Philosophy in Classical India

The proper work of reason

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2 Rationality, emptiness and the objective view

2.1 THOUGHT AND REALITY

Is reality accessible to thought? Could it not be that there are limits on our cognitive capacities, and the way the world is, whatever that might be, is something beyond our powers of understanding? What there is in the world might extend beyond what we, in virtue of our natural cognitive endowment, have the capacity to form a conception of.

The thesis is a radical form of scepticism. It is a scepticism about what we can conceive rather than about what we can know. Nagarjuna (*c*. AD 150), founder of the Madhyamaka school of Indian Buddhism, is a radical sceptic of this sort. Indeed, he is still more radical. His thesis is not merely that there may be aspects of reality beyond the reach of conception, but that thought entirely fails to reach reality. If there is a world, it is a world about which we can form no adequate conception. Moreover, since language expresses thought, it is a world about which we cannot speak.

> Where the reach of thought turns back, language turns back. The nature of things (*dharmata*) is, like *nirvana*, without origin and without decay. (MK 18.7)

> Not dependent on another, calm, not conceptualised by conception, not mentally constructed, not diverse – this is the mark of reality (*tattva*). (MK 18.9)

This indeed is for Nagarjuna the true meaning of the Buddha's teachings, a meaning so disruptive to common reason that the Buddha was reluctant to spell it out.

> For that reason – that the truth (*dharma*) is deep and difficult to understand – the Buddha's mind despaired of being able to teach it. (MK 24.12)

A century of scholarship on the Madhyamaka system has seen a plethora of interpretations. David Seyfort Ruegg has remarked on a situation in which

'the doctrine of the Madhyamaka school, and in particular that of Nagarjuna, has been variously described as nihilism, monism, irrationalism, misology, agnosticism, scepticism, criticism, dialectic, mysticism, acosmism, absolutism, relativism, nominalism, and linguistic analysis with therapeutic value.'[1] More recently, thematic relationships with antirealism[2] and the Derridean technique of deconstruction[3] have received attention. Nagarjuna is certainly a complex and at times ambiguous thinker. He writes in an aphoristic style, he may have shifted his position in the course of his career, and no-one is entirely sure whether many of the works usually attributed to him are his own compositions. The exegetical problems remain fully to be resolved. What we can be sure of is that Nagarjuna did indeed compose two fascinating philosophical documents, the *Middle Stanzas (Mulamadhyamakakarika:* MK) and his *Reply to Critics (Vigrahavyavartani:* V), whose great value lies in the undisputedly radical nature of their ideas. What seems clear is that Nagarjuna thinks that the conceptual scheme implicit in common sense presupposes the existence of a world of stable, self-sustaining objects, and that his philosophical method consists in demonstrating that existential presuppositions of this sort are never true. To reach the sceptical thesis one needs a more general result, that the common-sense scheme is the only possible conceptual scheme. For if nothing of the sort that thought presupposes exists, then anything – if there is anything – which does exist is inaccessible to thought.

2.2 EMPTINESS AND THE OBJECTIVE VIEW

The theory of emptiness (*sunyata*) is Nagarjuna's most celebrated doctrine. It is a theory about the nature of our understanding of our own experience, and its relation to the world. It is a theory about our capacity for objective thought. Experience represents itself as being about external objects, yet all but the most unreflective know that their experience is sometimes misleading. Among Nagarjuna's favourite examples are witnessing the illusory objects conjured up in a magical trick, apprehending an object in a dream, and thinking that the objects of stories and fables, such as the city of celestial musicians, are real (MK 7.34, 17.33, 23.8). We may add holograms, hallucinations, objects seen in film projections. If one is to be able to understand such experiences for what they are, the unreflective view must be replaced with a more objective one, a view achieved by reflecting on the origin of such experiences. One must attain a perspective on one's own experience which enables one to think of illusions, dreams and holograms along with their etiology, and so to explain their occurrence without recourse to the assumption that they have genuine content. The process of stepping back from the contingencies of appearance produces a sequence of progressively more objective conceptions. If the process can be completed, it is completed in the attainment of an 'objective view'[4] or 'absolute conception'.[5]

   Nagarjuna presses us towards an objective view. He observes that there

are types of experience for which, when we place them within our conception of the world, we can find an adequate explanation without having to suppose that there actually exist things of the sort represented in the experience. We are not deceived by the magician's illusion because we can explain the appearance in terms of the magical trick. The new understanding we have come to is a conception of such experiences as ones whose objects are, in Nagarjuna's term, 'empty'. They are empty because they depend for their apparent existence on other factors, such as the magician, the dream, the holographic projector, or the fictional narrative.

> Emptiness is proved on the grounds that things do not have self-standing natures (*svabhava*). The dependent nature of things is what is called 'emptiness,' for a dependent nature is one which is not self-standing. (V 21–22)

> We claim that dependent origination is emptiness. It is a derivative designation, and it alone is the middle way. (MK 24.18)

One is in a position to think of an experience as empty if one can explain its occurrence in terms of a set of causes none of which is an object of the type the experience presents. The ability to think of one's experiences in this way depends on one's having taken the first step towards an objective stance.

Someone who has taken this first step towards objectivity will contrast two kinds of experience. Part of one's experience is now understood as arising in dependence of a deviant etiology. The remainder of one's experience, however, has to be understood in another way, as being about what causes it. The conceptual scheme encoded in common sense offers just such an explanation. What are the key elements in the common-sense scheme, the most deeply ingrained categories in our thinking about the constituents of our surroundings and our interactions with them? In the chapters of the *Middle Stanzas*, Nagarjuna identifies the following concepts: origin, motion, sensory perception, physical objects and their properties, desire, causation, past and future, suffering (*duhkha*), combination, the idea that things have a self-standing nature or essence, bondage and release, agency, the self, the flow of time, creation and decay, and the possibility of error. Our common-sense understanding of the world is as one containing stable, self-sustaining objects which move about and causally influence one another, which we can see in virtue of their causal influence upon us, which are caused to come into being and eventually to decay, and which stand in spatio-temporal relations to one another and to us. The *karma* hypothesis appears here too as a deeply entrenched ingredient in the classical Indian common-sense understanding of moral consequence (Chapter 1.3).

The common-sense understanding of ordinary (non-deviant) experience is of experience as caused by the object it purports to represent. Such experience is said to have a 'support' (*alambana)* in the world of objects (see Chapter

4.10). When one thinks in this way of one's experience as caused by the object it represents, one has a certain conception of objects. They are conceived of as things which can be perceived and can also continue to exist unperceived. Nagarjuna claims that they are conceived of as things which have a 'self-standing nature' or *svabhava*. This complex and ambiguous term conveys notions of permanence, stability, endurance, independence, essence, identity. It stands for the idea of an object which can exist independently of any perception or experience, and which, by existing for a duration of time, can be perceived more than once at different times. It is a conception of things 'out there' which make intelligible our having the experiences we do when no other explanation of their origin can be found.

The common-sense understanding of our experiences and conceptions is a step in the direction of objectivity, a step away from an uncritical acceptance of the existential presuppositions of experience and conception. The crucial move is the next one. Nagarjuna describes it as a move from 'conventional' truth (*samvrtti-sat*) to 'ultimate' truth (*paramartha-sat*). We may regard it as the step from the common-sense scheme to an absolute conception. What happens when we take another step away from appearance, when the conception of these two kinds of experience itself becomes part of what we want to understand? The possibility explored by Nagarjuna is that our conception of experience, as produced by self-sustaining and independent objects, is itself a fiction of the common-sense scheme. To put it another way, when we step back from the common-sense scheme, what we come to understand is that we have no independent conception of an independent reality, but conceive it only as containing things which are not empty. The common-sense scheme applies to such things because we have a category of experience for which we can find no 'deviant' causal explanation. What we now discover is that it is a mistake to take this inability to comprehend all of our experience in the way we comprehend dreams and illusions as grounds for thinking that such experience must be thought of as caused by an explanatorily independent world of objects. Nagarjuna recommends calmness in place of striving for such explanations:

> Those with little understanding who see only the existence and non-existence of things fail to see the calmness of what is experienceable. (MK 5.8)

When one steps out of the common-sense conception and towards an objective view, the view to which one is led is that *all* conception is empty. The idea of experience explained by thinking of it as caused by explanatorily independent objects is seen now for what it is – a fiction of the common-sense scheme. Such experience ought to be conceived of simply as experience for which the experiencer cannot find the explanation. It is the proper function of rationality to lead one to a critical assessment of one's own conceptual

scheme, to an understanding of the operations and deceptions of common sense, and so eventually to an objective view. Nagarjuna's claim is that when reason is so used, the objective understanding one attains is that the 'naive' view, the view that there is a role for objects in the causal explanation of experience, is nothing but an appearance of explanation, created by the naive view itself. An objective understanding is an understanding that all conception and all experience is empty.

> Just like a master, by his magical powers, fashions a magical figure, and this magical figure in turn fashions another magical figure – in that way, an agent is like the magical figure and his action like the other figure fashioned by the first. Afflictions, actions, bodies, agents and effects are like a city of celestial musicians or a mirage or a dream. (MK 17.31–33)

The form of understanding encoded in common sense is more objective than blind trust in one's experience because with it one understands that some experience is 'genuine' and other experience is mere 'appearance'. The new view, the view Nagarjuna thinks can be reached by a critical exercise of reason, is that the explanation of 'genuine' experience offered by common sense is itself a mere appearance of an explanation. Common sense deceives us, just as common experience does. Common experience deceives us into thinking that magical projections and other mere appearances exist. Common sense deceives us into thinking that genuine experience is explained with reference to a world of objects. When we achieve an objective understanding, we realise that common sense is itself the projection of a magician, a magical figure which fashions another magical figure in the form of the distinction between genuine experience and mere appearance. Nagarjuna's point, and it is a theme running right through his work, is that common sense deceives us when it appeals to the idea of an 'independent' object, which explains why we have the experiences we do, but is not itself within the explanatory web. But it is better to accept that some experiences are unexplained, than to appeal to an idea which gives only an impression of being an explanation, but in fact offers no real explanation. The same point is what leads him to his attack on the ideas of an uncaused causer, an unproved prover, an unmoving mover and an unperceived perceiver. The circle of explanation (or causation, or proof, or motion, or perception) must be (but cannot be) closed.

   The Nyaya model of rational inquiry is itself a model embedded within common sense. It is the intuitive, natural, naive account of the rational processes of belief-formation, revision and rejection. For the common-sense appeal to the idea that beliefs are true when they are caused by what they represent is itself a certification of certain methods of belief-formation as rational. Nagarjuna has a quite different conception of the means and ends of rationality.

2.3 RATIONALITY IN MADHYAMAKA

Rationality is the means by which one 'steps back' to a more objective view. Rationality is a mode of critical evaluation of one's conceptual scheme. A more objective understanding is one in which one understands that things are not necessarily as they appear. It is a view from which one can see how and where one's earlier conceptions are misleading. One learns not to trust one's perceptions when a large object far away looks small, or a stick half submerged in water looks bent, and in learning this one exercises a mode of self-critical reason. So too rational people learn not to trust their conceptions when they presuppose the existence of independent, self-standing objects. From the vantage point of an objective view, it is easy to see that one's old conceptions had false presuppositions. The real trick, however, is to be able to expose those presuppositions while still 'within' the old conception, and so to lever oneself up to a more objective view. This levering-up-from-within requires a new way of reasoning: Nagarjuna's celebrated *prasanga-type* rationality. It is a self-critical rationality which exposes as false the existential presuppositions on which one's present conceptions are based.

One feature of those presuppositions is especially important. A conceptual scheme does not presuppose a world of *objects* so much as a *structure of division*. A conceptual scheme is a grid of divisions and relations imposed upon an undifferentiated, amorphous reality. A system of concepts is a way of cutting, grouping and relating. It represents a choice about where the boundaries of objects should fall. Modern studies of the notion of an object encoded in common sense suggest that common sense encodes principles of cohesion ('surfaces lie on one object if and only if they are connected'), principles of contact ('surfaces move together if and only if they are in contact') and principles of continuity ('an object traces exactly one connected path over space and time').[6] Other notions of an object, other carvings of reality, are possible, for example, the notion of an object in Vaisesika ontology (for which, see Chapter 3), or those encoded in modern physical theory. What a conceptual scheme presupposes, then, is that the ways of cutting, grouping and relating which it encodes correspond to natural structures of division and organisation in the world. It is on *this* presupposition that the Madhyamika process of rational self-criticism bears.

A simple example will illustrate the kind of reasoning Nagarjuna thinks is needed if one is to expose the presuppositions of one's conceptual scheme from within. A non-compound monadic concept '*F*' has the following application-condition: it applies only to things which are *F*. It is therefore a concept whose application presupposes that there is a condition which divides the domain into two. For our purposes, the condition can be thought of either as 'belonging to the class of *F*s' or 'possessing the property being-*F*'. Now take an arbitrary object, *a*, from some antecedently specified domain. There are apparently two possibilities for *a*: either it falls under the concept, or else it does not. That is, the two options are:

(I)   F applies to a.
(II) F does not apply to a.

Suppose that one can disprove *both* of these options. How one would try to do this will vary from case to case, depending on the individual concept under scrutiny. But if one is able to disprove (I) and to disprove (II), then the concept in question can have no application-condition. The presupposition for the application of the concept, that there is a condition (class, property) effecting a division within the domain, fails. A later Madhyamika master[7] expresses the idea exactly:

> When neither existence nor non-existence presents itself before the mind, then, being without objective support (*niralambana*) because there is no other way, [the mind] is still.

Sentences are used to make statements, but if the statement so made is neither true nor false, then, because there is no third truth-value, the statement must be judged to lack content.[8]

   Nagarjuna's developed strategy involves a generalisation. A generalisation is needed because many if not most of the concepts under scrutiny are *relational* rather than *monadic;* centrally: causes, sees, moves, desires. When a concept is relational, there are four rather than two ways for its application-condition to be satisfied (Figure 2.1):

(I)   R relates a only to itself.
(II)   R relates a only to things other than itself.
(III) R relates a both to itself and to things other than itself.
(IV)   R relates a to nothing.

As an illustration of the four options, take R to be the square-root relation $\sqrt{}$, and the domain of objects to be the set of real numbers. Then the four possibilities are exemplified by the numbers 0, 4, 1 and -1 respectively. For $\sqrt{0}$ = 0, $\sqrt{4}$ = 2 and also -2, $\sqrt{1}$ = 1 and also -1, while finally -1 does not have a defined square root among the real numbers. The list of four options is what is called in Madhyamaka a *catuskoti.*

> Everything is thus, not thus, both thus and not thus, or neither thus nor not thus. That is the Buddha's [provisional] instruction. (MK 18.8)

> Some say that suffering (*duhkha*) is self-produced, or produced from another, or produced from both, or produced without a cause. (MK 12.1)

> Since every factor in existence (*dharma*) is empty, what is finite and what is infinite? What is both finite and infinite? What is neither finite nor infinite? (MK 25.22)
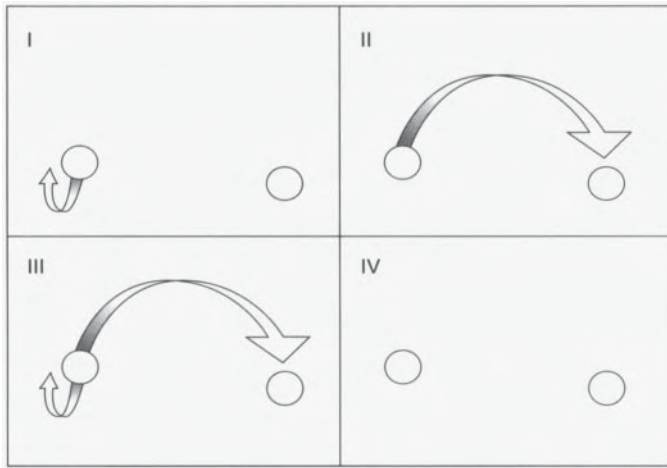
Figure 2.1 The four options.

It is easy to see that the four options are mutually exclusive and jointly exhaustive. For the class of objects to which R relates a is either (IV) the empty set Ø or, if not, then either (I) it is identical to {a}, or (II) it excludes {a}, or (III) it includes {a}. Not every relation exhibits all four options. (I) is not exhibited if R is anti-reflexive. (II) is not exhibited if R is reflexive and bijective. (IV) is not exhibited if R is defined on every point in the domain. Note in particular that if R is the identity relation, then neither (III) nor (IV) is exhibited, not (III) because identity is transitive, and not (IV) because identity is reflexive. Indeed, options (III) and (IV) are not exhibited whenever R is an equivalence (transitive, symmetric and reflexive) relation.

The next step in the strategy is to construct subsidiary 'disproofs', one for each of the four options. Although there is no pre-determined procedure for constructing such disproofs, by far the most commonly used method is to show that the option in question has some unacceptable consequence (*prasanga*). A major dispute for later Madhyamikas was over what sort of reasoning is permissible in the four subsidiary disproofs, the proofs that lead to the rejection of each of the four options. It is a difficult question to answer, so difficult indeed that it led, at around 500 AD, to a fission within the school of Madhyamaka. The principal group (Prasangika, headed by Buddhapalita) insisted that only *prasanga*-type, 'presupposition-negating' reasoning is admissible. This faction is the more conservative and mainstream, in the sense that their teaching seems to be in keeping with Nagarjuna's own method of reasoning. The important later Madhyamika masters Candrakirti and Santideva defended this view. A splinter faction, however (Svatantrika, headed by Bhavaviveka), allowed 'independent' inference or inductive demonstration into the disproofs. Perhaps this was done so that the inductive methods developed by Dinnaga (Chapter 4.7) could be deployed in establishing the Madhyamika's doctrinal position. Clearly, the fewer restrictions one places

on the type of reasoning one permits oneself to use, the greater are the prospects of successfully finding arguments to negate each of the four options. On the other hand, we have seen that the citation of paradigmatic examples is essential to this type of reasoning (Chapter 1.6–7), and it is hard to see how one could be entitled to cite examples in support of one's argument, when the very conception of those examples is in question.

The effect of the four subsidiary disproofs is to establish that none of the four options obtains:[9]

> Neither from itself nor from another, nor from both, nor without a cause, does anything whatever anywhere arise. (MK 1.1)

> One may not say that there is emptiness, nor that there is non-emptiness. Nor that both, nor that neither exists; the purpose for so saying is only one of provisional understanding. (MK 22.11)

The emptiness of the concept in question is now deduced as the final step in the process. For it is a presupposition of one of the four options obtaining that the concept does have an application-condition (a class of classes or relational property). If all four are disproved, then the presupposition itself cannot be true. When successful, the procedure proves that the concept in question is empty, null, *sunya*. This is Nagarjuna's celebrated and controversial '*prasanga*-type' rational inquiry, a sophisticated use of rationality to annul a conceptual scheme.

A statement is truth-apt if it is capable of being evaluated as either true or false. When Nagarjuna rejects each of the four options, he is rejecting the claim that a statement of the form '*a*R*b*' is truth-apt, since the four options exhaust the possible ways in which it might be evaluated as true. But if the statements belonging to a certain discourse are not truth-apt, then the discourse cannot be part of an objective description of the world (a joke is either funny or unfunny, but it cannot be evaluated as true or false). The *prasanga* negates a presupposition for truth-aptness and so for objective reference.

Nagarjuna applies the procedure in an attempt to annul each of the concepts I listed above as the basic ingredients of the common-sense scheme. In each case, his method is to identify a relation and prove that none of the four options can obtain. On closer inspection, it turns out that his argumentation falls into two basic patterns.[10] One pattern is applied to any concept involving the idea of an ordering or sequence, especially the concept of a causal relation, of a temporal relation and of a proof relation. The paradigm for this argument is Nagarjuna's presentation of a paradox of origin (MK Chapter 1), which serves as model for his analysis of causation (MK Chapter 8), the finitude of the past and future (MK Chapter 11), and suffering (MK Chapter 12). The argument seeks to establish that a cause can be neither identical to, nor different from, the effect. If nothing

within the domain is uncaused, then the four options for the realisation of a causal relation are foreclosed.

The other pattern of argumentation in Nagarjuna is essentially grammatical. When a relational concept is expressed by a transitive verb, the sentence has an Agent and a Patient (the relata of the relation): for example, 'He sees the tree,' 'He goes to the market,' 'He builds a house.' The idea of the grammatical argument is that one can exploit features of the deep case structure of such sentences in order to prove that the Patient can be neither identical to the Agent, nor include it, nor exclude it, and that there must he a Patient. Nagarjuna uses this pattern of argumentation in constructing a paradox of motion (MK Chapter 2), and this chapter serves as a model for his analysis of perception (MK Chapter 3), composition (MK Chapter 7), fire (MK Chapter 10), and of bondage and release (MK Chapter 16). Indeed, the same pattern of argument seems to be applicable whenever one has a concept which involves a notion of a single process extended in time. In the next three sections, I will reconstruct respectively Nagarjuna's arguments against causation, proof and motion. What we say about these prototypical cases will apply *inter alia* to all other concepts to which the two basic strategies apply.

2.4 ON CAUSATION

How does the causal argument go? In a passage on the origins of suffering, a theme so central to Buddhist soteriology and the Buddha's teaching, Nagarjuna rehearses the general pattern of argumentation:

> Some say that suffering is self-produced, or produced from another, or produced from both, or produced without a cause. (MK 12.1)

> If suffering came from itself, then it would not arise dependently; surely *those* sensory and bodily aggregates arise in dependence on *these* sensory and bodily aggregates. (MK 12.2)

> When being self-produced is not established, how could suffering be caused by another? Whatever caused the suffering of another must have caused its own suffering. (MK 12.7)

> If suffering were caused by each, it could be caused by both. Not produced by another nor self-produced. How could suffering be uncaused? (MK 12.9)

> Not only are the four options impossible in respect to suffering, none of the four options is possible even in respect to external things (*bhava*). (MK 12.10)

The relational concept under scrutiny is 'originator of'. The object in question here is suffering, but Nagarjuna extends the argument to include

any object within the causal order. Let us then take some arbitrary object, a. The four options are (I) that *a* originates in itself, (II) that it originates in some other, (III) that it originates in itself and originates in some other, and (IV) that it has no origin. And, if we read these passages along with others in the *Middle Stanzas*, the four disproofs have something like the following structure.

Disproof of (I). If *a* is self-originating then it exists and perpetuates itself independently of anything else. For *a* is self-originating just in case a necessary and sufficient cause of its existence at time t is its existence at time $t - δ$, and so on backwards in time. It follows that there is no point in time at which a comes into existence, for its existence at one instant is necessary for its existence at the next. It also follows that there is no point in time at which it goes out of existence, for its existence at one time is sufficient for its existence at the next. So calling something 'self-causing' is just a rather misleading way of saying that it is eternal. This is misleading because it is wrong to think of eternal entities as 'causal' at all. They are outside the causal realm. This is the *prasanga,* the unacceptable consequence of the initial hypothesis.

Disproof of (II). The claim is that only things other than a can be causes of *a*. If *a* originates from some other thing, then one must ask wherefrom this other thing originates. It cannot originate from itself. This is because, in the previous argument, *a* was an object chosen arbitrarily. So that argument will apply with equal force to the originator of *a*. But if the originator of *a* itself originates from some other, we have the beginning of an infinite chain of distinct causes (MK 7.19: 'If another originates this, then origination is infinitely regressive'). It cannot, however, be a matter of logical necessity that the world of objects is infinite.

Disproof of (III). The remaining possibility is that at some point a causal ancestry loops back on itself. An object in such a loop would be caused by all the members of the loop, and so have both itself and other things among its sufficient causes. However, the argument against (I) proved that *a* is not a sufficient cause of itself, and the argument against (II) proved that no other thing is a sufficient cause of *a*. So (III) is disproved by either of the previous arguments.

Disproof of (IV). Can something exist and have no originating cause? One may be inclined to think of numbers, universals and other abstract objects, but Nagarjuna has specified that the argument is applicable only to *bhavas,* and we may take a *bhava* in this context to be an object *within* the causal order. Elsewhere, he insists that 'there is nowhere an existing thing without a cause' (MK 4.2).

An interesting dialectical strategy underpins this sequence of arguments. (I) in general asserts that R relates *a* to *itself and* that R does not relate *a* to any other thing. The disproof consists in showing that R does not *even* relate *a* to itself. Similarly (II) in general asserts that R relates *a* to other things *and* that R does not relate *a* to itself. It is disproved by showing that R does not *even* relate *a* to other things. The arguments against (I) and (II)

are then individually sufficient to disprove (III), that R relates a to itself and to other things.

Suppose we let 'A' stand for 'R relates a to itself,' and that we let 'B' stand for 'R relates a to other things.' The dialectical structure is now:

Option	Thesis	Disproof strategy
I	A & ¬B	disprove A
II	B & ¬A	disprove B
III	A & B	disprove A or disprove B
IV	¬A & ¬B	eliminated by fiat

So (III) is disproved both by the disproof of (I) and by that of (II). Nagarjuna might have chosen a different dialectical strategy here. He might have chosen to disprove (I) by disproving 'A', and to disprove (II) by disproving '¬A'. The disproof of (III) would then follow from the disproof of (I), but not from that of (II). He might also have chosen to disprove (I) by disproving '¬B', and to disprove (II) by disproving 'B.' The disproof of (III) would then follow from the disproof of (II), but not from that of (I). To use either of these alternative strategies, however, one would have to be happy with the idea that a proposition and its negation can simultaneously be disproved. The important point is that, whichever strategy one uses, the disproof of (III) is trivial once one has a disproof of both (I) and (II).

The way that (IV) has been disproved is instructive too. In fact, it is not so much disproved as ruled out by fiat. For we restrict the domain to objects within the causal order, leaving no room for an object within the domain and yet uncaused. This is a characteristic function of the fourth option. It is used to delimit the domain is such a way that everything within the domain has the property under scrutiny (in this case, the property having-an-origin).

Nagarjuna has sometimes been understood differently.[11] It has been claimed that Nagarjuna derives his argument against origin from a paradox about change. Nagarjuna does indeed formulate the paradox of change in one place:

> If a thing were by nature to exist, then it could not fail to exist, for a change of nature is certainly not possible. (MK 15.8)

> In the absence of a nature, what can undergo the process of change? On the other hand, if a nature is present, what can undergo the process of change? (MK 15.9)

The argument against (I) might then be that a thing that comes into being out of itself cannot change from one moment to the next, and if it does not change then nothing *new* has come into being. And an argument against (II) might be that if one thing can change into something completely different from itself,

then there is nothing to regulate what produces what. If an oak tree can originate from an acorn, then why not from a mustard seed? The general strategy here is to argue that once we allow that R can relate a to things other than itself, there can be no regulation as to which other things a is so related. This is the *prasanga*, the unacceptable consequence, of assuming (II).

If this is Nagarjuna's argument, it is a difficult one to defend. The idea that the effect must resemble or pre-exist in its cause has always been enticing, but it has little to recommend it. I think Nagarjuna has a much stronger argument in mind. The idea that things have causes, if applied universally, forces us into the unacceptable position of having to accept infinite causal chains or else causal loops. The alternative, to allow there to be exceptions to the proposition that things have causes and admit there to be uncaused causers, is to make an *unprincipled* distinction. For there is no rational criterion with which to divide things into the caused and the uncaused.

Let me try to clarify the structure of this argument. Graham Priest[12] has shown that there is a general structure common to many of the most familiar paradoxes. A paradox arises whenever one has a function or operation which is bound to a domain and yet which goes beyond that domain. A paradox is thus the result of a pair of arguments. One proves *closure* – that the result of performing the operation in question falls within a given domain. The other proves *transcendence* – that the result of performing the operation in question falls outside the domain. The pattern of arguing from the four options itself conforms to this schema. For I observed that the effect of rejecting option (IV) is to delimit the domain of entities to which the argument applies. So the rejection of (IV) is an assertion of closure. And the rejection of the first three options jointly constitutes the proof of transcendence, that the operation must nevertheless go beyond the domain.

For the paradox of origin, take the domain to be the class C of things which have causal originators, and the operation to be a function d from objects to their originators. The idea behind the proof of transcendence is that the repeated application of the 'originator of' function to an arbitrary object a eventually takes us out of the domain C. The originator of the originator of . . . of the originator of a is not in C:

$$\exists n \; \delta^n a \notin C \qquad \text{Transcendence}$$

Closure, on the other hand, is the thesis that no matter how often the 'originator of' function is iterated, it never maps out of C:

$$\forall n \; \delta^n a \notin C \qquad \text{Closure}$$

The proof of closure is, as I noted earlier, the role of the refutation of the fourth option in the *catuskoti*. For this option states that objects arise uncaused, while closure states that no object lacks a causal originator. I regard this as having the force of a stipulation on what 'object' means in this context.

The function of the first three options in the *catuskoti* is to prove transcendence. Iteration on the 'originator of' function eventually maps out of the domain C. The proof is by reductio. Let us assume that for any value of x, the originator of x is in C. Then either (i) $\delta x = x$ or (ii) $\delta x \neq x$. Now (i) states that x is its own originator – it is option (I) in the *catuskoti*. The argument against this is that if an object is its own originator, then it must be eternal, and if it is eternal then it is not within the causal domain, the domain of things which have causes. That is, if $\delta x = x$ then $\delta x \notin$ C. Calling something 'self-originating' is misleading. It gives the impression that such things do have causal origins, but is really nothing more than a confused neologism for saying that they are eternal and so *acausal.*

Let us suppose then that the originator of x is something different from x. Consider the originator of the originator of x, i.e. $\delta^2 x$. Again, either (i) $\delta^2 x = x$ or (ii) $\delta^2 x \neq x$. The first possibility is that there are loops of causation, in which x is caused by y, and y is caused by x. So the originators of x are x itself and y (I am assuming that causal origination is a transitive relation). This is option (III) in the *catuskoti*, the option that things originate both from themselves and from others. The argument against this is that we again have self-origination, and so again the object is eternal and so acausal. Another objection would be that it contradicts the idea that a cause must precede its effect, but this is not a principle on which Nagarjuna places any great weight.

The only remaining possibility is that $\delta^2 x \neq x$, the originator of the originator of x is not identical to x. Since we have already shown that the originator of the originator of x is not identical to the originator of x (because no object is identical to its originator – the rejection of option (I) of the *catuskoti*), it follows that x, δx and $\delta^2 x$ are distinct entities. Likewise, $\delta^3 x$ cannot be identical to $\delta^2 x$ or δx, and if it were identical to x there would again be a causal loop, this time with three rather than two members. One can clearly go on and prove that the nth order originator of x is distinct from any lesser order originator of x unless two lower order originators of x are identical or there is a causal loop with n members. As long as there are no causal loops, it follows by induction that the nth order originator of x is distinct from all lower order originators of x. So there is an infinite sequence of distinct higher order originators of x. This is the possibility excluded by the rejection of option (II) in the *catuskoti*. One argument would be that the domain C is finite. Another is that causal explanation would be vitiated – one never reaches the explanans.

This then is how Nagarjuna seeks to prove the transcendence part of the paradox. It is interesting to see in Sextus Empiricus a parallel argumentative strategy.[13] The strategy of the Pyrrhonic sceptic is one of seeking to demonstrate that the reasons for and against a thesis are equally strong. The Pyrrhonic sceptic then recommends that the rational course is to suspend all judgment and in doing so to reach a state of equipoise. From an Indian point of view, this would be a route to scepticism via the fallacy of the 'counter-balanced' reason (Chapter 1.9). Sextus[14] argues that it is very plausible that there are causes, for

> [I]f there were no causes, everything would come from everything else, and by chance. For example, perhaps horses would come from mice, and elephants from ants; and in Egyptian Thebes there would have been rainstorms and snow and the south would have had no rain, if there had not been a cause on account of which the south is stormy in winter and the east is dry. Further, anyone who says there are no causes is refuted; for if he claims to make this statement simply and without any cause he will not be worthy of belief; while if he says that he makes it because of some cause, he is positing a cause while wishing to deny it, in granting a cause why causes do not exist.

On the other hand, Sextus argues that it is also very plausible that there are no causes. One of his arguments is that it is impossible to conceive of a cause before apprehending its effect as its effect, and this leads to a circularity. Another argument is that

> [A]s we are questioning the very existence of causes, it will be necessary for him to supply a cause of the cause of there being a cause, and a cause of that, and so on ad infinitum. But it is impossible to supply an infinite number of causes; therefore, it is impossible to assert with firm assurance that anything is the cause of anything.

Another of Sextus' arguments against there being causes is this:

> Whence some people say also the following: The cause must either exist at the same time as its effect, or before it, or come into being after it. But to say that the cause is brought into existence after the genesis of its effect would be ridiculous. But neither can it exist before it, as it is said to be conceived relatively to it, and the Dogmatists hold that relatives, *qua* relative, coexist and are conceived together with one another. Nor can it exist at the same time as the effect; for if it is productive of the effect, and if what comes into being must come into being through the agency of what exists, it is necessary that the cause first become a cause, and then, this being done, produce the effect. Consequently, if the cause comes into being neither before nor at the same time as the effect, and the effect does not come into being before it, it does not, I suppose, have any existence at all. It is also clear, I think, that by these considerations, too, the concept of cause is once again destroyed.

The dialectical aims of Sextus and Nagarjuna are rather different, as I have already observed. In brief the difference is that Nagarjuna thinks that there can be *no* reasons for thinking either that there are causes or that there are no causes, while Sextus thinks that there are plausible reasons for thinking *both* that there are causes and that there are no causes. Yet there are certainly echoes of Nagarjuna in the above passages. Nagarjuna, to be sure, is not as

unclear as Sextus seems to be about the distinction between reasons and causes (although that confusion undoubtedly arose in connection with the Sanskrit term *hetu,* which can mean both 'reason' and 'cause'). On the other hand Nagarjuna's argument against there being reasons, to which we shall turn next, does indeed exploit the idea of an infinite regress, and the pattern of arguing from 'the three times' (past, present and future), which Sextus applies to the question of the existence of causes, is applied by Nagarjuna to the putative existence of movement and other temporal processes.

Nagarjuna's paradox of causation is this: the concept of a cause is incoherent because, *given certain plausible assumptions*, it is self-contradictory. The concept is an empty one, failing to correspond to anything in the structure of the real world: an apparently unacceptable conclusion derived from apparently acceptable premises via an apparently acceptable argument. Something must give! Some authors[15] have claimed to find fallacies in Nagarjuna's argumentation. I accept that Nagarjuna is not above using sophistical tricks, such as equivocation and the like, but I hope that the reconstruction of his argument I have given above is free from the sorts of fallacy of which he has been accused. Another response would be to deny that Nagarjuna is employing the common-sense concept of a cause. His argument depends for its plausibility on the falsity of the following contentions: that to be self-caused is to be causal; that there are causal loops; and that there are infinite causal chains. Might one not argue that one or more of these contentions is consistent with the common-sense notion of a cause? There is, perhaps, nothing so very counter-intuitive about the idea of causal chains stretching back into the infinite past, or of causation going round in loops.

I believe that no such defence of common sense is necessary. The idea that the common-sense scheme is best-suited or even well-suited to provide an adequate explanation of the world has lost its grip with the rise of scientific theory. We are happy to be told that the 'solid' table is really mostly empty space, that there is a finite maximum speed faster than which nothing can travel, and so on. Nagarjuna's error, I suggest, is to be located in the extrapolation of his argument against the coherence of common sense to the coherence of any system of concepts, or rather, in his implicit assumption that the common-sense scheme is the only possible conceptual scheme. I believe that we can accept that he has shown that the common-sense concept of a cause is incoherent, but reject the further claim that the structure of reality lies beyond the powers of human conception. The reason is this. Nagarjuna's method is to expose the existential presuppositions of a conceptual scheme, and demonstrate that they cannot obtain. The truth of any assertion of the form 'x is caused by y' presupposes that there are causal relations, and having shown that there is no value of 'y' for which that assertion is true, the conclusion is drawn that the presupposition fails. The problem for Nagarjuna is that scientific theories do not *presuppose* the existence of entities, but *posit* them. Theoretical terms are introduced

by explicit stipulations. A scientific conception of the world does not rest on a set of existential presuppositions, whose falsity would render the conception empty. It rests on a set of explicit stipulations. So the existence of entities denoted by the terms of such stipulations is not a presupposition of the theory's having content, but that in virtue of which the theory is true or false.

Nagarjuna does not draw the crucial distinction. It is the distinction between the ordinary terms in a language and the terms which are introduced by explicit stipulation. Other Indian philosophers did appreciate the importance of this distinction. The grammarian Bhartrhari, called terms of the first sort *ajanika* 'immanent', and terms of the second sort *adhunika* 'novel'. Great weight was placed on this distinction by the scientific rationalists in India, the Vaisesikas, and especially by Prasastapada (a contemporary of Bhartrhari). The point is that the existence of a reference is *presupposed* only by the use of immanent terms in the language, and not by the use of stipulatively introduced ones, for which the existence of a reference is part of what is explicitly stipulated.[16] This vital distinction shielded the construction of scientific theory from Nagarjuna's destructive arguments, and allowed for a new conception of rationality (see Chapter 3). The great advantage of Dinnaga's formulation of the Buddhist position over Nagarjuna's is precisely that it bears upon the realism of scientific accounts of conceptual structure (Chapter 4). Such structures, he claims, approach reality asymptotically, but never reach it.

I have run ahead of myself. Let us go back to Nagarjuna, and examine his demonstrations of the impossibility of proof and the paradox of motion.

2.5 THE IMPOSSIBILITY OF PROOF

Beliefs are justified with reference to the means by which they are acquired – this is the central claim of the theory of knowledge known as the *pramana* theory (see Chapter 1). Nagarjuna considers the theory to have a flaw so fundamental as to render it paradoxical. His argument depends on what would now be called a 'doxastic ascent'. Ernest Sosa[17] says:

> It is sometimes held, for example, that perceptual or observational beliefs are often justified through their origin in the exercise of one or more of our five senses in standard conditions of perception. The advocate of doxastic ascent would raise a vigorous protest, however, for in his view the mere fact of such sensory prompting is impotent to justify the belief prompted. Such prompting must be coupled with the further belief that one's senses work well in the circumstances, or the like. For we are dealing here with *knowledge,* which requires not blind faith but reasoned trust. But now surely the further belief about the reliability of one's senses cannot rest on blind faith but requires its own backing of reasons, and we are off on the regress.

Nagarjuna's formulation of the criticism is similar:

> If just such objects are established for you through the means of knowing, tell me how you establish those means of knowing. If the means of knowing are established through other means of knowing, then there is an infinite regress (*anavastha*). Neither the beginning nor the middle nor the end can then be established. (V 31–33)

Nagarjuna compares the means of knowing with measuring instruments. Just as one cannot use a pair of scales to measure weight unless one knows that the scales have been properly calibrated, so too one cannot use some method as a means of knowing to 'measure' an object of knowledge unless one knows that the method *is* an adequate means of knowing.

The literal meaning of *anavastha* is 'lack of grounding'. If A is proved through B, and B proves A only if it is itself proved, then a proof of A necessitates a proof of B (the doxastic ascent). The argument iterates, and unless the iteration can be made to come to rest somewhere, A will lack a proof. The doxastic ascent switches the burden of proof from the thing to be proved to the means by which it is to be proved. The idea that such a switching of the burden of proof is legitimate is at one with the idea that it is a fallacy of reason to establish one's conclusion on the basis of unproved reasons. This was the fallacy called the 'unproven' or *sadhyasama*, the reason's being in the 'same predicament' as what is to be proved. Admitting the legitimacy of doxastic ascent is equivalent to accepting that this is indeed a fallacy. Nagarjuna does regard this as a fallacy; indeed, the principal fallacy from which his critics' arguments suffer (MK 4.8–9).

The relations 'is proved by' and 'originates in' both generate infinite chains by being indefinitely iterable. We can ask for the proof of the proof of A, just as we can ask for the originator of the originator of *x*. As in the paradox of origin, there are just two ways to block the infinite regress. One is by appeal to the existence of termini of proof, propositions that are either self-proving or else require no proof. The other is by appeal to the existence of loops of proof, allowing proof relations to go round in a circle. These are options Nagarjuna examines systematically in V 33–51. His objection to the idea that there are two classes of proposition, those that must be proved through some means of knowing and those that need not, is that this distinction lacks any basis in reason:

> If the means of knowing are established without any means of knowing, then your position is abandoned. There is a discordance, and you should state the distinguishing reason (*visesa-hetu*). (V 33)

This is an important methodological point. Distinctions should not be postulated on an *ad hoc* basis. A good philosophical theory tries to give a unified explanation of a diversity of facts. Dividing the facts into different types for which there are

different explanations leaves explanatory gaps in the account. One should introduce a distinction only if it corresponds to some natural division in the phenomena under examination, and not simply to solve a problem in one's theory. To block the threatened infinite regress by saying that there are unproved provers is to postulate a category simply for theoretical expediency, and not because there is any independent ground for doing so.

Even if there is no independently motivated distinction between the unproved and the proved, perhaps there is a well-founded distinction between what is self-proved and what is proved by another. Everything must be proved, but might not the means of knowing be self-proving? This seems to have been the view of Gautama, the author of the *Nyayasutra* (*cf.* NS 2.1.19). The proposal is, it seems, analogical. The sources of proof are like sources of light. A source of light illuminates other things and at the same time illuminates itself. Likewise, a source of proof proves other things and at the same time proves itself (V 33). Nagarjuna is apparently responding to the *Nyayasutra v*iew here. His response is to dismiss as defective the assertion that a source of light illuminates itself! To say that something is illuminated is to say that it ceases to be in the dark. But a source of light is not illuminated, for it is never in the dark, and if it is not illuminated, then it certainly is not self-illuminated. Nagarjuna's point perhaps is that an object is visible just in case light is coming from it, and since this description is true of both illuminators and things illuminated, there is no need to say that an illuminator must be illuminated in order to be visible. There is a hint in this reply of a 'grammatical' basis to Nagarjuna's argument (the influence of grammar on Nagarjuna's way of arguing is much more apparent, however, in the argument we will consider in the next section). The implication is the Agent and the Patient cannot be identical when the verb is 'illuminates'. The statement 'A illuminates A' is not well formed. It is not well formed because 'A illuminates B' means something like 'the addition of A in the circumstances results in B's ceasing to be in the dark,' and that implies that A is something that can be added to a circumstance in which B is already present.

Nagarjuna, I think, employs a sophistical debating trick in this curious argument. The light analogy uses a causative form *pra-vkas,* whose meanings include both 'to make bright, illuminate, irradiate', and by extension 'to make clear, evident, manifest'. The point of the analogy is most plausibly that a source of light makes itself evident *in the very act* of making some other object evident, for the object could not be made evident unless by a source of light. It is only in 'quibbling' on the meaning of a word that Nagarjuna is led in this context to discuss the capacity of light to illuminate itself. What Nagarjuna ought to discuss, but does not, is whether a means of knowing can prove itself *in the very act* of proving something else.[18]

Nagarjuna, fortunately, has another argument against the idea that the means of knowing prove themselves. It is that if they prove themselves

independently of any reference to what it is that they prove, then they cannot be proof of anything (V 40–41). His point is easiest to see if we remember the analogy between means of knowing and measuring instruments. How might one go about 'measuring' a pair of scales, that is to say, checking that it is correctly calibrated? The only way, it seems, is to test its performance against things of known weight. The same is true of a means of knowing such as observation. In order to check that my visual sense is working properly, I test it by reading an optician's chart. If I want to check that I know a method for solving quadratic equations, I solve a few textbook problems and then check in the back of the book that I have the right answers.

Nagarjuna is swift to point out that the method of proof by testing against known cases cannot block the threatened regress (V 42–43). The reason is simple: the test cases must have been established first. An attempt to block the regress along these lines would result in the technical fault of 'proving the proved' (*siddhasadhana*). The methods of proof under investigation are being proved by comparing them to known cases, but those cases are known only because proven by those methods of proof. So one is attempting to prove something which must already have been proved, that the methods of proof in question are adequate and reliable. Couldn't one counter by pointing out that the method of proof used to establish the test case is not the same as the method of proof under scrutiny? I solve the test problems, but someone else prepared the answers in the back of the book. For otherwise one would have the situation which Nagarjuna ridicules when he asks whether a son can be produced by a father and the father by that very son (V 49–50). But it is clear that the alternative is not much better. For if objects have to proved by a means of knowing, and the means by objects, one ends up proving nothing (V 45–48).

Nagarjuna sums up the entire argument in a triumphant final verse:

> The means of knowing are not established by themselves or by one another or by other means of knowing. Nor are they established by the objects known, nor accidentally. Perception is not established by that very perception, inference is not established by that very inference, comparison is not established by that very comparison, and testimony is not established by that very testimony. Nor are they established by one another, i.e. perception by inference, comparison and testimony, inference by perception, comparison and testimony, comparison by perception, inference and testimony, and testimony by perception, inference and comparison. Nor are perception, inference, comparison and testimony established, respectively, by another perception, another inference, another comparison and another testimony. Nor are the means of knowing established by the objects known, taken collectively or severally, included in their own field or in those of the other means of knowing as well. Nor are they established accidentally. Nor are they established by a combination of the causes mentioned before, whatever their number: twenty, thirty,

forty or twenty-six. In these circumstances, your statement 'Because the objects known are to be apprehended through the means of knowing, those things are known to exist as well as those means of knowing' is not valid. (V 51)

This is a fine example of Nagarjuna's general dialectical strategy. The strategy is to find a rule such as 'A proves B only if A is itself proven' or '*x* can cause *y* only if *x* is itself caused', and to make every possible application of the rule onto the domain. What happens when one takes the set of objects (including provers and things proven), and tries to apply the rule at every point, is that one discovers one cannot do it. Nagarjuna then concludes that the rule cannot be applied, and so that the concept it governs is empty.

Formally, the argument follows very similar contours to the argument against causation. The domain is the class of propositions with proofs, and the operation is the function 'proof of *x*'. Here closure is the thesis that every proposition has a proof – there are no unproved provers. Transcendence then follows from the plausible contentions that there are no proof loops, for this would lead to a vicious circle, and that there are no infinitely long proof chains, for this would lead to a lack of grounding. However, while I was willing to accept that Nagarjuna had uncovered an incoherence in the ordinary concept of a cause, I do not think that he has succeeded in anything comparable here. For the rule on which his argument plays, that A proves B only if A is itself proven, is not actually a rule governing the notion of a proof. Some reasons, reasons based on observation, are defeasible – observation in itself provides one with reasons to believe, unless one comes to have reasons to suspect it. So the correct rule on proof by observation is: A proves B unless A is disproven. In other words, proof by observation is non-monotonic.[19] Perception as of a table proves the existence of the table; perception as of a table, together with evidence that one is hallucinating, does not. The Naiyayikas beginning with Uddyotakara were very clear about this.[20]

What happens now to the fallacy of the unproven, on which Nagarjuna said that his refutation depended? One needs to be able to draw a distinction between purely extrapolative reasoning, inference from the observed to the unobserved, and demonstration-based reasoning, a public setting out of one's thesis with supporting reasons and examples. Extrapolation rests on observation, and observation can prove without being proved. The second rule is the right one here, and there is no fallacy of the unproven. Demonstration, however, rests on convincing one's audience by citing reasons, and reasons are convincing only if they are themselves proven. So the proper domain of the fallacy of the unproven is only that of reasoning by demonstration. The crucial distinction one needs is the one Dinnaga was later to codify and make explicit with his terms 'inference for oneself' and 'inference for others'.[21] Once again we see that Nagarjuna's arguments are ones which would have been highly persuasive at the time, and which are refuted only by distinctions clearly recognised much later.

2.6 A NEW PARADOX OF MOTION

Nagarjuna's celebrated argument against motion is interesting in its own right, but it also functions as a paradigm for a pattern of argumentation he thinks is widely applicable. Kamaleswar Bhattacharya[22] has described the argument as having a grammatical basis, because it exploits the Sanskrit grammatical theory of 'deep case' or 'thematic role' (*karaka*). This is a theory of the underlying semantic structure of sentences rather than their surface grammar, and Nagarjuna's argument might therefore be better described as 'semantic'. In any case, the fact is that the argument is a general one, applicable whenever one has statements with certain semantic properties. It does not depend on particular properties of the concept of motion.

The Sanskrit theory of deep case is an approach to the analysis of sentences which takes the verb to be the core of a sentence, around which nouns stand in a variety of relationships. A verb denotes an activity or event, and each noun in the sentence denotes a thematic causal factor connected with that event. In the sentence 'Sita cooks rice,' for example, the activity of cooking has for its Agent Sita and for its Patient rice. Agency is a thematic deep case relation, a relation explicated in terms of Sita having a certain causal role with respect to the activity. One suggestion is to think of the Agent as an affector, and the Patient as the thing affected. The Sanskrit grammarians do not quite say this, however, but prefer to say that the Agent is 'what is independent', and the Patient is 'what is most desired' by the Agent. Other thematic roles capable of being occupied include Instrument ('that by means of which the Agent performs the activity'), Target, Donor and Place (the 'location' of the activity).[23]

When there is a moving, there is also an Agent of moving, the 'mover', defined as that which is moving, as well as a Patient of moving, the 'being moved over', here identified with the Place of the moving. The paradox Nagarjuna exposes is one to do with the nature of such definitions. A thing has the properties by which it is defined, and the mover is defined to be that which is *now* moving. Nothing in the past or in the future can satisfy this definition, for nothing in the past or the future has the property of being *now*. But a movement cannot be entirely in the present moment, for movement requires duration. Similarly, the being moved over is defined to be the place *now* being moved over, and that cannot be a position already moved over, nor a position yet to be moved over. But a movement cannot be located in the point between the already moved over and the yet to be moved over, for movement requires displacement.

> How indeed can it be said that a mover moves, when without a movement there is no mover. (MK 2.9)

> From the perspective of one who thinks that a mover moves, there would be the consequence of a mover without movement. But of a mover there is movement. (MK 2.10)

If a mover were said to move, there must be two movements, one by which he is called a mover, and one by which the mover moves. (MK 2.11)

If without motion one cannot posit a mover, how can one posit a mover standing still? (MK 2.16)

One does not stand still where one is moving, nor where one has moved nor where one has yet to move. Moving, starting to move and ceasing to move are the same. (MK 2.17)

The motion by means of which the mover is so-called is not the motion by means of which he moves. He does not exist before that motion, so what and where is the thing that moves? (MK 2.22)

The motion by means of which the mover is so-called is not different from the motion by means of which he moves. There cannot be two motions in a single mover. (MK 2.23)

So there is no motion, no mover and no place to be moved over. (MK 2.25)

Nagarjuna draws a distinction between the event of movement (*gamana*), or movement at an instant, and the process of movement (*gati*), or movement over a duration. A process of movement cannot be identified with any one event of movement, nor with a succession of such events. For if there are two movements, then there are two movers, and then there is here no single mover in a process of motion. The same argument applies to any process. The seer sees the seen. The 'seer' is, by definition, one who now sees. This is a definition nothing past or future can satisfy, and yet seeing necessarily requires duration, for it is a causal process extending between the seer and the thing seen (MK Chapter 3).

An obvious solution is simply to allow that a single enduring substance can be the 'mover' in a succession of movements. One who wishes to say this has to be able to maintain that an object can be identically present at different times. For only an object present *now* can be that which *now* moves, and only an object present in the immediately succeeding instant can be that which moves at that instant. If these two movers are one and the same, it follows that the mover is identically present at different times. That invites the objection that the mover will be the substratum of contradictory properties. The present movement ceases, and is replaced by the next movement in the sequence; so the mover will both have the present movement and also not have it. But this is impossible.

If it cannot be said that there is a movement without a mover, then how will there be a mover without that movement? (MK 2.7)

Just as a mover does not move, so too a non-mover does not move. Apart from the mover and the non-mover what third thing can move? (MK 2.7)

Later Nyaya writers found a general solution to the problem of contrary temporal properties. Their solution is to introduce adverbial modifiers (delimitors) on the property possession relation. An object as delimited by one time can possess a property, even if the object as delimited by another time does not.[24] This solution was not apparent in Nagarjuna's time. Indeed, the problem of temporary intrinsic properties is a live one even today, where one finds both promoters and detractors of the adverbial solution.[25]

Nagarjuna's argument has naturally been studied in comparison with those of Zeno.[26] Here are Zeno's arguments as reported by Aristotle:[27]

> [The Dichotomy] The first asserts the non-existence of motion on the ground that that which is in locomotion must arrive at the half-way stage before it arrives at the goal.

> [Achilles] The second . . . amounts to this, that in a race the quickest runner can never overtake the slowest, since the pursuer must first reach the point whence the pursued started, so the slower must always hold a lead.

> [Arrow] Zeno argues fallaciously; for if, he says, everything always rests when it is against what is equal, and what is in locomotion is always in the now, the arrow in locomotion is motionless. But this is false, for time is not composed of indivisible 'nows', no more than is any other magnitude.

> [Stadium] The fourth is the one about equal bodies which move in opposite directions past equal bodies in a stadium at equal speed, the one row from the end of the stadium and the other from the middle – in which he thinks it follows that half the time is equal to double.

The only one of Zeno's arguments bearing any resemblance to that of Nagarjuna is the flying arrow, although there is no general agreement in the interpretation of either paradox. Jonathan Lear[28] has proposed an interpretation of the arrow under which there is a substantial agreement with my interpretation of Nagarjuna. The force of the argument, according to Lear, is that the present tense 'is moving' cannot be applied to a period of time, as a period cannot be present, and yet nothing at an instant is moving.

Nagarjuna's paradox of motion is a paradox of definition. The phrase 'the mover' is defined as 'that which now moves'. It is, therefore, defined only for the present time, and not for any past or future time. One cannot truly say that the mover will move or that the mover has moved. One can indeed assert again, a moment later, 'the mover is moving', but this new utterance of 'the mover' is again defined only for its time of utterance. There is nothing in virtue of which one can say that the denotation of the previous utterance is the same as the denotation of this one: whence Nagarjuna's claim that if there are two movements, there must be two movers. Movement, however, requires a duration, and so one can never say that a single thing, the mover, is moving.

Consider again the statement 'the mover will move.' Nagarjuna's argument depends on the claim that, because the phrase 'the mover' is not defined at future times, this statement, uttered in the present, cannot be true. However, 'the mover' *is* defined in the present, and what is to stop us from asserting of some present thing that it will be moving in the future? What stops us is the existence of truth-value links between statements in different tenses uttered at different times. The statement 'a will be F' is now true just in case the statement 'a is F' will be true. So the statement 'the mover will move' is now true just in case the statement 'the mover is moving' will be true. But that future statement can never be true, because the description 'the mover' is not defined at any future time (and a future utterance of 'the mover' is an utterance of a different description, defined only in the future).

The puzzle arises because we are dealing with descriptions of an unusual type, ones whose matrix is an indexical property – the property of being the Agent of a movement occurring *now*. Many definite descriptions are indeed like this, for instance 'the Prime Minister', which is really an abbreviation for 'the *current* Prime Minister'. Clearly, in truth-value links of the sort I have just described, we have to take into account this indexicality in the description. The statement 'The *current* Prime Minister will resign' is true just in case the future statement 'The *past* Prime Minister has resigned' will be true. When we make explicit the shifting value of the temporal index, the paradox disappears. For the truth-value link we are after is this one: the statement 'The present mover will move' is true just in case the statement 'The past mover is moving' will be true. Such truth-value links show how the sentence 'the mover will move' can after all be true.

2.7 SELF-REFUTATION

'With relief, with humiliation, with terror, he understood that he too was a mere appearance, dreamt by another.' Thus ends a story by Jorge Luis Borges entitled 'The Circular Ruins'.[29] It is a story about a magician who sets out to dream into reality another man, and who completes his task only to discover that he himself is nothing but a dream. According to Nagarjuna when one achieves an objective view of one's conceptions, what one finds is that all conception is empty. Does that mean that the objective view is empty too, that the concept of emptiness is as empty of content as the concepts it describes? Does Nagarjuna's thesis defeat itself?. The charge was one vigorously pressed by Nagarjuna's opponents, and in order to respond to it, he wrote a new book, his *Reply to Critics*. This book begins with a formulation of the self-refutation charge:

> If a self-standing nature of things, whatever they may be, exists nowhere, your statement must lack a self-standing nature. It is not, therefore, in a position to deny the self-standing nature of things. (V 1)

Let us recall what the emptiness thesis claims. It claims that no thesis or theory formulated in terms of the categories and concepts of the commonsense scheme has objective content, because a presupposition of that conceptual scheme, that there are self-standing objects, is false. The emptiness thesis itself, however, is not a thesis *within* the common-sense scheme, but a thesis *about* it. It does not itself presuppose that there are self-standing objects. There appears to be a straightforward *non sequitur* in the self-refutation charge, as Nagarjuna himself points out:

> This statement of mine, though lacking a self-standing nature because dependently originated, is engaged in the task of establishing the nature of things as lacking a self-standing nature. In these circumstances, your statement is not proper. (V 22)

Similarly, when Nagarjuna famously claims to have no 'doctrine' (*pratijña*) of his own (V 29), he might simply be using the term 'doctrine' to mean a thesis resting on the same presuppositions as the common-sense scheme, and it is quite evident that the emptiness thesis is not a 'doctrine' in that sense.[30] Indeed, Nagarjuna sometimes speaks as if he has a viable alternative ontology on offer, an ontology consistent with the teachings of the Buddha, in which entities exist only in relations of dependent origination with one another and lack any self-standing nature. The world, in this alternative ontology, is rather like a net, where entities are merely the knots in interlocking ropes of dependent origination, acquiring whatever capacities they have in virtue of their relative position in the whole network and not in virtue of having intrinsic properties (V 22).

This sits ill, however, with the concept scepticism Nagarjuna also avows.[31] If common sense is the only possibility for an objectively well-grounded conceptual scheme, and if even common sense fails, then no conception can be well grounded. The emptiness thesis belongs to an ungrounded, dream-like discourse, and within that dream-discourse other, embedded dreams are described, the dreams that are common-sense theories. Nagarjuna exploits a comparable literary device, the idea of a magic trick *within* a magic trick:

> Suppose a magic man created by a magician should obstruct another magic man created by his own magic and occupied by something . . . [then] the magic man who is obstructed is void, and he who obstructs is also void. In like manner, a negation of the intrinsic nature of all things by my statement is possible, even though this statement is void. (V 23)

Another sort of conceptual ascent has occurred here. It is like a novel the narrator of which is a literary theorist who declares that all novels are merely empty fictions. Within the novel, the narrator's declaration has the desired effect of making the other characters understand better the

nature of fictional discourse. This is so even though the narrator's statement itself is merely an empty fiction. Nagarjuna would like to explain the therapeutic efficacy of his own teaching the same way. His denial that things have self-standing nature can make one see that one's experiences are dream-like, empty, even though that denial is only dream-like too (V 23–28).

It might be argued that Nagarjuna's position is self-refuting because it is self-referential. For the statement 'This statement is empty' is, if true, then empty and so not true, and, if empty, then true and so not empty. The only remaining possibility is that the statement is false. If it is false, then it is not empty, and Nagarjuna is wrong to say that the emptiness thesis is itself empty. Nagarjuna's point, however, is that one can agree that the emptiness thesis is empty without agreeing that it is self-referential. Conception is like a hierarchy of dreams within dreams within dreams, carried on indefinitely. Whenever we take a step back to a more objective view, we ascend a level in this hierarchy, and realise that our conceptions at the previous level were themselves all empty. And this thought, that all those conceptions are empty, is itself recognised as another empty thought when we take the next step through the hierarchy of empty conceptions. So the emptiness thesis is formulated at each level in the hierarchy, but recognised as itself empty in the next level up. It never applies to itself.

Nagarjuna gives up on the idea that conception is 'supported' by the world. Conception is always a dream within a dream. The real problem with the Madhyamaka method is that it is piecemeal. All it can show is that specific concepts, particularly the concepts of the common-sense scheme, are dreamlike, ungrounded, empty. What it does not prove is the emptiness of *all* concepts, and especially those concepts, such as emptiness itself, which do not presuppose that there are self-standing objects. Nagarjuna may have shown that the concepts of common sense have false presuppositions; what he has not shown is that the same is true of any possible system of concepts. Perhaps then there is still another use of reason, a use neither to codify common sense (Chapter 1) nor to leap-frog out of it (Chapter 2), but to construct 'sophisticated' or 'scientific' (non-common-sensical) theories of the world. After examining one such theory, Vaisesika metaphysics (Chapter 3), we will be in a position to see how the Buddhist challenge is reconfigured in the work of Dinnaga (Chapter 4).

FURTHER READING

Texts

Nagarjuna *c*. AD 150, *Mulamadhyamakakarika* (MK, *The Middle Stanzas*).
Nagarjuna, *Vigrahavyavartani* (V, *Reply to Critics)*.
Candrakirti *c*. AD 600, *Prasannapada* (P).

Emptiness (2.1–2)

1   David Seyfort Ruegg, *The Literature of the Madhyamaka School of Philosophy in India* (Wiesbaden: Otto Harrassowitz, 1981).
2   C.W. Huntington, *The Emptiness of Emptiness: An Introduction to Early Indian Madhyamaka* (Honolulu: University of Hawaii Press, 1989).
3   David Burton, *Emptiness Appraised: A Critical Study of Nagarjuna's Philosophy* (London: Curzon Press, 1999).

The four options, the dialectical method (2.3)

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2   David Seyfort Ruegg, 'The Uses of the Four Positions of the Catuskoti and the Problem of the Description of Reality in Mahayana Buddhism,' *Journal of Indian Philosophy* 5 (1977), pp. 1–71.
3   Brian Galloway, 'Some Logical Issues in Madhyamaka Thought,' *Journal of Indian Philosophy* 17 (1989), pp. 1–35.
4   Frank Hoffman, 'Rationality in Early Buddhist Four-Fold Logic,' *Journal of Indian Philosophy* 10 (1982), pp. 309–337.
5   Vijay Bharadwaja, 'Rationality, Argumentation and Philosophical Embarrassment: A Study of Four Logical Alternatives (*catuskoti*) in Buddhist Logic,' *Philosophy East and West* 34 (1984), pp. 303–319; reprinted in his *Form and Validity in Indian Logic* (Shimla: Indian Institute for Advanced Study, 1990), Chapter 4.

Causation, proof, motion (2.4–6)

1   Richard Hayes, 'Nagarjuna's Appeal,' *Journal of Indian Philosophy* 22 (1994), pp. 299–378.
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5   Kamaleswar Bhattacharya, 'The Grammatical Basis of Nagarjuna's Arguments: Some Further Considerations,' *Indologica Taurinensia,* 8–9 (1980–1), pp. 35–43.
6   George Cardona, 'A Path Still Taken: Some Early Indian Arguments Concerning Time,' *Journal of the American Oriental Society* 111.3 (1991), pp. 445–464.

Self-refutation (2.7)

1   Richard Robinson, 'Did Nagarjuna Really Refute All Philosophical Views?' *Philosophy East and West* 22 (1972), pp. 325–331.

2   David Seyfort Ruegg, 'Does the Madhyamika Have a Thesis and Philosophical Position?' in B. K. Matilal and R. D. G. Evans eds., *Buddhist Logic and Epistemology: Studies in the Buddhist Analysis of Inference and Language* (Dordrecht: Reidel Publishing Company, 1982), pp. 229–238.

3   Paul Sagal, 'Nagarjuna's Paradox,' *American Philosophical Quarterly* 29.1 (1992), pp. 79–85.