

THE VAISESIKA CATEGORIES : A LOGICAL PERSPECTIVE

I have straightaway rendered the Vaiśeṣika term *padārtha* as "category". For, as I shall try to show in the course of my argument the Vaiśeṣika doctrine of *padārthās* runs parallel to the Aristotelian doctrine of "categories" in all essential respects. It is important to note right at the outset that the parallel is not to be carried beyond Aristotle. For, in the course of the development of philosophical thinking, the term "category" has freed itself of its original setting and yet has retained its specific significance. Such is not the case with the Vaiśeṣika term *padārtha*.

Tarka-Saṅgraha of Annambhatta states the doctrine in a categorical manner as : Substance (*Dravya*), Attribute (*Guṇa*), Action (*Karma*), The General (*Sāmānya*), The Individual (*Viśeṣa*), Inherence (*Samavāya*), Absence or Non-Existence (*Abhāva*) are the seven *padārthās*. The *Tarka-Saṅgraha* statement is chosen here to enunciate the doctrine as it alone seems to me to be faithful to the original thought. The last two words of the statement viz. "seven categories" (*sapta-padārthās*) carry the sense : The seven as mentioned are the categories. In other words these categories are posited. The manner of Annambhatta's statement has a point, and that is to elucidate the Vaiśeṣika doctrine as such, whereas, other statements of the doctrine as, for example, in the *sapta-padārthī* of Sivāditya, seem to add a gloss to it, often thereby depriving it of its rigour.

This loss of rigour in the statement of the doctrine is seen in two ways. Wherever the statement of the doctrine posits the *padārthās* themselves, the list of the *padārthās* (either six or seven) is not qualified by "only". But such statements as use descriptive names for the *padārthās* e. g. *upādhayaḥ* as in *saptapadārthī*, the list is made to end with the restrictive "only". This difference is brought out clearly in the *Nilakaṇṭhi* a commentary on *Tarka-Saṅgraha*. It says that the *padārthās* are the ways in which the signification of differences is determined. The elucidatory commentary *Bhāskarodaya* is even more explicit. It describes the *padārthās*

as *upādhayah* but takes care to explain that these predicative names signify 'extreme othernesses' (*anyatama-vantaḥ*) and for this reason are called *padārthās*. It goes further and asserts explicitly that the 'seven' is not a qualitative determination, but relates to our apprehension of the specific character of the differences.¹ The *Dīpikā* comment of Annaṁbhata follows this cue and says : The "seven" speaks for the scope of the othernesses and adds that this seven-fold determination of othernesses should be spoken of more positively as the seven types of distinctnesses (*vyavachchēdāḥ*).

The Vaiśeṣika system uses the term '*padārtha*' in a technical sense. Sanskrit scholars generally seem to be averse to rendering the term, '*padārtha*' as 'category'. The doctrine of the '*padārthās*' is a characteristically Vaiśeṣika position, and the adoption of the term by the other systems of Indian thought only results in divesting the position of its strict significance, as will be seen later. The fact that each school takes a different stand regarding the number and also the names of the *padārthās* should be reason enough to have to draw a line between the notion of the *padārtha* and the specific doctrines based on it. It is imperative to attempt to determine the notion first.

The *Dīpikā* alone seems to make the point that the "*padārtha*" is in the first instance 'a name' in the sense of a designating term (*abhidhēya*); and that the characteristic mark (*lakṣaṇa*) of a *padārtha* is that it can be named (*abhidhēyatvam*). It is but obvious that the reference to names here is not to proper names eg. "Annaṁbhata". While speaking of designating terms it is important to note the distinction between two ways of designating. Elementary logic speaks of uniquely descriptive names, eg. "the author of Tarka-Saṁgraha" as designations (*abhidhāna*). Such descriptive words are meant to identify individuals and are closer to proper names in their denotative capacity. The *Dīpikā* has in mind a still another way of naming, where the name signifies a notion. It is a way of naming with a view to determining the meaning of the term used. The *padārthās* are called "*abhidhēyās*" and not "*abhidhānās*". *Abhidhānās* are descriptive names given to things already identified as individual. The implication of the term "*abhidhēya*" is that the things, rather the notion it names, is not yet distinctively apprehended and that it is the naming that is both to signalise and to signify it. It could be possible to mark

the two apart by speaking of *abhidheyās* as designating or significant names and of *abhidhānās* as designations or significant names.² The point of the distinction lies in the intended reference in the two terms, the implied reference, in 'abhidheya' being to the function of naming, whereas in 'abhidhāna', it is to the result achieved. If the term 'abhidheya' can be granted to have a distinctive connotation, then it should follow that to describe the *padārthās* as "a list of namable objects" or "as a classification of knowable things" as seems to be the common practise, is to say the least, a misleading way of explicating the notion. A 'namable object' or a 'knowable thing' are blanket terms which could be used of everything that in any manner forms a part of our conscious experience. Neither expression permits an exclusive application, and least of all to *padārthās*. The *padārthās* are names, but not of what in ordinary parlance is called 'things' or 'objects'. It is even more important to note that the list is not a classification either.

It is a point to note that neither *Nīlakanthī* nor the *Dīpikā* both of which explicate the notion of the *padārthās* by the conception of a 'name' speaks of 'objects' but only of 'terms' (*padās*). Besides each of them makes it clear that the name aspect is only an explicatory conception, not the main part of the notion. The *Nīlakanthī* remarks: the name for a term (*padā-abhidheya*) is an additional mark of a *padārtha* and it is intended to remove a shortcoming if any such is involved, in naming the *padārthās* originally under seven heads by virtue of their forms such as *dravya*³ etc. The *Dīpikā* breaks up the term 'padārtha' into two constituents, viz. *Pada* (a term) and *artha* (meaning) as standing in a genitive relationship. And it immediately adds that "the meaning of a term" is only the etymological sense of the term 'padārtha'. The sense of the "only" is: the *padārthās* in their basic distinctions are apprehended independently of any such connection with the term 'pada' and 'artha'. The point of these denials of *Nīlakanthī* and the *Dīpikā* could be construed as: the *Padārthās* are objective distinctions and are not to be reduced to the linguistic or conceptual modes of our understanding. It is unfortunate that none of the other Nāyaya-Vaiśeṣika commentators seems to have pursued either of the two points made by *Nīlakanthī* and the *Dīpikā*, viz. (i) the *Padārthās* name distinctions and (ii) the *Padārthās* are names of terms.

The first position implies a definite metaphysical standpoint. The explication of this point depends upon an analysis of the concept of 'being'. In both these respects the Vaiśeṣika and the Aristotelian systems show a parallelism. Any kind of a doctrine of categories is singularly absent in any system of thought that goes under such names as materialism or naturalism on the one hand and idealism or spiritualism, and phenomenism on the other. For, reductive metaphysics, i. e. a way of thinking which reduces diverse types of being to some one order, can strictly speaking have no place for the doctrines of categories, as names for the distinct modes of being. Reductive metaphysics reads the world in terms of "plurality" only and seeks a principle of unity that would explain away the plurality. This way of thinking, by and large, suffers from the fallacy of oversimplification and for that reason ends up by separating the reality it finds from the world of experience. But, for a philosophy which would find the reality within the world of experience, "diversity" is a fact which is basic to plurality. It is not suggested that the metaphysics of plurality and of diversity always remain apart. Yet, in spite of the fact that historically they coalesce in different periods in various degrees, they remain characteristically different in their logic. Plato and Aristotle who stand in a historical relation to, offer a good illustration. It is Aristotle who advocates the doctrine of categories, being concerned with the problem of "becoming", i. e. with the way a thing comes into being, and not Plato, who is concerned to find "pure being" and finds it to be one absolutely. The doctrine of categories is possible, rather it is essential to a metaphysics which takes its stand on the fact of diversity. It therefore needs a concept of 'being' which admits of diversity. And both Vaiśeṣika and Aristotle are seen to devote quite some attention to determining the meaning of the term "being".

The Vaiśeṣika system draws its title from its main principle, viz. 'viśeṣa' i. e. 'distinctness' which leads Prof. Ninian Smart to describe it as "Distinctionism". It begins with a statement of the *Padārthās*; for the principle of distinctness makes it necessary to name the things that stand out in their diverse modes of being. Kaṇāda is explicit on the point of distinctness. He equates the knowledge of first principles (*tatva jñāna*) with the capacity to

comprehend the diverse *Padārthās* named, in their similarities as in their differences, by virtue of the distinct nature of each.⁴

Both the Vaiśeṣika and Aristotle distinguish different senses of the term "being", differing somewhat in their approach though. Aristotle appears to start negatively, in that he arrives at his doctrine in the course of an attempt to remove the ambiguities of the term "being". The Vaiśeṣika speak of, or rather straight-away proceed to classify, the senses of the different words signifying "being". This is so, perhaps because Sanskrit has the advantage of being able to use the word "being" unambiguously in its noun form and in verbal or predicative form, and can even use the two together significantly. Aristotle feels called upon to clarify the different senses of the word "being" for common usage allows the word to be used in the sense of, "real", "really", "true", "truly", "is" "being", and "things" in order to name the ways in which "things are". In Greek, "is" (*esti*), "being" (*on* or *to on*), "beingness" (*onsia*) and "beingly" (*ontos*) form a consanguine group, so that "Socrates really wise" or "Socrates really a man", in place of "Socrates is wise" or "Socrates is a man" are genuine expressions in Greek⁵. This information enables us to see that the predicative "is" is central to the meaning of "real" or "reality" and no unwarranted transition is involved in shifting from the one to the other. Further, it reduces the gap between the "true" and the "real". For "true" is a fairly common meaning of "real" in spoken or written Greek, so that "true" can be made applicable to things and objects, although it applies primarily to propositions⁶.

The ambiguity is even greater in English : for English admits two forms only of the verb "to be", viz. the present participle "being" and the verbal expression "is" and these two forms have to carry the sense of the abstract noun "reality", and the adverb "really" and even of the adjective "real". It is obvious that the two sets of words do not belong to the same stem, with the result that in English one can hardly see that "real" and "reality" are simply the adjectival and the nominal forms of "to be" (*einai*) and that "is" in turn presents the verbal form of "real" or "reality"⁷.

The doctrine of categories brings up yet another ambiguity in "being". In the Oxford translations of Aristotle's works the

participle form "being" (*to on*) is translated as "what there is" or "what exists", whereas the plural "*ta onta*" is translated as "things that are" or as "existing things". Such a translation is felt to be unsatisfactory for it happens to divorce the plural from the singular. Even so, this in itself does not appear to me to be ground enough for an objection. For the participle "being" (*to on*) and the plural noun (*on ta*) do not stand on the same footing, not in the Categories at least. The plural noun is used of "things that are", in the sense of objects in the world of experience, that is to say, of things like, "man", "ox", "winged" etc. Whereas the participle noun "being" is said to run parallel with "unity" and they both in their distinct senses are said to be predicates of absolutely everything⁸. It is of "being" in the sense of "things that are" (*ta onta*), such as "man", "aquatic" that Aristotle asks the question, "what are things in themselves"? For these things can be said "to be" : i) in an accidental sense and ii) by their own nature i. e. "essentially". The list of categories is his answer to the question, what are the essential kinds of beings as evidenced in things? It is the different senses of 'essential being' that are called the "categories" or the "figures of predication".

The Vaiśeṣika explication of categories is connected with their technical use of the term "*artha*"¹⁰ in the sense of 'object'. Used in this special sense the term stands for : "substance" (*dravya*), "attribute" (*guṇa*), and "action" (*karma*). Praśastapāda lays down that the name "*artha*" is to be used of these three only.¹¹ It is the presence (*upasthiti*) of these three that is indicated by the term "*artha*"¹². What is meant by 'presence' here is : that they belong with "*sattā*" i. e. they stand for the order of existence. For this reason Kaṇāda had at one stage granted only these three categories. It is Gautama who extends the use of the name '*artha*' to all perceptible substances and qualities.¹³

The Vaiśeṣika sūtrās not only name the *padārthās* in terms of '*sattā*' but they also attempt to determine the meaning of the word '*sattā*'. V. S. (1.2.7) defines "*sattā*" in terms of "*sat*". "*Sat*" is the present participle of the verb '*asa*' (to be). But '*sat*' gets used as a genuine noun, i. e. as a name that is a pointer word. And it needs to be rendered in English as "the real" in keeping with its nominal status, rather than by the abstract noun "reality"

as is done generally. In this sense 'sat' is the concept of the metaphysician. He can use it in a non-committal way, and take up his own stand for naming and describing what to him is 'the real'. The word 'sat' needs no further embellishment with the adjective "parā"¹⁴ meaning 'supreme' as in the case of other words conveying the sense of being or knowledge, like 'parā-sattā', 'Para-samānya', or 'Parā-vidyā'. The word 'sat' also has a settled meaning in language as 'good' and in that sense functions as an adjective with a normative or evaluative connotation. 'Satya' (the truth) is a noun formed from 'sat' with the meaning 'having the property of being 'sat''. "Satya" stands for "truth" as for "true being", i. e. for 'truth in knowledge' as for 'the real'. 'Truth' (satya) is defined by Pāṇini as that in which, the seer of the truth, the seer of the truth, the object and the perception of truth cannot be conceived in another way.¹⁵

Further, as can be seen from V. S. (1.2.7) the "sat" is to be judged as "sat". Vātsyāyana too includes the perception of the "sat as sat" in the definition of a principle.¹⁶ According to this sutra that which stands judged as "sat" or the "real" in substance, attribute and action is to be called "sattā". Viśva nāth elaborates the point a little more in his *Bhāṣā Parichhēda* as: What the Vaiśeṣikās call the "parā-sattā" or "para-samānya" is the "way of being" (vṛitti) as *dravya* *guṇa* and *karma*. Thus "sattā" stands for the generality of different modes of being and can be said to signify the order of existence in general. This view is borne out by the further criteria laid down for determining the meaning-cum-application of the word. They are two. The first is: a direct apprehension (*pratyaya*) of it as "sat" and the second is: the dealing with it in the same manner (*vyavahāra*) the expression of the apprehension in language being classed along with the latter. The *Bhāṣya* to V. S. (1.2.4)¹⁷ addas that the criteria are based on the ground of the distinctness i. e. the irreducibility between substance, attribute and action. The next V. S. (1.2.8) lays down that there is no "sattā" other than in these three forms.

An earlier sūtra, V. S. (1.2.4) has used another verbal noun in the definition of *sattā*, viz. "sattā" is: "to be in being" (*bhāva*). *Bhāva* is the abstract noun from the verb "bhu" meaning "to be", or rather "to come to be", but not in the sense of "coming to be". I. P. Q....8

in time" or "becoming." The verb "as" (to be) changes to "bhū" to express the sense of "to come to be." Thus *Sattā* can be said to stand for the general order of existence, while "bhāva" signifies the being in the sense of the 'actuality' in that order. The word "bhāva", like "sat" is used more as a genuine noun than as an abstract noun. "Bhāva" in this context stands for the necessity towards actuality involved in the nature of 'being'. The conception is elucidated as: that which is only to be followed up i. e. to be affirmed in its way of being, (*anuvṛitti*), and not as being a separable (*vyā-vṛitti*). Hence "bhāva" gets no special name. It is further explained by Vyavṛitti as the affirmation (*paratva*) only and no negation (*aparatva*) of *satta*.¹⁸ The bhāsyā simplifies the conception of "bhavā" as the being itself of the reals, i. e. of all that are "sat". "Bhāva" is said to belong to all the objects (*arthās*). "Bhāva" expresses: "there are all these objects."

"Sat", "Sattā" and "Bhāva" expresses: "there are all these objects." "Sat", "Satta" and "Bhāva" form a gradation. *Sat* stands as expressed; it signifies "Sat iti" i. e. "that it is". In other words "sat" stands affirmed independent of any predicative or *ākhyayiki* concept. Hence the assertion, "sat iti" is called knowledge or a true apprehension.¹⁹ "Sattā" stands for the order of existence and admits of a feature, viz. distinctness in the modes of being. The distinct types are given their names like, "dravya" etc. but the order stands expressed in its generality only, as the affirmation of its being. For this reason it is expressed by the abstract noun "*paratva*" and not by a verb as already seen. "Bhāva" the elucidatory concept of "sattā" can be expressed by an existential predicative expression, viz. "vidyate"²⁰ i. e. "It is." "It is" expresses the occurrent aspect of 'being'. However as applicable to *Sattā* it is still affirmation in general and therefore admits of no distinctive name.²¹ A name presupposes an object of a specific character because of which the distinction between the general and the individual can go with a name. Hence the distinction is said to appear with *dravya*, *guṇa* and *karma*²² for their distinctive modes of being.

This brief linguistic survey could be said to set out in perspective the metaphysical background for a doctrine of categories, as it marks the parallelism between the Vaisheṣika and the Aristotelian

doctrines. Such a doctrine implies a three tiered view of "being" viz.: i) "sat" (the real) corresponding to what Aristotle calls "being qua being", ii) "sattā" in the sense of the order of existence corresponding to what Aristotle calls "the essential way" in which things "are" and (iii) lastly the individual things such as, "man", "aquatic" or "the pot" or "the garment". The doctrine of categories in both these systems is metaphysical only to the extent to which they grant the notion of the real. For they do not raise it into a doctrinaire system. This kind of, what may be called, an open notion of the real, alone can grant the order of existence to be a distinct conception or a distinct level of knowledge. Another equally important feature of this conception of the real is that, it denies to individual things, taken in their individual settings even the right, so to speak, for the order of existence in its generality. In this its last feature it is non-empiricist in its outlook. The kind of metaphysics involved in a doctrine of categories is rationalistic realism. It maintains that the order of existence is marked by diversity, and the categories just name these diversities. Western thought succeeds in preserving this emphasis on diversity, for Aristotle embodies it in his logic. In the Indian tradition, the *Nīlakanṭhī Bhāskarodayā* explication of the categories as expressing distinct differences or "extreme othernesses" (*anyatama-vantaḥ*) fails to make its mark under the overpowering influence of the Nyāya conception of "upādhi" i. e. a dependent or conditioned determination. For the same reason, the point that the *padārthās* are names gets lost sight of.

Aristotle arrives at his list of categories from more than one angle. We have already considered his approach to the problem from the side of things. The other approach is linguistic. He distinguishes expressions in language into "simple expressions" i. e. names and "composite expressions" i. e. predicative expressions and declares that "expressions which are in no way composite, signify: substance, quality, relation, time, position, state, action or affection". From the side of things these same names are called "figures of predication". The seeming opposition, perhaps more so in the eyes of Sanskrit scholars, between categories as "types of being" and categories as "figures of predication" should disappear when the two conceptions are bridged over by the conception of the "types of meaning"²³. Aristotle speaks of the three interchangeably. Aristotle's approach is linguistic, not verbal.

He considers "names" and a name is a term (*pada*) and not just a word. Both words and terms are connected with meaning essentially, but in different ways. A word, singly or in a group is called a 'term', only when it is used to make a statement with. A term therefore is defined by its function, as either the subject or the predicate. i. e. as either the naming or the attributive or descriptive expression in a statement. A word is a symbol and means what it stands for by a linguistic convention. A term means by way of its syntactical function and hence is said to signify rather than to mean. The *Nilakanthī* and the *Dīpikā* speak of the *padārthās* as names for terms and as the meanings of terms respectively, most probably purposefully. For, Vatsyāyana gives a clear statement of the nature of a term i. e. a '*pada*'. A word (in Sanskrit) in its inflectional form only is to be called 'a *pada*' and divested of its inflections it ceases to be 'a *pada*'.²⁴ According to Vatsyāyana the basic inflections are two, viz. naming (*nāmiki*) and describing i. e. stating something about the subject named (*ākhyāyiki*)²⁵. The purpose of a *pada* is the apprehension of its significance, as for example, the term "cow" can signify the individual or the species or the form.²⁶ That is to say, the same word means differently according as it is used either as subject or as predicate or in a still more abstract sense even. The manner in which a term is intended is by and large understood in language communication. But if, what a term signifies is to be explicitly expressed, it could be readily observed that the mode of signification can be indicated only by using it as the predicate of the term used as a naming expression. The name of a term is on a different footing than the name of a thing as already seen. The former is a designative name while the latter is a referential or a pointer name. The two kinds of names function differently in statements. Hence it could be maintained that categories as names of terms could be expressed predicatively only. On that score the Aristotelian "figures of predication" do not in any way differ from the *padārthās* as *pada-abhidheyās*, i.e. as names of terms or even as meanings of terms.

It needs to be stressed that Aristotle himself describes the categories as "figures of predication" and not as 'predicates' although the categories have generally come to be spoken of as "first predicates". It is of "being" and "unity" that he uses the word "predicate", but qualified as "universal," in the sense of "predicates of absolutely everything." The categories are

not the same thing with either these universal predicates or with predicates in the ordinary sense i. e. attributive predicates. The latter express specific determinations of their subjects in judgments. Amongst the terms used attributively of a subject, general nouns, eg. 'man', 'pot' and adjectives, eg. 'wise', 'blue' function as class terms in a way in which verbs and adverbs cannot. In his logic of inference Aristotle takes into account only the class-aspect of predicates. It is most probably by some misunderstanding of Aristotle that the Vaiśeṣika *padārthās* are sometimes explained as 'a classification of things'. It needs to be emphasised that the conception of classification is incompatible with a statement of distinctnesses, for all classification amounts to a unification in terms of some common character. Even apart from this consideration, the notion of a category can. not be rendered by the conception of a class. The word 'class' is used primarily of empirical concepts. All common or general nouns eg. 'table', 'sparrows' are class-words. Similarly, 'red', 'great' may be used in the sense of 'red things' or 'great men' i. e. to stand for classes. Our understanding of the class word or the general noun like the ones mentioned above arises in the course of our experience of individual instances of the kind. The conception of class depends upon the notion of quality as characterising and the notion of the individual as in some way characterised. The class comprises of members which need to satisfy some common quality or qualities. The members of a class are characterised by similarity in respect of that quality or qualities which makes them fall under the same class.

The class word is primarily the name of a common character which for ordinary purposes is used to name both the class of individuals or the individuals in the class. Logically speaking the class word is a description i. e. it is a predicate which is applied to the individuals. For this reason it is not necessary for us to have observed every individual in a class. Modern logic represents a class by a function, in the manner, " ϕx ". In the expression ' ϕx ', ' ϕ ' is called a predicate variable, i. e. it is a symbol which stands for any description or a predicate, i. e. any mode of characterisation: and ' x ' is called an individual variable i. e. it is a symbol which stands for any individual. To illustrate, the class 'sparrow' is represented by the function ' $\exists x$ ' in which 'S'

stands for the predicate 'sparrow' and 'x' stands for the thing or things which satisfy the description 'sparrow'. In this way the class 'sparrows' stands for all the values of the function 'Sx'. The members of a class show a common character, for they are instantiations of the same function.

A category word eg, "substance" is not a class word like 'man' or 'sparrow'. The category word 'guṇa' (attribute) even is not a class word like 'sound' or 'colour'. etc. For, the types of objects distinguished in a category are marked by diversity, unlike the members of a class which are marked by a common character. Each of the nine substances listed by Kaṇāda is distinguished by its own characteristic marks (lakṣanās) yet, they are all named 'dravya'; for each is apprehended as being of a pattern, a pattern which is judged to be the same irrespective of the varying character of the objects. A category is the same name used of diverse types of objects displaying the same mode of being. The class concept is adequate to explain plurality, but diversity needs another concept to account for it and that is the concept of a category. A list of categories is therefore a list of diversities. In the first instance the diversities are only named, for names mark differences in a way in which no other expressions do. A name implies a counterpart, which is not a contradictory, in the form of 'the other' or 'another'. Hence categories come primarily to be presented as names. That they are designating names is an account of the category names. That designating names stand for patterns, or forms, distinguishes them from denoting names which stand for things. The Vaiśeṣika thinkers expressly refer their categories to *sattā*, the order of existence as distinguished from the things in the world like, 'pots' and 'garments'. Judging by Vātsyānana's account of terms and the *Nilakanthī-Dīpikā* comments on how the *padārthās* are to be construed, the Vaiśeṣika *padārthās* could well have been described as 'figures of predication' as in Aristotle.

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NOTES

1. Bhāskarodayā. p. 10.
2. A. B. Tarka Samgraha. p. 73.
3. Bhāskarodayā. p. 10.
4. V. S. 1.1, 4.
5. See : Vlastos : Degrees of Reality in Plato. p. 1. *New Essays on Plato and Aristotle.*
6. *Ibid* p. 2. 3. *Ibid* p. 1.
7. See : Owen : Aristotle on the Snares of Ontology p. 69 in the same work.
8. Topica. 127^{aa}—*Works of Aristotle*, Oxford.
9. *Ibid* 12116-19.
10. V. S. 8.2.3.
11. *Ibid.*
12. *Ibid.*
13. Ny. Ko. p. 76
14. "parā" is the feminine form of "para".
15. Sarv. D. S.—Panini. P 309 lines, 255-56.
16. Vātsyāyana's introduction to Gautama Sutras p¹.
17. V. S. (1.2.4).
18. *Ibid* Vi.
19. Vātsyāyana's introduction to Gautama sutras. p. 2.
20. Bh. Gi. 16.II.
21. V. S. (1.2.4).
22. V. S. 1. 2. 5.
23. Categorea 16^{aa} *Works of Aristotle*—Oxford.
24. G. S. 2. 2.60—Ny. Ko. p. 461.
25. *Ibid.*
26. *Ibid.*

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Wittgenstein's treatments of fundamental philosophical questions of pure mathematics—the apparent *necessity* of Mathematical truths and the nature of our apparent knowledge of them—is conspicuously free of technicalities. These issues can be taken as falling within the Philosophy of Mathematics, the Philosophy of Language or the Theory of Knowledge.

The questions Wittgenstein was concerned with call only for hard thought and a natural language to express it in. C. Wright's book is in keeping with both these requirements.



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