ū/, /r̥/, /r̥̄/, /l̥/ and /l̥̄/ [daśa daśāvatārāḥ, 3]. Of these ten simple vowels, the homorganic pairs are homogeneous ekātmaka "with the same self" [teṣām dvau dvau ekātmakau, 4]. Palsule says (ibid.) that the term for asavarṇa in this system is anekātmaka. The Harināmāmṛta uses the term viṣṇu-varga for varga [te mantāḥ pañca pañca viṣṇu-vargāḥ, 19], and uses affixation of -rāma for -kāra of other systems [varṇa-svarūpe rāmaḥ, 37]. The Supadma-vyākaraṇa of Padmanābha defines savarṇa as: vargya-svarau sajātīyau savarṇau (1.1.15) (K. C. Chatterji (1948), p. 285). This seems to make use of the concept of jāti "universal" to define homogeneity. This is rather unique, because we find

that these two concepts are kept distinct in other systems.
Similarly this system also seems to extend the concept of
universal to members of a varga. This is also unique. The
Prayoga-ratna-mālā of Puruṣottama defines that two
homorganic (sasthāna) simple vowels are homogeneous with
each other, and /ṛ/ and /ḷ/ are also homogeneous with each
other [sasthānākau savarṇaḥ (?) syāt sāvarṇyam ṛ-ḷ-varṇayoḥ,
1.1.9] (K. C. Chatterji (1948), p. 285). This is very similar
to the Mugdhabodha conception of (sava-)rṇa.

CHAPTER XIII

A HISTORICAL OVERVIEW

13.1. Having reached the other end of the line, we can have an overview of the development of the notion of savarṇa and its implementation. Several scholars have compared and contrasted simply the definitions of savarṇa in different systems, without going into the function and implementation of this concept in those respective systems. [432] Such comparisons, though indeed very useful, do not give us the real relationships between these systems. For instance, the VPr definition of savarṇa is identical with Pāṇini's definition in its scope, but it is absolutely unnecessary to justify the usage of that term in that text. The definitions of the Jainendra, Śākaṭāyana, Hema-śabdānuśāsana etc. are identical with Pāṇini's definition, but the Jainendra follows Pāṇini's implementation, Śākaṭāyana follows Kātyāyana's suggestion of universal-mention, while Hemacandra retains a strong influence of the Kātantra. Thus, the definitions alone are not quite sufficient to give us the real historical relationships.

13.2. The term savarṇa is a very old term. It appears in the Ṛgveda (10.17.2) and the Atharvaveda (18.2.33), where Sāyaṇa explains it by sadṛśa "similar" and samāna-rūpa "having similar appearance." The term sāvarṇya also appears in the Ṛgveda (10.63.9), but here it stands for Manu, the son of Savarṇā. The earlier usage is, however, noteworthy. Though it has nothing to do with varṇa "sound," and is rather connected with varṇa "color," its general meaning of similarity must have contributed to the later grammatical notion.

In the early Vedic, we have more mythological and philosophical speculation on the speech-phenomenon, but in the Brāhmaṇa texts we start getting a glimpse of the ancient

127

grammatical activity. The Aitareya-Brāhmaṇa knows the
distinction between -varṇa and -kāra, ghoṣa and ūṣman. [433]
The Gopatha-Brāhmaṇa mentions a whole range of grammatical
terminology, which we later find utilized by the known
grammatical texts. [434] The Taittirīya-Upaniṣad quotes
subject headings of an ancient Śikṣā. [435] Weber has collected
a large number of grammatical terms from the Vedic Kalpa-
sūtras. [436] These were self-expressive terms and, according
to Burnell, they formed the technical terminology of the
Aindra School of Grammar, whose continued existence is
seen in the Prātiśākhyas, Kātantra and some of the later
systems. [437] Pāṇini brought in more mathematical
expressions, which were meaningful only according to the
technical conventions of the system, and were mainly aimed
at brevity in the expression of rules. He redefined some of
the older terms and gave them a more comprehensive
meaning.

13.3. The word varṇa primarily means color, but was used
to stand for sounds in later days. It is important to see how
the word standing for color could have been transfered to
stand for sounds. This has already created a long controversy.
In Goldstücker's Pāṇini, we find the first full scale discussion
of this problem. Before Goldstücker, Weber argued that
varṇa stands for "coloring," or specializing of the sound.
[Compare: rakta "colored" = "nasalized," Indische Studien,
Vol. IV, Berlin, 1858, p. 109]. Max Müller followed Weber.
Then came Goldstücker who argued that varṇa refers to
written letters, "arising naturally from its primitive sense
'colour'" [Goldstücker (1860), pp. 38-9]. Goldstücker used
this argument to substantiate his view that Pāṇini knew the
script. Batakrishna Ghosa gives an explanation which makes
more sense:

> This meaning of the word varṇa should have been
> developed first in the Brāhmaṇas of the Sāmaveda in
> which we constantly come across locutions like
> rathantara-varṇā ṛk "verse which gets the colour of
> Rathantara Sāman in chant." In these passages the
> word varṇa is visibly changing its meaning from
> "colour" to "sound" of melody. Thus, gradually,

the "sound of melody" became "sound in general."
["Aspects of Pre-Pāṇinian Sanskrit Grammar,"
B. C. Law Comm. Volume, p. 338; quoted by
Chatterji (1948), p. 279.]

K. C. Chatterji himself, however, seems to favor the view
that written letters "were covered with a coating of paint"
[(1948), p. 279], and hence the word for color came to be
used for sounds or letters.

Batakrishna Ghosa's explanation paves the way for
a rather more consistent development. However, from very
early days we come across association of types of Vedic hymns
with different colors in the primary sense of the word "color."
In the seventeenth chapter of the RPr, we find a detailed
discussion of color distinctions of different types of Vedic
hymns. The RPr lists seven different colors [17.8, p. 77].
It says that the fourfold Vedic Chandas is of kapila "brown"
color [17.10, p. 78]. However, the RPr does not seem to
associate individual sounds with different colors. This is
seen in the Yājñavalkya-śikṣā. It says that vowels are white,
stops are black, semi-vowels are brown, spirants are redish,
yamas are blue, anusvāra is yellow, visarga is white,
nāsikya is green, nasal sounds are dark blue, while raṅga is
of a mixed color [Śikṣā-saṁgraha, pp. 13-14]. The
Yājñavalkya-śikṣā goes further and says that nouns are
white, verbs are red, upasargas are brown while the nipātas
are black [ibid, p. 14]. Different systems of Yoga and
Tantra had different color-classifications of sounds, which
had meditational and mystical significance. [For a brief
informative account and bibliographical references, see:
Yoga, by Ernest Wood, a Pelican Original, first published
in 1959, revised reprint of 1971, pp. 153-4.]

As far as the non-mystical aspects are concerned, it
seems more probable that the word varṇa "color" came to be
used for sounds, by the secondary meaning of "color" standing
for musical quality, and later for vocalic quality. It stands
not only for a sound, but also for a comprehensive sound
quality, mostly the vowel quality. In this extended meaning,
it stood for "real sound" which is not affected by quantity,

nasality and accent. This notion of a common-substance or
real sound is an impressionistic notion. Thus, /a/, /ā/ and
/ā3/ have the same sound-substance, and hence they belong
to the same varṇa, whose minimal expression is naturally
found in the short, non-nasal variety. But /k/ and /kh/
were not thought to have the same real sound-substance, and
hence they belonged to different varṇas, and thus the notion
of varga "class of homorganic stops" came up. Thus, the
notions of varṇa and varga were the earlier notions. Affixation
of -varṇa to short vowels to stand for their long and extra-
long varieties is a later development based on this ancient
notion of varṇa. It goes back to the days of the Brāhmaṇa
texts. This stage is perhaps reflected in the Sāmaveda-
prātiśākhyas of ancient Śākaṭāyana and Audavraji. However,
the notion of savarṇa has not yet emerged.

13.4. The early conception of savarṇa is clearly based on
this notion of varṇa. Thus, savarṇa meant "belonging to
the same varṇa," having the same real sound-substance.
This was perhaps aided by the ancient usage of the word
savarṇa "having similar appearance." Thus, /a/ was savarṇa
with /ā/, since they had the same real sound-substance. But
/k/ and /kh/ were not regarded to be savarṇas, since they
were not thought to belong to the same varṇa. There, the
conception of varga "class of homorganic stops" and the
conception of savargīya "belonging to the same varga" filled
the gap. Thus, both the concepts, namely savarṇa and
savargīya, function side by side in the Prātiśākhyas
[Sec. 10.3.4]. K. C. Chatterji (1948, p. 285) says that
"originally 'savarṇa' appears to have been formed after
'samānākṣara' and was, therefore, restricted to the simple
vowels." This is difficult to justify. The term savarṇa also
appears in the context of consonants in the Prātiśākhyas,
and hence it is more appropriate to relate it to a basic ·
conception of varṇa.

The basic notion of savarṇa as founded on the notion
of varṇa, was in a way vague. We find that the Prātiśākhyas
and the Kātantra adjust this background notion of savarṇa to
their specific needs. Thus, as far as vowels are concerned,
the RPr and APr restricted the notion of savarṇa to short and

long /a/, /i/, /u/ and /r̥/. The TPr omitted /r̥/, while the Kātantra also added /l̥/. This difference from system to system shows the degree of adjustment. Some of the Prātiśākhyas did use the term savarṇa in the context of consonants, but here it was used in the sense of identity of the varṇa. Thus /y/ and /ȳ/ are savarṇas with each other, while /k/ or /ś/ is savarṇa only with itself.

13.5. Pāṇini thought in more sophisticated terms. He did not care if his terms were not self-explanatory, but his main purpose was to achieve more generalization and more compact expression for his rules. He re-examined the categories of varṇa and varga, and tried to cover both of these notions in a single generalization. Through this attempt came the expanded notion of savarṇa. Pāṇini defined his expanded notion of savarṇa in clear featural terms: identity of points of articulation and internal effort. He also gave specific solutions to problems such as unwanted non-homogeneity of /a/ and /ā/, and unwanted homogeneity of certain vowels with spirants. It is possible that this expanded notion of savarṇa existed in pre-Pāṇinian times. Such a notion is seen in the Āpiśali-śikṣā-sūtras, and if these can be proved to belong to the pre-Pāṇinian teacher Āpiśali, that would help us push this notion into pre-Pāṇinian antiquity. Pāṇini not only gave an expanded definition of savarṇa, he also gave the procedure of homogeneous-representation, which is more compact than the older conventions of affixation of -kāra, -varṇa and -varga.

13.6. Then came Kātyāyana, the Vārttikakāra. According to the tradition recorded in the Kathā-sarit-sāgara, he belonged to the Aindra School of Grammar.[438] That he belonged to a non-Pāṇinian tradition can be clearly seen from his terminology, which is identical with that of the Prātiśākhyas and the Kātantra. Kātyāyana had also come under a heavy philosophical influence of the early schools of the Mīmāṁsā system, i.e. the schools of Vyāḍi and Vājapyāyana. Vyāḍi held the doctrine of vyakti-vāda or dravya-vāda "Individualism," while Vājapyāyana held the opposite doctrine of ākr̥ti-vāda "Universalism." Kātyāyana extensively refers to the linguistic and ontological theories

of these two thinkers. Probably under the influence of
Vājapyāyana's theory of universals, Kātyāyana returned to
the old conception of varṇa with a new philosophical interpre-
tation. Instead of saying that /a/, /ā/ and /ā3/ belong to
the same varṇa, Kātyāyana said that they share the same
universal /a/-ness, which is naturally expressed by any
instance of it. Similarly, /y/ and /ȳ/ are covered by the
same universal. However, the universal of /k/ cannot
cover /kh/ etc. Thus, the limitations of the conception of
a universal are the same as those of the conception of varṇa.
Both are equally impressionistic or a priori. Kātyāyana
never gave an explicit definition of a sound-universal. With
this conception, he attempted to partially replace the procedure
of homogeneous-representation. It was not necessary for
vowels and semi-vowels, but it was still necessary for stops.
Thus, in a way, Kātyāyana returned to the old distinction of
varṇa and varga.

13.7. These were the three major directions in the develop-
ment of the notion of savarṇa and its implementation. Each
of the later schools of grammar chose one of these for its
model, and some chose to combine them in varying degrees.
Thus, Candragomin accepted Kātyāyana's suggestion of
universal-mention for vowels, and adopted the notion of
varga for stops. Thus, he tried to get rid of the notion of
savarṇa. Śākaṭāyana also followed Kātyāyana's universal-
mention, but he also defined savarṇa, like Pāṇini, and
reserved homogeneous-representation for stops. The
grammars of Devanandin and Bhoja are very closely related
to Pāṇini's scheme. Hemacandra and Malayagiri defined
savarṇa like Pāṇini, but in its implementation they worked
out a synthesis of Pāṇini and the Kātantra system. The
Sārasvata mostly followed the Kātantra, except in a few
cases where it uses the term savarṇa in the Pāṇinian sense.
The Mugdhabodha gave an independent definition of savarṇa,
but this definition reflects a synthesis of Pāṇini and the
Kātantra. The Pāli grammars followed the Kātantra in their
usage of the term savaṇṇa. The VPr probably came under
the influence of the Pāṇinian system, in its definition of
savarṇa, but its implementation is not different from the
other Prātiśākhyas. This complex historical development

and relationships can be seen in the following diagram:

<div align="center">

Historical Development of

Savarṇa

</div>

Varṇa (sound)
/
Varṇa (real sound)

Savarṇa   Varṇākṛti
(sound universals)
Kātyāyana

restriction   expansion

Savarṇa   Savarṇa
Aindra School Type   Pāṇini's Type

Kātantra   RPr   TPr   APr   Śākaṭāyana   Cāndra

Pāli   Jainendra
Grammars

VPr   Bhoja   Sārasvata   Hemacandra   Mālayagiri   Mugdhabodha
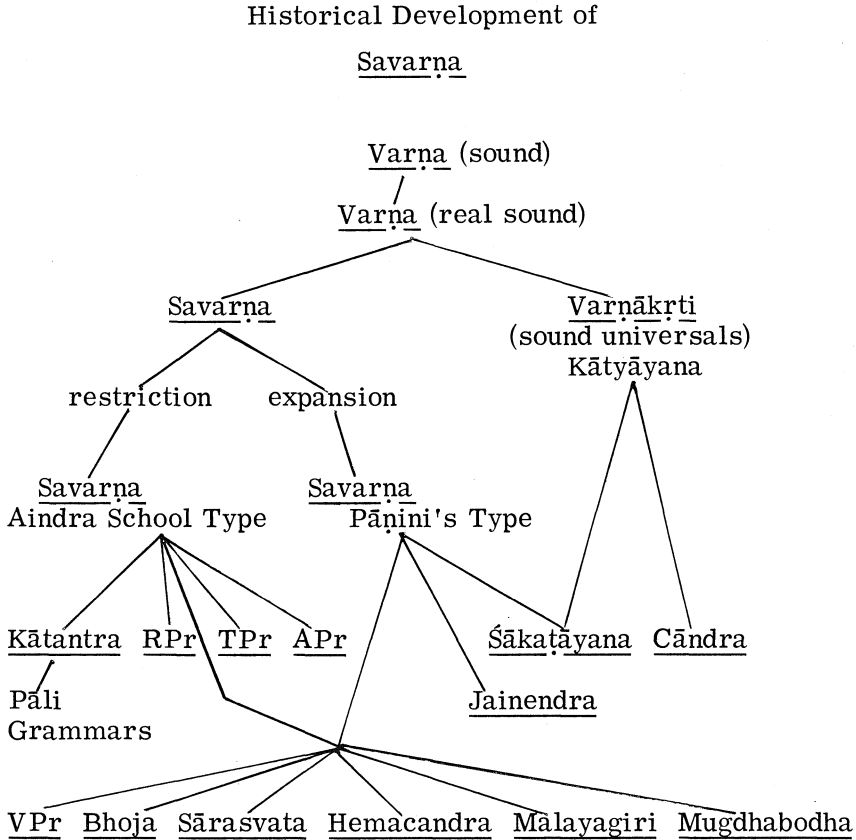
13.8. Thus, the historical development of this conception and its implementation represents a continuous process of rethinking, reformulation and re-examination at each stage. It shows the continued vitality of grammatical reasoning in the traditions of Indian grammar. Kielhorn rightly observed: "It was indeed difficult for later grammarians to add to the store of knowledge which had been collected by Pāṇini, Kātyāyana and Patañjali; nevertheless there has been no lack of scholars who have endeavoured to improve on the

arrangement of the A<u>ṣṭādhyāyī</u>, and who, each in his way, have done useful work." ["On the <u>Jainendra-Vyākaraṇa,</u>" <u>Indian Antiquary</u>, Vol. 10, March 1881, p. 76.] The linguistic and methodological significance of the post-Pāṇinian grammars was also pointed out by Kielhorn: "Their aim was not to adapt the rules of those that went before them to the changed conditions of the language, but mainly, each after his own fashion to rearrange those rules, and to alter their wording and terminology." ["A Brief Account of Hemachandra's Sanskrit Grammar," <u>Wiener Zeitschrift</u>, Vol. 2, 1888, p. 18.] No system ever lived in a total vacuum, and hence each system is a product of its history. The notion of homogeneity is only one instance of this historical process. Only through a number of such studies, covering the entire span of grammatical activity, will we come to possess a complete history of the development of the Indian Grammatical Theories.

APPENDIX A

THE SCOPE OF SAVARṆA-GRAHAṆA

[In this appendix, I shall present the arguments, which I have already discussed in my article "The Scope of Homogeneous-Representation in Pāṇini," which is due to appear in the Silver Jubilee Volume of the Annals of Oriental Research, University of Madras. I addressed myself to this issue after the main body of this book was already completed. However, this is a very crucial question and hence this appendix has been added.]

1. In his Śiva-sūtras, Pāṇini uses the marker /Ṇ/ twice, i.e. in [1] a-i-u-Ṇ₁ and in [6] l(a)-Ṇ₂. By P.1.1.71 (ādir antyena sahetā), an initial sound given along with a marker stands for itself and for the intervening sounds, excluding the marker sounds. The first six Śiva-sūtras are as follows:

$$[1]\ \ \underline{a\text{-}i\text{-}u}\text{-}N_1$$
$$[2]\ \ \underline{ṛ\text{-}ḷ}\text{-}\overline{K}$$
$$[3]\ \ \underline{e\text{-}o}\text{-}\overline{N}$$
$$[4]\ \ \underline{ai\text{-}au}\text{-}C$$
$$[5]\ \ \underline{h(a)}\text{-}\underline{y(a)}\text{-}\underline{v(a)}\text{-}\underline{r(a)}\text{-}Ṭ$$
$$[6]\ \ \underline{l(a)}\text{-}N_2$$

There are about forty shortforms made by using the Śiva-sūtras, and very rarely there is any confusion as to what sounds are included in those shortforms. But the shortforms /a-Ṇ/ and /i-Ṇ/ which are used by Pāṇini very frequently do present problems, because the marker /Ṇ/ is given twice in the Śiva-sūtras. Theoretically, /a-Ṇ/ and /i-Ṇ/ could have two meanings each, depending whether /Ṇ/ belongs to a-i-u-Ṇ₁ or to l(a)-Ṇ₂.

135

2. Vyāḍi presents this problem in his <u>Paribhāsa-sūcana</u> and
says that Pāṇini deliberately used the marker /Ṇ/ twice and
that a confusion should not obstruct us, and we should rely
on the tradition of interpretation for the specific significance
of a shortform. Unfortunately, Vyāḍi only presents the
problem and refers us to interpretative tradition, but does
not state the conclusions in the case of /a-Ṇ/ and /i-Ṇ/
[<u>Paribhāṣā-sūcana</u>, p. 26-7]. The specific attempt to
define the scope of /a-Ṇ/ and /i-Ṇ/ is seen for the first time
in the versified <u>vārttikas</u> quoted by Patañjali. The authorship
of these <u>vārttikas</u> is not yet clearly known, but they certainly
seem to be pre-Patañjali. The <u>Śloka-vārttika</u> says:

> Without any doubt [/a-Ṇ/ is formed with the first /Ṇ/]
> because the following [sounds] do not appear [in the
> examples of rules with /a-Ṇ/], [except] in P.1.1.69,
> [where] /a-Ṇ/ [is formed with the second /Ṇ/],
> because [/r/ is] followed by the marker /T/ [in the
> rule] P.7.4.7 (ur ṛt). The shortform /i-Ṇ/ is
> [always] with the second /Ṇ/, since elsewhere /i/
> and /u/ are [given separately, and not by the shortform
> /i-Ṇ/]. [439]

Patañjali says that by using the marker /Ṇ/ twice, Pāṇini
indicates the maxim that one should not consider a rule to be
inoperative because of doubt, but one should understand the
specific meaning from the interpretation of the learned. [440]
Patañjali clearly says that except in P.1.1.69, the shortform
/a-Ṇ/ is always with the first /Ṇ/, and that the shortform
/i-Ṇ/ is always with the second /Ṇ/. [441] Thus, according
to the tradition, the procedure of homogeneous-representation
(<u>savarṇa-grahaṇa</u>) applies to vowels and semi-vowels as they
are given in the <u>Śiva-sūtras</u>, and to sounds marked with /U/.
Thus the sounds /y/, /v/ and /l/ also stand for /ȳ/, /v̄/ and
/l̄/, and /r/ stands for /ṝ/ and /ṝ3/. Homogeneous-
representation goes beyond a-i-u-Ṇ. This also seems to be
the view of Kātyāyana. [442] The later Pāṇinian tradition
follows the verdict of Patañjali.

3. Kunhan Raja has pointed out several problems in the
traditional view about the scope of /a-Ṇ/ in P.1.1.69.

The first problem concerns the diphthongs:

> There are the sounds /e/ and /ai/ which have the
> same place of articulation and the same effort in
> production. There is a similar relation between
> /o/ and /au/. Therefore /e/ and /ai/ become
> mutually concordant and /o/ and /au/ also become
> mutually concordant in the same way. If the
> combination /a-Ṇ/ in this s̲ū̲t̲r̲a̲ (P. 1. 1. 69) has the
> second /Ṇ/ as its final mute, the combination will
> include the diphthongs and consequently, when Pāṇini
> uses the sound /e/ and /o/, it includes also the
> sounds /ai/ or /au/, just as the sound /a/ means
> both the short /a/ and the long /ā/. This is not
> acceptable. This leads us to the assumption of another
> rule that as an exception, there is no concordance
> between /e/ and /ai/ or between /o/ and /au/. Such
> an exception is taken to be implied by the fact that
> while he does not include the long forms of the
> simple vowels, he gives all the four diphthongs
> separately. But all such difficulties can be avoided
> if even in this s̲ū̲t̲r̲a̲ /aṇ/ is taken as combined with
> the first /ṇ/ as mute as in the other s̲ū̲t̲r̲a̲s̲. [443]

This objection assumes that according to Pāṇini /e/ and /o/
are homogeneous with /ai/ and /au/, and then there might be
the problem of /e/ and /o/ standing for /ai/ and /au/, and
vice versa.

4. Kunhan Raja tries to point out that /ṛ/ need not stand for
/ṝ/. The rule he considers is P. 6. 1. 101 (a̲k̲a̲ḥ̲ s̲a̲v̲a̲r̲ṇ̲e̲
d̲ī̲r̲g̲h̲a̲ḥ̲). This rule says that if an /a-K/ sound is followed
by a homogeneous sound, both are replaced by a homogeneous
long sound. Kunhan Raja comments:

> ...the short /ṛ/ can never be followed by a long /ṝ/;
> there is also no possibility of a long /ṝ/ sound being
> followed by a short /ṛ/ sound, in the way in which a
> short /a/ can follow a long /ā/....An example like
> h̲o̲t̲ṛ̲-ṝ̲k̲ā̲r̲a̲ḥ̲ is only an artificially manipulated one. [444]

He also considers the rule P. 8. 4. 58 (<u>anusvārasya yayi</u>
<u>parasavarṇaḥ</u>) which says that /ṁ/, if followed by a /y(a)-Y/
sound [i.e. semi-vowels and stops] changes into a sound
homogeneous with the following. Raja says:

> All that is said in the <u>sūtra</u> is that the <u>anusvāra</u>
> becomes a <u>savarṇa</u> of the following sound, retaining
> its nasal character. [445]

Kunhan Raja holds that this rule requires /y/, /v/ and /l/
to be homogeneous with /ȳ/, /v̄/ and /l̄/, but not to stand
for them.

5. With these arguments, Kunhan Raja concludes as follows:

> That Pāṇini used the same sound /ṇ/ twice is unhappy.
> But we can say that of the two combinations possible
> with this mute one with the first letter /a/ is with the
> first mute /ṇ/ and one with the second letter /i/ is
> with the second /ṇ/. But to say that even here, there
> is an exception, not specifically mentioned by Pāṇini,
> is a position which I feel very difficult to accept....In
> this context, the question is not whether a semi-vowel
> has a <u>savarṇa</u> or not; the point is whether when Pāṇini
> gives the semi-vowels, he includes the nasalised
> form of the semi-vowels also in it.... What is meant
> is simply this that when Pāṇini gives the short /r/
> sound or the semi-vowels, they do not include the
> <u>savarṇa</u>s also. [446]

Kunhan Raja has rightly separated the two questions: Does
a given sound have any homogeneous sounds? Can a given
sound stand for its homogeneous sounds? However, his
general conclusion needs to be critically examined.

6. Raja says that /e/ and /ai/ are homogeneous, since their
"place of articulation is throat-cum-palat and effort is <u>vivṛta</u>
(open)."[447] Similarly, /o/ and /au/ are homogeneous,
since their "place of articulation is throat-cum-lip and effort
is <u>vivṛta</u> (open)."[448] Here K. Raja is clearly following the
phonetic description as given by such late texts as the

Siddhānta-kaumudī of Bhaṭṭoji Dīkṣita. [449]

Historically speaking, we do not know exactly what
kind of phonetic classifications were there in Pāṇini's mind
when he gave his rules. We have to rely on secondary
sources. The dates of the different versions of the Pāṇinīya-
śikṣā are not very clear, and they seem to be relatively of
a late date. There are some subtle indications in Pāṇini's
rules which suggest that he treated /e/ and /o/ quite differently
from /ai/ and /au/. P.8.2.106 (plutāv aica idutau) says that
when /ai/ and /au/ become pluta "extra-long," it is the /i/
and /u/ in these sounds that becomes extra-long, and not
the /a/ element. This clearly shows that, for Pāṇini, the
sounds /ai/ and /au/ had distinctly two components. By
contrast we may infer that the sounds /e/ and /o/ did not
have such distinct elements. [Ref.: Bare (1975), pp. 185-93.]

Looking at the vārttikas of Kātyāyana, we find that
he clearly distinguishes /e/ and /o/ from /ai/ and /au/.
The vārttika 4 on P.1.1.48 says that /i/ and /e/ are sasthāna
"having the same point of articulation," and the same is
true of /u/ and /o/. [450] On the other hand, the vārttika 5
on P.1.1.48 says that in /ai/ and /au/, the latter elements,
i.e. /i/ and /u/, are longer segments, compared to the
initial /a/. [451] Thus, Kātyāyana seems to hold that /e/ is
palatal, /o/ is labial, /ai/ is throatal-palatal and /au/ is
throatal-labial. Kātyāyana also says that the diphthongs are
more open as compared to simple vowels. [452]

Patañjali says that the element /a/ in /e/ and /o/
is quite indistinct, while /ai/ and /au/ contain a vivṛta-tara
"more open" /a/ vowel. He further says that /e/ and /au/
cannot be savarna "homogeneous," because they are not
tulya-sthāna "with the same point(s) of articulation." The
sounds /e/, /o/, /ai/ and /au/ are all sandhy-akṣaras
"diphthongs" but, in contrast to /e/ and /o/, the sounds /ai/
and /au/ are described by Patañjali as being samāhāra-varṇas
"composite sounds," where there is a mātrā "mora" of /a/,
and the other mora is of /i/ and /u/ respectively. [453] This
slightly differs from Kātyāyana's point of view concerning
proportions of these elements.

140

This shows·that at the early stage of the Pāṇinian tradition, the sounds /e/ and /o/ were looked upon as having one point of articulation, while /ai/ and /au/ were the real composite sounds with double points of articulation. All diphthongs are held to be more open than the simple vowels. This picture has been confirmed by a perusal of the Prātiśākhyas.[454] The Pāṇinīya-śikṣā, in different versions, represents views of a later period, and cannot be taken as representing the views of Pāṇini.[455] Thus, there is no reason to believe that Pāṇini held /e/ and /o/ to be homo-geneous with /ai/ and /au/.

7. The second argument of Kunhan Raja is that /ṛ/ in Pāṇini's rules need not stand for /ṝ/. In twenty-five rules, Pāṇini gives short /ṛ/ with the marker /T/, while /ṝ/ is given with the marker /T/ in several rules. The short /ṛ/ is given also without /T/ in several rules.[456] The presence and absence of the marker /T/ is closely connected with the application of homogeneous-representation. The marker /T/ with /ṛ/ or /ṝ/ is not really a conclusive proof that /a-Ṇ/ in P.1.1.69 includes /ṛ/, since the marker /T/ is also used with non-/a-Ṇ/ sounds like /ā/ and /ī/ in a prescriptive function (vidhāyaka-taparakaraṇa), as opposed to its restrictive function (niyāmaka-taparakaraṇa) in the case of /a-Ṇ/ sounds. Wihtout /T/, a non-/a-Ṇ/ sound stands just for itself, while with it, it can cover homogeneous varities of the same quantity.[457]

However, there are cases of /ṛ/ without /T/, where representation of /ṝ/ is absolutely necessary. P.1.2.12 (uś ca), where /uḥ/ is genitive singular of /ṛ/, applies to verb-roots ending in /ṛ/ and /ṝ/ both, giving formations such as kṛṣīṣṭa [kṛ - sīyUṬ - sUṬ - ta] and stīrṣīṣṭa [stṝ - sīyUṬ - sUṬ - ta] . As the Kāśikā-vṛtti explains:

The marker /T/ is attached to [the substitute /ṛ/ in P.7.4.7 (ur ṛt)] , so that even in the place of a long substituendum [/ṝ/] , the short [/ṛ/] alone would be effected as the substitute. For example: acīkṛtat.[458]

P.3.2.171 (ād-ṛ-gama-hana-janaḥ kikinau liṭ ca) applies to
roots ending in /ṛ/ and /ṝ/, and yields formations like cakri
[kṛ-Ki/KiN] and tituri [tṝ-Ki/KiN].[459] P.1.1.51 (ur aṇ
ra-paraḥ) says that the substitutes of /ṛ/ in the form of
/a/-vowels, /i/-vowels and /u/-vowels are followed
immediately by /r/. This needs to apply not only to the
substitutes of short /ṛ/, but also to the substitutes of the long
/ṝ/ [e.g. P.7.1.100 (ṝta id dhātoḥ), P.3.3.57 (ṝd-or ap) etc.].
These examples conclusively prove that /ṛ/ in Pāṇini needs to
stand for /ṝ/ also, and hence the scope of /a-Ṇ/ in P.1.1.69
could not have been limited to a-i-u-Ṇ.

8. Thus, there is no doubt that the shortform /a-Ṇ/ extends
up to the second /Ṇ/, in P.1.1.69. The question whether
/y/, /v/ and /l/ need to stand for /ȳ/, /v̄/ and /l̄/ is, as we
shall see, a far more complex question, and needs much
deeper attention than was given by Kunhan Raja. There are
the following considerations:

Prima-Facie Argument [A] . If /y/, /v/ and /l/ do not
represent /ȳ/, /v̄/ and /l̄/, then these nasal semi-vowels
will not be designated as /h(a)-L/. P.1.1.7 (halo'nantarāḥ
saṁyogaḥ) says that two /h(a)-L/ sounds without a gap are
called saṁyoga "cluster." Thus, the sequences like /ȳy/,
/v̄v/ and /l̄l/ will not be legally clusters. This could create
several problems. For this reason, we might say that /y/,
/v/ and /l/ must stand for /ȳ/, /v̄/ and /l̄/ also.

This argument is not really valid. The nasal /ȳ/,
/v̄/ and /l̄/ in cases like sayyantā are obtained by P.8.4.58
(anusvārasya yayi para-savarṇaḥ) from /ṁ/, which is itself
obtained from /m/ by P.8.3.23 (mo'nusvāraḥ). P.8.4.59
(vā padāntasya) makes P.8.4.58 optional, if /ṁ/ is at the end
of a pada "finished word." The question is as follows. Is
/ȳ/ derived by P.8.4.58 to be treated as siddha "effected"
for P.1.1.7 (halo'nantarāḥ saṁyogaḥ), which defines two or
more immediate /ha-L/ sounds as a saṁyoga "cluster?"
By P.8.2.1 (pūrvatrāsiddham), rules in the Tripādī, last
three quarters of the Aṣṭādhyāyī, are to be treated as if
asiddha "not effected," for the rest of the grammar. Even
within these last three quarters, a rule is to be considered

to be <u>asiddha</u> "not effected" with respect to all the preceding rules.

    In the present case, we have to go into still more details. On P. 8.2.1, Patañjali says that the <u>saṁjñā</u>-<u>sūtras</u> [designation-rules] and the <u>paribhāṣā</u>-<u>sūtras</u> [maxims of interpretation] apply wherever their conditions of application are found. These rules operate even with respect to the <u>asiddha</u>-section. [<u>naiṣa doṣaḥ</u>/ <u>yady apīdaṁ tatrāsiddhaṁ</u>, <u>tat tv iha</u> siddham/ <u>katham</u>/ <u>kārya</u>-<u>kālaṁ saṁjñā</u>-<u>paribhāṣaṁ</u>, <u>yatra kāryaṁ tatropasthitaṁ draṣṭavyam</u>, <u>MB</u>, Vol. III, p. 354-5; <u>kārya</u>-<u>kāla</u>-<u>pakṣe</u> <u>tu tripādyām</u> <u>apy</u> <u>upasthitir iti</u> <u>viśeṣaḥ</u>, <u>Paribhāṣenduśekhara</u>, ed. by K. V. Abhyankar, Pt. I, Poona, 1962, p. 2.] This might lead us to think that /ȳ/ derived by P. 8.4.58 is <u>siddha</u> "effected" for the <u>saṁjñā</u>-rule P. 1.1.7. However, I think the situation is different. Patañajli's discussion indicates that if a <u>saṁjñā</u> "technical term" is found in a <u>Tripādī</u>-rule, then the respective rule defining that technical term has to apply with respect to that <u>Tripādī</u>-rule. In such a case, whatever rules are <u>siddha</u> "effected" with respect to that particular <u>Tripādī</u>-rule are also to be treated <u>siddha</u> with respect to that <u>saṁjñā</u>-rule. [The case of the term <u>pragṛhya</u> is discussed by Nāgeśa, see: <u>Paribhāṣenduśekhara</u>, pp. 3-4.] No rule after P. 8.4.58 uses the term <u>saṁyoga</u> or any other term dependent on the term <u>saṁyoga</u>. Therefore, P. 8.4.58 cannot be <u>siddha</u> "effected" for P. 1.1.7 in any way. Hence, in the place of the sequences /ȳy/, /v̄v/ and /l̄l/, P. 1.1.7 finds /my/, /mv/ and /ml/, which are eligible to be termed <u>saṁyoga</u>. This is the original picture in the system of Pāṇini. Thus, /ȳ/, /v̄/ and /l̄/ need not be covered by /y/, /v/ and /l/ in /ha-L/ in P. 1.1.7.

    The Pāṇinian system has to work this way. For instance, in a case like <u>supīhṣu</u>, the sequence /hṣ/ cannot become a <u>saṁyoga</u> "cluster," if /h/ derived by P. 8.2.66 (<u>sasajuṣo ruḥ</u>) and P. 8.3.15 (<u>khar</u>-<u>avasanayor visarjanīyaḥ</u>) is <u>siddha</u> for P. 1.1.7 (<u>halo'nantarāḥ saṁyogaḥ</u>). The sound /h/ is not a /ha-L/ sound in the original system of Pāṇini. Actually, /h/ is <u>asiddha</u> with respect to P. 1.1.7, and hence the rule P. 1.1.7 finds /s/ in the place of /h/, consequently

making /ṣṣ/ a real samyoga. The same has to be the case
for sequences of an anusvāra and a consonant. The anusvāra
effected by a rule like P. 8. 2. 23 (mo'nusvāraḥ) has to be
asiddha for P. 1. 1. 7, so that there can be a samyoga in terms
of the original /m/ or /n/ and the following consonant. Only
with such a procedure can we explain why Pāṇini did not feel
it necessary to include the ayogavāhas in the Śiva-sūtras.

However, in one context, Patañjali seems to accept
/ȳy/, /v̄v/ and /l̄l/ to be samyogas, by saying that /y/, /v/
and /l/ stand for /ȳ/, /v̄/ and /l̄/, implying thereby that they
are /ha-L/ sounds, thus making /ȳy/ etc. real samyogas.⁴⁶⁰
Considering the above given arguments, we may regard this
passage in Patañjali as not reflecting the exact Pāṇinian
procedure. As we shall see later on, Patañjali has accepted
a vārttika of Kātyāyana, which proposes to regard /ȳ/ etc.
to be siddha "effected" in the context of rules of doubling
(dvirvacana).

Prima-Facie Argument [B]. If /y/, /v/ and /l/ do not stand
for their nasal counterparts, then these nasal semi-vowels'
will not be included in a pratyāhāra "shortform" such as
/y(a)-R/. Thus a rule like P. 8. 4. 47 (anaci ca, yaraḥ from
P. 8. 4. 45) will not apply to sequences such as -/ȳy/-. This
rule says that a /y(a)-R/ sound preceded by a vowel and not
followed by a vowel is optionally doubled. For this reason,
we would want to include /ȳ/, /v̄/ and /l̄/ in /y(a)-R/
through /y/, /v/ and /l/.

This argument is also full of problems. The sound
/m/ is changed to /ṁ/ by P. 8. 3. 23 (mo'nusvāraḥ), while
this anusvāra is changed to a nasal semi-vowel by P. 8. 4. 58
(anusvārasya yayi parasavarṇaḥ). However, the rule for
doubling, i. e. P. 8. 4. 47 (anaci ca) stands in between these
two rules, so that for this rule the nasal semi-vowel is as if
non-effected (asiddha), while only /ṁ/ is effected (siddha).
Hence it is not included in /y(a)-R/, and hence cannot be
doubled by P. 8. 4. 47. Kātyāyana goes ahead and makes
several suggestions. He proposes to include anusvāra in
the Śiva-sūtras, as well as he proposes that for the sake of
doubling para-savarṇa "substitute homogeneous with the

144

following" should be regarded as siddha "effected."461
This creates several possibilities. Either an anusvāra could
be doubled, or a nasal /ȳ/ etc. could be doubled by regarding
it to be a /y(a)-R/ sound. However, we are not sure if
these provisos are intended by Pāṇini.

Prima-Facie Argument [C]. By P.8.4.57 (ano'pragrhya-
syānunāsiko vā) a word-final /a/-vowel, /i/-vowel or
/u/-vowel is optionally nasalized, if the word is not a
pragrhya. Thus, we may optionally have nadī or nadī̃
Suppose that nadī̃ is followed by atra, would the nasal /ī̃/
change into a nasal /ȳ/ by P.6.1.77 (iko yaṇ aci)? In such
a case, we may want /y(a)-Ṇ/ to include the nasal semi-
vowels also.

    This is also a dubious argument. The nasal final
vowels are obtained by P 8.4.57, which belongs to the last
three quarters. Therefore, for P.6.1.77, the nasal /ī̃/ is
still considered to be non-effected (asiddha), and hence we
cannot get nasal /ȳ/ any way.

9. The evidence considered so far for inclusion of semi-
vowels in /a-Ṇ/ in P.1.1.69 is quite inconclusive. At this
stage, we should refer to Patañjali who has raised this exact
question, and it is of historical importance to see how he
struggles to find a purpose for this inclusion. What follows
is a translation of the relevant passages from Patañjali's
Mahābhāṣya:

   [A] Question:
       For what purpose the semi-vowels have been included
       in /a-Ṇ/ [in P.1.1.69 (aṇ-udit savarṇasya
       cāpratyayaḥ)] ?

   [B] Explanation of the Purpose:
       In [the examples] saȳyantā, savvatsaraḥ, yallokam
       and tallokam, the [substitutes] homogeneous with
       the following [i.e. /ȳ/, /ṽ/ and /ī/, effected by
       P.8.4.58 (anusvārasya yayi parasavarṇaḥ)] are
       regarded as being non-effected (asiddha) [for P.8.4.47
       (anaci ca) and hence] only the anusvāra [i.e. /ṁ/]

is doubled [by P.8.4.47]. Thus, [in the expressions
saṁṁyantā, saṁṁvatsaraḥ, yaṁṁlokam and
taṁṁlokam], after the second [/ṁ/] has been
[substituted] by a sound homogeneous with the following
[i.e. after having obtained saṁ́yyantā, saṁ́vvatsaraḥ,
yaṁ́lokam and taṁ́lokam by P.8.4.58], those [/ȳ/,
/v̄/ and /ī/] should be represented by [/y/, /v/ and
/l/in] /y(a)-Y/ [in P.8.4.58]. This would finally
allow application of P.8.4.58 to the first [/ṁ/,
yielding saȳȳyantā, sav̄v̄vatsaraḥ, taīīlokam and
yaīīlokam]."

[C] Objection:
That is not the purpose. [Kātyāyana] will say later
[on P.8.2.6]: 'In effecting doubling, a substitute
homogeneous with the following (para-savarṇa) should
be considered effected (siddha).' Since [such a
substitute] is said to be effected, it would remain so
[and will not be considered to be /ṁ/].

[D] Reiteration of the Purpose:
In that case, when a substitute homogeneous with the
following (para-savarṇa) is effected [i.e. /ȳ/, /v̄/
and /ī/, by P.8.4.58], that should be represented by
[/y/, /v/ and /l/ in] /y(a)-R/ [in P.8.4.47 (anaci ca,
yaraḥ from P.8.4.45], so that [by P.8.4.47] there
could be doubling [of /ȳ/, /v̄/ and /ī/].

[E] Rejection of the Purpose:
Doubling [of /ȳ/, /v̄/ and /ī/] may not take place
[by P.8.4.47 (anaci ca)].

[F] Reiteration of the Purpose:
[We need doubling of /ȳ/, /v̄/ and /ī/ by P.8.4.47],
since there is a difference [in the resulting forms].
If there is doubling, the form [saȳȳyantā] would
have three /y/-s. If there is no doubling, then the
form [saȳyantā] would have two /y/-s.

[G] Rejection of the Purpose:
[Even if there is doubling], there is no difference

[in the forms]. Even if there is doubling, the form
[finally] contains only two /y/-s. How could this be?
By P.8.4.64 (halo yamāṁ yami lopaḥ) one of the /y/-s
will be deleted. [The rule says: A /y(a)-M/ sound
preceded by a consonant and followed by a corresponding
/y(a)-M/sound is (optionally?) deleted.]

[H] Reiteration of the Purpose:
Still there is a difference. After doubling, the form
might be with two /y/-s [if the deletion rule P.8.4.64
applies], and it might be with three /y/-s [if P.8.4.64
does not apply]. If doubling does not take place,
then the form will have only two /y/-s. How could
such a difference not be there? [There will be no
difference in the form] if the deletion rule [P.8.4.64]
is obligatory. However, it is optional.

[I] Rejection of the Purpose:
Let [the rules] be in such a way that there is no
difference [in forms].

[J] Reiteration of the Purpose:
Option must continue [in P.8.4.65 (jharo jhari
savarṇe) from P.8.4.62 (jhayo ho'nyatarasyām)],
since by P.8.4.49 (śaro'ci), Pāṇini prohibits doubling.
[P.8.4.65 means: a /jh(a)-R/ sound preceded by a
consonant and followed by a homogeneous /jh(a)-R/
sound is (optionally?) deleted. P.8.4.49 means:
If followed by an /a-C/ sound (i.e. a vowel), a
/ś(a)-R/ (i.e. /ś/, /ṣ/ and /s/) is not doubled.]
How is this indication [justified]? [It is justified]
because, if the deletion rule [i.e. P.8.4.65 (jharo
jhari savarṇe) were obligatory, there would be no
purpose in negation [of doubling by P.8.4.49
(śaro'ci)]....If there is doubling, then the [obligatory]
deletion by P.8.4.65 would take place. The teacher
realizes that the deletion is optional, and hence
prescribes negation of doubling [in specific cases, by
P.8.4.49]. [Note: The implication is that if option
continues from P.8.4.62 to P.8.4.65, it obviously
continues through P.8.4.64 (halo yamāṁ yami lopaḥ).

Once this rule is optional, to derive a form such as saȳȳyantā with three /y/-s, we need /y/, /v/ and /l/ to stand for /ȳ/, /v̄/ and /ī/ in P. 8. 4. 58 (anusvārasya yayi parasavarṇaḥ). Thus, this argument establishes the purpose.]

[K] <u>Rejection</u> of the <u>Purpose</u>:
This is not a [justifiable] indication.... Therefore, even if the deletion rule [i. e. P. 8. 4. 65] is obligatory still the rule for negation [of doubling, i. e. P. 8. 4. 49] must be given. [Note: We need not go into the arguments in this section. The argument consequently means that P. 8. 4. 64 (halo yamāṁ yami lopaḥ) must be obligatory, and ultimately would mean that /y/, /v/ and /l/ need not stand for /ȳ/, /v̄/ and /ī/. This is the objector's view.]

[L] <u>Patañjali's</u> <u>Conclusions</u>:
<u>Thus, it is extremely unclear in Pāṇini's [system]</u> to <u>the teachers, whether option continues or not</u>. [462]

This is a statement of frustration on the part of Patañjali, a clear indication that there was probably no direct teacher-student tradition linking Patañjali with Pāṇini. However, Patañjali accepts elsewhere that P. 8. 4. 64 (halo yamāṁ yami lopaḥ) is optional. [463] That would indicate that Patañjali accepts forms such as saȳȳyantā with triple clusters, which require that /y/, /v/ and /l/ should stand for /ȳ/, /v̄/ and /ī/. The whole discussion shows that Patañjali was at great pains in justifying inclusion of semi-vowels in homogeneous-representation, and finally he himself was not sure of the conclusions.

10. Looking at the whole argument we may sum it up as follows. There are three axioms:

(1) P. 8. 4. 64 (halo yamāṁ yami lopaḥ) is optional.
(2) An anusvāra can be duplicated by P. 8. 4. 47 (anaci ca). This depends on inclusion of the anusvāra in the Śiva-sūtras. This has been proposed by Kātyāyana and seems to have been accepted by Patañjali. [464]

(3) The <u>parasavarṇa</u> "substitute homogeneous with the
following" effected by P. 8. 4. 58 needs to be considered
as effected (<u>siddha</u>) for P. 8. 4. 47. [465]

Of these three axioms, we need either (1) and (2) or (1) and
(3) to justify inclusion of semi-vowels in the rule P. 1. 1. 69.
It is impossible to establish with any certainty historical
validity of any of the three axioms stated above. Patañjali
himself has declared the uncertainty of the first, while the
other two are suggestions of Kātyāyana.

11. Perhaps, Pāṇini's intention in the formulation of P. 1. 1. 69
was for achieving a very wide morphophonemic generalization,
of which different parts may have varying degrees of utility
in his grammar. [466] It is possible that he constructed these
meta-rules before conceiving the specific operation rules.
Thus, certain elements in his meta-rules may have later
remained unutilized. Traditionally, the only practical
purpose is the doubling of nasal semi-vowels. It depends on
P. 8. 4. 64 being optional. Kaiyaṭa says that though the
argument for indication (<u>jñāpaka</u>) has fallen through, still
the tradition of the Pāṇinian teachers accepts P. 8. 4. 64 to
be optional. [467] Hari Dīkṣita in his <u>Bṛhacchabdaratna</u> says
that the usage of /a-Ṇ/ in P. 1. 1. 69 itself is an indication
that P. 8. 4. 64 is optional. If P. 8. 4. 64 is not optional, then
the purpose of /a-Ṇ/ beyond the limit of /a-C/ cannot be
justified. [468] Nāgeśa refutes this argument. [469] However,
Hari Dīkṣita's argument alone can explain to some extent
why Patañjali eventually considered P. 8. 4. 64 to be optional.

12. There is no doubt that Kātyāyana, who presupposes
that <u>parasavarṇa</u> "substitute homogeneous with the following"
be considered effected (<u>siddha</u>) in the context of doubling,
intends such a doubling and accepts clusters like /ȳȳy/,
/ṽṽv/ and /l̄l̄l/. [470] Patañjali and the later tradition accepts
this notion. What is historically not certain is if Pāṇini
himself accepted this. Pāṇini's rules as they stand do not
allow such doubling. For the doubling rule P. 8. 4. 47 (<u>anaci
ca</u>), /ȳ/, /ṽ/ and /l̄/ effected by P. 8. 4. 58 are non-effected
(<u>asiddha</u>), while /ṁ/ effected by P. 8. 3. 23 is effected (<u>siddha</u>).
However, an <u>anusvāra</u> is not included in the <u>Śiva-sūtras</u>.

It is not a /y(a)-R/ sound and hence cannot be doubled. Thus, ultimately there is no doubling of nasal semi-vowels.

It is quite probable that Pāṇini himself never intended doubling of anusvāra and nasal semi-vowels. Thus, this may never have been the purpose for inclusion of semi-vowels in the rule P.1.1.69. If we look at the Prātiśākhyas, we find support for the view that there is no possibliity of clusters like /ỹỹy/, /ṽṽv/ and /ĩĩl/. The Prātiśākhyas state very clearly that a consonant followed by a homogeneous consonant is not doubled. [471] There seems to be consensus of the Prātiśākhyas on this point. Under such circumstances, without any positive proof, it is hard to accept that Pāṇini allowed such doubling. It is not clear why Kātyāyana developed such a notion. It may be that this was his deductive attempt to find a practical purpose for inclusion of semi-vowels in P.1.1.69. Ultimately, we can only state that Pāṇini most certainly included semi-vowels in /a-Ṇ/ in P.1.1.69, but for what practical purpose, we do not know. [472]

NOTES

1. Kielhorn (1876a), p. 52, and also S. D. Joshi (1968), Intr.
   p. iv. We find a stong traditional assertion of this opinion
   in Maitreyarakṣita's <u>Tantrapradīpa</u>: <u>na hi bhāṣyakāra</u>-
   <u>matam anādṛtya sūtrakārasya kaścanābhiprāyo varṇayituṁ</u>
   <u>yujyate/ sūtrakāra-vārttikakārābhyāṁ tasyaiva prāmāṇya</u>-
   <u>darśanāt/</u> ...<u>uttarottarato bhāṣyakārasyaiva prāmāṇyam</u>,
   quoted by S. C. Chakravarti, Introduction to <u>Dhātupradīpa</u>,
   pp. 2-3.

2. Belvalkar (1915), p. 35.

3. For an example, see: Deshpande (1972), p. 233.

4. Thieme (1935a), p. x.

5. This traditional view is in fact quite a late notion, and
   most of the modern scholars now believe in Pāṇini's
   authorship of these <u>sūtras</u>. The most recent and
   comprehensive study is: Cardona (1969).

6. For the discussions on this point by Kātyāyana and
   Patañjali, see: <u>MB</u>, Vol. I, Sec. I, p. 59 ff.

7. For a misinterpretation of this notion, see: "These
   <u>sūtras</u> must be understood in such a way that the last
   consonant of each of them is the notational symbol for
   the preceding group: /n/ is the symbol of the short
   vowels, /k/ is the notational symbol of the sonatic
   liquids etc." Zgusta (1969), p. 405. This is obviously
   wrong.

8. Thieme (1935a), p. 101.

9. Burnell (1875), p. 22.

10. <u>savarṇa-saṁjñāyām bhainna-deśeṣv atiprasaṅgaḥ</u>
    <u>prayatna-sāmānyāt</u>, <u>Vārttika 2</u> on P. 1. 1. 9, <u>MB</u>, Vol. I,
    Sec. I, p. 153.

11. <u>siddhaṁ tv āsye tulya-deśa-prayatnaṁ savarṇam</u>,
    <u>Vārttika 2</u> on P. 1. 1. 9, ibid.

151

12. taddhitāntam āsyam/ āsye bhavaṁ āsyam, "śarīra-
    vayavād yat"/ kim punar āsye bhavam? sthānaṁ karaṇaṁ
    ca/ MB, Vol. I, Sec. I, p.154.

13. VPr (i. 43) samāna-sthāna-karaṇāsya-prayatnaḥ
    savarṇaḥ. Uvaṭa's commentary says: ko'sāv āsya-
    prayatno nāma, samvṛtatā vivṛtatā ca aspṛṣṭatā spṛṣṭatā
    ca īṣat-spṛṣṭatā ardha-spṛṣṭatā cety āsya-prayatnaḥ,
    VPr (W), pp. 118-9. The Varṇa-ratna-pradīpikā-śikṣā
    of Amareśa and the Yājñavalkya-śikṣā also speak of these
    six types of internal efforts (āsya-prayatna), see: Śikṣā-
    samgraha, pp. 120 and 132.

14. Breloer (1929), p. 116.

15. Thieme (1935a), p. 94. For a counter argument, see:
    Cardona (1965), p. 227.

16. Thieme (1935c), p. 22.

17. ibid.

18. See: "Varṇa ist anderseits auch nicht ein einzelner
    'gesprochener Laut', noch auch ein 'Phonem', sondern
    bezeichnet eine Abstraktion, die keine linguistische
    Wirklichkeit hat: varṇa 'Farbe, Gattung' benennt
    speziell eine 'Lautgattung'. Z. B. avarṇa ist 'die
    Gattung der /a/-Laute (d.h. /a/, /ā/ und /ā3/)', z. B.
    /k/, /kh/, /g/, /gh/ und /ṅ/ sind savarṇa 'von gleicher
    Gattung', weil sie alle am Velum artikuliert werden."
    Thieme (1957c), p. 666.

19. bhedādhiṣṭhānā hi savarṇa-samjñā, yadi yatra sarvaṁ
    samānaṁ tatra syāt, savarṇa-samjñā-vacanam anarthakaṁ
    syāt/ MB, Vol. I, Sec. I, p. 156.

20. prayatna-viśeṣaṇam āsyopādānam/ santi hi āsyād bāhyāḥ
    prayatnāḥ, te hāpitā bhavanti/ teṣu satsv asatsv api
    savarṇa-samjñā siddhā bhavati/ ibid, 1. 153.

21. nāsikāyā āsyāntargatatve'pi mukha-nāsiketi sūtre
    nāsikātiriktāvayavaka-mukhasyaiva grahaṇena tat-
    sāhacaryād atrāpy āsya-padena tādṛśasyaiva grahaṇam
    bodhyam/ MB-P-U, Vol. I, Sec. I, p. 154.

22. aṇudit savarṇasya iti śāstram sataḥ savarṇasyāṇā

grahaṇam bhavati ity etāvanmātram bodhayati, na tv
aprasiddham savarṇam kalpayati/, Ratnaprakāśa on
MB, MPV, pp. 170-1.

23. See: ākṛti-grahaṇāt siddham, Vārttika 13 on the Śiva-
sūtra 1, and also: avarṇākṛtir upadiṣṭā sarvam avarṇa-
kūlam grahīṣyati, tathevarṇākṛtis tathovarṇākṛtiḥ/
MB, Vol. I, Sec. I, p. 70.

24. See: evañ ca kṛtvā dharma-śāstram pravṛttam 'brāhmaṇo
na hantavyaḥ,' 'surā na peye'ti, brāhmaṇa-mātram ca na
hanyate, surā-mātram ca na pīyate/ yadi dravyam
padārthaḥ syād, ekam brāhmaṇam ahatvā, ekām ca surām
apītvā anyatra kāma-cāraḥ syāt/ MB, Vol. I, Sec. II,
p. 92.

25. See the Vārttikas: 1) hal-grahaṇeṣu ca, Vt 15 on the
Śiva-sūtra 1, MB, Vol. I, Sec. I, p. 71, and 2) tadvac
ca hal-grahaṇeṣu, Vt on P.1.1.69, MB, Vol. I, Sec. I,
p. 375. On this Vt, Bhartṛhari comments: hal-grahaṇeṣu
ca/ tatra grahaṇaka-śāstrasyāvyāpāraḥ, MB-D, p. 57.
This statement of Bhartṛhari that P.1.1.69 does not apply
to consonants needs some modification. P.1.1.69
does apply to /y/, /v/ and /l/, which are included in the
shortform /a-Ṇ/. Only then these sounds can stand for
/ȳ/, /v̄/ and /l̄/. If P.1.1.69 were meant to apply only
to vowels, Pāṇini could have used the shortform /a-C/
instead of /a-Ṇ/.

26. savarṇe'n-grahaṇam aparibhāṣyam ākṛti-grahaṇāt, Vt on
P.1.1.69, MB, Vol. I, Sec. I, p. 373.

27. Cardona (1968), p. 448.

28. See: "The Śiva-sūtras at the beginning of Pāṇini's
grammar are sophisticated presentation of Sanskrit
sounds, but not a complete list, because, e.g. /a/
stands not only for /a/, but also for /á/, /à/, /ā/, /ā́/,
/ā̀/, /ā3/ etc., i.e. /a/ denotes the genus of /a/ sounds."
Scharfe (1971), p. 7.

29. See: "It (i.e. /a/) stands for all its varieties 18 in
number, Pat. avarṇākṛtir upadiṣṭā sarvam avarṇa-
kulam grahīṣyati." Ghatage (1972), p. 158. Also see:
"But there are some sounds lacking (in the Śiva-sūtras),

154

which cannot have been unknown to Pāṇini, first of all
the long vowels /ā/, /ī/, /ū/, ... Of course, the long
vowels were known to the great grammarian: as a matter
of fact they already appear in 1.1.1. vṛddhir ādaic, or at
least one of them, the long /ā/. And the introduction to
the Mahābhāṣya tells us, that the long vowels are always,
unless expressly otherwise stated, implied when
mentioning short ones." Sköld (1926), p. 9. He also
says: "Now, why do the long vowels not appear in the
Śiva-sūtras? Already the Indian commentators explained
this fact by stating, that in Pāṇini's work short vowels
usually stand for the long ones also. And this opinion
seems to have been unanimously accepted by Western
scholars." Ibid., p. 21. These scholars seem to blur
the distinction between the two procedures of savarṇa-
grahaṇa and ākṛti-grahaṇa.

30. Biardeau (1964), p. 372.

31. aṇ-grahaṇaṁ kurvataḥ sūtra-kṛto nāyam pakṣo'bhipretaḥ,
    SKB, p. 36.

32. na tāvad vārttikaṁ dṛṣṭvā sūtra-kṛtaḥ pravṛttiḥ, SKB,
    p. 39.

33. atra... savarṇa-grahaṇaṁ, jāti-nirdeśo vā, LSS,
    pp. 104-5, and also: sūtra-matenāha-savarṇeti, bhāṣya-
    matenāha-jātīti, Cidasthimālā on LSS, p. 122.

34. tat-sūtre jāti-pakṣasyābhāvāc ca, Cidasthimālā on
    LSS, p. 104.

35. See the note: 23.

36. ākṛti-grahaṇāt tu siddham/ pratyāhāre'nuvṛtti-nirdeśe
    ca jātir eva codyate na vyaktiḥ/ vyakty-upādānaṁ tu
    yathā nālikera-dvīpa-nivāsina idam upadiśyate-ayam
    gaur eṣa tvayā na padā spraṣṭavya iti/ sa tam bālaṁ
    kṛṣṇaṁ kṛśaṁ copadiṣṭo vṛddhaṁ śabalaṁ sthūlam api
    na spṛśati/ MB-D, p. 57. Annambhaṭṭa tries to give some
    formal explanation of the perception of a universal like
    atva "/a/-ness" which is common to /a/, /ā/ and /ā3/:
    kevala-kaṇṭhyatve sati svaratvam atva-jāter vyañjakaṁ,
    tac ca dīrgha-plutayor api samānam/, Uddyotana on
    MB-P, MPV, p. 115.

37. aṣṭa-kṛtvo go-śabda uccarita iti vadanti/ nāṣṭau go-
śabdā iti/ ...na hi te sadṛśa iti pratīyanti, kin tarhi
sa evāyam iti/ ...naiṣa vinaṣṭaḥ yata enam punar
upalabhāmahe/ "[The people] say that the word go
'cow' is uttered eight times, but they do not [say that]
eight go-words [were uttered]. They do not think that
[the second utterance] is similar [to the first], but
[they understand the second] to be the same [as the
first]. The [first sound] has not been destroyed,
since we find the same sound [manifested] again."
Śābara-bhāṣya on MS, Vol. I, Part I, p. 87-9. Also:
saṁyoga-vibhāgā nairantaryeṇa kriyamāṇāḥ śabdam
abhivyañjanto nāda-śabda-vācyāḥ/ tena nādasyaiṣā
vṛddhir na śabdasya, "The conjunctions and disjunctions
[of the air] which are continuously produced are called
nādas 'physical sounds' which manifest the [real] sound.
Therefore, this kind of prolonging etc. belongs to the
physical sound and not to the real sound." Śābara-bhāṣya
on MS, Vol. I, Part I, p. 84.

38. utpanno ga-kāro naṣṭo ga-kāra iti pratītyā varṇānām
anityatvāt 'so'yam gakāra' iti pratyabhijñāyāḥ seyam dīpa-
jvāletivat sājātyāvalambanatvāt, "The sounds are non-
eternal, since there are cognitions that the sound /g/ is
produced and that it has been destroyed. Therefore, the
recognition of the type 'this is that /g/-sound' rests on
[two sounds] belonging to the same universal. This is
similar to the cognition 'this is the same flame of the
lamp.'" Dīpikā on TS, p. 54, also: KM, p. 851.

39. katvādikaṁ tu dhvani-niṣṭham, dhvani-viśeṣa-vyaktayaḥ
anantā janyāś ca, MB-P, Vol. I, Sec. I, p. 152.

40. iṣṭa-buddhy-arthaś ca varṇānām upadeśaḥ/ iṣṭān varṇān
bhotsyāmahe iti/ na hy anupadiśya varṇān iṣṭā varṇāḥ
śakyā vijñātum, MB, Vol. I, Sec. I, p. 60.

41. iṣṭa-buddy-arthaś ceti ced udāttānudātta-svaritā-
nunāsika-dīrgha-plutānām apy upadeśaḥ, Vt, MB,
Vol. I, Sec. I, p. 60.

42. ākṛty-upadeśāt siddham, Vt, avarṇākṛtir upadiṣṭā sarvam
avarṇa-kulaṁ grahīṣyati/ tathevarṇākṛtiḥ/ tathovarṇākṛtiḥ/
MB, Vol. I, Sec. I, p. 60.

43. ākṛty-upadeśāt siddham iti cet samvṛtādīnām prati-
ṣedhaḥ, Vt., MB, Vol. I, Sec. I, p. 60. Patañjali
mentions the following faults of the pronounciation of
vowels: samvṛta "closed pronounciation," kala
"pronouncing a sound in a wrong point of articulation,"
dhmāta "a short vowel appearing long, because of using
too much air," eṇīkṛta "an unfinished sound, which leaves
doubt about its exact nature," ambūkṛta "that which is
heard as if not clearly coming out of the mouth," ardhaka
"that which is heard with half of its regular quantity,"
grasta "unclear or suppressed at the root of the tongue,"
nirasta "harsh (Kaiyaṭa), fast (Nāgeśa)," pragīta "as if
sung," upagīta "affected by the tones of the nearing
sounds," kṣviṇṇa "trembling," romaśa "high sounding,"
avalambita "mixed with another sound," nirhata "too dry,"
sandaṣṭa "as if prolonged," virkīrṇa "extending into
another sound." Patañjali says that consonants have
different faults of pronounciation. The above explanations
are based on the commentaries of Bhartṛhari, Kaiyaṭa
and Nāgeśa [MB-D, p. 43; MB-P and MB-P-U, Vol. I,
Sec. I, p. 60].

44. evam tarhi aṣṭādaśadhā bhinnām nivṛtta-kalādikām
avarṇasya prattyāpattim vakṣyāmi/ sā tarhi vaktavyā,
MB, Vol. I, Sec. I, p. 61. Also: akārasya nidarśa-
nārthatvāt sarva-varṇānām śāstrānte prattyāpattir ity
arthaḥ, MB-P, and tathā ca prattyāpatty-āśrayaṇe
gauravam iti bhāvaḥ, MB-P-U, Vol. I, Sec. I, p. 61.

45. liṅgārthā tu prattyāpattiḥ, Vt; yady apy etad ucyate,
athavaitarhy anekam anubandha-śatam noccāryam, it-
samjñā ca na vaktavyā, lopaś ca na vaktavyaḥ/ yad
anubandhaiḥ kriyate tat kalādibhiḥ kariṣyate/ MB, Vol. I,
Sec. I, p. 61. This has been elaborated by the
commentators by showing how new rules could be
formulated by using the faulty varieties of pronounciation.
"For example, in order to show that a root is one of
those with which occur the endings called ātmanepada,
Pāṇini lists (in the appendix called Dhātu-pāṭha) consonant-
final roots with a final nasalized anudātta vowel, which
by [A 1: upadeśe'j anunāsika it] is an it. Vowel-final
roots are listed with a final /ñ/ which is it by [A 2:

hal antyam P.1.3.3] . Pāṇini then formulates a rule
(1.3.12) anudātta-ṅita ātmanepadam 'The ātmanepada
endings occur after roots marked with anudātta or /ṅ/.'
Now for 1.3.12, a new rule would be formulated: kalād
ātmanepadam 'After roots pronounced with kala....'"
Cardona (1969), p. 10. For the original commentatorial
discussions, see: MB-P and MB-P-U, Vol. I, Sec. I,
p. 61.

46. siddhyaty evam apāṇinīyaṁ tu bhavati, MB, Vol. I,
Sec. I, p. 61.

47. [siddhānta-bhāṣyam] athavā idaṁ tāvad ayaṁ praṣṭavyaḥ:
kveme samvṛtādayaḥ śrūyerann iti? āgameṣu/ āgamāḥ
śuddhāḥ paṭhyante/ vikāreṣu tarhi/ vikārāḥ śuddhāḥ
paṭhyante/ pratyayeṣu tarhi/ pratyayāḥ śuddhāḥ paṭhyante/
dhātuṣu tarhi/ dhātavo'pi śuddhāḥ paṭhyante/ prātipadikeṣu
tarhi/ prātipadikāny api śuddhāni paṭhyante/ yāni tarhy
agrahaṇāni prātipadikāni/ eteṣām api svara-varṇānupūrvī-
jñānārtham upadeśaḥ kartavyaḥ/śaśaḥ ṣaṣa iti mā bhūt/
mañcako mañjaka iti mā bhūt/ āgamāś ca vikārāś ca
pratyayāḥ saha dhātubhiḥ/ uccāryante tatas teṣu neme
prāptāḥ kalādayaḥ/ MB, Vol. I, Sec. I, p. 62. The
commentary Ratnaprakāśa on the MB says that this
reference to "unlisted nominals" also indirectly refers to
unlisted verb-roots and affixes: dhātu-pratyayayor
apaṭhitayor upalakṣaṇam idam, Ratnaprakāśa, MPV,
p. 121.

48. K. V. Abhyankar (1969), pp. 51-2. Also: "This is not to
suggest that Pāṇini's grammar be remolded to list all
nominal bases of the language. As Kaiyaṭa says:
nominal bases with uṇādi affixes and the nominal bases
such as pṛṣodara 'spotted-belly' are recognized as
correct because they are used by the instructed. Hence,
all are included in the grammar." Cardona (1969),
p. 11. However, I think that here Patañjali is trying to
demonstrate how the follower of universal-mention is
finally cornered. He is faced with listing all the nominals
in order to exclude the faulty pronounciations covered by
universal-mention. Patañjali's expression upadeśaḥ
kartavyaḥ "listing would have to be made" is quite clear.
Kātyāyana was probably not aware that his proposal would

lead to such consequences. Patañjali has lead the
argument to its inevitable logical conclusion. In a
different context, Patañjali clearly says that if one
proposes to make a complete teaching of all unlisted
and underived nominals, it would involve undesirable
prolixity [yāny etāni prātipadikāny agrahaṇāni, tesām
etenābhyupāyenopadeśaś codyate, tad guru bhavati, MB,
Vol. I, Sec. I, p. 65. Also: pratipada-pāthasyāśakyatvāt,
MB-P, and sarvāṇy agrahaṇāni prātipadikāni vivṛtākāra-
yuktāni paṭhanīyānīty arthaḥ/ ...tad guru bhavati,
tasmād iti/ MB-P-U, Vol. I, Sec. I, p. 65]. Patañjali
narrates a story that Bṛhaspati started teaching Indra,
by listing all the words, but could not finish his instruction
even within a thousand divine years. The sample of such
a listing given by Patañjali is gaur aśvah puruṣo hastī
śakunir mṛgo brāhmaṇah [MB, Vol. I, Sec. I, pp. 42-3].
This story indicates impossibility of listing all words.
However, apparently there were some efforts in such a
direction. Patañjali uses the term śabda-pārāyaṇa "a
[full] listing of all words," and Bhartṛhari says that
this is a conventionally established term and is the name
of a work [MB-D, p. 17]. Interestingly enough, the
word nāma-pārāyaṇa occurs in the first verse of the
Kāśikā-vṛtti [Vol. I, p. 3]. The Nyāsa says that it is
a work with which one can go to the end of nominal-
stems, while the Pada-mañjari explains this to be a
work where the words listed in Pāṇini's gaṇa-pāṭha are
explained [KS-N and KS-P, Vol. I, p. 4]. In 1803,
Colebrooke hinted at the possible existence of such
voluminous texts ["On the Sanskrit and Prakrit
Languages," Asiatic Researches 7, 1803; reprinted
partially in Staal (1972), p. 42].

49. tasmān na śiṣṭa-prayogam antareṇaitad bhavati kalādi-
    nivṛttir upapanneti, MB-D, p. 46. Annambhaṭṭa says
    that the Bhāṣya passage upadeśah kartavyah "teaching of
    [unlisted nominals] should be made" implies that such a
    teaching has not been done by Pāṇini, and if all such
    nominals were to be listed, it would be a case of
    pratipada-pāṭha "a word by word listing" of all usages.
    That certainly could not be a solution (parihārānupapattih).
    Therefore, Kaiyaṭa gives another explanation, i.e. one

must rely on the usage of the Śiṣṭas. [nanu upadeśaḥ
kartavya ity uktyā sūtrakāreṇānupadiṣṭatvāvagateḥ
sarveṣām upadeśāṅgīkāre pratipada -pāṭha -prasaṅgāt
parihārānupapattiḥ/ ata āha śiṣṭa -prayuktatveneti/,
Uddyotana, MPV, p. 110.

50. yasya punar [varṇaika -deśā varṇa -grahaṇena] gṛhyante,
    ra ity eva tasya siddham, MB, Vol. I, Sec. I, p. 84.

51. lādeśe ca ṛkāra -grahaṇaṁ kartavyam/ kṛpo ro laḥ/
    ṛkārasya ceti vaktavyam/ ihāpi yathā syāt/ klptaḥ,
    klptavān iti/ MB, Vol. I, Sec. I p. 84.

52. athavobhayataḥ sphoṭa -mātraṁ nirdiśyate/ ra -śruter
    la -śrutir bhavati, MB, Vol. I, Sec. I, p. 84.

53. athavā sphoṭa -mātram ity ākṛti -nirdeśo'yam ity uktam
    bhavati/ ...ākṛty -āśrayaṇasyedam prayojanam, antar -
    bhūtānantar -bhūtayo rephayoḥ pratipatty -artham, MB -D,
    p. 76.

54. sphoṭa -mātram iti jāti -sphoṭa ity arthaḥ/ tataś cāntar -
    bhūtānantarbhūta -repha -lakāra -vyakti -vyaṅgyaṁ
    sāmānyaṁ sthāny -ādeśa -bhāvenāśrīyate/ MB -P, Vol. I,
    Sec. I. p. 84. Kaiyaṭa's argument is upheld by the
    commentary Nārāyaṇīyam: anugata -buddhi -vedyatvāj
    jāteḥ, antargatatve api 'ra' ity -ādi -rūpa -sad -bhāvāj
    jāty -abhyupagamaḥ/ ...'ra' ity -ādy -anubhava -mātreṇa
    jātiṁ vastu -satīm asatīṁ vā svīkṛtya śabdānuśāsana -
    pravṛtter nāyam artho yuktyā bādhanīyaḥ/, Nārāyaṇīyam,
    MPV, p. 171.

55. On this passage, John Brough says: "This can be
    approximately rendered in modern terminology, 'In
    both the cases the phoneme is meant, i.e. "an allophone
    of the /r/-phoneme is replaced by an allophone of the
    /l/-phoneme."' It is of interest to observe that Patañjali
    realized that for the phonology of Sanskrit it is convenient
    to regard /r/ and /ṛ/ as belonging to the same phoneme."
    Brough (1951), p. 37. Perhaps, Brough is reading too
    much into Patañjali's statement. Patañjali does not even
    consider /r/ and /ṛ/ to be homogeneous (savarṇa)
    [rephoṣmaṇāṁ savarṇā na santi, MB, Vol. I, Sec. I,
    p. 88]. The consonantal /r/ is considered to be

īsat-spṛsta "with slight contact," while /r/ is vivṛta
"open." Thus, they are not homogeneous with each
other. The relationship is rather like part and whole.
The phonemic identity is not between /r/ and /ṛ/, but
rather between /r/ occurring independently, and /r/ as a
part of /ṛ/. This has been clarified by S. D. Joshi (1967),
p. 16. Thus, /r/ and /ṛ/ do not belong to the same
sphoṭa, but /r/ inside and outside belongs to the same
sphoṭa. Whitney thought that /r/ and /l/ were originally
phonetically the same with /ṛ/ and /ḷ/. Whitney on TPr,
p. 59. He also says: "Some consonants are capable of
use as vowels. The consonants most often employed with
vocalic quality are /l/, /n/ and /r/. A higher grade of
vocalic capacity belongs to /r/ and /l/ than to any other
of the sounds reckoned as consonantal, in virtue of the
more open position assumed by the mouth organs in
their utterance, which gives them a share in the
sonorousness and continuability characteristic of the
vowels." Whitney (1884), pp. 362-3. In contrast to
Whitney's conception, Indian phoneticians considered
/ṛ/ and /ḷ/ to be rather composite sounds, with
vocalic and consonantal parts.

56. yat tu svatantrāsvatantra-sādhāraṇa-jāti-paratayā etad-
bhāṣya-vyākhyānam iti tan na/ tādṛśa-jātau mānābhāvāt,
MB-P-U, Vol. I, Sec. I, p. 85. This explanation of
Nāgeśa agrees with that of the commentary Ratnaprakāśa
on the MB. This commentary says that the Bhāṣya does
not indicate the existence of a universal (jāti) common to
/r/ inside and /r/ outside. The Bhāṣya refers only to
the sound (dhvani-mātra) which is common to /r/ which
is the locus of /r/-ness, i.e. independent /r/, and the
/r/ sound in /ṛ/. [MPV, pp. 169-170.]

57. Cardona (1969), p. 7. Also: ṛti *r vā, ḷti *ḷ vā ity
ubhayatrāpi vidheyaṁ varṇa-dvayaṁ dvi-mātram,
ādyasya madhye dvau rephau tayor ekā mātrā, abhito'j-
bhakter aparā/ dvitīyasya tu madhye dvau la-kārau,
śeṣam prāgvat, SK, p. 7.

58. yathākāro'-ntvād dīrgha-plutāv·api gṛhṇāti, evam
bhaktim api grahīṣyati iti/ ākṛti-grahaṇe vā sarvatrākṛter
bhāvāt, MB-D, p. 76.

59. idaṁ varṇa-turīyam anyatrādṛṣṭaṁ kvacit, sāvarṇyam
    api nāsti/ na hy atra samudāya-prayatnād anyo'vayava-
    prayatno nāpi sthānam/ na tv eṣa varṇa-bhāgaḥ śaknoti
    jātim upavyañjayitum/ MB-D, pp. 76-7.

60. tasya bhāgasya sphuṭa-pratibhāsāviṣayatvāt jāty-
    abhivyakti-hetutvābhāvāc ceti bhāvaḥ, MB-P, Vol. I,
    Sec. I, p. 85.

61. atvādi-jātīty arthaḥ/ evaṁ ca na kenāpy acā tad-grahaṇam
    iti bhāvaḥ/ atra jāty-abhivyakti-hetutvābhāve sphuṭa-
    pratibhāsāviṣayatvaṁ hetuḥ/ MB-P-U, Vol. I, Sec. I,
    p. 85.

62. edaitor odautoś ca na mithas sāvarṇyam/ ai-au-c iti
    sūtrārambha-sāmarthyāt/ SK, p. 3.

63. ṛkāralkāroyoḥ savarṇa-vidhiḥ ity asya vārttikakāra-
    vākyatvāt sūtrakāreṇānāśritatvād atra lkāropadeśaḥ
    kṛtaḥ/ MB-P, Vol. I, Sec. I, p. 72. Also: vastutaḥ
    sūtra-mate lkārasya ṛkāreṇa sāvarṇyābhāvena
    grahaṇābhāvāt, Jyotsnā on LSS, p. 127. Thieme realizes
    the unhistoricity of Kātyāyana's statement and calls it
    "ein Postulat." Thieme (1935b), p. 171.

64. asya hi lkārasyālpīyāṁś caiva hi prayoga-viṣayaḥ/ yaś
    cāpi prayoga-viṣayaḥ so'pi klpisthasya/ MB, Vol. I,
    Sec. I, p. 72.

65. Cardona (1965b), pp. 310-1.

66. Thieme (1935a), p. 112.

67. ṛkāra-lkārayoḥ savarṇa-vidhiḥ, Vt, MB, Vol. I, Sec. I,
    p. 158.

68. Deshpande (1972), p. 230. On this vārttika, Devasthali
    comments: "This is a vārttika composed by Kātyāyana,
    who coming about two centuries after Pāṇini sought to
    remove the deficiencies in P's rules. It is not impossible
    that some deficiencies might have crept into the Aṣṭādhyāyī
    in spite of P; but what is also [and even more] likely is
    that the language which formed the basis of his rules,
    being a living language, underwent several modifications,
    thus making P's rules deficient in course of time."
    Devasthali (1969), p. 7. The general thesis of language

change being the basis of Kātyāyana's vārttikas is
advocated by Devasthali elsewhere ["The Aim of the
Vārttikas of Kātyāyana," Munshi Felicitation Volume,
Bharatiya Vidya Bhavan, Bombay, 1962]. Whatever its
independent merits, this thesis cannot be really applied
to Kātyāyana's proposed homogeneity of /ṛ/ and /ḷ/.
The reason is not historical linguistic change. Deva-
sthali himself says that /ṛ/ and /ḷ/ are said to be
homogeneous despite the fact that they have different
points of articulations [Devasthali (1969), p. 7]. The
only reason Kātyāyana needed this homogeneity is the
change in linguistic attitude. Pāṇini looked at the use of
/ḷ/ only in the object language, i.e. only in the forms of
√kḷp, while Kātyāyana also tried to take care of
grammatical expressions with /ḷ/, and imitation
expressions etc. [For details, see: above, Sec. 3.12-13.]
Siddheshwar Varma (1929, p. 7) believes that there was
actually a real linguistic change, i.e. /ṛ/ and /ḷ/ came
to be pronounced at the same point of articulation and
hence their homogeneity was inevitable. He claims that
the later Pāṇinīyas did not realize the contradiction in
giving different points of articulation for /ṛ/ and /ḷ/,
and also saying that they are homogeneous. Though
certain traditions recorded in the Prātiśākhyas and
Śikṣās did accept /ṛ/ and /ḷ/ to have the same point of
articulation, there is no proof that this was universal
and was accepted in the Pāṇinian tradition. Thieme has
discussed and refuted Varma's views, Thieme (1935a),
P. 108. Interestingly, we find a totally different
view in Viśveśvarasūri's VSSN, p. 90. Viśveśvarasūri
refers to the view of the RPr that /ṛ/ and /ḷ/ are both
jihvā-mūlīyas "produced at the root of the tongue,"
and says that this naturally leads to their homogeneity.
He refers [Ibid, pp. 90-1] to an important indication in
Pāṇini's rule: ṛd-upadhāc cāklpi-cṛteḥ P.3.1.110. This
rule refers to roots with /ṛ/ as their pre-final sound,
except kḷp and cṛt. This could be interpreted to suggest
that Pāṇini did accept homogeneity of /ṛ/ and /ḷ/.
However, it may also be argued the kḷp is the normal
way of referring to the meta-root kṛp, and hence the rule
need not imply homogeneity of /ṛ/ and /ḷ/.

69. yadi tarhi ṛkāra-grahaṇe lkāra-grahaṇaṁ sannihitam
bhavati, ur aṇ ra-paraḥ, lkārasyāpi raparatvam prāpnoti,
MB, Vol. I, Sec. I, p. 159.

70. lkārasya laparatvaṁ vakṣyāmi/ tac cāvaśyaṁ vaktavyam/
asatyāṁ savarṇa-saṁjñāyāṁ vidhy-artham/ tad eva
satyāṁ repha-bādhanārtham bhaviṣyati/ ibid. The
statement of Patañjali, namely "I shall prescribe
(vakṣyāmi) [the substitute vowel] for /l/ to be followed
by /l/," is actually a totally new provision, which is
not found in Pāṇini's rules. However, Bhartṛhari takes
vakṣyāmi to be the same as vyākhyāsyāmi."I shall
[re-]interpret." Then Bhartṛhari introduces the notion
of the shortform /rA/, formulated by declaring the /a/
in laN to be nasalized and hence being an it "marker."
Thus, from /r/ in hayavaraT to /A/ in lAN, we get /r/
and /l/ in the shortform /rA/. [lkārasya laparatvaṁ
vakṣyāmi vyākhyāsyāmīty arthaḥ/ raṭ laṇ iti lakāre
yo'kāraḥ asau anunāsikaḥ pratijñāsyate/ ataḥ
svenānyenetaraḥ it iti rephaḥ ādiḥ tan-madhyasya saṁjñā
bhaviṣyati/ ur aṇ raparaḥ iti rephas tan-madhyaṁ
lakāram pratyāyayati/ evam api ubhayoḥ ra-lau kasmān
na bhavataḥ/ MB-D, p. 149.] This interpretation is
followed by the later tradition up to Bhaṭṭoji Dīkṣita.
Nāgeśa, however, criticizes this shortform, for being
unhistorical. He points out that Pāṇini independently
uses /r/ and /l/ in rules like P.7.2.2 (ato lrāntasya).
He also notes that if /a/ in laN were a meta-element,
Pāṇini would have used the shortform /yA/ for yaN
[LSS, pp. 24-6]. A. M. Ghatage has missed the point
in his explanation: "A nasalized form (of /a/) is used
by P as an it in Śiva-sūtra 6, taking advantage of the
fact that Skt. uses no nasal vowels as distinctive."
Ghatage (1972), p. 158. For the right historical view,
see: K. M. K. Sharma (1968), p. 29. Also: Thieme
(1935b), p. 200.

71. yadā ca ṛkāra-lkārayoḥ savarṇa-vidhir ākṛti-grahaṇāc ca
grahaṇaka-śāstram pratyākhyāyate tadā saty api śruti-
bhede ekākṛtitvam eva yathā hrasva-dīrghayor iti/
MB-D, p. 64.

72. vārttika-mate savarṇe'ṇ-grahaṇam aparibhāṣyam
    ākṛti-grahaṇād iti siddhāntād ṛkāre lkāra-sādhāraṇa-
    jāti-virahenākṛti-grahaṇāsambhavāt/ SKB, p. 39.

73. tasmād aṇ-grahaṇam pratyācakṣāṇasya tat-sthāne
    ṛgrahaṇam karttavyaṁ/ SKB, p. 40.

74. ārabdhe'pi vārttike ṛkāra-lkārayoḥ sāvarṇyasyānityatāṁ
    jñāpayituṁ karttavya eva lkāropadeśaḥ/ tena kḹpta-
    śikha ity atra guror anṛta iti plutaḥ siddhyati/ anyathā
    anṛta iti niṣedhaḥ syāt/ ṛkāreṇa lkāra-grahaṇāt/ SKB,
    p. 39.

75. ṛ-ḷ-varṇayoḥ sāvarṇyam ity anena samāna-jātitvasya
    evātideśena...na doṣaḥ/ LSS, p. 129. Also: sāvarṇya-
    vacanena samāna-jāty-atideśam eva vakṣyati,
    Cidasthimālā on LSS, p. 127.

76. samāno varṇo jātir ity arthaḥ/ varṇāśramācāravān ity
    ādau varṇa-padena jāter vyavahārāt iti bhāvaḥ,
    Sadāśivabhaṭṭīya on LSS, p. 129.

77. lakāra-rephayoś ca samāna-śrutitā kavi-sampradāye
    prasiddheti ṛtva-jātir lkāre'py asty eveti tatrāpi na
    doṣaḥ/ BSS, Vol. I, p. 66.

78. a-i-u-ṇ iti eṣu jāti-paro nirdeśaḥ/ ...tatra yady api
    hrasva-dīrgha-pluta-sādhāraṇī jātir asti tathāpi tasyā
    atra na nirdeśaḥ/ aṇ-udit-sūtre aṇ-grahaṇāt/ kin tu tad-
    vyāpyā hrasva-mātra-vṛttir api sā svīkriyate, vyavahāra-
    balāt/ tasyā atra nirdeśaḥ/ (ata evāsya cvau ity ādau aṇ-
    udit-sūtra-pravṛttiḥ)/ ata eva 'dīrghāṇām anantvena
    savarṇāgrāhakatvam' iti siddhāntaḥ saṅgacchate/ na
    caivam api dīrghādīnām actvam na syāt/ iṣṭāpatteḥ/ aṇ-
    udit-sūtra-pravṛttyā, lakṣaṇayā vājādi-padais tad-
    upasthitiḥ śāstre ity agre nirūpayiṣyāmaḥ/ ...yad vā
    vyāpaka-jāti-nirdeśa evātra/ aṇ-udit-sūtra-prayojanaṁ
    tu vakṣyate/ BSS, Vol. I, pp. 2-3; also SKB, p. 37.

79. Actually, /a/ and /h/ do not have the same internal effort,
    according to the Pāṇinian tradition. The short /a/ is
    saṁvṛta "closed," while /h/ is vivṛta "open." In order
    to have homogeneity of closed /a/ with open /ā/, Pāṇini
    considers /a/ also to be open, within the system. The
    final rule of his system, P.8.4.68 (a a), reinstates

closed /a/ for open /a/ in the object language. There
were other traditions, which considered short /a/ to be
open even in the object language. For instance: Ṛktantra-
vyākaraṇa (3.8) says: vivṛta-taram akāraikāraukāraṇām.
The same view is adopted by Abhayanandin in his
Jainendra-mahāvṛtti [see: Sec. 12.4.1] and by
Hemacandra in his Bṛhad-vṛtti [see: Sec. 12.7.3]. For
views of the Prātiśākhyas, see. n. 261. Also Rāmajñā
Pāṇḍeya (1965), p. 160, says that the Gauḍas pronounce
open short /a/. K. C. Chattopadhyaya (1974) argues that
Pāṇini himself considered /a/ as an open sound. The
later Pāṇinīyas, however, had a closed short /a/ under
the influence of ancient Dravidian and they designed the
final rule of the Aṣṭādhyāyī, P.8.4.68 (a a), to explain
away the problem. I have dealt with Chattopadhyaya's
argument in my article "Phonetics of Short /a/ in
Sanskrit," which is due to appear in the Indo-Iranian
Journal.

80. jāti-pakṣe doṣa eva na, itva-śatvādi-jāter bhedāt,
Cidasthimālā on LSS, P. 122, and also Sadāśiva-
bhaṭṭīyam on LSS, p. 122. Bhaṭṭoji is also aware of
this implication: vārttika-mate tu hakārākārayor eka-
jāty-anākrāntatvād eva nātiprasaṅgaḥ, SKB, p. 123.

81. V. N. Misra (1966), p. 105, gives a very confusing
account of this rule. This view is discussed in Sec. 5.9.

82. udid-grahaṇaṁ karttavyam eva/ nahi vargyāṇām ekākṛti-
yogo'sti, MB-P, Vol. I, Sec. I, p. 375. Also the
commentaries on LSS, p. 129 and 130.

83. atredam bodhyam/ vyaktiḥ padārtho guṇāḥ bhedakāḥ ity
abhimānenātra sūtre'ṇ-grahaṇam iti, LSS, p. 132.

84. upātto'pi viśeṣaḥ nāntarīyakatvāj jāti-prādhānya-
vivakṣāyāṁ na vivakṣyata ity arthaḥ/ MPB, Vol. I,
Sec. I, p. 60.

85. atra (jāti) pakṣe a-i-u-ṇ-sūtra-śeṣokta-bhāṣya-rītyā
tapara-sūtrasya jāti-grahaṇa-prāpta-savarṇa-grahaṇa-
niyāmakatvavad apratyaya ity asya yoga-vibhāgena tat-
prāpta-savarṇa-grahaṇa-niṣedhakatvāt tyadādīnām aḥ ity
ādau vidheye na doṣaḥ/ LSS, pp. 129-30. Also: jāti-

pakṣe'py anayaiva paribhāṣayā savarṇa-grahaṇaṁ
vāraṇīyam, LSS, p. 125.

86. For various interpretations of P. 1. 1. 70, see: Sec.
8.5-6. Also: Deshpande (1972), pp. 213, 249-51.

87. tadvac ca tapara-karaṇam, Vt on the Śiva-sūtra 1, MB,
Vol. I, Sec. I, p. 71. Also: Deshpande (1972), p. 213,
fn. 19, and p. 231.

88. evaṁ ca kṛtvā taparāḥ kriyante/ ākṛti-grahaṇenāti-
prasaktam iti kṛtvā/ MB, Vol, I, Sec. I, p. 71.

89. tulya-nyāyāj jāti-grahaṇa-prayuktātiprasaṅga-nivāraṇāya
taparatvavat vidheye tyadādīnām aḥ ity ādau tad-vāraṇāya
apratyaya iti etad iti bodhitam, MB-P-U, Vol. I, Sec. I,
p. 71, and p. 376.

90. Deshpande (1972), p. 211, Fn. 15; and Cardona (1965a)
p. 227.

91. See: Sec. 8.5-6.

92. aṣṭana ā vibhaktāv ity atra yatnādhikyād dīrgha-vyakti-
samavetaṁ sāmānyaṁ gṛhyate, MB-P, Vol. I, Sec. I,
p. 374. Also: atra tu ākāra-grahaṇe jāti-nirdeśād
akāra-grahaṇam prāpnoti/ tat tu na prāpnoti, prayatna-
bhedāt/ yathā pūrva-vayā brāhmaṇaḥ pratyuttheyaḥ/
plutasya tu prāpnoti/ tatrāpi parihāraḥ/ plutaś ca
viṣaye smṛtaḥ iti/ MB-D, p. 57.

93. kecit tu dīrgha-ṣaḍ-bheda-vṛtty-ātva-jāter eva atva-
vyāpyāyās tatra nirdeśa iti vadanti/ MB-P-U, Vol. I,
Sec. I, p. 374.

94. Deshpande (1972), pp. 210-5, 238-42.

95. ibid, p. 239.

96. i ceti hrasvaḥ supaṭhaḥ, SK, p. 272.

97. See: n. 94.

98. SK, p. 2. Traditionally, the term ūṣman is applied to
/ś/, /ṣ/, /s/ and /h/, in the Pāṇinian tradition.
Sometimes Patañjali uses this term with reference to
aspirate stops, but in the present context, the term stands
only for /ś/, /ṣ/, /s/ and /h/ [yady api varga-dvitīya-

caturthayor api sthāne'ntaratama-sūtra-bhāṣyād ūṣmatvam,
tathāpi 'vivṛtam ūṣmaṇām' ity atraita eva gṛhyante/ LSS,
p. 117]. The TPr (i. 9) says: pare ṣaḍ ūṣmāṇaḥ "The
latter six sounds are ūṣmans," and Whitney comments on
this as follows: "Namely, the three sibilants, /ś/, /ṣ/,
and /s/, the jihvāmūlīya, χ, the upadhmānīya, ɸ, and the
aspiration, /h/. As regards the sounds to which the
name ūṣman 'flatus,' shall be given, the phonetic treatises
are at great variance. The Vāj. Pr. (viii. 22) limits the
class to sibilants and /h/; the Ath. Pr. (see note to i. 31)
apparently adds the guttural and labial spirants and the
more indistinct visarjanīya; the Rik Pr. (i. 2), those and
the anusvāra." Whitney on the TPr, p. 14.

99. vivṛtaṁ svaroṣmaṇām, Ṛktantra-vyākaraṇa 3. 7; tatrā-
bhyantaraḥ (21), saṁvṛtatvaṁ vivṛtatvaṁ spṛṣṭatvam
īṣat-spṛṣṭatvaṁ ca (22), Cāndra-varṇa-sūtras, Śikṣā-
sūtrāṇi, p. 25; (ūṣmaṇām) karaṇa-madhyaṁ tu vivṛtam,
TPr (ii. 45); svarānusvāroṣmaṇām aspṛṣṭaṁ sthitam, RPr,
Trayodaśa-paṭala 3; ūṣmaṇāṁ ca svarāṇāṁ ca vivṛtaṁ
karaṇaṁ smṛtam, verse 29, Die Pāṇinīya-śikṣā, p. 355;
vivṛtaṁ ca svaroṣmaṇām, Māṇḍūkī-śikṣā, Śikṣā-
saṁgraha, p. 469.

100. śaṣasahānāṁ yathā-kramam ikāra-ṛkāra-lkārākārāḥ
sūtra-mate yady api tulyāsya-prayatnās tathāpi na
savarṇāḥ/ nājjhalāv iti tan-niṣedhāt/ SKB, p. 118.

101. atra hi sūtre 'ac' iti ikāro gṛhyamāṇaḥ savarṇaṁ gṛhṇāti
iti śakārasyāpi grahaṇam asti/ svātmani kriyā-virodhād
asminn eva sūtre idam eva na vyāpriyata iti savarṇatva-
niṣedha ikāra-śakārayoḥ nāsti/ ...asti ca pūrveṇa
savarṇatvam ikāra-śakarayor iti bhāvaḥ/ MB-P, Vol. I,
Sec. I, p. 160; also LSS, p. 122.

102. This problem does not arise with other vowels like /i/
or /u/. The sound /a/ is an /a-Ṇ/ sound and represents
its homogeneous sounds. The sounds /ś/, /ṣ/ and /s/
could be perhaps represented by /i/, /ṛ/ and /ḷ/, but
cannot represent them, since they are not /a-Ṇ/ sounds.
Bhaṭṭoji mentions various problems which this would
create. He says: tathā ca pūrva-pakṣa-vārttikam-
ajjhaloḥ pratiṣedhe śakāra-pratiṣedho'jjhaltvāt iti/ atra
śakāra-grahaṇaṁ śarām upalakṣaṇam/ kiñ ca avarṇasyā-

ṣṭādaśadhā bhinnasya parasparaṁ sāvarṇyaṁ na syāt/
tataś ca 'daṇḍāgram' ity ādau dīrgho na syāt/ tathā hi
hakāreṇa grahaṇāt akāro hal, akṣu pāṭhāc ca ac/ SKB,
p. 121.

103. ajjhaloḥ pratiṣedhe śakāra-pratiṣedho'jjhaltvāt, Vt. on
P.1.1.10, MB, Vol. I, Sec. I, p. 160.

104. ac caiva hi śakāro hal ca/ kathaṁ tāvad actvam/ ikāraḥ
savarṇa-grahaṇena śakāram api gṛhṇātīty evam actvam/
halṣu copadeśād dhaltvam/ BM, Vol. I, Sec. I, p. 160.

105. tatra savarṇa-lope doṣaḥ, Vt. on P.1.1.10, paraśśatāni
karyāṇi/ jharo jhari savarṇe iti lopo na prāpnoti/ MB,
Vol. I, Sec. I, p. 160.

106. siddham anactvāt, Vt. on P.1.1.10, MB, Vol. I, Sec.
I, p. 160.

107. Apparently, Patañjali himself is not quite sure of the
interpretation of this vārttika. He gives another
alternative explanation of the sequence: siddham anactvāt,
vākyāparisamāpter vā. In this second interpretation, he
says: siddham etat/ katham/ anctvāt/ katham anactvam/
vākyāparisamāpter vā/ MB, Vol. I, Sec. I, p. 162. In
this interpretation, both the vārttikas together form one
solution, but as Patañjali himself notes, the word vā "or"
becomes purposeless [asmin pakṣe vā ity etad
asamarthitam bhavati, MB, Vol. I, Sec. I, p. 162] .

108. siddham etat/ katham/ anactvāt/ katham anactvam/
'spṛṣṭaṁ sparśanāṁ karaṇam'/ 'īṣat-spṛṣṭam antaḥ-
sthānām'/ 'vivṛtam ūṣmaṇām,' īṣad ity anuvartate/
'svarāṇāṁ ca' vivṛtam, īṣad iti nivṛttam/ MB, Vol. I,
Sec. I, p. 160.

109. sūtra-pratyākhyāna-sādhāraṇam uktam/ prayatna-bhedād
ajjhaloḥ savarṇa-saṁjñāyāḥ prāptir eva nāstīty arthaḥ/
MB-P, Vol. I, Sec. I, p. 161.

110. vastutas tūkta-rītyā (prayatna-bhedena) sūtram eva
nārambhaṇīyam ity arthaḥ/ SKB, p. 121.

111. "AP 1.31 reads ūṣmaṇām vivṛtam ca, in which ca refers
to īṣat of 1.30, hence the spirants are classed as īṣad-
vivṛta." Cardona (1965a), p. 226. This interpretation

of the APr 1.31 clearly follows Patañjali. This, however, may not necessarily be the meaning of the original rule. See: Sec. 4.7.

112. bhāṣyakārās tu 'nājjhalau' ity asya pratyākhyānāvasare ūṣmaṇāṁ svarāṇāṁ ceṣad-vivṛtatvaṁ vivṛtatvaṁ ceti vailakṣaṇyaṁ vakṣyanti/ SKB, p. 117. Also: sapta-prayatnā iti bhāṣya-rītyā..., Sadāśivabhaṭṭīya on LSS, p. 92. bhāṣyakāra-mate tu prayatna-bheda eveti vakṣyate/ SKB, p. 118.

113. bhāṣya-mate tu santu sapta-prayatnāḥ, LSS, p. 103.

114. svarāṇām ūṣmaṇāṁ caiva vivṛtaṁ karaṇaṁ smṛtam/ tebhyo'pi vivṛtāv enau tābhyām aicau tathaiva ca/ iti śikṣā-vākyāt vivṛtatara-vivṛtatamayoḥ pratītyā nājjhalāv iti sūtra-bhāṣyād ūṣmaṇām īṣad-vivṛtatvasya ca pratītyā..., LSS, p. 103. The verse quoted by Nāgeśa is No. 29 in the Yajus Recension of the Pāṇinīya-śikṣā [See: Die Pāṇinīya-śikṣā, p. 355].

115. tathā ca śikṣā-vivṛta-karaṇāḥ svarāḥ, tebhya e o vivṛtatarau, tābhyām ai au, tābhyām apy ākāraḥ, saṁvṛto'kāraḥ/, KS-P and KS-N, Vol. I, p. 22. Also: Śikṣā-sūtrāṇi, pp. 3-4, 12, 25.

116. avarṇasya tarhi aicoś ca savarṇa-saṁjñā prāpnoti/ [na], vivṛtatarāvarṇāv etau/ MB, Vol. I, Sec. I, p. 155; also: santu sapta-prayatnāḥ/ māstu ca nājjhalāv iti sūtram/ ata eva 'tulyāsye'ti sūtre bhāṣye avarṇasyaicāṁ ca sāvarṇyam āśaṅkya vivṛtataratvenaiva parihṛtam/ BSS, Vol. I, p. 48.

117. tadā (bhāṣya-mate) santu sapta-prayatnāḥ/ evaṁ ca edaitor odautoś ca na sāvarṇya-prasaktiḥ prayatna-bhedād ity alam/ BSS, p. 48. Also: MB-P-U, Vol. I, Sec. I, p. 161.

118. śaṣasahānāṁ yathā-kramam ikāra-rkāra-lkārākārāḥ sūtrakāra-mate tulyāsya-prayatnāḥ/ SKB, p. 118.

119. na ca 'nājjhalāv' iti nirdeśena bhāṣyokta-prayatna-bhedasya sūtrakārābhipretatvaṁ kalpyate iti vācyam/ BSR, p. 12.

120. nājjhalāv iti sūtreṇa vivṛtatva-vyāpyānām eṣāṁ savarna-
samjñānupayuktatva-bodhanam ity āsayāt/, LSS, p. 103.
The commentary Viṣamapadavivṛti on LSS (p. 102)
believes that P.1.1.10 is necessary even after accepting
Patañjali's proposal of prayatna-bheda. It points out that
the special variety /*ḷ/ is īsat-spṛṣṭa "with slight contact"
like the consonant /l/, and both have the same point of
articulation, i.e. danta "teeth." For this reason, they
would be mutually homogeneous. To avoid this, we have
to take recourse to P.1.1.10. That /*ḷ/ is īsat-spṛṣṭa
is quite clear. It is also clear that this special variety
/*ḷ/ is not homogeneous with /ḷ/ which is vivṛta "open."
See: "...die beiden Laute [/*ṛ/ und /*ḷ/] nicht 'ac'
heissen, wenn sie nicht ausdrücklich durch Hinzufügung
einer Angabe so genannt werden. Sie sind also weder
in den ŚS. [Śiva-sūtra] aufgeführt, noch den dort
aufgeführten Lauten /ṛ/ und /ḷ/ 'gleichlautig.'" Thieme
(1935b), p. 181. The view expressed by Viṣamapadavivṛti
involves some element of anachronism. The sounds /*ṛ/
and /*ḷ/ are not mentioned by Pāṇini, but are introduced
by Kātyāyana in his vārttikas ṛti *ṛ vā and ḷti *ḷ vā on
P.6.1.101 (akaḥ savarṇe dīrghaḥ). It is quite possible
that these sounds themselves are of a later date in
Sanskrit usage. Again the commentatore are not sure if
these sounds are vocalic. We could say that /*ḷ/
[i.e. əllə] is less vocalic than /ḷ/ [i.e. ələ] and is more
vocalic than /l/.

121. bhāṣya-mate tu santu sapta-prayatnāḥ/ evaṁ caidaitoś
ca na sāvarṇya-prasaktiḥ, prayatna-bhedād iti bodhyam/
nājjhalāv iti sūtram api prayatna-bheda-prāpta-sāvarṇyā-
bhāvānuvādakaṁ sat tasyaiva bodhakam/ ata eva bhāṣye
tan na vaktavyam iti noktam/ LSS, p. 103. Also: atra
pakṣe nājjhalāv iti sūtram pratyākhyātam iti bhramaṁ
nirācaṣṭe/ Cidasthimālā on LSS, p. 103. Madhukar
Phatak (1972, pp. 146-7) says that even Pāṇini knew the
subdivisions of vivṛta into īṣad-vivṛta etc., but he did
not accept them in the context of the notion of homogeneity.
Jagadīśa Citrācārya [Śikṣā-śāstram, p. 12] ascribes a
fivefold division of internal efforts to Pāṇini including
īṣad-vivṛta. These suggestions are groundless.

122. yadi tu sūtra-vṛttyādiṣu śraddhā-jāḍyam apahāya
     prayatna-bhedād evaitad-vyāvarttya-sāvarṇyānāṁ na
     sāvarṇyam ity ucyate, tadā santu sapta-prayatnāḥ,
     māstu ca nājjhalāv iti sūtram/ BSS. Vol. I, p. 48.

123. Kielhorn (1876b), p. 193.

124. Śikṣā-sūtrāṇi, pp. 3-4. Limaye (1974, pp. 57-8) refers
     to this passage in the Āpiśali-śikṣā, and says that
     Patañjali probably quotes from this Śikṣā. In support of
     his view, he quotes a passage from Vṛṣabhadeva's
     commentary on the Vākya-padīya which ascribes the
     above passage in Patañjali to a Śikṣākāra. B. A. van
     Nooten (1973, p. 409) thinks that Patañjali quotes from
     the Āpiśaliśikṣā, rather than the Śikṣā quoting Patañjali.
     However, I think that the Āpiśaliśikṣā in its present
     form is post-Patañjali. If he knew this text as we know
     it, he would have directly quoted this Śikṣā to show that
     spirants are īṣad-vivṛta "slightly open," instead of
     quoting the SCA and reinterpreting it. For more details
     on the chronology of the Āpiśaliśikṣā, see my article
     now in preparation for the Journal of the Oriental Institute,
     Baroda, "The Date of the Āpiśali-śikṣā-sūtras."

125. Thieme (1935a), p. 87, Fn. 2.

126. APr, p. 360. Also see: n. 111.

127. Die Pāṇinīya Śikṣā, pp. 355-6.

128. Ibid, p. 355.

129. īṣad-vivṛta-karaṇā ūṣmāṇaḥ/vivṛta-karaṇā vā/ Śikṣā-
     sūtrāṇi, p. 12.

130. īṣad-vivṛta-karaṇā ūṣmāṇaḥ/ Śikṣā-sūtraṇi, p. 3.

131. R. Pandeya (1965), p. 202.

132. VPr (W), pp. 118-9: ardha-spṛṣṭatāsya-prayatnā ūṣmāṇo'
     nusvāraś ca.

133. ūṣmāṇo'rdha-spṛśaḥ/ Yājñavalkya-śikṣā, Śikṣā-saṁgraha,
     p. 32.

134. ardha-spṛṣṭāś ca vijñeyā ūṣmāṇo varṇa-vedibhiḥ/,
     Varṇa-ratna-pradīpikā-śikṣā, Śikṣā-saṁgraha, p. 120.

135. S. C. Vasu (1891), Vol. I, pp. 62-3.

136. Ibid.

137. Ibid., p. 13.

138. See: Sec. 7.2.2.

139. S. D. Joshi (1969), p. 23. His footnote 127 on p. 23
   says: "The principle of grahaṇa means that all vowels
   included in the pratyāhāra /aN/ stand for themselves
   and their corresponding homo-organic varieties also."
   This needs to be enlarged, since semi-vowels also
   represent their homogeneous varieties by P.1.1.69.
   Similarly, P.1.1.69 also says that sounds marked
   with /U/ stand for their homogeneous sounds.

140. Ibid., fn. 128.

141. Ibid., fn. 130. On the maxim grahaṇān-grahaṇe grahaṇā-
   bhāvaḥ, which is quoted by Kaiyaṭa, S. D. Joshi says:
   "The quotation is probably from the lost part of
   Bhartṛhari's Mahābhāṣya-dīpikā." It is actually found
   in MB-D, p. 174 (Swaminathan's edn.). Also see n. 161.

142. evaṁ ca hal iti sūtre lakārasya it-saṁjñāyāṁ satyām
   'ādir antyena sahetā' iti hal-saṁjñā-siddhau 'hal antyam'
   iti sūtra-pravṛttiḥ; 'hal antyam' iti sūtreṇa hal-sūtre
   lakārasya it-saṁjñāyām 'ādir antyena sahetā' iti hal-
   saṁjñā-siddhiḥ/ ity evaṁ 'hal antyam,' 'ādir antyena'
   ity anayoḥ paraspara-sāpekṣatvena anyonyāśrayatvād
   abodhaḥ/ Bālamanoramā on SK (M), Vol. I, p. 5.

143. eka-śeṣa-nirdeśād vā, Vārttika 5 on P.1.1.3, MB, Vol. I,
   Sec. II, p. 130.

144. hal ca hal ca hal, hal-antyam it saṁjñam bhavati/ MB,
   Vol. I, Sec. II, p. 130.

145. hasya 1 hal/ hal ity ekaḥ ṣaṣṭhī-tatpuruṣaḥ/ dvitīyaḥ
   pratyāhāraḥ/ MB-P, Vol. I, Sec. II, p. 130.

146. tasmād vākya-dvayam apy anta-pada-ghaṭitam/ dvandvānte
   śrūyamāṇasyaiva pratyekaṁ sambandhāt/ tayoś ca
   tantreṇoccāraṇam bhāṣye iti hal-sūtrāntyam antyaṁ ca
   hal it ity eva bhāṣyārthaḥ/ ekaśeṣa-śabdena ca bhāṣye
   tantraṁ lakṣyate/ MB-P-U, Vol. I, Sec. I, p. 130.

147. hal antyam/ hal iti sūtre'ntyam it syāt/ ādir antyena
sahetā/ antyenetā sahita ādir madhyagānāṁ svasya ca
saṁjñā syāt/ / iti hal-saṁjñāyām/ hal-antyam/
upadeśe'ntyaṁ hal it syāt/, SK, p. 1.

148. yathā ac ca gheh ity ādau guṇa-darśanena ghi-śabdasyāpi
ghi-saṁjñā-bodhyatvam/ LSR, p. 21.

149. nanv evaṁ 'tulyāsya-prayatnaṁ savarṇaṁ,' 'nājjhalāv'
ity adāv 'akaḥ savarṇe dīrghaḥ' iti dīrgho'pi na
pravartteteti cet, na, savarṇa-saṁjñādy-uttara-kāle
pravarttamānasya dīrgha-śāstrasya daṇḍāḍhakādāv iva
ihāpy apratibaddha-pravṛttikatvāt, uddeśyatāvacchedaka-
rūpākrāntatvāviśeṣāt/ ... anyathā vyākaraṇa-śāstra-
pariśīlana-vikalānāṁ kvāpi śābda-bodho na syāt/ tathā
vaiyākaraṇānām api vyākaraṇa-sūtra-ghaṭaka-śabdeṣu
vyākaraṇād eva sādhutva-bodhe tad-uttara-kāle ca
vākyārthāvagatau ātmāśrayānyonyāśraya-cakrakāṇāṁ
durvāratvāt iti dik/ SKB, p. 122.

150. yat tu varṇopadeśa-kāle'jādi-saṁjñānām aniṣpādāt-
sandhir neti/ tan na/ varṇopadeśa it-saṁjñāyām ac-
pratyāhāre ca jñāte, 'upendra' ity ādau taṭastha
ivoddeśyatāvacchedakāvacchinne varṇopadeśādāv api
pravṛtter āpādayituṁ śakyatvāt/ vākyāparisamāpti-
nyāyasya tu nāyaṁ viṣayaḥ/ vākyārthāpratibandhakatvāt/
... ata eva 'sarūpāṇām,' 'nājjhalāv' ity ādāv ekaśeṣa-
dīrghādi siddhyati/ spaṣṭā ceyaṁ rītir 'bhute' iti sūtre
tṛtīye bhāṣya-kaiyaṭayoh/ tatra hi 'bhūte ity adhikārā-
śrayā niṣṭhā, bhūta-kriyā-viṣaya-niṣṭhā-vidhānāśrayo
bhūtādhikāra' ity anyonyāśrayam āśaṅkya, 'bhūta-śabdo
hi nityaḥ, śāstraṁ cānvākhyāna-mātram' ity āśritya
samāhitam/ BSS, Vol. I, pp. 3-4. Patañjali discusses
this question in detail. The affixes Kta and KtavatU,
called niṣṭhā, are prescribed under the section bhūte
"to signify past tense" [P.3.2.84]. Now the word bhūta
itself is derived by applying the affix Kta to the root bhū.
This involves an apparent interdependence. Unless we
derive the word bhūta, there cannot be a prescription of
the affix Kta, and unless this affix is prescribed, we
cannot have the word bhūta. This is solved by saying
that the word bhūta is actually nitya "eternal, existing
in the usage," and the science of grammar only explains

174

the existing words. Also see: MB-P-U, Vol. I, Sec. I, p. 63.

151. Misra (1966), p. 105.

152. vākyāparisamāpter vā, Vārttika 4 on P.1.1.10, MB, Vol. I, Sec. I, p. 161.

153. varṇānām upadeśas tāvat/ upadeśottara-kālet-saṁjñā/ it-saṁjñottara-kāla 'ādir antyena sahetā' iti pratyāhāraḥ/ pratyāhārottara-kālā savarṇa-saṁjñā/ savarṇa-saṁjñottara-kālam 'aṇudit savarṇasya cāpratyaya' iti savarṇa-grahaṇam/ etena sarveṇa samuditena vākyena anyatra savarṇānāṁ grahaṇam bhavati/ MB, Vol. I, Sec. I, p. 161.

154. anumānaṁ dvividhaṁ svārtham parārtham ca/ ...yat tu svayaṁ dhūmād agnim anumāya para-pratipatty-artham pañcāvayavaṁ vākyam prayuṅkte, tat parārthānumānam/ yathā parvato vahnimān dhūmavattvāt/ yo yo dhūmavān sa vahnimān yathā mahānasaḥ/ tathā cāyam/ tasmāt tathā iti/ TS, p. 37.

155. tataḥ 'ādir antyena sahetā' iti pratyāhāra-siddhiḥ/ tato 'nājjhalāv' ity etad-vākyārtha-bodhaḥ/ tato'pavāda-viṣaya-parihāreṇa savarṇa-saṁjñā-niścaye sati grahaṇaka-śāstra-pravṛttiḥ/ na tv etat-sūtra-niṣpatti-samaye/ SKB, p. 121.

156. niṣedha-paryālocanaṁ vinā notsargasya vākyārtho lakṣye pravṛttiś ca/ 'kṅiti ce' ti sūtre niṣedha-sūtrāṇām paribhāṣātvāṅgīkāreṇaikavākyatāyā eva yuktatvāt/ nājjhalāv iti sūtrāt pūrvam ikārādiṣu saṁjñā-pravṛtti-samaye ajjhalor api pravṛttatvena bhuktavantam prati mā bhuṅkthāḥ iti vākyasyeva niṣedha-vākyasya vaiyarthyāpatteḥ/ BSS. Vol. I, p. 68.

157. tathā caitat-paryālocanottaraṁ savarṇa-padārtha-jñāne jāte'ṇudit ity asya vākyārtha-bodhaḥ/ vākyārtha-bodhe padārtha-jñānasya kāraṇatvāt/ ...vākyasya aparisamāptatvaṁ ca savarṇa-pada-vācya-nirṇayaṁ vinā savarṇa-grahaṇa-bodhanāsāmarthyam iti bodhyam/ BSS, Vol. I, p. 68.

158. itaḥ pūrvaṁ grahaṇaka-śāstram eva na niṣpannam iti kathaṁ na paryālocayeḥ/ SKB, p. 122; also: PM, p. 53.

159. a-i-u-ṇ, nājjhalāv ity ādau dīrghādīnāṁ na grahaṇam,
     tat-praṇayana-kāle tad-arthasyaiva ajñānena hrasvā-
     bhiprāyeṇaiva prayuktatvāt/ BSR, p. 13.

160. Thieme (1935b), p. 206.

161. iha tu nāsti grahaṇam 'aṇudit savarṇasya cāpratyaya'
     iti/ kiṁ kāraṇam? asmin grahaṇe apariniṣpannatvāt
     saṁjñā-saṁjñi-sambandhasya, grahaṇāṇ-grahaṇe
     grahaṇābhāvaḥ, grahaṇaka-śāstrasya anabhinirvṛttatvāt,
     grahaṇāntarasya cābhāvāt, svātmani ca kriyā-virodhāt/
     tatra hi aṇ-grahaṇe grahaṇaka-śāstram anabhinirvṛttam,
     kriyamāṇatvāt saṁjñā-saṁjñi-sambandhasyà/
     grahaṇāntaraṁ ca nāsti/ svātmani ca kriyā viruddhyate/
     yathā ghaṭo nātmānaṁ śaknoti spraṣṭum/ MB-D, pp. 174-5
     (Swaminathan's edn.).

162. īṣad ity asyānanuvṛttiṁ samāna-prayatnatāṁ ca svīkṛtya
     sūtrārambha-pakṣe'py āha-vākyāparisamāpter veti/
     SKB, p. 121.

163. ākārasya tapara-karaṇaṁ savarṇārtham, bhedakatvāt
     svarasya, Vārttikas 13-4 on P.1.1.1, MB, Vol. I,
     Sec. I, p. 113.

164. abhedakā guṇā ity eva nyāyyam/ kuta etat/ yad ayam asthi-
     dadhi-sakthy-akṣṇām anaṅ udātta ity udātta-grahaṇaṁ
     karoti/ yadi bhedakā guṇāḥ syuḥ, udāttam evoccārayet/
     MB, Vol. I, Sec. I, p. 113.

165. asandehārthas tarhi takāraḥ/ MB, Vol. I, Sec. I, p. 114.

166. aṇ savarṇasyeti svarānunāsikya-kāla-bhedāt, Vārttika
     1 on P.1.1.69, MB, Vol. I, Sec. I, p.

167. taduktaṁ vārttika-kāreṇa-ākārādīnāṁ tapara-karaṇaṁ
     savarṇārtham, bhedakatvāt svarasya iti/ aṇ savarṇasyeti
     svarānunāsikya-kāla-bhedād iti uktavato bhedakatvam
     evābhipretam/ sūtrakārasya ca savarṇe'ṇ-grahaṇāt...
     bhedakatvam apy astīty anumīyate/, MB-D, p. 155.

168. atredam bodhyam/ vyaktiḥ padārtho guṇāḥ bhedakā ity
     abhimānenātra sūtre'ṇ-grahaṇam iti/ LSS, p. 132.

169. aṇudit-sūtre'ṇ-grahaṇād anityeyam iti dhyeyam/
     Paribhāṣā-vṛtti by Nīlakaṇṭha Dīkṣita, PBS, p. 312.

170. abhedakā udāttādaya iti siddhāntasya ca te savarṇa-
saṃjñā -bhedakatvena na vivakṣitā ity arthaḥ/ BSS,
Vol. I, p. 47.

171. See: n. 19.

172. tatrānuvṛtti -nirdeśe savarṇāgrahaṇam anantvāt, Vārttika,
MB, Vol. I, Sec. I, p. 66.

173. ekatvād akārasya siddham, Vārttika, MB, Vol. I, Sec. I,
p. 66.

174. ākṛti -grahaṇāt siddham, Vārttika, MB, Vol. I, Sec. I,
p. 70.

175. rūpa -sāmānyād vā, Vārttika, MB, Vol. I, Sec. I, p. 71.

176. nanu ca savarṇa -grahaṇenātiprasaktam iti kṛtvā taparāḥ
kriyeran/ ...pratyākhyāyate tat -'savarṇe'ṇ -grahaṇam
aparibhāṣyam, ākṛti -grahaṇāt' iti/ MB, Vol. I, Sec. I,
p. 71.

177. eko'yam akāro yaś cākṣara -samāmnāye, yaś cānuvṛttau,
yaś ca dhātv -ādi -sthaḥ/ MB, Vol. I, Sec. I, p. 66.

178. ekaivākāra -vyaktir udāttādi -pratibhāsas tu vyañjaka-
dhvani -kṛtaḥ/ MB -P, Vol. I, Sec. I, p. 66.

179. yadi punar ime varṇāḥ -ādityavat syuḥ, Vt. --tad
yathādityaḥ anekādhikaraṇastho yugapad deśa -pṛthaktveṣu
upalabhyate/ MB, Vol. I, Sec. I, p. 66. punar apy
ekatva -nityatve sādhayati/ MB -P -U, Vol. I, Sec. I,
p. 70. Compare: ādityavad yaugapadyam, MS 1.1.15,
and yat tv eka -deśasya sato nānā -deśeṣu yugapad darśanam
anupapannam iti/ ādityam paśya devānām -priya/ ekaḥ
sann aneka -deśāvasthita iva lakṣyate/ Śabara on MS,
Vol. I, Pt. I, p. 80. Also: Biardeau (1964), p. 178 ff.

180. Viśveśvarasūri clearly says: tasmād aṣṭādaśaivākāra-
vyaktayo nityāḥ, VSSN, p. 83. He has a detailed
discussion of the Nyāya and Mīmāṃsā views on this point
[ibid. pp. 77 ff.].

181. kāryatve nityatāyāṃ vā kecid ekatva -vādinaḥ/ kāryatve
nityatāyāṃ vā kecin nānātva -vādinaḥ// VP, I. 70, P. 7.
The commentary Ratnaprakāśa on the MB says that those
who consider that there is only one sound individual must

accept sounds to be eternal, and those who consider that
there are many sound individuals must accept that
sounds are non-eternal. Those who accept that there
are many sound individuals and yet accept that sounds
are eternal have not properly understood the meaning of
the Bhāṣya. [eka-vyakti-vādinām mate hi varṇānāṁ
nityatāvaśyābhyupeyā/ aneka-vyakti-vādi-mate tv
anityataiveti/ ...evaṁ cāneka-vyaktikatva-pakṣe'pi
varṇānāṁ nityatvaṁ ye'ṅgīkurvanti te tv atratya-bhāṣya-
sva-rasānabhijñā bhrāntā eveti spaṣṭam eva sudhiyām/
Ratnaprakāśa, MPV, p. 132.]

182. vyakti-pakṣe grahaṇaka-śāstrārambhāt/ MB-P, Vol. I,
     Sec. I, p. 63; also: vyaktiḥ padārtho guṇā bhedakāḥ ity
     abhimānenātra sūtre'ṇ-grahaṇam/ LSS, p. 132.

183. ekā avarṇa-vyaktir iti pakṣe tu yady api siddhyati/
     MB-P-U, Vol. I, Sec. I, p. 373.

184. ānya-bhāvyaṁ tu kāla-śabda-vyavāyāt and yugapac ca
     deśa-pṛthaktva-darśanāt, Vārttikas, MB, Vol. I, Sec. I,
     p. 69.

185. ānya-bhāvyaṁ tv akārasya kāla-śabda-vyavāyāt/ ...
     kāla-vyavāyāt-daṇḍa agram/ śabda-vyavāyāt-daṇḍaḥ/ na
     caikasyātmano vyavāyena bhavitavyam/ bhavati cet,
     bhavaty ānya-bhāvyam akārasya/ ...yugapac ca deśa-
     pṛthaktva-darśānān manyāmahe-ānya-bhāvyam akārasyeti/
     yad ayaṁ yugapac ca deśa-pṛthaktveṣūpalabhyate/ aśvaḥ,
     arkaḥ, arthaḥ iti/ na hy eko devadatto yugapat srughne
     ca bhavati madhurāyāṁ ca/ MB, Vol. I, Sec. I, p. 68.

186. tad yathā tān eva śātakān ācchādayāmaḥ, ye
     mathurāyāṁ, tān eva śālīn bhuñjmahe, ye magadheṣu
     tad evedam bhavataḥ kārṣāpaṇaṁ yan mathurāyāṁ
     gṛhītam, anyasmiṁś cānyasmiṁś ca rūpa-sāmānyāt
     tad evedam iti bhavati/ evam ihāpi rūpa-sāmānyāt
     siddham/ MB, Vol. I, Sec. I, p. 71. Referring to this
     passage, the commentary Ratnaprakāśa says that
     similarity (sādṛśya) in this context has to be accepted in
     a specific sense: there should be difference of two
     individuals with identity of all properties. [tatra sādṛśyaṁ
     sarva-dharma-sāmye sati vyakti-bheda-prayuktaṁ
     grāhyam, Ratnaprakāśa, MPV, p. 121.]

187. rūpa -sāmānyād vā/ katham ayam parihāraḥ/ tatra kecid
varṇayanti/ yady apy ākṛtir naiva syād evam api na doṣaḥ/
yathā kārṣāpaṇādiṣv asatyāṁ jātau bhavatas tāvan
mathurāyāṁ kārṣāpaṇam asty atha cārtha -vastv eva/
MB -D, p. 58.

188. siddhaṁ tv avasthitā varṇā vaktuś cirācira -vacanād
vṛttayo viśiṣyante, Vārttika on P. 1. 1. 70.

189. See: n. 166.

190. See: n. 188.

191. hrasva -dīrgha -plutās tu svata eva bhinnā bhinnair
dhvanibhir abhivyajyanta iti teṣāṁ kāla -bhedaḥ/ MB -P,
Vol. I, Sec. I, p. 378. Nāgeśa totally reinterprets
Kaiyaṭa: kaiyaṭe hrasva -dīrgha -plutās tu svata eva
bhinnā ity asya vyañjaka -bhedenāropita -bhedā eva
bhinnair dhvanibhir vyajyanta ity arthaḥ/ MB -P -U, Vol.,
Vol. I, Sec. I, p. 379. This is not true to Kaiyaṭa's
intention.

192. varṇāntaratvam evāhuḥ kecid dīrgha -plutādiṣu, Kumārila's
Śloka -vārttika, Sphoṭa -vāda section, verse 45.

193. svabhāva -bhedān nityatve hrasva -dīrgha -plutādiṣu/
prākṛtasya dhvaneḥ kālaḥ śabdasyety upacaryate//
śabdasyordhvam abhivyakter vṛtti -bhedaṁ tu vaikṛtāḥ/
dhvanayas samupohante śabdātmā tair na bhidyate//
VP, I. 76 -77. See: "Whereas length in terms of the
time required for utterance (duration or quantity) is a
phonological parameter according to some modern
linguists, the parameter of temporal length is not
applied by the Pāṇinians in determining the varṇas. In
other words, the former may hold that the difference
between /u/, /ū/ and /ū̄/ ...is phonemic in Sanskrit,
for a variation in meaning results when one is substituted
for the other in some minimal pairs; for example, pura
'city' and pūra 'flood.' But a Pāṇinian does not hold
that /u/, /ū̄/ and /ū/ are three distinct varṇas of the
Sanskrit language; he reduces all these forms to a sort
of common -factor form in his list of the varṇas and sees
two different realizations of one varṇa in pura and pūra.
Thus, he attributes the difference in temporal length to

the sound-substance rather than to the entity which the
sound-substance manifests." Aklujkar (1970), p. 10.
This needs to be modified slightly. Pāṇini and Kātyāyana
considered length etc. to be distinctive features [see:
Sec. 6.5-8 and Sec. 6.12 above]. The Pāṇinīya-śikṣā
[verse 3] says: triṣaṣṭiś catuḥṣaṣṭir vā varṇāś śambhu-
mate matāḥ "In the view of Śiva, there are sixty-three
or sixty-four varṇas 'sounds.'" Here, we have to count
short and long vowels as separate varṇas. Even in the
Prātiśākhyas, we find short and long vowels listed
separately. At the same time, there exists a higher-
level notion of varṇa "sound-class," which is seen in
the affixation of -varṇa to short vowels to include long
varieties. However, this class-notion is not contradictory
to short and long vowels being phonemically distinct. The
higher notion of varṇa, or the notions of savarṇa-grahaṇa
or Kātyāyana's varṇākṛti are all supra-phonemic notions.
They are rather convenient ways of grouping sounds
which are phonemically distinct from each other. These
notions are in the background of Bhartṛhari's notion of
sphoṭa, which also stands on a supra-phonemic level.
Bhartṛhari himself considered features of length etc. to
be phonemically distinctive, though they were not
distinctive at the supra-phonemic level of sphoṭa
[see: Sec. 6.13].

194. Deshpande (1972), pp. 226-7.

195. Ibid., p. 233.

196. Ibid., p. 239.

197. Thieme (1958), p. 33.

198. Ibid.

199. agrhīta-savarṇānām eva nājjhalāv iti niṣedha iti sthitam/
SKB, p. 123. Viśveśvarasūri [VSSN, p. 242] refers to
a difference of opinion between Kaiyaṭa and Bhaṭṭoji
Dīkṣita. Kaiyaṭa says that P.1.1.10 is needed to avoid
undesired homogeneity between /a/ and /h/, and /i/ and
/ś/. Bhaṭṭoji adds to this /ṛ/ and /ṣ/, and /ḷ/ and /s/.
These two cases are not mentioned by Kaiyaṭa.
Viśveśvarasūri says the Kaiyaṭa accepted the RPr view

that /r̥/ and /l̥/ are both jihvāmūlīya "produced at the
root of the tongue," and hence they cannot be homogeneous
with /ṣ/ and /s/, which are cerebral and dental
respectively. Viśveśvarasūri believes that the same
view was shared by Pāṇini and Kātyāyana. He also points
out [VSSN, p. 244] that if P.1.1.69 were to apply to
P.1.1.10, different varieties of /a/ will not be homo-
geneous with each other.

200. evam īkāro'py atrekāreṇa na gṛhyata iti īkāra-
śakārayoḥ savarṇatvam asti/ MB-P, Vol. I, Sec. I,
p. 161.

201. yad etad 'akaḥ savarṇe dīrgha' iti pratyāhāra-grahaṇaṁ,
tatrekāra īkāraṁ gṛhṇāti, śakāraṁ na gṛhṇāti/ MB,
Vol. I, Sec. I, p. 161.

202. atra ca na īkaro gṛhīto nāpi śakāra iti ikāra-śakārayoḥ
pratiṣiddhā savarṇa-saṁjñā, īkāra-śakārayos tulyatvāt
sāvarṇyam, iti kumārī śete iti sāvarṇya-kāryam
ekādeśaḥ prāpnoti/ aj-adhikārān nivartate/ MB-D,
p. 153.

203. MB-P, Vol. I, Sec. I, p. 161; KS, Vol. Iv, p. 571;
SKB, p. 123; Rūpāvatāra, Pt. I, p. 11; Prakriyā-
Kaumudī, Pt. I, pp. 67-8; SK, p. 7.

204. yadā tūṣmaṇām īṣad-vivṛtatvam āśritya 'nājjhalāv' iti
sūtram pratyākhyāyate, tadeha 'aci' iti nānuvartanīyam/
PM, p. 173. Also: BSS, Vol. I, p. 205.

205. katham punar idam pratyudāharaṇam upapadyate, yāvatā
'aṇudit savarṇasya cāpratyayaḥ' ity atra hakāreṇa ākāro
gṛhyata iti/ asti hy ākārasya hakāreṇa saha savarṇatvaṁ,
tulya-sthāna-prayatnatvāt/ sthānam asti hy anayos
tulyam iti 'akuhaviṣarjanīyāḥ kaṇṭhyāḥ' iti/ prayatno'pi
tulyaḥ-'vivṛtaṁ karaṇam ūṣmaṇāṁ svarāṇāṁ ca' iti/
tasmāt saty apīṅkor iti prāpnoty eva mūrdhanyaḥ,
'nājjhalāv' iti savarṇa-saṁjñā-[a] -pratiṣedhād iti cet,
naiṣa doṣaḥ/ yad ayaṁ 'vayasyāsu mūrdhno matup' ity
atrākārād uttarasya sakārasya mūrdhanyam akṛtvā
nirdeśaṁ karoti, tato'vasīyate hakāro gṛhyamāṇo nākāraṁ
grāhayati; anyathā 'vayasyāsu' iti nirdeśaṁ na kuryāt/
KS-N, Vol. 6, p. 544.

206. yathā...īkāra-śakārayoḥ sāvarṇyam apratiṣiddhaṁ,
tathā ākāra-hakārayor api/ tataḥ kim? hakāreṇākārasya
grahaṇāt ṣatva-prasaṅgaḥ? naiṣa doṣaḥ, hakāro vivṛtaḥ,
ākāro vivṛtataraḥ/ ...evaṁ ca kṛtvā 'iṣṭakāsu,'
'vayasyāsu' ity ādayo nirdeśā upapadyante/ KS-P, Vol. 6,
p. 544.

207. evaṁ sthite 'mālāsu' ity ādau ṣatvaṁ na syāt/
hakāreṇākāra-grahaṇe sati 'gaurīṣu' ity ādivat iṇaḥ
paratvānapāyāt/ kiñ ca 'viśvapābhiḥ' ity atra 'ho ḍhaḥ' iti
dhatvaṁ syāt/ 'vāg āśīḥ' ity atra 'jhayo ho'nyatarasyām'
iti ākārasya ghakāraḥ syāt/ 'gāsīdhvam' ity atra 'iṇaḥ
sīdhvam' iti mūrdhanyādeśaḥ syāt/ 'dāsīṣṭa' ity ādau
'dāder dhātor ghaḥ' iti ghatvam syāt/ 'rāma āyāti' ity
ādau 'haśi ca' ity utvaṁ syāt/ 'devā āyānti' ity ādau
'hali sarveṣām' iti nityo yalopaḥ syāt/ 'cākhāyitā' ity
ādau 'yasya halaḥ' iti yalopaḥ syāt/ 'śyenāyitā' ity ādau
'kyasya vibhāṣā' iti lopas syāt/ 'niccāyya' ity atra 'halo
yamāṁ yami lopaḥ' iti yalopaś ca syāt iti bahūpaplava-
prasaṅgaḥ/ SKB, p. 123.

208. yiyā3so ity ādau 'guror anṛtaḥ' iti plutād ākārāt parasya
saṇaḥ ṣatvam/ SKB, pp. 123-4. Also: PM, p. 53.

209. atrocyate-ākāro na hakārasya savarṇaḥ 'tato'py ākāraḥ'
ity a-i-u-ṇ-sūtrodāhṛta-śikṣā-rītyā bhinna-prayatnatvāt/
'savarṇe'ṇ-grahaṇam aparibhāṣyam ākṛti-grahaṇāt' iti
vārttika-mate tu hakārākārayor eka-jāty-anākrāntatvād
eva nātiprasaṅgaḥ/ yad vā ākāra-sahitaḥ ac āc, sa ca
hal ca ājjhalāv iti sūtre ākara-praśleṣo vyākhyeyaḥ/
tenākārasyācāṁ ca halbhiḥ saha sāvarṇyaṁ niṣidhyate/
ākāra-praśleṣe liṅgaṁ tu 'kāla-samaya-velāsu tumun'
ity ādi-nirdeśāḥ/ atra pakṣe āś ca ā3ś ceti dvandvena
savarṇa-dīrgheṇa ca 'nājjhalāv' iti sūtre dīrghāt paraḥ
pluto'pi nirdiṣṭa iti vyākhyeyam/ tena 'yiyā3so' ity ādau
'guror anṛtaḥ' iti plutād ākārāt parasya saṇaḥ ṣatvaṁ
nety avadheyam/ bhāṣya-mate tūṣmaṇām īṣad-vivṛtatā-
bhyupagamena sāvarṇya-prasaktir eva nāstīti sūtra-
pratyākhyānāt sakalam anāvilam/ SKB, pp. 123-4;
also PM, p. 153.

210. ākāra-praśleṣe liṅgaṁ tu 'kāla-samaya-velāsu tumun'
ity ādi-nirdeśāḥ/ SKB, pp. 123-4; also PM, p. 52.

182

This device of inserting a sound in the rule to yield a
new interpretation is not unfamiliar in the Pāṇinian
tradition. Kielhorn comments: "A long or even a short
vowel often results from the coalition of two or more
vowels. How this simple fact may be turned to account
in grammatical discussions, may be seen from the
following examples. In Vol. I. p. 501, Kātyāyana states
that the single vowel /ā/ (ḍā), which by P. II. 4. 85
is substituted in the Periphrastic Future for the ordinary
personal terminations ti and ta, takes place of the
whole original termination (and not merely, according
to P. I. 1. 52, of their final letters), because /ā/ may be
regarded as a combination of the two vowels /ā/-/ā/;
and that for this reason Pāṇini is justified in not attaching
the Anubandha /ś/ to the substitute ḍā (compare P. I. 1. 55).
According to Patañjali, Pāṇini might similarly have
omitted the Anubandha /ś/ of the term aś in P. II. 4. 32
(Vol. I, p. 481), and of the term aś in P. VII. 1. 27
(Vol. III, p. 251), because even (short) /a/ may be
regarded as a combination of /a/-/a/. According to
Patañjali, again, loka- in P. II. 3. 69 may be regarded as
the result of the combination /la/-/u/-/uka/-, and no
additional rule is required to teach that words like
cikīrṣu, which are formed with /u/, are not construed
with the genitive case (Vol. I, p. 469)." Kielhorn
(1887), p. 248. Kielhorn also rightly expresses his
doubts about the validity of such interpretations [Kielhorn
(1887), p. 245].

211. ukta-nirdeśād eva sāvarṇyābhāvasya kalpane tu ānumānika-
vacana-kalpanāpātaḥ/ pada-vibhāga-mātra-tātparya-
kalpane tu na kiñcid gauravam/ BSR, p. 52. Also:
LSR, pp. 52-3. Nārāyaṇabhaṭṭa in his Prakriyā-sarvasva
accepts that Pāṇini's usages are sufficient to avoid
homogeneity of /ā/ and /h/, and there is no need to
reinterpret P. 1. 1. 10. [nājjhalau ity atra dīrgha-haloḥ
sāvarṇyāniṣedhāt ākārasya hakāreṇa savarṇa-grahāt
iṇtvena 'somapāsu' 'ramāsu' ity ādau ṣatvam prāptam
'vayasyāsu mūrdhno matup' iti nirdeśān na syāt/
Prakriyā-sarvasva, Pt. IV, p. 150: also: S. Venkata
Subromonia (1972), p. 102.] This is similar to
Jinendrabuddhi's view. See: n. 205.

212. rephosmaṇāṁ savarṇā na santi/ MB, Vol. I, Sec. I,
p. 88. Limaye (1974, p. 46) considers this to be a
quotation from the Āpiśali-śikṣā. He considers several
lines from the MB as being quotations from this text
[ibid., pp. 56-8].

213. Abhyankar (1969), p. 100.

214. vṛttau bhāṣye tathā dhātu-nāma-pārāyaṇādiṣu/
viprakīrṇasya tantrasya kriyate sāra-saṁgrahaḥ//
KS, Vol. I, p. 3.

215. "...the compilers of the Kāśikā have diligently used that
grammar (i.e. Cāndra-vyākaraṇa), although they never
mention it." Kielhorn, "The Chandra-Vyākaraṇa and
the Kāśikā-vṛitti, " The Indian Antiquary, June, 1886,
p. 184.

216. Quoted in Kielhorn (1891), p. 107.

217. S. C. Vasu (1891), Vol. I, p. 13.

218. Renou (1966), Vol. I, p. 5.

219. Böhtlingk (1887), p. 3.

220. On the history of the interpretation of halantyam (P.1.3.3),
see: Thieme (1957a), pp. 51-3.

221. [A]: P.1.2.45 (arthavad adhātur apratyayaḥ prātipadikam),
P.8.3.41 (idudupadhasya cāpratyayasya).
[B]: 1) apratyaya iti cet tib-ekādeśe, Vt. 13 on
P.1.2.45.
2) ciṇo luki ta-grahaṇānarthakyaṁ saṁghātasyā-
pratyayatvāt, Vt. 1 on P.6.4.104.
3) lumati pratyaya-grahaṇam apratyaya-saṁjñā-
pratiṣedhārtham, Vt. 1 on P.1.1.61.
4) yathāgṛhītasyādeśa-vacanād apratyayasthe
siddham, Vt. 4 on P.6.1.13.
5) mamaka-narakayor upasaṁkhyānam
apratyayasthatvāt, Vt. 4 on P.7.3.44.

222. Deshpande (1972), 1p. 237-8 and 242-3.

223. KS, Vol. 1, p. 244. As an example, KS cites the
affixes /u/ and /a/ taught by P.3.2.168 and P.3.3.102.
But in other places, it again seems to accept the

Maxim [1], see: KS, Vol. 5, p. 631.

224. Renou (1966), Vol. I, p. 21.

225. Deshpande 91972), pp. 224-5 and 242-3.

226. Pāṇini's rules do not allow a substitute sound to be given with both the markers, i.e. /Ś/ and /T/. The marker /Ś/ with a substitute shows that the unit with /Ś/ replaces the whole substituendum and not just the final sound [i.e. P.1.1.55 (anekāl-śit sarvasya)]. This obviously means that with reference to substitutes marked with /Ś/, the rule P.1.1.50 (sthāne'ntaratamaḥ) does not apply and the substitute as given will be effected. Therefore, Patañjali's argument concerning P.2.3.3 (idama iś) is a weak argument.

227. Deshpande (1972), pp. 237-8, 242-4.

228. Ibid., pp. 208-210.

229. 1) P.8.4.66 (ur at), all /ṛ/ > short /a/.
  2) P.7.4.95 (at smṛ-dṝ...), /ṝ/ (in dṝ) > short /a/.
  3) P.1.2.17 (sthā-ghvor ic ca), /ā/ > short /i/.
  4) P.6.4.34 (śāsa id aṅ-haloḥ), /ā/ > short /i/.
  5) P.1.2.50 (id goṇyāḥ), /ī/ > short /i/.
  6) P.6.4.114 (id daridrasya), /ā/ > short /i/.
  7) P.7.1.100 (ṝta id dhātoḥ), /ṝ/ > short /i/.
  8) P.7.4.40 (dyati-syati-mā-sthām it ti kiti),
       /ā/ > short /i/.
  9) P.7.4.7 (ur ṛt), all /ṛ/ > short /ṛ/.

230. Deshpande (1972), pp. 236-7.

231. astañ-janādi-pathi-mathy-ātveṣv āntaratamyād anunāsika-prasaṅgaḥ, Vt. 1 on P.7.2.84.

232. Kaiyaṭa has the following comment on this vārttika: anantvād eva bhāvyamano'n savarṇān na gṛhṇātīti parihāro noktaḥ, MB-P, Vol. III, p. 158. "[Kātyāyana does accept the Maxim (1), but] the solution that an introduced /a-Ṇ/ sound does not represent its homo-geneous sounds is not offered, simply because [the substitute /ā/ is] a non-/a-Ṇ/ sound." Kaiyaṭa's assumption has no base.

234. Patañjali on P.6.1.185 says: "The procedure of the teacher indicates that an introduced /u/ does represent its homogeneous sounds, since Pāṇini attaches /T/ to /u/ in P.6.1.131 (diva ut)." [ācārya -pravṛttir jñāpayati bhavaty ukāreṇa bhāvyamānena savarṇānāṁ grahaṇam iti yad ayaṁ diva ut iti ukāraṁ taparaṁ karoti/ MB, Vol. II, p. 801.] Nāgeśa [MB -P -U, Vol. II, p. 801] offers P.6.1.111 (ṛta ut) as an indication for the same maxim.

235. Deshpande (1972), pp. 237-8, 242-3.

236. For instance, if the Maxim [2] is accepted, it will also apply to /u/ affixes which are introduced, and then they would also represent their homogeneous varieties. Thus, it would be necessary to make a separate statement to exclude them.

237. Paribhāṣā -sūcana, PBS, p. 15.

238. Ibid., p. 16.

239. PBS, Intr. pp. 12-3.

240. dravyābhidhānaṁ vyāḍih, Vt. on P.2.1.1.

241. See: Sec. 8.8 and n. 132. For more arguments, see: Deshpande (1972), p. 226, Fn. 37.

242. S. D. Joshi (1969), Intr. p. 10.

243. Paribhāṣā -sūcana, PBS, p. 25. K. V. Abhyankar, the editor, quotes another reading in the footnotes: anudit savarnam eva grhnāti na varna -mātram. This is not supported by the auto-commentary [see: n. 244] , and also its sense makes it redundent.

244. udit varno grhyamāṇaḥ sva -vargam eva grhṇāti na savarṇa -mātram/ kathaṁ jñāyate/ yad ayaṁ 'na vibhaktau tusmāh' (P.1.3.4) ity atra tu -grahaṇād eva siddhe sakārasya grahaṇaṁ karoti/ kim etasyā jñāpane prayojanam/ 'coḥ kuḥ' (P.8.2.30) ity atra cu -grahaṇena sakārasyāgrahaṇāt kutvaṁ na bhavati, tena vid iti siddhaṁ bhavati/ Ibid., p. 26.

245. The rule APr I.33 is given by Whitney as eke spṛṣṭam and interpreted to mean that, according to some, vowels

are with contact. In that case, the spirants may as well be with contact. However, the true reading of this rule is eke asprṣṭam "According to some, the vowels are without contact." [For details, see: Madhav Deshpande, "New Material on the Kautsa-vyākaraṇa," appearing in the Journal of the Oriental Institute, Baroda.] The TPr, in a way, classifies stops, semi-vowels and spirants together as involving sparśana (ii.33) "contact," as opposed to vowels which have upasaṁhāra (ii.31) "approximation." But later we find in TPr (ii.45) that the middle of the articulator is vivṛta "open" in the case of spirants. This distinguishes spirants from other consonants.

246. Bṛhat-paribhāṣā-vṛtti, PBS, p. 179.

247. udid varṇaḥ 'anudit savarṇasya' (P.1.1.69) iti sthāna-prayatnābhyāṁ viśiṣṭam eva savarṇaṁ gṛhṇāti na savarṇa-mātram/ tena 'coḥ kuḥ' (P.8.2.30) iti ku-grahaṇe hakārasya grahaṇaṁ na bhavati/ jñāpakaṁ cātra 'na vibhaktau tu-smāḥ/ (P.1.2.4) ity atra tu-grahaṇaṁ kṛtvā sakāra-grahaṇam iti/ ayaṁ ca nyāya-siddha evārthaḥ sukha-pratipatty-arthaṁ jñāpakenoktaḥ/ Ibid., p. 179.

248. udit savarṇaṁ gṛhṇāti na savarṇa-mātram/ (17)/ mātra-śabdaḥ sākalye/ udid varṇaḥ 'anudit savarṇasya' (P.1.1.69) iti sūtreṇa sthāna-prayatnābhyāṁ viśiṣṭam eva savarṇaṁ gṛhṇāti, na tu sthānaika-tulyaṁ savarṇa-mātram/ 'na vibhaktau' (P.1.3.4) ity atra vargāt pṛthak sakāra-grahaṇāl liṅgāt/ 'tulyāsya-prayatnam' (P.1.1.9) iti sthāna-prayatna-viśiṣṭasyaiva savarṇa-saṁjñābhidhānād vā/ tena 'coḥ kuḥ' (P.8.2.30) ity adau na hakārādi-vidhiḥ/ Paribhāṣā-bhāskara by Haribhāskara Agnihotrin, PBS, p. 329.

249. udit savarṇaṁ gṛhṇāti (131)/ na savarṇa-mātram/ sthāna-mātra-tulyaṁ savarṇaṁ gṛhṇātīty arthaḥ/ viśiṣṭasyaiva savarṇa-saṁjñā-vidhānād bhāṣye'darśanāc ceyam prakṣiptā/ ...atha prakṣiptā nirmūlāś ca pradarśyante/ Paribhāṣā-vṛtti of Nīlakaṇṭha Dīkṣita, PBS, p. 315.

250. Burnell (1875), p. 47, extensively quotes from Martin Haug. Also: Kielhorn (1876b), p. 142.

251. Burnell (1875), pp. 47, 50.

252. Kielhorn (1876b), pp. 142-4.

253. Ibid. Franz Kielhorn in his "Indragomin and other Grammarians" [Indian Antiquary, Vol. 15, June 1886, pp. 181-3] discusses Burnell's views on the Aindra School of Grammar. He says: "I have indeed been long aware of the fact that a grammar composed by Indra must have existed, because I knew that that grammar had been used by Hemachandra. But as the fuller name of the author of that work is Indragomin, just as Chandra's fuller name is Chandragomin, I feel no inclination to make it older than Pāṇini." (p. 181) "I would urge my fellow students to cease speaking of an Aindra grammar, or of the Aindra School of grammarians, terms for which, so far as I know, there is no justification, and which are only apt to mislead." (p. 183) Despite Kielhorn's warning, there are enough references to the Aindra grammar that existed before Pāṇini to justify acceptance of such a possibility. It is also possible that Indragomin's grammar was different from this ancient Aindra grammar, just as the pre-Pāṇinian Śākaṭāyana is different from the post-Pāṇinian Jain Śākaṭāyana.

254. "That this science is warranted as much by general reasons as by the explicit reference made to it in the TU 1.2 must not be confounded with the well known treatises going by the name of Śikṣā need hardly be repeated. They are all of them, young elaborations of the definitions laid down in the Prātiśākhyas." Thieme (1935a), pp. 85-6. [The abbreviation TU stands for Taittirīya-Upaniṣad.]

255. Cardona (1965a) presents a brief discussion of the notion of savarṇa in the Prātiśākhyas.

256. hrasvādeśe hrasva-dīrghau savarṇau, RPr, 1st Paṭala, verse 13, p. 7.

257. The sound /ḷ/ would be excluded because there is no long /ḹ/. Though the RPr does not say it explicitly, this can be inferred. The sound /ḷ/ occurs only in the forms of

188

the root klp, where also it is considered as a
transformation of /ṛ/ [madhye sa tasyaiva lakāra-bhāve
dhātau svaraḥ kalpayatāv ṛkāraḥ, RPr, 13th Paṭala,
verse 14, p. 56]. It never occurs either at the beginning
or at the end of a word [padādy-antayor na lkāraḥ
svareṣu, RPr, Upodghāta, verse 9, p. 3]. Thus, there
is no chance of obtaining long /ḹ/.

258. pañca te pañca vargāḥ, RPr, 1st Paṭala, verse 2, p. 5.

259. savarṇa-pūrvasya para-dhruvasya..., RPr, 6th Paṭala,
verse 12, p. 31.

260. samānākṣare sasthāne dīrgham ekam ubhe svaram, RPr,
2nd Paṭala, verse 6, p. 9.

261. svarānusvārosmaṇām aspṛṣṭaṁ sthitam, RPr, 13th
Paṭala, verse 3, p. 55. Also see: "The Ṛk. Prāt. also
fails to note any difference of quality between the long
and short values of this vowel (i.e. /a/). 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 pronounciation, or they may have simply disregarded
as of little account, the discordance of quality between
/a/ and /ā/." Whitney on APr, p. 32. Max Walleser
(1927) 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 Ṛk. und Taitt. Pr. bemerkt worden ist, und
Zwar aus vier Gründen: ...," p. 195. I tend to agree
with his general conclusion [see my "Phonetics of Short
/A/ is Sanskrit," appearing in the Indo-Iranian Journal],
but 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
Prātiśākhyen," and that the Vedic speech being a
dominating "Kultsprach," any organic sound-changes
were generally unlikely. The arguments adduced by

him to prove that the short /a/ was a closed sound are
based on the fact that the Sanskrit /ă/ represents Indo-
European /a/, /e/ and /o/. They are interesting, but
not conclusive.

262. dve dve savarṇe hrasva-dīrghe, TPr (i.3), p. 11.

263. teṣu samānākṣareṣu dve dve hrasve, dve dve dīrghe,
      hrasva-dīrghe, dīrgha-hrasve vākṣare parasparaṁ
      savarṇa-saṁjñe bhavataḥ, Tribhāṣya-ratna, TPr, p. 11.

264. atha navāditaḥ samānākṣarāṇi, TPr (i.2), p. 10.
      Contrast: aṣṭau samānākṣarāny āditaḥ, RPr, 1st Paṭala,
      verse 1, p. 5, referring to /a/, /ā/, /i/, /ī/, /u/, /ū/,
      /ṛ/ and /r̄/.

265. na pluta-pūrvam, TPr (i.4), p. 2.

266. saṁjñāyāḥ prayojanaṁ 'dīrghaṁ samānākṣare savarṇa-
      pare' (x.2) iti, Tribhāṣya-ratna, TPr, p. 11.

267. Whitney on TPr, p. 11.

268. iyam anvartha-saṁjñā/ savarṇatvaṁ nāma sādṛśyam
      ucyate/ tasmād akārādīnām ikārādibhir na savarṇa-
      saṁjñāśaṅkā, bhinna-sthāna-prayātnatvād anayoḥ/
      saṁjñāyāḥ prayojanaṁ 'dīrghaṁ samānākṣare savarṇa-
      pare' (x.2) iti/ Tribhāṣya-ratna, TPr, p. 11.

269. varṇaḥ kārottaro varṇākhyā (i.16), TPr, p. 18.
      hrasvo varṇottaras trayāṇām (i.20), TPr, p.20.
      prathamo vargottaro vargākhyā (i.27), TPr, p. 25.

270. Whitney on TPr, p. 21.

271. TPr, p. 383.

272. Tribhāṣya-ratna, TPr, p. 383.

273. Whitney on TPr, p. 385.

274. TPr, p. 307.

275. savarṇa-paraḥ savargīya-paraś ca dvitvaṁ nāpadyate/
      savarṇaś ca nāma sārūpyam ucyate/ na tulya-sthāna-
      karaṇatā-mātram/ savargīyaḥ samāna-varga-sambandhī/
      Tribhāṣya-ratna, TPr, p. 308; Whitney on TPr,
      pp. 307-8; Cardona (1965a), p. 234.

276. TPr, pp. 148-9; Cardona (1965a), p. 233.

277. The commentary Vaidikābharaṇa on the TPr (i. 2) says
that the term samānākṣara "simple vowels" actually
applies to all vowels except the diphthongs. The
commentator refers to the RPr where we have eight
samānākṣaras, i.e. short and long /a/, /i/, /u/ and
/ṛ/. He says that the designations such as these are
for the purpose of using them (upayogānuguṇyāt) to
formulate rules, and hence for the specific needs of
the system in the TPr only nine sounds, i.e. short,
long and extra-long /a/, /i/ and /u/ are called
samānākṣaras. The term savarṇa is used with reference
to these simple vowels in the TPr (i. 3). See:
Vaidikābharaṇa, Taittirīya-prātiśākhya, Government
Oriental Library Series, Bibliotheca Sanskrita, No.
33, Mysore, 1906, pp. 10-1.

278. APr, p. 148.

279. Ibid., p. 28.

280. Ibid.

281. Whitney on APr, p. 118.

282. APr (iii. 44, 45, 46), pp. 148-9.

283. APr (ii. 31) makārasya sparśe para-sasthānaḥ; Compare:
P. 8. 4. 58 (anusvārasya yayi para-savarṇaḥ). APr (iii. 30)
sasthāne ca; compare: P. 8. 4. 65 (jharo jhari savarṇe).

284. Thieme (1935a), pp. 85, 95.

285. See: Sec. 4. 7.

286. APr (i. 36) saṁvṛto'kāraḥ, p. 31.

287. Deshpande (1972), p. 230; also: Sec. 4. 9 above.

288. Thieme (1935a), pp. 81-91; his detailed argument is
found in Thieme (1937-8), pp. 189-209. Also
V. Venkatarama Sarma (1935), pp. 96 ff.

289. VPr, p. 8.

290. VPr (i. 65-84), pp. 10-12.

291. 'ahavisarjanīyāh kantha' (71) iti akārasya mātrikasya
dvimātrikasya trimātrikasya kantha-sthānatā uktā/
tathā 'kanthyā madhyena' (84) iti samāna-karanatā
trayānām api/ āsya-prayatnas tu bhidyate/ ko'sāv
āsya-prayatno nāma/ samvrtatā vivrtatā ca, asprstatā
īsat-sprstatā sprstatā ca ardha-sprstatā ca/ tad yathā
samvrtāsya-prayatno'kāro vivrtāsya-prayatnā itare
svarāh/ tad yathā asprstatāsya-prayatnāh svarāh,
sprstatāsya-prayatnāh sparśāh, tathā īsat-sprstatāsya-
prayatnā antahsthāh, ardha-sprstatāsya-prayatnā
ūsmāno'-nusvāraś ca/ ayam āsya-prayatnah śiksā-
vidbhir uktah iha grhyate/ Uvata on VPr(W),
pp. 118-9. Also: Venkatarama Sarma (1935),
pp. 169-70. The VPr (i.11) [dve karane] says that
there are two karanas. The word karana is used by
the VPr normally to refer to the articulator [cf. VPr
(i.43), (i.75-6), (i.80)]. However, on this rule, Uvata
says that there are two karanas, i.e. samvrta and vivrta,
which probably refers to open and closed positions of
the glottis [cf. RPr (13.1-2), TPr (ii.4-5)]. The
commentary of Anantabhatta gives the same interpretation,
but quotes a verse attributed to Kātyāyana, which speaks
of four prayatnas: sprsta "with contact," īsat-sprsta
"with slight contact," samvrta "closed" and vivrta
"open" [see: Vājasaneyi-Prātiśākhya, with the
commentaries of Uvata and Anantabhatta, Madras
University Sanskrit Series, No. 5, Madras, 1934,
p. 9]. Here, Anantabhatta seems to interpret the
term karana with the term prayatna. If the vowels and
spirants were vivrta "open," then the VPr would require
a rule like P.1.1.10 (nājjhalau) to prohibit homogeneity
of vowels with spirants. The very fact that the VPr
does not have such a rule is an indication that vowels
and spirants had different efforts. Thus Uvata's comments
on the VPr (i.72) seem to be quite appropriate.
Anantabhatta, even on the VPr (i.72), sticks to the view
that vowels and spirants are both vivrta "open," without
solving the impending question of their homogeneity.

292. savarnavac ca, VPr (i.72), p. 11. See: ato'kārasya
mātrikasya samvrtāsyaprayatnasya itarayoś ca
vivrtāsya-prayatnayor dvimātrika-trimātrikayoh

sāvarṇyaṁ tulyaṁ na bhavati, tad-artham idam ārabhyate/ savarṇavac ca kāryam bhavati/ Uvaṭa on VPr(W), pp. 118-9.

293. Thieme (1935a), pp. 89-90.

294. i-c(a)-ś-e-yās tālau, VPr (i. 66), p. 10.

295. tālu-sthānā madhyena, VPr (i. 79), p. 12.

296. u-v-o-hp(a)-pā oṣṭhe, VPr (i. 70), p. 11.

297. samāna-sthāna-karaṇā nāsikyauṣṭhyāḥ, VPr (i. 81), p. 12.

298. See: n. 116 and 117.

299. Thieme (1935a), p. 93.

300. Ibid., p. 92, Fn. 3. Cardona has criticized Thieme's views regarding Pāṇini's knowledge of sthāna and karaṇa: "The finally accepted analysis of āsya in Bh. ad 1.1.9 is that it is a taddhita derivative with suffix -ya (5.1.6) like dantya. Therefore āsya, analysed as meaning āsye bhavam 'located in the mouth' (Bh. I.61.25), includes a reference to sthāna and, concomitantly, to karaṇa. cf. Bh I.61.25-6 kim punar āsye bhavaṁ, sthānam karaṇam ca....Hence I do not think we can state, with Thieme (Pāṇini and the Veda, 94, n.1), that Pāṇini did not know the doctrine of sthāna and karaṇa." Cardona (1965a), p. 227, fn. 6. Thieme clearly intends 'articulator' or 'active organ' by the term karaṇa in this context.

301. evam api vyapadeśo na prakalpate-'āsye yeṣāṁ tulyo deśa' iti/ vyapadeśivad-bhāvena bhaviṣyati/ siddhyati/ sūtram tarhi bhidyate/ yathā-nyāsam evāstu/ nanu coktaṁ-savarṇa-saṁjñāyām bhinna-deśeṣv ati-prasaṅgaḥ, prayatna-sāmānyāt' iti/ naiṣa doṣaḥ/ na hi laukikam āsyam/ kiṁ tarhi/ taddhitāntam āsyam/ āsye bhavam-āsyam-'śarīrāvayavād yat'/ kim punar āsye bhavam/ sthānam karaṇam ca/, MB, Vol. I, Sec. I, p. 155.

302. karaṇam iti/ spṛṣṭatādi, jihvāyā agropāgra-madhya-mūlāni vā/ MB-P, Vol. I, Sec. I, p. 155. Viśveśvarasūri [VSSN, p. 224] discusses these two interpretations given by Kaiyaṭa, and says that the first, i.e.

karaṇa = spṛṣṭatādi, is vyavahārābhiprāyaṁ na tu
tātvikam "according to the conventional use of the term,
and not really true." Then he argues that spṛṣṭatā
"property of being in contact" etc. stands for different
kinds of saṁyogas "conjunctions" and could not be
karaṇa "active instrument" in the real sense. They are
not "active," but they are "activities" themselves. The
second explanation by Kaiyaṭa, i.e. karaṇa = jihvāyā
agropāgra-madhya-mūlāni vā, is the proper interpretation,
because the tip of the tongue etc. are the "active
instruments" (vyāpāravad).

303. yadi tarhi 'sati bhede kiṁcit samānam' iti kṛtvā savarṇa-
saṁjñā bhaviṣyati/ śakāra-chakārayoḥ, ṣakāra-
ṭhakārayoḥ, sakāra-thakārayoḥ savarṇa-saṁjñā prāpnoti/
eteṣāṁ hi sarvam anyat samānaṁ karaṇa-varjam/
MB, Vol. I, Sec. I, p. 156. Though Viśveśvarasūri
considers that the term karaṇa primarily refers to tip
of the tongue etc., still on the phrase karaṇa-varjam in
the Bhāṣya, he explains karaṇa as internal efforts.
[ābhyantara-prayatnas tu śarāṁ vivṛtatvaṁ, chādīnāṁ
tu spṛṣṭatvam iti bhedaḥ, VSSN. p. 230.]

304. Thieme (1958), p. 43, fn. 24.

305. Ibid., p. 42.

306. mukha-nāsikā-karaṇo'nunāsikaḥ, VPr (i. 75).

307. anusvārasya yayi parasavarṇaḥ (P. 8. 4. 58).

308. antaḥsthām antaḥsthāsv anunāsikām parasasthānām,
VPr (iv. 9), p. 51.

309. sparśe para-pañcamam, VPr (iv. 11), p. 51.

310. siṁ savarṇe dīrghaḥ, VPr, (iv. 50), p. 55.

311. anunāsikavaty anunāsikam, VPr (iv. 51), p. 56.

312. savarṇe, VPr (iv. 110), p. 64.

313. VPr(W), p. 243.

314. ṛkāra-ḷkārayor api savarṇa-dīrghatvam eva bhavati,
yady udāharaṇaṁ chandasi labhyate, Uvaṭa on VPr (i. 43).

315. r̥hkkau jihvā-mūle, VPr (i.65); llasitā dante, VPr (i.69);
dantyā jihvāgra-karaṇāh, VPr (i.76); jihvā-mūlīyānusvārā
hanu-mūlena, VPr (i.83), pp. 10-2.

316. svarāś ca lkāra-varjam, VPr(i.87); svarāś ca padāntīyā
bhavanti lkāraṁ varjayitvā, Uvaṭa on VPr (i.87); also
lkāraś cālkāram, VPr (iv.60); Uvaṭa on this rule says:
idaṁ sūtraṁ kecin na paṭhanti, vyarthatvāt.

317. kāreṇa ca, VPr (i.37); a-vyavahitena vyañjanasya,
VPr, (i.38), p. 7.

318. hrasva-grahaṇe dīrgha-plutau pratīyāt, VPr (i.63);
prathama-grahaṇe vargam, VPr (i.64), p. 10.

319. rephoṣmaṇāṁ savarṇā na santi/ vargyo vargyeṇa savarṇaḥ/
Śikṣā-sūtrāṇi, p. 15.

320. See: n. 212.

321. īṣad-vivr̥ta-karaṇā ūṣmāṇaḥ/ vivr̥ta-karaṇā vā/
Śikṣā-sūtrāṇi, p. 21.

322. Ibid., p. 5.

323. yad yad yasya bhavet sthānaṁ karaṇam vā viśeṣaṇam/
savarṇatvena saṁgrāhya āsya-yatnas tu bhidyate//38//
Varṇa-ratna-pradīpikā-śikṣā, Śikṣā-saṁgraha, p. 120.

324. dvimātrasyaika-mātrasya saṁvr̥tādi-prayatnataḥ/
bhinnasyāpy astu sāvarṇyaṁ tad-artham idam ucyate//,
Ibid., pp. 120-1.

325. pratyayasya savarṇatvaṁ (sakāraḥ) yātīti śākaṭāyanaḥ/
avikāraṁ ca śākalyo manyate śaṣaseṣu ca// Ibid., p. 127.

326. Ibid., p. 119.

327. savarṇe (141), savarṇe pare vyañjanaṁ dvir na bhavati/
Prātiśākhya-pradīpa-śikṣā, Śikṣā-saṁgraha, p. 253.

328. Ibid., p. 228.

329. atra rkāroccāraṇe viśeṣaḥ/ tathā ca pratijñā-sūtre
'rkārasya tu saÿyuktāsaÿyuktasyāviśeṣeṇa sarvvatraivam'/
asyārthaḥ/ padānta-madhyeṣu saṁyuktāsaṁyuktasya
rvarṇasya rekāraḥ syāt/ sarvatra saṁhitāyām pade ca/
yathā kr̥ṣṇo'sīty atra kreṣṇo'sīty uccāraḥ/ r̥tviyo yataḥ/

atra retviya ity uccāraḥ/ evaṁ 'r̥lvarṇayor mithaḥ
sāvarṇyaṁ vācyam' iti vārttikena l̥kārasyāpi le ity
uccāraḥ/ kl̥ptam ity atra kleptam ity uccāraḥ/
Ibid., p. 296.

330. valhāmasīty atra valehāmasīty uccāro ralayoḥ sāvarṇyāt,
Keśavī-śikṣā, Śikṣā-saṁgraha, p. 142. Also:
Venkatarama Sarma (1935), p. 441.

331. Kielhorn (1876), p. 197.

332. Though I could not obtain the published edition of the
Vyāsa-śikṣā, I was fortunate to obtain a microfilm of
a manuscript of this text in the Vaidika Saṁśodhana
Maṇḍala, Poona [No. 4564]. In the following notes, I
shall augment Lüders with the original Sanskrit quotations
from this manuscript.

333. Lüders (1894), p. 5, verse 5 (folio 2): sparśānām pañca
pañca syur vargā vargottarasya ca/ tat-prathamādi
saṁjñāḥ syuh/; verse 10 of Lüders appears to be verse
7 of this Ms.: tulya-rūpaṁ savarṇam syāt (folio 3);
verse 13 of Lüders is verse 9 of the Ms.: bhaved akāraḥ
kārordhve halām (ākhyā) (folio 4). Perhaps the numbers
in Lüders refer to "rules" rather than to verses.

334. Lüders (1894), p. 9. I have not been able to find a
parallel verse in my Ms.

335. Ibid. The number 172 of Lüders is verse 116 of the Ms.:
ādy-aṣṭasu savarṇordhve dīrgham apluta-pūrvakaḥ
(folio 39).

336. Lüders (1894), p. 13. The number 269 of Lüders is
verse 183 of the Ms.: antaḥsthodayam aṅgaṁ syāt
asavarṇa-parasya ca (folio 55).

337. Lüders (1894), p. 16. However, certain verses found
in the Ms. of the Vyāsa-śikṣā indicate a notion similar
to Pāṇini's. The verses 78-9 (folio 26) are as follows:
nakāro laparas tasya sasthānam anunāsikam/ sparśottaro
makāras tu yavalottara eva ca/ anunāsikam eteṣāṁ
savarṇam pratipadyate// The usage of the term savarṇa
here is quite similar to that in P. 8. 4. 58 (anusvārasya
yayi para-savarṇaḥ).

338. āpadyate makāro rephoṣmasu pratyayeṣv anusvāram/
     yalaveṣu parasavarṇam, sparśeṣu cottamāpattim//
     Nāradīya-śikṣā, 2nd Prapāṭhaka, 4th Kaṇḍikā;
     rephoṣmasu parato makāro'nusvāratvam/ ...yalaveṣu
     parasavarṇatā, sparśeṣu parataḥ sparśa-varga-
     sadṛśottamāpattir makārasya bhavati/ Bhaṭṭa Śobhākara's
     comm., Nāradīya-śikṣā, p. 60.

339. anantyaś ca bhavet pūrvo'ntyaś ca parato yadi/ tatra
     madhye yamas tiṣṭhet savarṇaḥ pūrva-varṇayoḥ//
     2nd Prapāṭhaka, 2nd Kaṇḍikā, Nāradīya-śikṣā, p. 52.

340. pūrvasya varṇasya savarṇaḥ sadṛśaḥ, Śobhākara's
     comm., Nāradīya-śikṣā, p. 52.

341. evam ime na lakṣaṇena yuktā, nāpy ākṛtyā, nāpy upadiṣṭāḥ,
     MB-D, p. 81.

342. rephoṣmaṇāṁ savarṇā na santi/ vargyo vargyeṇa
     savarṇaḥ/ Āpiśali-śikṣā-sūtras, Śikṣā-sūtrāṇi, p. 5.

343. spṛṣṭa-karaṇāḥ sparśāḥ/ vivṛta-karaṇāḥ svarāḥ ūṣmānaś
     ca/ Ibid., p. 3.

344. saṁvṛto'karaḥ, Ibid., p. 4.

345. Burnell (1875), p. 22.

346. Ibid., p. 2.

347. siddho varṇa-samāmnāyaḥ, Kātantra (1.1.1), p. 14.
     tatra caturdaśādau svarāḥ, Kātantra (1.1.2), p. 14.
     daśa samānāḥ, Kātantra (1.1.3), p. 14.

348. teṣāṁ dvau dvāv anyonyasya savarṇau, Kātantra (1.1.4),
     p. 14.

349. Ibid., p. 14.

350. samānaḥ savarṇe dīrghī-bhavati paraś ca lopam,
     Kātantra (1.2.1), p. 17.

351. ivarṇo yam asavarṇe, na ca paro lopyaḥ, Kātantra
     (1.2.8); uvarṇo vam, Kātantra (1.2.9); ram ṛvarṇaḥ,
     Katantra (1.2.10); lam ḷvarṇaḥ, Kātantra (1.2.11),
     pp. 17-8.

352. abhyāsasyāsavarṇe, Kātantra (3.4.56), p. 70.

353. samānād anyo'savarṇaḥ, Bāla-śikṣā, p. 4.

354. ram ṛvarṇaḥ, Kātantra (1.2.10); lam ḷvarṇaḥ, 1.2.11; ṛvarṇe ar, 1.2.4; ḷvarṇe al, 1.2.5; pp. 17-8.

355. Kātantra-vyākaraṇa [Eggeling's edn.] , p. 470. Bhāvasena Traividya in his Kātantra-rūpa-mālā-prakriyā (ed. by Jivaram Shastri, published by Hirachand Nemichand Shreshthi, Bombay, Saṁvat 1952, p. 3) gives ṛkāra-ḷkārau ca as rule 5. His commentary runs as: ṛkāra-ḷkārau ca parasparaṁ savarṇa-saṁjñau bhavataḥ.

356. ṛkāra-ḷkārayoḥ savarṇa-saṁjñā lokopacārāt siddheti bhāvaḥ, Trilocanadāsa's commentary, quoted by Eggeling, ibid., p. 480.

357. yat tu trilocanadāsenoktam ṛkāra-ḷkārayoḥ saṁjñā lokopacārataḥ siddheti tan na/ loke ḷkāre ṛkāra-vyavahārasyādarśanāt/ Laghubhāṣya, p. 14.

358. Kātantra-paribhāṣā-sūtra-vṛtti of Bhāvamiśra, Paribhāṣā-saṁgraha, p. 67.

359. sasthāna-kriyaṁ svam, Jainendra (1.1.2), p. 2.

360. sthānaṁ tālvādi, kriyā spṛṣṭatādikā..., samānā sthāne kriyā yasya, sāmarthyāt sthānam api samānaṁ labhyate/ ...sā caturvidhā...spṛṣṭatā, īṣat-spṛṣṭatā, vivṛtatā, īṣad-vivṛtatā ceti/ Mahāvṛtti on Jainendra-vyākaraṇa, p. 2.

361. anye saṁvṛtam akāram icchanti loke/ śāstra-vyavahāre tu vivṛtam/ etac cāyuktaṁ, loka-śāstrayor uccāraṇam praty aviśeṣāt/ ibid., p. 2. This criticism of Abhayanandin clearly neglects the meta-linguistic purpose of using open /a/ in Pāṇini's grammar.

362. rephosmaṇāṁ svā na santi/ vargyaḥ sva-vargyeṇa sva-saṁjño bhavati/ Mahāvṛtti, Jainendra-vyākaraṇa, p. 3.

363. anudit svasyātmanā'bhāvyo'taparaḥ, Jainendra (1.1.72), p. 16.

364. yayy anusvārasya parasvam, Jainendra (5.4.132),
comp. with anusvārasya yayi parasavarṇaḥ (P.8.4.58).
jharo jhari sve, Jainendra (5.4.139) comp. with jharo
jhari savarṇe (P.8.4.65). sve'ko dīḥ, Jainendra
(4.3.88), comp. with akaḥ savarṇe dīrghaḥ (p.6.1.101).
na padānta -dvitva -vare ya -kha -svānusvāra -dī -car -
vidhau, Jainendra (1.1.59), comp. with na padānta -
dvirvacana -vare -yalopaśvara -savarṇānusvāra -dīrgha -
jaś -car -vidhiṣu (P.1.1.58).

365. "The Jainendra grammar, taken as a whole, is a copy
of Pāṇini pure and simple, and the sole principle on
which it was manufactured appears to be that 'the saving
of a half a short vowel affords as much delight as the
birth of a son.'" Kielhorn, "On the Jainendra -Vyākaraṇa,"
Indian Antiquary, Vol. 10, March 1881, p. 76.

366. ranto'ṇ uḥ, Jainendra (1.1.48), uḥ sthāne prasajyamāna
eva ranto bhavati/ ...ṛlkārayoḥ sva -saṁjñoktā/ tena
tavalkāraḥ/ ...kathaṁ lantatvam? ranta iti laṇo
lakārākāreṇa praśleṣa -nirdeśāt pratyāhāra -grahaṇam/
Mahāvṛtti of Abhayanandin, Jainendra -vyākaraṇa, p. 11.
Abhayanindin quotes a Vārttika: ṛkāra -ḷkārayoḥ sva -
saṁjñā vaktavyā, ibid., p. 3.

367. jāti -nirdeśaś cāyam, Cāndra -vyākaraṇa, Vol. I, p. 2.

368. utā savargaḥ, Cāndra (1.1.2), Vol. I, p. 10.

369. anusvārasya yayi yam, Cāndra (6.4.151), comp. with
anusvarasya yayi para -savarṇaḥ (P.8.4.58). ako'ki
dīrghaḥ, Cāndra (5.1.106), comp. with akaḥ savarṇe
dīrghaḥ (P.6.1.101). Actually, Bhaṭṭoji Dīkṣita says
that the Cāndra rule is better worded than P.6.1.101.
[ako'ki dīrgha ity eva suvacam, SK, p. 7.]

370. halo jharāṁ jhari sasthāne lopo vā, Cāndra (6.4.155),
comp. with jharo jhari savarṇe (P.8.4.65). There is,
however, a rule where Cāndra uses the term savarṇa:
dvitve parasavarṇaḥ, Cāndra (6.3.34). The Cāndra -
paribhāṣā -sūtras contain the maxim: bhāvyamānot
savarṇān gṛhṇāti, Cāndra -vyākaraṇa, Vol. II, p. 397.
We should note here that the Vṛtti on Candragomin's
rules, which was declared by Liebich to be an

autocommentary (svopajña), has been doubted by scholars for not being a work of Candragomin himself. Thus, this is yet an open question. For a discussion of this point, see: "Ist Candragomin der Verfasser der Cāndra-Vṛtti?," by R. Birwé, Mélanges d'Indianisme à la mémoir de Louis Renou, Publications de l'Institut de Civilisation Indienne, Fascicule 28, Paris, 1968. The same might be said of the Cāndra-paribhāṣā-sūtras.

371. sāmānyāśrayaṇāt dīrgha-plutānunāsikānāṁ grahaṇam, Amoghavṛtti, Śākaṭāyana-vyākaraṇa, p. 1.

372. bhāvyo'g, Śākaṭāyana (1.1.4), p. 2.

373. teyān, Śākaṭāyana (1.1.3), p. 2.

374. svaḥ sthānāsyaikye, Śākaṭāyana (1.1.6), sthānaṁ kaṇṭhādi, āsyam mukhaṁ, tatra bhavam āsyam, spṛṣṭatādi-prayatna-pañcakam, sthānasyoktatvāt, Amoghavṛtti, Śākaṭāyana-vyākaraṇa, p. 3. Comp. with Patañjali's interpretation of āsya in P.1.1.9. [See: Sec. 2.4.]

375. saṁvṛtam akārasyeti, Amoghavṛtti, ibid., p. 3.

376. a a a ity akāra udātto'nudāttaḥ svaritaś cānanunāsiko' nunāsikaś ceti ṣaṭ/ evaṁ dīrgha-plutāv iti dvādaśa varṇa-bhedāḥ parasparasya sve bhavanti/ evam, ivarṇādīnāṁ tv aṣṭādaśa bhedāḥ. Amoghavṛtti, ibid., p. 3.

377. īṣad-vivṛtam ūṣmaṇām, ibid., p. 3.

378. rephoṣmaṇāṁ sve na bhavanti, ibid., p. 3.

379. utā svaḥ, Śākaṭāyana (1.1.2), ibid., p. 2.

380. ukāreṇetā sahopādīyamāno varṇaḥ svasya vargasya saṁjñā bhavaty ātmanā saha, Amoghavṛtti, ibid., p. 2.

381. ṛ ity eva ḷvarṇasya grahaṇam, ibid., p. 1.

382. tathā ca 'ṛty akaḥ' (1.1.75) ityādi ḷkāre'pi siddham bhavati, ibid., p. 1. Also: pp. 15-6, 18.

383. jari jaraḥ sve vā, Śākaṭāyana (1.1.133), ibid., p. 23.

384. Nemichandra Shastri (1963), pp. 92 ff.

385. tulya-sthānāsya-prayatnaḥ svaḥ, Hemacandra (1.1.17).

386. karaṇaṁ tu jihvā-mūla-madhyāgropāgra-rūpaṁ sthānāsya-prayatna-tulyatve sati nātulyam bhavatīti pṛthak noktam, Bṛhad-vṛtti, Hema-śabdānuśāsana, p. 3.

387. īṣad-vivṛtaṁ karaṇam ūṣmaṇām/ vivṛtaṁ karaṇaṁ svarāṇām/ 'ūṣmaṇāṁ ce'ty anye/ ibid., p. 4.

388. akāraḥ samvṛta ity anye/ ibid., p. 4/

389. pañcako vargaḥ, Hemacandra (1.1.12), and also: varṇāvyayāt svarūpe kāraḥ, Hemacandra (7.2.156).

390. samānānāṁ tena dīrghaḥ, Hemacandra (1.21.) is closer to Kātantra (1.2.1), TPr (x.2), APr (iii.42) and VPr (iv.50) than to P.6.1.101.

391. ivarṇāder asve yavaralam, Hemacandra (1.2.21). comp. with Kāntantra (1.2.8-11).

392. tau mumau vyañjane svau, Hemacandra (1.3.14).

393. anusvārasya yayi para-savarṇaḥ, P.8.4.58.

394. dhuṭo dhuṭi sve vā, Hemacandra (1.3.48).

395. jharo jhari savarṇe, P.8.4.65.

396. ivarṇāder asve yavaralam, Hemacandra (1.2.21); avarṇasyevarṇādinā edodaral, Hemacandra (1.2.6); ṛty ār upasargasya, Hemacandra (1.2.9) and lty āl vā, Hemacandra (1.2.11).

397. rkārāpadiṣṭaṁ kāryam lkārasyāpi, Maxim 71, Nyāya-saṁgraha, PBS, p. 109.

398. svaḥ sthāna-spṛṣṭatādy-aikye, Malayagiri (2nd sandhi, 1), p. 5.

399. spṛṣṭatā, īṣat-spṛṣṭatā, vivṛtatā, īṣad-vivṛtatā/ ... rephaśaṣasahānāṁ tu sve na santi/ Svopajña-vṛtti, Malayagiri's Śabdānuśāsana, p. 5.

400. Ibid., p. 5.

401. utā sva-vargasya, Malayagiri (2nd sandhi, 14), p. 8.

402. ik etaḥ, Malayagiri (1st sandhi, 6); ṛtaḥ aṇ, (1st sandhi, 8; edādi ec, (1st sandhi, 9); e-o eṅ,

(1st sandhi, 10); Malayagiri's Śabdānuśāsana, p. 3.

403. Śākaṭāyana-vyākaraṇa, p. 1.

404. yaralavā yañ, Malayagiri (1st sandhi, 17), p. 4.

405. Śākaṭāyana-vyākaraṇa, p. 1.

406. ikaḥ asve yañ, Malayagiri (3rd sandhi, 2), p. 10.

407. dīrghaḥ sve saparasvarasya, Malayagiri (3rd sandhi, 5), p. 11.

408. tṛtīyasya svaḥ anunāsikaḥ pañcame, Malayagiri (4th sandhi, 8); pratyaye, Malayagiri (4th sandhi, 9); mnāṁ dhuṭi apadānte, Malayagiri (4th sandhi, 10); p. 17.

409. vyañjanāt yañ-pañcamasya sarūpe vā, Malayagiri (5th sandhi, 4), p. 21.

410. āvat svarghaplu, Mugdhabodha (5), p. 5.

411. ñapo'k samo ṛṇa ṛk ca, Mugdhabodha (6), p. 6.

412. sāmyaṁ tv eka-sthānatvam, Vṛtti, Mugdhabodha-vyākaraṇa, p. 6.

413. capoditākānitā ṛṇaḥ, Mugdhabodha (7), p. 7.

414. saha ṛṇe ṛghaḥ, Mugdhabodha (22), p. 17.

415. Comp. RPr (2nd paṭala, verse 6), APr (ii.31), APr (ii.30), and Cāndra (6.4.155). All these rules use the term sasthāna instead of savarṇa.

416. aiuṛḷ samānāḥ, Sārasvata (1), p. 1; hrasva-dīrgha-pluta-bhedāḥ savarṇāḥ, Sārasvata (2), p. 1.

417. varṇa-grahaṇe savarṇa-grahaṇam/ kāra-grahaṇe kevala-grahaṇam/ tapara-karaṇaṁ tāvanmātrārtham/ Sārasvata-vyākaraṇa, p. 6.

418. ku-cu-ṭu-tu-pu, ibid., p. 4.

419. asavarṇe svare pare pūrvekārokārayor iy-uvau vaktavyau, Sārasvata (771), p. 134; savarṇe dīrghaḥ saha, Sārasvata (52), p. 9.

420. hasāt jhasasya savarṇe jhase lopo vācyaḥ, Sārasvata (990), p. 181.

421. vargyo vargyeṇa savarṇaḥ, qt. in the Vṛtti, Sārasvata-vyākaraṇa, p. 7.

422. ṛlvarṇayoḥ sāvarṇyaṁ vācyam, Sārasvata (63), pp. 10-1.

423. ṛlvarṇa-sthānikatvād ralayor api sāvarṇyaṁ vācyam/
...ralayor ḍalayoś caiva śasayor bavayos tathā/ vadanty
esāṁ ca sāvarṇyam alaṁkāravido janāḥ/ Sārasvata-
vyākaraṇa, pp. 10-1.

424. tulya-sthānāsya-prayatnaḥ savarṇaḥ, Sarasvatī-kaṇṭhā-
bharaṇa (1.1.101), Pt. I, p. 27.

425. nājjhalau, Sarasvatī-kaṇṭhābharaṇa (1.1.102), ibid,
p. 28. No other text has a rule parallel to nājjhalau.
However, Kṛṣṇadāsa's commentary on the Kautsa-
Vyākaraṇa which is identical with the APr [= Śaunakīya
Caturādhyāyikā] interprets the rule naikāraukārayoḥ
sthāna-vidhau, APr (i. 41), as a rule prohibiting homo-
geneity of vowels and consonants. This version of the
Kautsa-vyākaraṇa, according to Kṛṣṇadāsa's commentary,
[Vaidika Saṁśodhana Maṇḍala, Poona, Ms. E4179,
folio 9] has a rule: sasthāna-karaṇaṁ savarṇam. This
would make two sounds homogeneous with each other if
they share the same point of articulation and internal
effort. Kṛṣṇadāsa [ibid., folio 5] holds that vowels
and spirants are both vivṛta. Thus this creates the same
problem that Pāṇini was faced with. Kṛṣṇadāsa interprets
naikāraukārayoḥ sthānavidhau as: hrasva-dīrgha-
plutānāṁ svarāṇām para-sannikarsaṇāt a i e ai u o au
ebhir vyāñjanānāṁ sandhau sāvarṇyaṁ neti niṣedhaḥ/
nājjhalāv iti pāṇiniḥ/ ibid., folio 5. This is, however,
a very doubtful interpretation.

426. Burnell (1875), pp. 60 ff.

427. aādayo titālīsa vaṇṇā, Moggallāna (1.1), p. 1; dasādo
sarā, Moggallāna (1.2), p. 1.

428. dve dve savaṇṇā, Moggallāna (1.3), p. 2.

429. para-samaññā payoge, Kaccāyana (1.1.9), p. 12.

430. kva cāsavaṇṇaṁ lutte, Kaccāyana (1.2.3), p. 18.

431. rassa-sarā saka-saka-dīghehi aññamaññaṁ savaṇṇā

nāma sarūpā ti pi vuccanti/ Kaccāna-vaṇṇanā, Kaccāyana-
vyākaraṇa, p. 13.

432. Thieme (1935a), pp. 92-3; Nemichandra Shastri (1963),
pp. 69-70; Burnell (1875), p. 24.

433. Burnell (1875), p. 27.

434. oṁkāram pṛcchāmaḥ ko dhātuḥ? kiṁ prātipadikam? kiṁ
nāmākhyātam? kiṁ liṅgam? kiṁ vacanam? kā vibhaktiḥ?
kaḥ pratyayaḥ? kaḥ svaraḥ upasargo nipātaḥ? kiṁ vai
vyākaraṇam? ko vikāraḥ? ko vikārī? katimātraḥ?
kativarṇaḥ? katy-akṣaraḥ? kati-padaḥ? kaḥ saṁyogaḥ?
kiṁ sthānānupradāna-karaṇam? śikṣukāḥ kiṁ uccārayanti?
kiṁ chandaḥ? ko varṇaḥ? iti pūrve praśnāḥ, Gopatha-
Brāhmaṇa, (i. 24).

435. śikṣāṁ vyākyāsyāmaḥ/ varṇāḥ svaraḥ/ mātrā balam/
sāma santānaḥ/ ity uktaḥ śikṣādhyāyaḥ/ Taittiriya-
Upaniṣad (vii. 1. 2).

436. Weber, _Indische Studien_, Vol. iv, p. 75.

437. Burnell (1875), pp. 28 ff.

438. Ibid., pp. 2 ff.

439. asandigdham parābhāvāt savarṇe'n taparaṁ hy ur ṛt,
yvor anyatra pareṇen syāt, MB, Vol. I, Sec. I,
pp. 97-100.

440. kim punar varṇotsattāv ivāyaṁ ṇakāro dvir anubadhyate?
etaj jñāpayaty ācāryaḥ: bhavaty eṣā paribhāṣā-
vyākhyānato viśeṣa-pratipattir na hi sandehād alakṣaṇam-
iti/ MB, Vol. I, Sec. I, p. 100.

441. aṇuditsavarṇam parihāya pūrveṇāṇ-grahaṇam, pareṇeṇ-
grahaṇam iti vyākhyāsyāmaḥ/ MB, Vol. I, Sec. I, p. 100.

442. On P. 1. 1. 1 (vṛddhir ād-aic), Kātyāyana explains the
purpose of adding the marker /T/ to /ā/, by saying that
/ā/ is a non-/a-N/ sound and accents etc. are distinctive.
Thus, /ā/ would not cover homogeneous varieties
differing in accent, unless it is marked with /T/.
[ākārasya tapara-karaṇaṁ savarṇārtham bhedakatvāt
svarasya, _Vārttika_ on P. 1. 1. 1, MB, Vol. I, Sec. I,
p. 113.] He has no such doubts about /ai-C/ sounds

204

in the same rule. On the other hand, he positively fears that /e-C/ sounds might stand for short /e/ etc., as well as for extra-long varieties. [atapara eca igghrasvādeśe, and ekādeśe dīrgha-grahaṇam, Vārttikas, MB, Vol. I, Sec. I, pp. 78-9.] This clearly indicates that he accepts /a-Ṇ/ in P.1.1.69 to be formed with /Ṇ/ in the Śiva-sūtra: l(a)-Ṇ. Also see: Deshpande (1972), pp. 226, 249-51.

443. Kunhan Raja (1957), p. 70-1.

444. Ibid., p. 71.

445. Ibid., p. 73.

446. Ibid., pp. 73-4.

447. Ibid., p. 80, Fn. 20.

448. Ibid., p. 80, Fn. 19.

449. edaitoḥ kaṇṭha-tālu/ odautoḥ kaṇṭhoṣṭham/ ...vivṛtam uṣmaṇāṁ svaraṇāṁ ca/ SK, p. 2.

450. siddham eṅaḥ sasthānatvāt, Vārttika on P.1.1.48, MB, Vol. I, Sec. I, p. 262.

451. aicoś cottara-bhūyastvāt, Vārttika on P.1.1.48, MB, Vol. I, Sec. I, p. 262.

452. sandhyakṣareṣu vivṛtatvāt, Vārttika, yad atrāvarṇaṁ vivṛtataraṁ tad anyasmād avarṇāt/ ye'pīvarṇovarṇe vivṛtatare te anyābhyām ivarṇovarṇābhayām/ MB, Vol. I, Sec. I, p. 84.

453. praśliṣṭāvarṇāv etau (eṅau), vivṛtatarāvarṇāv etau (aicau)/ etayor eva tarhi mithas savarṇa-saṁjñā prāpnoti/ naitau tuly-sthānau/ MB, Vol. I, Sec. I, p. 155; also: imāv aicau samāhāra-varṇau-mātrāvarṇasya mātrevarṇovarṇayoḥ/ MB, Vol. I, Sec. I, p. 78 and Vol. III, p. 426. Siddheshwar Varma is off the point in describing Patañjali's views: "Here an objector states the opinion, attributed to Śākaṭāyana, that both the elements of the diphthongs /ai/ and /au/ were equal, being one mora each....Patañjali, however, does not accept this opinion; he seems to follow the opinion expressed by the Ṛg-Prāt. and the Pāṇinīya-śikṣā,

that the second element of the diphthongs /ai/ and /au/
was longer." Varma (1929), pp. 180-1. Contrast:
bhāṣyakāro vārttikakāram paryanuyuṅkte/ 'aicoś cottara-
bhūyastvād' iti vadatā vārttikakāreṇa sama-pravibhāgatvaṁ
neṣṭam iti bhāvaḥ, MB-P, Vol. III, p. 427, and sama-
pravibhāga-pakṣa eva bhagavato bhāṣyakārasya sammata
iti bodhyam, MB-P-U, Vo. III, p. 427, on P.8.2.106.

454. i-c(a)-ś-e-yās talau (i.66), u-v-o-hp(a)-pāḥ oṣṭhe (i.70),
aikāraukārayoḥ kaṇṭhyā pūrvā mātrā, tālvoṣṭhayor
uttarā (i.73), VPr, p. 3; akārārdham aikāraukārayor
ādiḥ (ii.26), ikāro'dhyardhaḥ pūrvasya śeṣḥ (ii.28),
ukāras tūttarasya (ii.29), TPr, pp. 65-6; sandhyakṣarāṇi
saṁspṛṣṭa-varṇāny eka-varṇavad vṛttiḥ (i.40),
naikāraukārayoḥ sthāna-vidhau (i.41), APr, pp. 34-5;
sandhyāni sandhyakṣarāṇy āhur eke dvisthānataiteṣu
tathobhayeṣu/ sandhyeṣv akāro'rdham ikāra uttaraṁ
yujor ukāra iti śākatāyanaḥ/ mātrā-saṁsargād avare
pṛthak-śrutī hrasvānusvāra-vyatiṣaṅgavat pare/ RPr,
13th paṭala, verses 15-6, pp. 56-7; sandhyaṁ dvivarṇam,
(3.4.5), Ṛk-tantra, p. 22. The word dvivarṇa here
refers to /ai/ and /au/, and clearly refers to their
composition in contrast to /e/ and /o/.

455. e ai tu kaṇṭha-tālavyāv o au kaṇṭhoṣṭhajau smṛtau/
ardha-mātrā tu kaṇṭhyā syād ekāraikārayor bhavet/
okāraukārayor mātrā tayor vivṛta-saṁvṛtam/ Pāṇinīya-
śikṣā, verses 18-9. These are very unclear lines.
Even Weber has different, but much more corrupt
lines ["Die Pāṇinīya-śikṣā," Indische Studien, Vol. IV,
Berlin, p858, pp. 353-4]. Also: svarāṇām uṣmaṇām
caiva vivṛtaṁ karaṇaṁ smṛtam/ tebhyo'pi vivṛtāv eṅau
tābhyām aicau tathaiva ca/ Pāṇinīya-śikṣā, verse 21,
p. 386. The Pāṇinīya-śikṣā-sūtras have, in this respect,
the same thing to say, see: Śikṣā-sūtras, pp. 11, 12,
20-1.

456. Deshpande (1972), pp. 221-2, 225, 236, 238.

457. Ibid., pp. 213-4.

458. tapara-karaṇaṁ dīrghe'pi sthānini hrasva eva yathā syāt-
acīkṛtat, KŚ, Vol. 6, p. 136. Also: Deshpande (1972),
pp. 236-7.

459. Deshpande (1972), pp. 236-7, 250-1.

460. Patañjali in his Mahābhāṣya on the Śiva-sūtra 1(a)-N
seems to suggest that by P.1.1.69 /y/, /v/ and /l/ stand
for /ȳ/, /ṽ/ and /l̄/, and that the sequences /ȳy/ etc.
are eligible for the designation saṁyoga "cluster." MB,
Vol. I, Sec. I, p. 86. Here he does not bring up the
question of /ȳ/, /ṽ/ and /l̄/ being "non-effected" for
P.1.1.7 (halo'nantarāḥ saṁyogaḥ), which is quite a
legitimate question.

461. dvirvacane parasavarṇatvam, Vārttika on P.8.2.6,
dvirvacane parasavarṇatvaṁ siddhaṁ vaktavyam/
saȳyantā, saṽvatsaraḥ, yal̄lokam, tal̄lokam iti
parasavarṇasyāsiddhatvāt yara iti dvirvacanaṁ na
prāpnoti/ MB, Vol. III, p. 373.

462. [A] atha kimartham antaḥsthānām aṇsūpadeśaḥ kriyate/
[B] iha saȳyantā, saṽvatsaraḥ, yal̄lokam, tal̄lokam iti
parasavarṇasyāsiddhatvād anusvārasyaiva
dvirvacanam/ tatra parasya parasavarṇe kṛte tasya
yay-grahaṇena grahaṇāt pūrvasyāpi parasavarṇo
yathā syāt/
[C] naitad asti prayojanam/ vakṣaty etat-dvirvacane
parasavarṇatvaṁ siddhaṁ vaktavyam-iti, yavatā
siddhatvam ucyate parasavarṇa eva tāvad bhavati/
[D] parasavarṇe tarhi kṛte tasya yar-grahaṇena
grahaṇād dvirvacanaṁ yathā syāt/
[E] mā bhūd dvirvacanam/
[F] nanu ca bhedo bhavati-sati dvirvacane triyakāram,
asati dvirvacane dviyakāram/
[G] nāsti bhedaḥ, satyapi dvirvacane dviyakāram eva/
katham/ 'halo yamāṁ yami lopaḥ' ity evam ekasya
lopena bhavitavyam/
[H] evam api bhedaḥ/ sati dvirvacane kadācid dviyakāram,
kadācit triyakāram/ asati dviyakāram eva/ sa eṣa
katham bhedo na syāt? yadi nityo lopaḥ syāt/
vibhāṣā ca sa lopaḥ/
[I] yathā'bhedas tathāstu/
[J] anuvartate vibhāṣā śaro'ci yad vārayaty ayaṁ

dvitvam/ (Śloka -vārttika)/ yad ayaṁ 'śaro'ci'
iti dvirvacana -pratiṣedhaṁ śāsti, taj jñāpayaty
acāryaḥ -anuvartate vibhāṣeti/ kathaṁ kṛtvā
jñāpakam? "nitye hi tasya lope pratiṣedhārtho na
kaścit syāt" (śloka -vārttika)/ yadi nityo lopah syāt,
pratiṣedha -vacanaṁ anarthakam syāt/ astv atra
dvirvacanaṁ, "jharo jhari savarne" iti lopo
bhaviṣyati/ paśyati tv ācāryaḥ -vibhāṣā sa lopaḥ -
iti, tato dvirvacana -pratiṣedhaṁ śāsti/

[K] naitad asti jñāpakam/ ...tasmān nitye'pi lope'-
vaśyaṁ sa pratiṣedho vaktavyaḥ/

[L] tad etad atyanta -sandigdham ācāryāṇāṁ vartate-
vibhāṣā'nuvartate na veti/ MB, Vol. I, Sec. I,
pp. 96 -7.

463. halo yamāṁ yami lopah ity ekasyātra lopo bhaviṣyati/
vibhāṣā sa lopaḥ/ MB, Vol. I, Sec. I, p. 99.

464. MB, Vol. I, Sec. I, pp. 89 -91.

465. KS, Vol. I, p. 52.

466. Bhaṭṭoji Dīkṣita says in his SKB that, since, according
to Patañjali, features like nasality are non-distinctive,
/y/, /v/ and /l/ would naturally stand for /ȳ/, /v̄/ and
/ī/, and hence it would be proper to have only /a -C/ in
P.1.1.69. However, Pāṇini uses /a -N/, including semi-
vowels, in P.1.1.69, in order to indicate that features
like nasality are distinctive and that, without a rule,
/y/, /v/ and /l/ cannot stand for /ȳ/, /v̄/ and /ī/.
yady api guṇānām abhedakatvenaiva sānunāsika -yavalanāṁ
dvitva -siddher grahaṇaka -śāstre'j -grahaṇam evocitaṁ na
tv aṇ -grahaṇam, tathāpi 'guṇāh bhedakāḥ' ity api pakṣaṁ
jñāpayitum aṇ -grahaṇam/ SKB, p. 61. For the
controversy bhedakā guṇāh and abhedakā guṇāh, see:
Sec. 6.5 -6.13, and Deshpande (1972), pp. 226 -30.

467. ācāryopadeśa -pāramparyāt tu jñāyate -'anuvartate
vibhāṣā' iti/ tasmāt trivyañjana -saṁyoga -śravaṇāya
'aṇudid' iti ṇakāreṇa pratyāhāraḥ kṛto na cakāreṇeti
sthitam/ MB -P, Vol. I, Sec. I, p. 97.

468. jñāpakāntaraṁ grāhaka -sūtrasthāṅ -grahaṇam/ tad dhi
sayyantety ādau yādīnāṁ sānunāsikānāṁ dvitvārtham/

lopasya nityatve tu vyartham eva syāt/ BSR, p. 149.

469. aṇ-grahaṇāj jñāpakād ity api kaścit/ tat tu vārttika-
kṛtāṇ-grahaṇa-pratyākhyānān noktam/ MB-P-U,
Vol. I, Sec. I, p. 97.

470. See: n. 461.

471. savarṇa-savargīya-paraḥ (na dviḥ) (xiv.23), TPr, p. 307;
sasthāne ca (iii.30), APr, p. 142; savarṇe (iv.110),
VPr, p. 62. These rules would not allow doubling of
/ȳ/ in forms like sayyantā.

472. George Cardona does refer to the commentators' question
as to why Pāṇini did not use /a-C/ instead of /a-Ṇ/ in
P.1.1.69, and says: "The answer is, of course, that
the semi-vowels /y/, etc. given in the śiva-sūtras
should denote also their nasal counter-parts /m̐y/ etc."
Cardona (1969), p. 35. On p. 21 he discusses the rules
involving semi-vowels. In (1965a, pp. 229-30), he
discusses how it is necessary to have /y/, /v/ and /l/
homogeneous with /ȳ/, /v̄/ and /l̄/. However, no
scholar has so far answered the question as to why /y/,
/v/ and /l/ are needed to stand for /ȳ/, /v̄/ and /l̄/.

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KM　　Kārikāvalī-Muktāvalī by Viśvanātha Tarkapañcānana
　　　Bhaṭṭācārya, with five commentaries, Sri Balamanorama
　　　Series 6, Madras, 1923.

KS　　Kāśikā-vṛtti by Vāmana and Jayāditya, with the
　　　commentaries Nyāsa by Jinendrabuddhi, and
　　　Padamañjarī by Haradatta, six vols., Prācya Bharati
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KS-N　Nyāsa by Jinendrabuddhi on KS, see: KS.

KS-P　Padamañjarī by Haradatta on KS, see: KS.

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LSR　　Laghu-śabda-ratna by Nāgeśabhaṭṭa, see: PM.

LSS　　Laghu-śabdendu-śekhara by Nāgeśabhaṭṭa, with six
　　　commentaries, Rajasthan Sanskrit College Series 14,
　　　Banaras, 1936.

MB　　Vyākaraṇa-Mahābhāṣya by Patañjali, with the
　　　commentaries Pradīpa by Kaiyaṭa, and Uddyota by
　　　Nāgeśabhaṭṭa, three vols., published by Motilal
　　　Banarasidass, Delhi, 1967.

MB-D　Dīpikā [or Ṭīkā] by Bhartṛhari on MB, ed. by
　　　Abhyankar and Limaye, Bhandarkar Oriental Research
　　　Institute, Post Graduate and Research Department
　　　Series 8, Poona, 1970. The same text is edited under
　　　the title Mahābhāṣya-ṭīkā by V. Swaminathan, Pt. I,
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　　　Granthamālā, 11, Banaras, 1965. This is occasionally
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MB-P   Pradīpa by Kaiyaṭa on MB, see: MB.

MB-P-U   Uddyota by Nāgeśabhaṭṭa on MB-P, see: MB.

Moggalāna-vyākaraṇa, ed. by Bhadanta Ānanda Kausalyāyana,
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MPV   Mahābhāṣya-Pradīpa-Vyākhyānāni, "Commentaires sur
       le Mahābhāṣya de Patañjali et le Pradīpa de Kaiyaṭa,"
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MS   Mīmāṃsā-sūtras by Jaimini, with the Bhāṣya by
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PM   Prauḍha-manoramā by Bhaṭṭoji Dīkṣita, with the
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SKB   Śabda-kaustubha by Bhaṭṭoji Dīkṣita, Chowkhamba
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TPr   Taittitīya-prātiśākhya, with the commentary
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TS   Tarka-saṁgraha by Annambhaṭṭa, with the auto-
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VP   Vākya-padīya, edited with appendices, by Abhyankar and Limaye, University of Poona Sanskrit and Prakrit Series, Poona, 1965.

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VPr(W) Vājasaneyi-prātiśākhya, ed. and tr. into German, with notes, by Albrecht Weber, Indische Studien, Beiträge für die Kunde des Indischen Alterthums, bd. IV, Berlin, 1858.

VSSN Vyākaraṇa-siddhānta-sudhānidhi, by Viśveśvarasūri, ed. by Dhadhi Ram Sarma, Chowkhamba Sanskrit Series, Banaras, 1914.

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ERRATA

The reader is requested to make the following corrections

page:	line:	for:	read:
16	25	Mahākarūṇāvatara	Mahākarūṇāvatāra
28	6	Kāyavāṇ-	Kāyavāṅ-
30	8	bhaṣyamāne	bhāṣyamāṇe
"	12	smarami	smarāmi
"	18	katam asya	katamasya
"	22	adhyabhaṣata	adhyabhāṣata
"	23	bhūyasya	bhūyasyā
39	4	120 scrolls	10 scrolls
49	14	Fredrich	Friedrich
87	20	pragṛhnāti	pragṛhṇāti
234	22	Jam	'Jam