Realism in Vaiśeṣika and Navyanyāya

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The extent of Vaiśeṣika realism

Realism is the commitment to a world in which to be or not to be are matters independent of the reach of our human epistemic resources – our capacities to verify, ascertain or establish what is and what is not the case. It is moot whether, whatever it is that God might think, we human beings are capable of such a commitment. Even if we can understand, as we seem to be able to, what would be *required* of us to be realists, it is not clear that in fact we are able to *satisfy* the requirement. What would underwrite the thought that some world of which we *can* conceive is a world in which the question of being is not a question that refers to us? What would make "manifest" that *this* is the sort of world to which our concepts point? It is one thing to claim to be a realist, quite another to demonstrate how it is possible actually to be one.

Among the Indians the Vaiśeṣikas are usually considered to be the most robust advocates of an across-the-board realism.[1] They admit all of the following:
- unobservable as well as observable substantial objects,
- the particular qualities and motions of those objects including their spatial and temporal position,
- a hierarchy of generic universals under which the particular substances, qualities and motions fall,
- a uniquely identifying 'distinguisher' for each non-composite particular,
- a single real connecting relation to bind the objects to their qualities, motions, universal features and distinguishers,
- finally, and only eventually, a domain of real particular and generic absences, such as the real absence here and now of a certain particular pan or of any pan at all.

Embedded within this expansive ontology is a metaphysics of mind that embraces real particular souls, each with an accompanying but distinct 'mind' and a portfolio of specifically mental qualities.

As this list reveals, the realism of the Vaiśeṣika system incorporates a range of less thorough-going realisms. It embeds a *scientific realism*, that is a commitment to the reality of unobservable entities postulated by our best theory of the material and immaterial world. The scientific entities towards which the Vaiśeṣika show an uncompromising commitment are: atoms (and dyads of atoms – the smallest observable is said to be a tri-atomic structure), souls, minds, space, time, and a

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[1] See, for example, Thakur 2003, p. 182; Bhaduri 1975, pp. 2-3. Vyomaśiva attributes the following declaration to the system's founder Kaṇāda: "I shall enumerate everything in this world that has the character of being" (*yad iha bhāvarūpam tat sarvaṃ mayā upasaṃkhyātavyam*); cited in Halbfass 1993, p. 69.

pervasive aether-like substance called *ākāśa*. Vaiśeṣika realism also embeds, however, a *common-sense realism*, a realistic commitment to the "middle-sized" objects of everyday experience, specifically to those composite wholes that are made out of smaller – ultimately atomic – parts. Halbfass (1993, p. 94) comments aptly that

> Whereas the Vaiśeṣika considers the noneternal substances to be effects of, and derived from, the eternal substances, it does not regard them as less real. They, too, are real substrates of real qualities and other attributes. They have their irreducible identity and reality as long as they last. The Vaiśeṣika tries to explain and defend their precarious ontological status in its peculiar and controversial theory of the "whole" (*avayavin*) as an entity over and above its constituent parts (*avayava*).

In its metaphysics, the Vaiśeṣika system further embeds a *property realism* that seems to be more Aristotelian than Platonic (the monadic universals and the dyadic connecting relation seem to be metaphysically dependent on being instantiated, just as a dent is metaphysically dependent on a surface.). This is later extended to a realism about negative properties, which is, however, configured in terms of a commitment to a *sui generis* type of negative entity.

Realism and Vaiśeṣika realism

What common thread underpins these various realist commitments? The Sanskrit term *padārtha* is used by those philosophers in India who wish to signal their espousal of a commitment to realism, a term that is often loosely translated as "category" or "division of reality". The category of universals is a *padārtha*, the category of substances another *padārtha*. Indeed, a philosopher who claims that some class of entities is *padārthāntara* "another *padārtha*" is advancing an irreducibility thesis: talk of the entities in this class is not reducible to talk of entities in any other class. What is rejected thereby is a reduction, for example, of a substance to a bundle of qualities; there is still room, however, for reduction *within* the domain of substances.

Here it is as well to recall the etymology of the term *padārtha*: *padasya arthaḥ* 'the object for which a word stands'. When the Vaiśeṣikas decide to count substance as a *padārthāntara*, the point of doing so is to assert first that there are substance words, such as "pot" and "pan", and second that the use of such terms belongs to a referential class of its own. Every term is associated with a condition governing its use, known as a *pravṛtti-nimitta*, a condition that any object must satisfy in order to be a referent of the term. Different kinds of term are associated with different kinds of condition. Another Sanskrit term with both semantic and metaphysical resonance is *sat* – the true, the existing. In formulations of realism, Vaiśeṣika authors make use of abstract nouns derived from the verb *as* 'is'; one is *sattā* 'existence', a second is *astitva* 'reality'. Another term, derived from the verb *bhū* 'to be, to become', is *bhāva* 'being'. None of these terms can catch the idea of Vaiśeṣika realism, however, simply because Vaiśeṣika is also

realist about entities that lack 'being' or 'existence' or 'reality' in these senses. The only term with the correct extension is *padārtha*.

In order to clarify the nature of Vaiśeṣika realism, it is helpful to compare it with the ultra-realism of Meinong. What Meinong's realism consists in is his commitment to every singular term having a referent. If "Cyclops" is a singular term, then Cyclops is an object; so Meinong is lead to realism about the merely possible. The characterisation of realism as a thesis about reference is considerably facilitated by the Sanskrit language itself, with its arsenal of syntactic tools for generating singular nominal terms, including abstraction suffices like *–tva* and *–tal*, and specification suffices like *–viśeṣa*. There is no difficulty in formulating Vaiśeṣika realism about universals as the doctrine that singular abstract terms always denote objects, in this case universals. It is the nominalist who tries to explain our use of abstract terms in some other way. Sanskrit syntax makes possible the characteristically Vaiśeṣika commitment to realism about negative objects: the use of negative prefixes and suffices to form nominals from nominals is entirely unrestricted in Sanksrit, as unrestricted as the use of conjunction in English.

Michael Dummett largely follows the Meinongian formulation of realism.[2] Meinong's realism, he says, "consisted in his treating singular terms as always *denoting* objects – actual ones, merely possible ones, or even impossible ones." There are, however, two escape routes from a commitment to 'ultra-realism', realism about the merely possible. One is to deny that singular terms for merely possible objects denote anything at all; the other is to deny that the terms in question really are singular terms. The first route does not deny that statements made with the help of those terms are intelligible, but does deny that they must be either true or false; the second route paraphrases the statements in such a way that there is no troublesome invocation of objects (cf. Russell's analysis of descriptions or Frege's translation of directions to parallels). So Dummett says,

> Integral to any given version of realism are both the principle of bivalence for statements of the disputed class, and the interpretation of those statements at face value, that is to say, as genuinely having the semantic form that they appear on their surface to have. Rejection of either one of these will afford a means of repudiating realism and will constitute a form of anti-realism, however restrained, for statements of the disputed class. (p. 325)

One has to be careful not to turn every theory based on a many-valued logic into a version of anti-realism. Such a theory does not regard a statement as false whenever it is not true, (because it treats a statement as false when its negation is true), but can, nevertheless, regard every statement as determinately either true or *not true*. Dummett introduces the term "objectivist" to describe a many-valued theory for which this is the case (p. 326); later developments of Vaiśeṣika are objectivist in precisely this sense. One

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[2] Dummett 1991, pp. 324–6. Dummett formulates the issue slightly differently in different places; my exposition of his theory will largely follow the excellent discussion in chapter 15 of *The Logical Basis of Metaphysics*.

must also be careful not to turn every reductionist into an anti-realist. One can be both a realist and a reductionist so long as one continues to hold that for every statement in the disputed class there are statements in the reductive class that render it determinately true or not true. Dummett:

> If it is his rejection of the principle of bivalence that marks the reductionist's divergence from realism, then the realist may continue to be a realist, despite espousing even a full-blooded reductionism, as long as he continues to adhere to the principle of bivalence. (pp. 327-8)

Such a realist will be a 'sophisticated" realist (p. 324), in contrast with the "naïve" realism of those who rest their realism on a rejection of any reductionist thesis. For a naïve realist, statements in the disputed class are barely true when true, barely false when false; that is, not true or false in virtue of the truth or falsity of any other statements (p. 328). The sophisticated realist might admit the possibility of reduction without translatability (weak reductionism) or even the possibility of reduction through an actual translation (strong or full-blooded reductionism), as long as he continues to treat singular terms in the disputed class as genuinely referential. The Vaiśeṣika, it seems to me, are sophisticated realists about wholes: they concede that such an object admits of decomposition into parts, and so that statements about wholes can be translated into statements about their stuctural arrangements, but maintain their "precarious" realism about wholes nevertheless. This is how the Vaiśeṣika hopes to adhere to both common-sense realism and scientific realism at the same time; in the teeth of strong Buddhist argumentation that such 'split-level' realism is incoherent.[3]

We can see Vaiśeṣika philosophers pursuing the second of the two escape routes with respect to empty names, and so side-stepping Meinong's realism about the merely possible. We do not see them pursuing the same strategy, however, with negative and general terms, and that is why they happily commit themselves to realism about negative objects (their logic of negation is many-valued but realist).[4] So while the expression "the hare's horn" is held to admit of a paraphrase that shows it not to be a genuine singular term, the expression "the hare's non-horn" is not similarly parsed away, but is taken to refer to the real absence of a horn on the hare. The reason for taking the one term to be a genuine singular term but not the other must be syntactic, for it would beg the question to give as the reason that absences are real but not possibilities. The intuition seems to be that one cannot simply build an object by putting together any old properties, such as horn and hare: the 'creation' of such monsters is possible only in thought. Correspondingly, one cannot build a singular term *simply* by conjoining various other terms. There is no fiction other than through construction out of what does exist, so all fictional terms are the result of composition. On the other hand, there is nothing wrong with taking a syntactically complex singular

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[3] See also Dummett 1979, and the discussion in Matilal 1986, pp. 13–16.
[4] The doctrine of *avyāpya-vṛttitva* 'nonpervasive occurrence' allows for an object to possess a property and simultaneously possess the negation of that property. But it is always a fully determinate matter whether it possesses the property or does not possess it (and likewise with the negation). For details, see Ganeri 2001, pp. 89–91.

term and analysing it into its disjoint parts; the process of analysis does not reveal the term to have been less than genuinely singular after all (see Ganeri 2006, pp. 53–72). The term "beast" (*paśu*) is analysable as "animal with hair and a long tail". Likewise, the term "absence" (*abhāva*) is unsaturated, demanding an *of* and a *where*. So "absence of a horn on the hare" is not a compound noun, but a single term with its open places filled in. Thus, while the Buddhist strategy of analytical decomposition, as expounded for example by Vasubandhu at *Abhidharmakośa* 6.4, proves nothing against the reality of the analysandum, no activity of imagination or mental creation can, of itself, bring an object into being.

According to Dummett, a realist is someone for whom "the condition we associate with a name, as that which must be satisfied by an object for it to be the referent, need not be one whose satisfaction by an arbitrary object we should have any effective means of deciding, however favourably placed: our use of the name is mediated solely by the knowledge that, objectively, the condition is satisfied by at most one object in the history of the universe" (Dummett 1991, p. 310); an antirealist holds that "reality itself is indeterminate; it has gaps, much as a novel has gaps, in that there are questions about the characters to which the novel provides no answers, and to which there therefore are no answers" (p. 318). The entire Vaiśeṣika theory, including even its strange doctrine of 'distinguishers', is geared up to making available a condition associated with a name, which they call the 'basis for application' *pravṛtti-nimitta*, a condition whose satisfaction is what gives the name its reference. What is not so clear is whether they would agree that we might sometimes lack an effective means of deciding if the condition is met. Thus, while they would certainly reject a picture of the world as having gaps in the way a novel or a dream might, it is not quite certain that Dummett's characterisation of realism is one they could completely endorse. Given the existence of formidable objections to the possibility coherently of being a realist in Dummett's sense of the term (a sense that is sometimes labelled 'metaphysical realism'), it would be unsurprising if exponents of realism sought ameliorated understandings of the realist commitment. There is indeed evidence that the Vaiśeṣikas themselves were uncomfortable with the idea of an epistemically unconstrained conception of truth, as I will now show.

Three questions about the Vaiśeṣika commitment to metaphysical realism

I have already noted that the Vaiśeṣika baulk at realism about the merely possible and the impossible (*tuccha*, *alīka*). Are there any indications that they draw back from realism, as understood above, in any other region of their elaborate metaphysics? Endorsement of realism is always, in any case, piecemeal, in the sense that it is a claim about some particular domain of statements. I believe that, as the tradition developed, there was a broad movement towards a sophisticated realism and away from the instinctive naïve realism of the early thinkers. There were also signs of a willingness to make use of one or the other of the two exit strategies from realism we have noted above, particularly in connection with some of the more recherché entities in the orthodox Vaiśeṣika heaven. But I also believe that, beginning with Raghunātha and his

"new" school of Navya-Nyāya, there was a counter-movement of thought that preferred instead a reconfigured version of naïve realism, a new resistance to reductionism and an elaboration, rather than a constriction, of the Vaiśeṣika world. I will consider three places where even Praśastapāda, the authoritative exponent of the school, says things that seem to be in conflict with a thorough-going realism.

Secondary qualities and cognition-dependence

John Locke's account of secondary qualities is sometimes seen as affording a way to circumvent a full-blown metaphysical realism, the thought being that biconditionals such as the following are true: x is yellow iff x is disposed to look yellow to standard subjects in standard conditions.[5] There is no suggestion of such a thought in the Vaiśeṣika discussion of colours, but there is in their treatment of at least one other sort of quality, number. Praśastapāda states that the quality twoness arises in a pair of objects, cognised individually, when in dependence on a 'combinative cognition' (*apekṣābuddhi*):

> Next, two-ness arises from the two unit-qualities in their substrata, in dependence on a combinative cognition. (PBh 131).

According to Praśastapāda, it is the act of counting out the two objects which makes them two. We might formulate his view in terms of a biconditional: {x, y} are two iff x and y are mentally counted out together. Śrīdhara comments that "the thesis that an object can be produced by cognition is not outlandish (*alaukika*), for we do observe the production of pleasures and so on from cognitions" (NK, p. 275). He adds that in both cases, being produced by my prior cognition is what guarantees that the resulting awareness is private to me. The duality which I isolate by mentally counting out these two objects is analogous to the pleasure which I feel as a result of thinking of something pleasant: in both cases, what explains my privileged access to the ensuing state of affairs is my ownership of the preceding creative mental act. In other words, the hypothesis that numbers are 'counting-dependent' (just as colours, for Locke, are 'response-dependent') is justified by considerations from the epistemology of number, specifically the privacy of the counter's knowledge of the number.[6] There would, presumably, be nothing to prevent a Vaiśeṣika extending this account to any aspect of perceptual appearance that varies in dependence on the perceiver; Matilal recommends its application to certain cases of perceptual illusion (Matilal 1986, pp. 290–291). On such an account, the statement "there are two objects" has no determinate truth-value independent of human capabilities; not, to be sure, our capacity to ascertain or verify it, but rather our capacity to constitute the statement's truth through our acts of counting; the same is true of the statement "I am in pain".

It seems then that a distancing of Vaiśeṣika realism from metaphysical realism can clearly be witnessed in the special realms of mathematics and the self. Realism about

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[5] See for instance Johnston 1998, Pettit 1991.
[6] For further details, and a fuller translation, see my article in Sen 2006, pp. 523–545.

numbers, and about mental states like pleasures and pains, the suggestion is, is not incompatible with affording mathematical knowledge and self-knowledge a special status, both in themselves and in the constitution of the truths known. If the truth that there are two objects here is partly constituted by my having counted out, in my mind, two objects, then knowledge of that fact is in some sense already available to me, in a way that knowledge of other kinds of external object or event or fact is not. The fact that there are two objects, and the fact that I know that there are, have, as it were, a common cause in my act of mentally counting.

Clearly, for the account not to threaten Vaiśeṣika realism, a sharp distinction must be drawn between mental acts of *counting* and mental acts of *imagination*; we have seen already that Vaiśeṣika realism defines itself in part as a rejection of the thesis that imagination has an object-constituting role. Using the mind to put a hare and a horn together in such a way as to fashion a creature with the body of a hare and a horn on its head is to be sharply differentiated from putting the hare and the horn together in the mind in such a way as to get a mentally delineated collection of two objects. That differentiation is effected, in Navya-Nyāya, through the asymmetrical use of the concepts of *viśiṣṭa-jñāna* and *samuhālambana-jñāna*, 'qualificative cognition' and 'combinative cognition'.

Existence, subsistence, nonexistence

Ought it count against the realism of the Vaiśeṣika that they are hesitant to accord the same mode of existence to all the entities in their ontology? Let me reserve the term "particular" for an object in any of their first three categories, that is, the particular substances, along with their particular qualities and motions (better: objects, tropes and events). Praśastapāda says that

> The three [categories] beginning with the substances have a "bond with existence" (*sattāsambandha*)... the three [categories] beginning with the universals have an "existence in their own terms" (*svātmasattva*) (PBh 14–5).

The universals, the 'distinguishers', and the connective glue called 'inherence', have a degraded claim on existence; or at least, a different claim. Later authors explicate the notion with the idea of *svarūpa* or 'own nature' (Śrīdhara actually glosses *svātmasattva* as *svarūpasattva*); the thought seeming to be that while particulars inherit their existence via their connection with an real universal *sattā* 'existence', the existence of nonparticulars is self-constituting. Halbfass comments that this idea "is precarious and problematic and hardly suitable to vindicate the old realism of the Vaiśeṣika against reductionist and relativistic challenges" (Halbfass 1993, pp. 157–158). But Udayana helpfully states that the idea of 'self-constituting existence' (*svarūpasattva)* does not apply to the impossible or fictitious, and he is well known to have argued that the names of impossible objects, like the natural son of an infertile man, and of fictitious or merely possible entities like the horn on a hare's head, are susceptible to a semantic expansion which shows that they do not need to be treated as genuine singular terms

at all (Ganeri 2006, pp. 62–67). So the restriction of the term 'existence' to the three kinds of particular does not undermine the Vaiśeṣika claim to avow realism with respect to the other categories too. Dummett again:

> We cannot say that a realist about things of a certain category is one who believes that such things exist, for Meinong differentiated between actual and merely possible objects in that the former, but not the latter, existed; it is quite common for philosophers to distinguish, within reality, between those of its denizens which exist and those which only subsist, or are ideal, or the like. (Dummett 1991, p. 324).

Vaiśeṣika, indeed, extends its realism even to what does not subsist; it accepts as real all manner of absence (*abhāva;* 'unreal'). Properly speaking, then, to be real is simply to be able have a genuine name (*padārtha*). That is what the straightforwardly existent (*sattā-sambandha, bhāva*), the ones whose existence is 'self-constituting' (*svarūpa*), and even the so-called 'unreal' (*abhāva, nāsti*) have in common. That is what, allegedly, the impossible and the merely possible or fictitious lack.

Vyomaśiva offers another suggestion. He prefers to view the world of the nonconcrete nonparticular as a world to which the term "exist" (*sat*) is indeed applicable, but only metaphorically (Vy pp. 110ff; trans. Halbfass 1993, pp. 248–255). Following his lead, the Vaiśeṣika world can be pictured as comprising a principal domain of concrete particulars, partitioned into objects ("substances"), events ("motions") and tropes ("qualities"), and two reflected worlds, a world of 'distinguishers' in one-one correspondence with the atoms in the principal world, and a world of generalities that is like a pyramid standing on the domain of particulars, moving in ever increasing abstraction to an apex whose name is *sattā* "existence". The cement that holds this triple world together is a single if distributed stuff, designated by the relational mass term *samavāya* "inherence". With this same cement, nested piles of wholes are fashioned out of ultimately atomic parts within the principal domain.
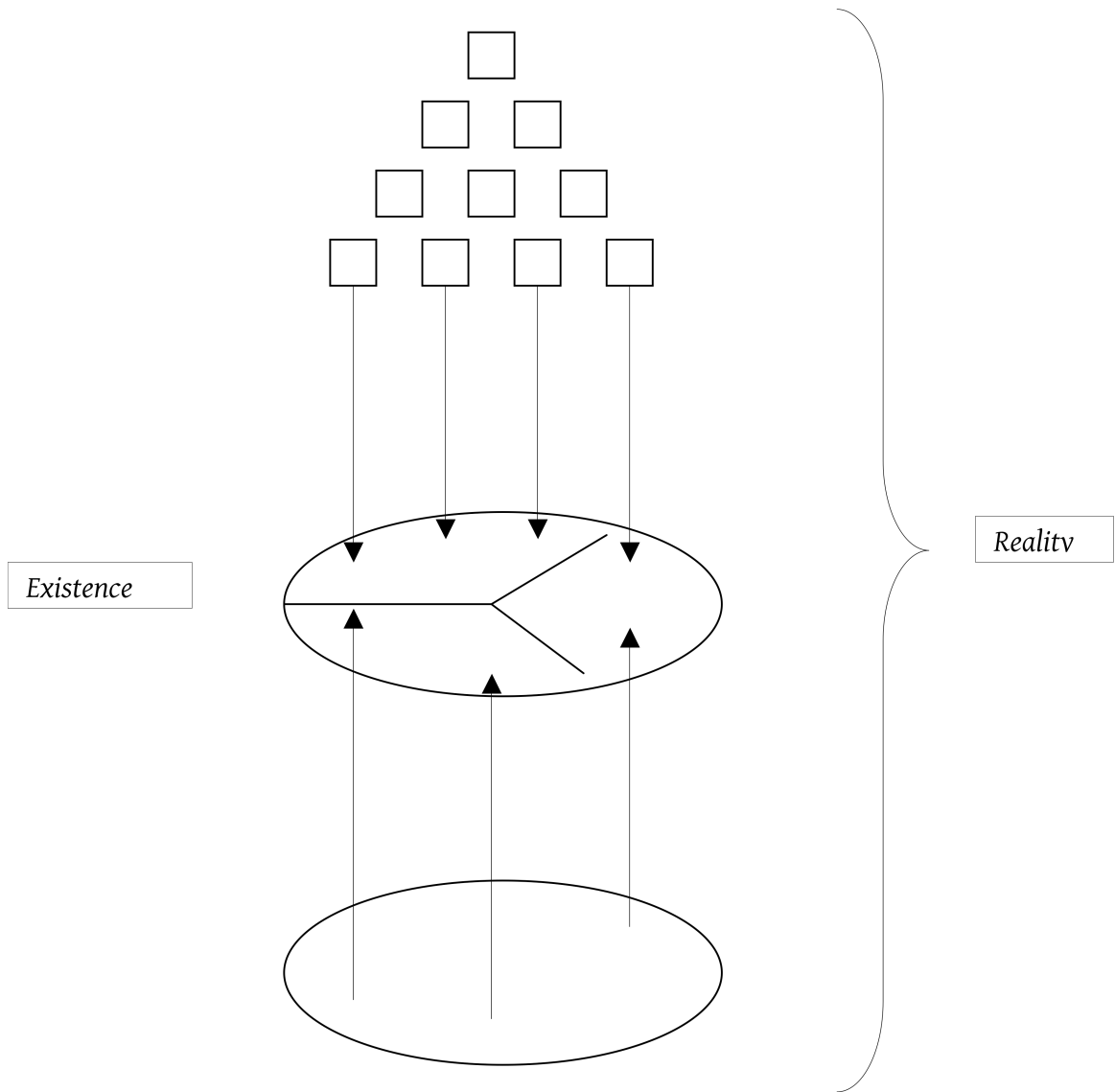
[DIAGRAM]

DIAGRAM: THE VAIŚEṢIKA WORLD

The echo worlds above and below are metaphysically dependent on the triple world of particulars, exactly as, within the domain of particulars, the common-sense world is metaphysically dependent on the atomic world of physics (and for both indeed, the metaphysical 'glue' is the same), as an ocean wave is dependent on the water, or a dent on a surface. Realism is content with such dependencies; its concern is to deny a *conceptual* dependence between worlds of any sort and their human cognisers.

Global knowability and nameability

A more difficult problem for our understanding of Vaiśeṣika realism follows from Praśastapāda's much quoted assertion that everything is real (*asti*), knowable (*jñeya*), and nameable (*abhidheya*):

> All six categories possess reality, nameability and knowability (PBh 11).

I will call the claim that everything is nameable the thesis of global nameability; likewise, the claim that everything is knowable I will call the thesis of global knowability (it is sometimes called 'weak verificationism'). What does it mean to claim, first of all, that everything is nameable? The two most likely interpretations are that every truth is assertible or that every object can be given a name. Is either interpretation incompatible with realism? We can easily enough imagine a simple world with just a few objects and properties, and a correspondingly simple language with a name for every object and a sentence for every truth. It is not clear, however, that in such a world the debate between realism and antirealism has any purchase. It gains significance only when we claim to be able to understand a language rich enough to make statements for which there is potentially no means of deciding whether they are or are not true. Dummett states that undecidable sentences are principally the result of three features of our language: our ability to refer to inaccessible regions of space or time, such as the past or the spatially remote; the use of unbounded quantification over infinite totalities; and the use of the subjunctive conditional, for example in describing how an object would behave if subjected to a certain test, when that test is never performed (1991, p. 315). If realism is a commitment to the claim that such statements do nevertheless have a determinate truth-value, then it is precisely the unrestricted reach of language that makes realism possible. There seems then to be no incompatibility between realism and global assertibility or denotability.

Might the doctrine nevertheless be false? One might wonder how names could be given to the unobservable atoms; certainly not by ostensive definition. But several Vaiśeṣikas show us how unobservables can be named with the help of uniquely identifying definite descriptions: the name "*ākāśa*" is introduced as a name for that which is the substratum of sounds (the means by which a theoretical name is introduced by way of an introducing description is sharply distinguished from the role of composite descriptions in either the construction of terms ("hare's horn") or their decomposition "beast"); Ganeri 2006, pp. 181–184). Exactly similar questions arise concerning space and time. Bhartṛhari's argument, that it is self-contradictory to say of something that it is indescribable (– have we not thereby just described it?) does not help either way, for "indescribable" is not a denotation, and a proof that there is at least one true assertion about some given object does not show that every truth about it is assertible. His further argument (see Parsons 2001) that the relation of denotation is not itself denotable, on the grounds that no relation can have itself as a relatum, points, however, to a deeper worry about the thesis of global denotability, one that I will return to. Perhaps no language can say everything about itself.

Global knowability, or weak verificationism, on the other hand, does seem at first sight to be incompatible with realism. For realism is characterised as the thesis that matters of being are independent of the reach of our epistemic resources, so that there could be truths which transcend our ability to verify them, either now or in the future, and statements whose truth or falsity is something we cannot and never will be able to decide. But if everything is knowable, then there are no verification-transcendent truths. A simple defence would be to invoke divine knowledge (see Perrett 1999, Balcerowicz forth.). That all is knowable only threatens realism if divine cognition is exempt; for otherwise, the claim might simply be that *if* realism is true, and *if* god is omniscient, then whatever is real is knowable. Actually, it is harder to square divine omniscience with antirealism than with realism (but not impossible; see Dummett 1993, pp. 318–319, 348–351).

There is, however, a persuasive argument that the context of Praśastapāda's slogan is one in which it is human, not divine, knowledge that is signified. The argument is that knowledge of the categories of existence is meant to have a soteriological value for human beings (PBh 2; cf. Perrett 1999, p. 402).

Might it be merely contingent that everything is knowable, a sort of extreme case of epistemic luck that we happen to find ourselves in the same situation with respect to everything that we are with respect to, say, the twelve times table? Certainly, what realism demands is only that there *could be* verification-transcendent truths, not that there actually *are* any. An argument might run as follows. If the world were simple enough, we could know everything about it and still be realists. Matters of complexity are contingent and so cannot affect the logical relationship between realism and global knowability. Therefore, it is not inconsistent for a realist to endorse global knowability. To put it another way, global knowability does not necessarily make matters of being dependent on the reach of our epistemic abilities in the relevant sense. It does not necessarily imply that our concept of being is a concept explicable only in terms of what we are or will be able know. The antirealist denies that any such concept is available to us, and therefore denies the coherence of realism; but if we allow that realism is coherent, then, global knowability is a possible additional doctrine (a realist might believe, for example, that God just has given us epistemic powers adequate to every fact; how they could know this, is, however, another matter). Once again, however, my impression is that a state of affairs in which it is contingently true that there are no recognition-transcendent facts is one in which the debate between realism and antirealism is simply not joined.

Even if not incompatible with realism, the thesis that everything is knowable might simply not be true. This thesis, like the thesis that everything is denotable, admits of several interpretations. One is that it is possible to know every truth; another is that it is possible to think about every object and so to have discriminating knowledge of every object; a third is that it is possible to know of every object that it exists. F. B. Fitch

has given a proof that the thesis that it is possible to know every truth entails a falsehood.[7] Let us call that thesis T:

T: $p \rightarrow \Diamond \, Kp.$

With two additional principles, Fitch proved that T entails the falsehood that *nothing is unknown.* The first principle is that knowledge is factive: $(Kp \rightarrow p)$. The second principle is that knowledge distributes over conjunction: $K \, (p \, \& \, q) \rightarrow Kp \, \& \, Kq$. Suppose now that there is a truth which is unknown:

[1] $p \, \& \sim K \, p.$
[2] $\Diamond \, K \, (p \, \& \sim K \, p)$. By T.
[3] $\Diamond \, (K \, p \, \& \, K \sim K \, p)$. By Distribution (in a modal logic strong enough to permit its use.)
[4] $\Diamond \, (K \, p \, \& \sim K \, p)$. By Factivity.

[4], however, states that a contradiction is possible. The proof therefore seems to show that [1] is false, i.e. that *every* truth is *in fact* known. Something has gone wrong; for many people, the problem lies with T, the thesis of global knowability.

There have been three attempts to save the knowability thesis from Ficht. Timothy Williamson (1982) has pointed out that reductio arguments work only in a classical bivalent logic; under an intuitionist logic, in which double negation elimination does not hold, we can infer only it is not the case that nothing is unknown, not that everything is known. This will not help the Vaiśeṣika, however. It is a consequence of the Vaiśeṣika treatment of negation that a property and its negation can co-occur in a single substratum, but the effect of this is to surrender double negation introduction rather than double negation elimination (for the details, see Ganeri 2001, p. 87). Daniel Ingalls was therefore in error when he compared the Indian theory with intuitionism (Ingalls 1951, p. 68 n.). Dorothy Edgington (1985) has argued that T should be revised in such a way as to relativize knowledge claims to situations; the principle should state that if, in a situation *s*, it is a truth that *p*, then there is a possible situation *s'* in which it is known that *p* is true in *s*. It has been shown, however, that the proposed revision fails to save the thesis from Ficht (Williamson 1987a, 1987b). Williamson (2000) considers, finally, a variety of attempts to deny Distribution, but concludes against all of them.

I think, nevertheless, that there is a solution to our puzzle. Consider what would happen if we tried to run Ficht's proof with assertibility in place of knowability. The thesis now is that every truth is assertible: $p \rightarrow \Diamond \, Ap$, and the assumption would be that there is a truth which is not asserted: $p \, \& \sim Ap$. Distribution holds for assertion: if one asserts a conjunction then one asserts each conjunct. But the proof falters with Factivity: if is not the case that everything asserted is true. That is not the end of the matter, however, for consider what step [2] now claims: $\Diamond \, A \, (p \, \& \sim Ap)$. This says that it is possible to assert that something is true and that one is not asserting it; for example

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asserting "It is raining and I do not assert that it is raining". This is similar in form to Moore's Paradox ("*p* but I don't believe that *p*") and is paradoxical for similar reasons. Assertion is governed by principles whose net effect is that one cannot cancel an assertion one makes simply by asserting that one has not asserted it. So not everything is assertible; in particular, one cannot make certain assertions about one's assertions (a point partly foreseen by Bhartṛhari and reminiscent of the semantic paradoxes). A language makes assertions about itself only at the risk of sliding into self-contradiction.

Ficht's proof likewise shows that the thesis that everything is knowable cannot coherently be maintained in an unrestricted form. I suggest that it also indicates the nature of the appropriate restriction. For what the proof shows is that if *p* is a truth that is unknown, then one cannot know that this is so, that *p* is an unknown truth.[8] Let us therefore restrict the knowability thesis to all those truths about the world that do not refer to our epistemic condition. Let us similarly restrict the denotability thesis to all those truths about the world that do not concern our efforts to denote or describe it. In our restriction of the thesis, the quantifier "everything" is allowed to range only over propositions the content of which makes no reference to our epistemic condition, so the step from [1] to [2] in Ficht's proof is blocked. This move, of course, would beg the question against an antirealist, for whom all facts in some sense refer to our epistemic condition, but it is available to someone who is *already* a realist and who wishes *then* to maintain a restricted version of the knowability thesis. The unknown is knowable; the fact that it is unknown is not.

Timothy Williamson, in the sophisticated analysis of Ficht's proof in his *Knowledge and its Limits* (Williamson 2000), notices that the world might have been one in which everything is known in a sense compatible with Ficht's result:

> if *p* is an unknown truth then it is unknowable that *p* is an unknown truth, but it does not follow that it is unknowable whether *p* is an unknown truth. ... Indeed, Ficht's argument does not show the impossibility of omniscience: a situation s such that, for every proposition *p*, it is known in s whether *p* is true (in s as opposed to actuality). The world might take an especially simple form in s, rendering it easier to know; naturally, the cognitive capacities of beings in s would also have to be far more extensive than in actuality. The possibility of omniscience would entain that, for every proposition *p*, it can be known whether *p* is true in this weak sense: for all *p*, ◊ (K*p* v K ~*p*)." (Williamson 2000, pp. 289–290)

A weaker restriction than the one we are contemplating might also serve the purpose: we must only rule out statements that some specified proposition is both true and unknown. The paradox of inquiry shows that specifications of the target of a search for knowledge must not presume that the inquirer already knows that which the inquiry is meant to discover, but yet must have at least some conception of what is being sought, enough to get the inquiry going. Inquiry aims at the unknown, but "the unknown" is a

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[8] Crispin Wright (2000, p. 356) makes a similar point: he says that "rational acceptance of either conjunct under 'sufficiently good' epistemic circumstances precludes rational acceptance of the other."

description and not a proper name. It is a black box – one cannot say of some given truth that it is included within it. The thought of the unknown, therefore, guides inquiry only insofar as we reflect on what we do know and become aware of the gaps. This weaker version has an additional doxological virtue: since the "unknown" is a negative entity, an *abhāva*, the restriction is not in formal conflict with Praśastapāda's statement that everything in the six categories 'exists' (*asti*) and is knowable.

The excursus through Ficht's proof has served to throw new light on the nature of Vaiśeṣika realism. It is a realism that can remain coherent as long as no attempt is made to include within our conception of "the world" *all* our own efforts to comprehend and describe it. The Vaiśeṣika willingness to endorse principles of global knowability and denotability reveals the influence of a conception of "the world" that situates knowers and speakers *outside* itself, a conception reminiscent of Wittgenstein's Tractarian conception of the self as a limit of the world (*Tractatus* 5.633). This conception, however, is in tension with another one. The second conception is holistic, and thinks of "the world" as that totality which includes knowers and speakers, knowledge and language. In particular, a theory of such a world includes itself, for any such theory is itself a part of the totality it seeks to describe. Vaiśeṣika metaphysics, as I mentioned at the beginning, embeds human souls, along with all they know and think, within its own folds. And, of course, that comprehensive metaphysics is itself one of the things human beings seek to know; indeed, they must know it if the soteriological claims of the Vaiśeṣika and Nyāya schools are given their due, claims to the effect that it is precisely knowledge of the whole of reality, including ourselves within it, which leads to the highest good (PBh 2; NS 1.1.1). What we have yet to discover is any way to reconcile the theory of everything (including ourselves as theorists) demanded by the soteriology with the realism that sees the world as what remains when we remove ourselves from the picture.

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