Abstract
Indian Culture is one of most ancient and advanced among the world’s cultures. Knowledge of Sanskrit language is a must for knowing the Indian culture in true spirit, as Sanskrit is the mother of it. A well-known quote truly defines it as,

\( \text{Sanskriti: Sanskritashraya} \)

Sanskrit Vyakaran is the gateway to know Sanskrit and therefore, Scholars has pronounced Vyakaran as Mouthpiece of Sanskrit:

\( \text{Mukham Vyakaranam smritam} \)

Though, in the history of Sanskrit Vyakaran, there are many scholars who contributed to refine the Sanskrit Vyakaran in Pre-Paniniyan era; however, they were not comprehensive to address all the branches of Sanskrit Vyakaran. These documents were not impactful because of their limitations. It was great Panini who organized Sanskrit Vyakaran in a perfectly comprehensive manner by removing all the limitations of previous grammar documents. Moreover, Paniniyan Vyakaran is yet beyond correction even after centuries and Paniniyan formulae (Sutras) are best suitable to justify Sanskrit words. Panini authored Sanskrit grammar in such a scientific manner that all the Sanskrit scholars praise with generosity.

Mahabhashyakar Patanjali says so precisely-
"Paniniyan Formulae (Sutras) do not have even a single letter, which is meaningless".

According to Prof. Moniyar Williams-
“Sanskrit Vyakaran is the most surprising model and vivid creation of human brain.”

Sir W. W. Hunter Says-
“Paniniyan Vyakaran is of the highest order among world’s grammars”

Such an eminent vyakaran authored by Panini is popularly known as Ashtadhyayi.

Introduction of Panini
Acharya Panini and Ashtadhyayi are briefly introduced as:

- Father of Panini: Panini
- Mother of Panini: Daakshi
- Guru of Panini: Varshacharya
- Place of Birth: Shalatur - Gandhar (at present in Afghanistan)
- Place of Study: Takhashila Vishwavidhylaya
- Life Time: Somewhere in between 7th century BC to 4th century BC as guessed by scholars.
- Books: Ashtadhyayi, Dhatupath, Ganapath, Unadisutra, Linganushasan, Varnochcharan Shiksha, Jambvati Vijay, Dwiroop Kosh
Ashtadhyayi: An Introduction

Paniniyan Vyakaran is popularly known as Ashtadhyayi as it is divided in eight chapters. It also known as Paniniyashtak. Ashtadhyayi has been written in form of formulae and each type of formulae has been organized in a single unit- called Prakaran. Formula means: to express a subtle principle in a brief sentence. Moreover, it should be scientific and largely applicable which has been wisely expressed by the definition of formula.

That means: Capability of explaining more by writing less, doubtless presentation of subject, conclusive processing, Omni applicable, free from error and beyond vilification are six major characteristics of Sutra (formula).

Ashtadhyayi possesses 4000 formulae in eight chapters, which include 14 Pratyahar formulae too. Each chapter comprises 4 Paadas and there are 32 Paadas in total. Paniniyan Vyakaran is not only Sutrapath but comprises Dhatupath, Ganapath, Linganushasan and Unadipath also in its complete understanding. It contains both vernacular and Vedic words. Paniniyan Vyakaran has been arranged in units (Prakaran) wherein we observe exclusively similar treatment of words in a unit. Thus, we can find all the formulae of a subject in a single unit (Prakaran) e.g. Formulae of Sarvanam (Pronoun), Itsanjna, Aatmanepada, Parasmeipada, Karaka, Vibhakti, Samaasa, Samhita etc have been well organized. Classification of Paniniyan Vyakaran formulae may observed in under mentioned table.

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Salient features of Structure of Ashtadhyayi

1. Sanjna Sutra: Technical rules, which assign a term for a given entity.
2. Paribhasha Sutra
   Which provide a check on the operational meta-rules so that they do not suffer from ‘over-application’, ‘under-application’ and ‘impossible application’. For example, ‘vipratishedheparamkaaryam’: when two meta-rules are equally applicable, the meta-rule that appears later shall apply.
3. Vidhi Sutra.
   These form the core of the grammar. All other rules assist the operational rules. Example ‘vartamane LaT’: To indicate the present tense, use the affix ‘Tat’.
4. Niyam Sutra
   Rules, which restrict the scope of other rules. For example, Sutra ‘sheSo ghyasakhi’ (1.4.7) states those terms - other than those already discussed ending in ‘i’ or ‘u’ are to be considered i ghiV except the word ‘sakhi’.

Subsequent sutra ‘patiH samAsa eva’ (1.4.8) however declares that the word pati will be termed ‘ghi’ only if it used in a Compound and not independently. Therefore, the original set of elements which ‘ghi’ would contain has been restricted by sutra 1.4.8 and therefore 1.4.8 is a Niyama sutra.
5. Atidesh Sutra
   A rule is termed Atidesh if it transfers certain qualities or operation to something for which they did not previously qualify. This is generally accomplished by the use of affixes ‘vat’/’mat’ (like), Example: in rule 3.4.85 ‘loTo langvat’ (the loT’s are like Icing) loT lakAr affixes are being given all the attributes unique to king lakAr affixes. Hence this is an Atidesh sutra.
6. Adhikar Sutra
   These rules are similar to a heading in modern books. Adhikaras have domains, which are not always well defined and only the commentaries like Kasika and Mahabhashya have to be consulted to understand their scope. Within the domain of an adhikara, all rules will pertain to it and also use parts or whole of that rule’s words to complete their meaning (refer to ‘Anuvritti’ above). For example, rule
3.1.91 is ‘dhatoh’ (Verbal Roots). The word is meaningless unless understood to imply that rules till 3.4.117 are under its domain and every rule described between 3.1.91 to 3.4.117 is formulated to describe Dhatus. Also, since rules are only stated partially, the ‘phrase’ ‘dhatoh’ has to be supplied - along with other phrases from other adhikaras, which may come within the domain and extend beyond - to make these rules a complete sentence.

Panini has followed scientific system to framed the sutras to organize words and so he organized a colossal collection of words by adopting different techniques in 4000 sutras. He has applied artificial Sanskrit in formulations. Such an artificial language has been developed and used for the analysis of Sanskrit and composition of Grammar. To analyze Sanskrit, Panini has used new techniques of Meta-Language (artificial language) for the formulation of sutras. Some of them are as under:

1. Utsarg-Apawaad Vidhi 2. Pratyahar-Vidhi
3. Anuvritti-System 4. Sanjya-System

1. Utsarg-Apawaad Vidhi: Acharya Panini has adopted several methods for Shastralaghava in Vyakaran and Utsarg-Apawaad is one of them. Utsarg mean general and Apawaad means special. At the time grammar composition, Acharya Panini faced the difficulty to systematize colossal collection of words in such a manner so that human being can study and understand them in his lifetime. However, oversized collection of word makes it challenging and it will take centuries if done word by word. There is a popular reference of conversation wherein Guru Brihaspati took 1000 years to teach Lord Indra collection of words still they could not cover all words. This reference makes Paniniany Vyakaran more scholarly and scientific too in which Acharya Panini systematize the whole words collection merely into 4000 sutras and made vyakaran accessible for everybody. Panini devised a method, which can cover complete range of words in a single and successful effort. And that method is known as Utsarg –Apwaad Vidhi. This method includes all legitimate words with valid explanation. According to this method, Panini formulated such sutras that can prove numerous words constructed in similar circumstance or conditions. But few words are exceptions to this method despite similar conditions and therefore cannot be proved by above sutras. These words have to be treated special and proved by separate Sutra, which were named Apwaad Sutras.

For example: ÞdeZ.;.k~ß (Karmanyak) it is a general (Utsarg) Sutra. While this formula works in the prefix, it is the statement of the suffix ending- v.k~ (an)

e.g. dqEHka djsfr bfr¾dqEHkdj% (Kumbham karoteeti = Kumbhakar:
Hkk";a djsfr bfr¾Hkk";dij% (Bhashyamkaroteeti = Bhashyakar:)

And the other sutra is Apwaad sutra– ^vkrks-uqixsZ d%* (Aatoanupsarga ka:) This sutra deals with words having no prefix in similar conditions and but with k: Pratyaya.

e.g. xka nnkfr bfr¾xksn% (Gaam dadateeti= God:)
 dEcya nnkfr bfr¾dEcyn% (Kambalamdadateeti= Kamabalda:)

2. Pratyahar (Abbreviation) Vidhi: Acharya Panini framed Pratyahar Vidhi (operation) to make Sanskrit Vyakaran concise. Panini constructed Pratyahar (abbreviation) with using 14 Maheshwar sutras like,

And Pratyahar is nearest to abbreviation in English and so it is called abbreviation method too. For example, Doctor is expressed as Dr by using first and last letter in English, for Mister; ‘Mr.’ make the sense of complete word. Likewise, Panini Constructed Pratyahar using letters and Pratyaya to express
them in short form. Panini reordered the pre-existing letters (Ka, Kh, Ga, Gh Ada) to his own set so that abbreviation (ch, chh, ja, Jha yan) could be constructed seamlessly. For example ^vp~* (Ach) Pratyahar consists of ^v[ b] m[+] y[ ]s[ vk] vkS* (a, e, u, ri, i, aie, o, au), nine letters and repeated use of these nine letters will make subject bulky and complex in the absence of Pratyahar. However Panini smartly expresses these by uttering Ach and a lot more abbreviations (Pratyahar) have been constructed by great Panini- ^v[ b] y[ ]s[ vk] vkS* (Ach) Pratyahar.

3. Anuvritti Vyavastha (Arrangement):

Panini used this technique ‘Anuvritti’ as core pillar to make oversize Sanskrit grammar brief, which is unbelievable without it. Panini considered it unnecessary to repeat Padas covered in earlier sutras. They can be picked from their original position to move forward in subject and this tendency of system is known as Anuvritti or Adhikar e.g. ^gyUR;e~* (Halantyam) consists of two parts (padas) 1) Hal and 2) ^vUR;e~* (Antyam). It possesses only the last and incomplete meaning of ^gy~* (hal) and it needstobe completed with the help of previously used sutra ^mins'ks·tuqukfd br~* (Updesheajananasika it) which comprises ^mins'k* ,oa ^br~* (Updeshe and it) which gives complete sense to ‘hal’.

Adhikar is also a type of Anuvritti which much wide spread in comparison to Anuvritti. The sutras, which come under this category, usually do not signify special meaning however, they possess role in sutras of their types. For example, ^/kkrks%* (Dhatoh) sutra is meaningless in itself but it has a meaning in more than 400 sutras to come. Therefore, Panini has constructed more than 80 Adhikar sutras.

4. Sanjna (Noun) Vidhan:

Sanjna: literal meaning is name. Panini framed Sanjna sutras to make Sanskrit grammar concise. In this process of word construction, he strictly avoided repetition of letters or padas. He classified the letters and padas by allotting specific name to them, which can signify all letters of that group. It is like title name of family in society. For example, Sutra ^o`f)jknSp~* (Vriddhira deich) contains Vriddhi (Sanjna), which includes ^vk[ ]s[ vk] vkS* (aa, aie ao) as group members. Wherever, Vriddhi (Sanjna) will be used in Ashtadhyayi, it will signify ^vk[ ]s[ vk] vkS* (aa, aie ao). Likewise, ^vns³~ xq.k%* (Adeanguna:) sutra possesses Guna Sanjna of ^v[ b] m* (a, i, u). There are more than 50 Sanjna sutras in Panini Vyakaran. He has framed the nouns of two types namely:

1) Unitary (Ekdeshi) Nouns: Unitary Nouns are those, which have been applicable to specific episode grammar e.g. Samasa, Tatpurush, Dwandwa, Karaka, Apadan, Karta, Krit, Krita etc.

2) Universal (Sarvbhoumik) Nouns. They have been applicable throughout Ashtadhyayi and beyond a particular episode. Examples of Universal Nouns are ‘it’, ‘savarna’, ‘pada’, ‘Vriddhi’, ‘guna’, ‘sanyog’, ‘Samhita’ etc.

It is important to note that these nouns are metalinguistic (Artificial) i.e. they are applicable in construction of words and no other special meaning.

5. Omission of Verb padas in Vyakaran Sutra:

The great Panini knowingly did not use the verb in Vyakaran sutras as it could deviate him from the purpose of concision of Sanskrit grammar. Fact of the matter is that verbs are integral part of a sentence therefore student of grammar can choose appropriate verb from the group i.e.

Asti, Bhavati, Bhavanti, Vartate etc

Such an arrangement in vyakaran is known as Adhyahar of Verbpadas. For example: ^fr³~ f'kr~ lkoZ/kkrqde~* ‘Tingshitsarvadhaturam’ sutra indicates only ^fr³~* vkSj ^f'kr~* lkoZ/kkrq (Ting and shit sarvadhakut), which is incomplete in itself and needs verb padas for completion. If we add ‘bhavanti’ to this sutra that makes it complete in meaning. Likewise, ^o`f)jknSp~* Vriddhiradeich has to be adjoined with verbpad ‘Astri’ for making it meaningful and complete. All Panini sutras exhibit similar characteristic.

6. Law of VipratiShedha:

Progression of sutra in Panini vyakaran technique is a unique foundation for the subject. In this system of arrangement to prove a words’ construction only choice is the last coming sutra in paniniyan
sequence as it commands more potential in comparison to its predecessor. Such an increasing order of command analogous to their sequence is known as Vipratishedha rule. For example: if we have the word to prove,

\[ \text{jkesH; } \% \overset{\text{jke}}{\text{H}}; l~ \]

(Ramebhya: = Ram+ Bhyas)

For proving it we have two sutras of same capability and features i.e.

\[ ^{\text{\^lqfi p}} \text{ (supi ch) (7.3.102)} \text{ and } ^{\text{\^cgqopus } \text{Y};sr~} \text{ (bahuvachane Jhalyet) (7.3.103)}. \]

Both these can successfully prove the word Ramebhya: however, ‘Bahuvachane Jhalyet’ (7.3.103) will be given priority for the purpose as it comes later in order as per Vipratishedha Rule.

Thus, Panini has applied several other techniques in Ashtadhyayi and major among these are Utsarg- Apwaad Vidhi, Poorvajsiddhi- Arrangement, Aabheeya-Asiddha arrangement, Use of Definitions, Special meaning of Vibhakties, Use of Anukaran Shabdas etc. All these cannot be presented at the moment. We can surely discuss them in upcoming workshops.

Conclusion

To conclude, Panini founded his Vyakaran ‘Ashtadhyayi’ on refined application of popular language in contemporary society. That is why Pratyahar sutra starts from \[^{\text{vFk } \text{kCnkuq'kklue~} \text{ 'Ath Shabdanishasan'} ie let us study words. To prove these vital words Panini used Sanjna sutras, Anubandh arrangement, Paribhasha (Definition) method, Anuvritti, Pratyahar method and Asiddha system very much beautifully. To validate complete range words of a gigantic language like Sanskrit in such a scientific and refined manner is really surprising and matchless piece of work ever had accomplished in human civilization. He is really a highest excellence of human brain and we will be ever grateful for his divine work.

References

i Mahabhashya, Pasphasanik- Pr=k\text{kD:a o.ksZukI;uFkZdsu fda iqufj;rk lw=s.kA\text{B}}
ii laKk p ifjHkk"kk p foi/fuZ,e.o pA
\text{vfrns'kks-f/kdkj'p 'kM-fo/ka lw=y\{k.ke~AA}
iii Panini., Ashtadhyayi, 3.2.1
iv Panini., Ashtadhyayi, 3.2.3
v Panini., Ashtadhyayi, 1.3.3
vi Panini., Ashtadhyayi, 1.3.2.
vii Panini., Ashtadhyayi, 3.1.91
viii Panini., Ashtadhyayi, 1.1.1
ix Panini., Ashtadhyayi, 1.1.2
x Panini., Ashtadhyayi 3.4.113
xi Panini., Patyaharsutra, 1 Ashtadhyayi.