

## Śaṅkara and the principle of material causation

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**Abstract.** One of Śaṅkara's most fundamental claims is that *nirguṇa brahman*, 'unqualified reality', is the origin of the world of experience. A serious challenge is posed by the Sāṅkhyan philosophers in terms of a principle of material causation, that the properties manifested in the effect are inherited from the material cause. Since *nirguṇa brahman* and the experienced world are so different, the principle implies that the former cannot be the material cause of the latter. Versions of the principle in relation to alternative kinds of candidates for the role of material cause are discussed, considering the particular cases which motivate both Śaṅkara's and the Sāṅkhyans' metaphysics alike. Śaṅkara seems forced to accept an implausible version of the principle by his own analysis of material causation.

### I

Metaphysical systems take many forms. One form, which has many variations throughout the history of philosophy both Western and Eastern, is monism: according to this, reality has a single nature, be it material or non-material. Yet metaphysical monism might still allow for some degree of complexity within that single stuff, or at the greatest extreme might deny any complexity at all. Such an extreme position was taken by the Indian philosopher Śaṅkara, working in the eighth century AD.

Śaṅkara presents his ideas as in essence a restatement of the ancient truths contained within the Vedic tradition, and particularly in those late additions to the Vedic corpus known as the Upaniṣads. In this, Śaṅkara is manifesting his orthodox Hindu allegiance as a 'commentator' on the Vedic literature – a 'Vedāntin'. But Śaṅkara is doing much more than this orthodox task, for his extreme monistic metaphysics is arguably a product of his own peculiar genius, and projected onto the ancient literature as a means of unifying and rationalizing those texts. His monistic, 'non-dual' (*advaita*) approach is strikingly different from that of the other major Vedāntins, Rāmānuja and Madhva of the eleventh and thirteenth centuries respectively.

The very juxtaposition of these two themes, the extreme metaphysical monism of Advaita and the orthodox commentarial project of Vedānta, presents a formidable task for Śaṅkara. After all, the Vedic literature is deeply concerned with the origin of the world of experience which is a complex phenomenon indeed, and Śaṅkara is therefore obliged to construct his philosophy in a way which makes sense of the origin of complexity out of simplicity.

The works attributed to Śāṅkara are quite numerous, but we will concentrate on his commentary on Bādarāyaṇa's *Brahmasūtras*<sup>1</sup>, which commentary is a major and seminal text. Our focus will indeed be even then quite narrow, on some fifteen pages or so of that commentary which runs to some thousand pages in all. These pages constitute Śāṅkara's commentary on *sūtras* 4 to 11 of Chapter II, Section I. Such a narrow focus brings with it a possible interpretative limitation<sup>2</sup> with respect to Śāṅkara's philosophy as a whole, but the philosophical issues are well specified by Śāṅkara within those pages. Moreover, Śāṅkara is dealing there with the very specific problem of the integration of an extreme metaphysical monism with the theme of the origination of complexity, and his difficulties are instructive for monistic metaphysics generally.

## II

Certain kinds of materials are an apt choice for certain kinds of products. You can't make a silk purse out of a pig's ear. If you want to produce milk, you must feed your cow with grass and not with sand. If you want to produce curd you have to start with milk. It seems to be a very significant fact about the world we inhabit that not just anything can be produced out of anything, a fact which might perhaps have been different but only insofar as the laws of nature – if there could be laws in such a different world – would have to be very different from those we know. A metaphysics which ignored this aptness in nature would not be a metaphysics of the world we inhabit.

Talk of aptness is talk of potentiality, of tendency and of latency in the stuff of the world. In theory, at least, a metaphysical story such as Śāṅkara's Advaita which takes reality to be quite different from the experienced world, might avoid imputing any such aptness to its reality at all. But Śāṅkara's metaphysics does not do this. On the contrary, it is a vital part of his story that his candidate for reality – *brahman*<sup>3</sup> – is the origin of the world of experience. *Brahman* is the source of everything that appears to us; *brahman* is both the efficient and the material cause of everything in our world. Śāṅkara is thus committed to making sense of aptness.

<sup>1</sup> Quotations are taken from the translation of Śāṅkara's commentary (Skt *bhāṣya*) on Bādarāyaṇa's *sūtras* by Swami Gambhiranada, *Brahma-sūtra-bhāṣya of Sri Śāṅkarācārya* 2nd ed. (Calcutta: Advaita Ashrama, 1972). An alternative translation, more readily available but less readable, is George Thibaut's in the Sacred Books of the East series, *Vedānta-sūtras with the commentary by Śāṅkarācārya*, first published by Oxford University Press in 1904 (Delhi: Motilal Banarsidass, 1962).

<sup>2</sup> Śāṅkara's text, and the original *sūtras* of Bādarāyaṇa on which it is a commentary, are presented as means by which we may achieve an understanding of the nature of ourselves and of reality generally – and thereby step that much closer to achieving *mokṣa* and leaving the birth–death–rebirth cycle of *saṃsāra*. In submitting Śāṅkara's discussion of material causation to close analytic scrutiny we may well be open to the charge that we are taking his analogies and examples too seriously. This is a risk we inevitably take in entering, as analytic philosophers, into traditions different from our own.

<sup>3</sup> Śāṅkara distinguishes 'unqualified reality', *nirguṇa brahman*, from 'qualified reality', *saṅguṇa brahman*. Unless explicitly stated otherwise, *brahman* is used here to refer to *nirguṇa brahman*.

Thinking about aptness might lead us to believe that the very special connection between the material out of which something is produced and the nature of the product is captured by the following principle, *the principle of material causation*:

PMC: The properties in the effect are inherited from the material cause.

That would at least explain why only material of one type could produce an effect of the right kind. You can produce one thing out of another only if the two share their properties. Śaṅkara does indeed find himself working with such a principle, which his own analysis of material causation drives him into accepting. He nevertheless exhibits a commendable disquiet when faced with certain apparent implications of it. For one thing, if all the properties of the material cause are there in the effect, and no more properties are added to the original ones, how can there be a cause–effect production? Why do we have anything new as an effect? And if there are new properties in the effect, are we not faced once again with trying to understand why the material cause was apt to produce just those new properties and not others?

But Śaṅkara has to face up to a quite serious and simple challenge (posed in his own words in his commentary on Bādarāyaṇa's *Brahmasūtras*, BSB II.i.4–11) which comes from the rival school of Sāṅkhyan philosophers. His response to this challenge is hardly satisfactory, and we will try to see how he could have improved on it. This will involve looking at the various candidates for the role of 'material cause' and exploring to what extent PMC is plausible for those different candidates. We should not expect that all of Śaṅkara's metaphysical claims can be salvaged as a result, not even some of his most fundamental claims.

### III

Śaṅkara and his Sāṅkhyan opponents are equally impressed by the aptness which the world exhibits, and both adopt PMC. The metaphysics they produce are nevertheless strikingly different, even though they use examples of material causation drawn from the same small pool. Curd can only be produced from milk; milk can only be produced from grass; a golden ornament can only be made from gold; you can't make a clay pot out of water alone; and so on.

For the Sāṅkhyan<sup>4</sup> philosopher, the most important application of the principle is an inference from the general nature of the experienced world to its unexperienced original material cause. All things in the experienced world manifest three fundamental properties, whatever else they manifest: *sattva*,

<sup>4</sup> The *locus classicus* for the Sāṅkhyan philosophy is Īśvara Kṛṣṇa's *Sāṅkhya Kārikā*, probably composed during the fifth century AD.

*rajas* and *tamas*<sup>5</sup> – and whatever else they manifest can be analysed in terms of different balances between the three *guṇas*.<sup>6</sup> It appears then to be a plausible inference, given PMC, that the ultimate material cause of these things is something which contains these three *guṇas* and nothing else. This, the *pradhāna*, is the Sāṅkhyan primordial state of nature, *prakṛti*, an equipoise between the three *guṇas* which nevertheless contains the potential to evolve out of that state into the whole variety of things in the experienced world. On the traditional Sāṅkhyan story, first comes *mahat* or *buddhi* – the ‘great one’ or ‘mind’. Next comes *ahamkāra*, the sense of individuality. Then come the materials out of which are made the senses and the organs of motion, and the variety of material bodies including human bodies with which the experienced world is populated.

The Sāṅkhyan is quite explicitly using inference, based upon PMC, to go beyond the experienced to the unexperienced.<sup>7</sup> For him the traditional texts of Hinduism need to be supplemented by such ratiocination to fill out the otherwise woefully incomplete story. But Śaṅkara, even when grappling with the Sāṅkhyan challenge in BSB II.i.4–11, is defending his own claim that reasoning is not the way to proceed in such abstruse metaphysics. Whether Śaṅkara succeeds in this particular aim is not our present concern. It is enough to say that he comes to the conclusion that reasoning has a place after all, but only as an adjunct to intuition. It is none too clear that the Sāṅkhyan position is in the final analysis much different from this.

Śaṅkara’s monistic metaphysics goes as follows. We know, from a careful study of the Vedic literature – particularly from the Upaniṣads – that reality is *nirguṇa brahman*, unqualified consciousness. It is pure consciousness, not diversified by intentionality into consciousness of this or that. We know also that it is the source

from which occur the birth, continuance, and dissolution of this universe that is manifested through name and form, that is associated with diverse agents and experiences, that provides the support for actions and results, having well-regulated space, time, and causation, and that defies all thought about the real nature of its creation. [BSB I.i.2]

*Brahman* is for Śaṅkara – a point frequently reiterated throughout his commentary – both the efficient and the material cause of the experienced world. But where, for Śaṅkara, does PMC figure in all this? In interpreting and

<sup>5</sup> These terms are usually translated as ‘goodness’, ‘passion’ or ‘foulness’, and ‘inertia’ or ‘darkness’ respectively.

<sup>6</sup> Skt *guṇa* = strand.

<sup>7</sup> Descartes uses a similar principle in Meditation III in his attempt at proving the existence of God: that there must be at least as much reality in the efficient and total cause as in the effect. In his reply to one of Mersenne’s objections (see *The Philosophical Writings of Descartes* translated by John Cottingham, Robert Stoothoff and Dugald Murdoch (Cambridge: Cambridge University Press, 1984), vol. II, 97). Descartes takes this to be the same as the principle ‘Nothing comes from nothing’: ‘... the reason why nothing cannot be the cause of a thing is simply that such a cause would not contain the same features as are found in the effect’. For a useful critique of what John Cottingham calls the ‘heirloom’ view of causation, see his *Descartes* (Oxford: Blackwell, 1986), 50–51. I owe this last reference to Jonardon Ganeri.

defending his special reading of the orthodox texts, he offers a theory of causation in which PMC is clearly embedded. Production, change, evolution – these, for the rival Sāṅkhyan philosopher are real events whereby *prakṛti* really unfolds from its original equiposed state to the diverse world which we experience (the theory of real transformation – *pariṇāmavāda*). Not so for Śaṅkara. Production, change, evolution – these for Śaṅkara are *merely apparent* (the *vivartavāda* or theory of apparent transformation). The correct understanding of the ‘production’ of one thing out of another is given by the case of the unfolding of a cloth:

A piece of rolled up cloth is not recognized as to whether it is cloth or something else; but when it is spread out, its real nature becomes revealed through the spreading ... Or even though it is cognized as cloth when remaining rolled up, its length and breadth are not definitely known; but when it is spread out, it is known as possessed of a definite length and breadth. And yet it is never known to be something other than the rolled up piece of cloth. Similarly such products as the cloth etc. are unmanifest as long as they remain latent in their causes, viz yarns etc.; but they are known distinctly when they become manifest as a result of the activity of such causal agents as the shuttle, loom, weaver, etc. So on the analogy of the cloth rolled up and spread out, the effect is non-different from the cause. [BSB II.i.19]

This general theory of apparent change, which includes a commitment to the ‘non-difference’ of the material cause and the effect, commits Śaṅkara to PMC. The material cause and its effect share their properties, since they are after all one and the same thing. There is merely an apparent production of one thing out of another, where really it was already there in the cause all along. We will look at Śaṅkara’s argument for equating material cause and effect later, but note here that Śaṅkara applies it to the case (the one *real* case) of *brahman* as the origin of the world of experience. *Nirguṇa brahman*, unqualified reality, is the origin only in the sense that it merely apparently transforms into the diversity contained in our experience.

#### IV

Śaṅkara proposes the Sāṅkhyan objection to his own position at BSB II.i.4, which in essence is that *brahman* and the experienced world do not share their properties, and hence by PMC the former cannot be the material cause of the latter. In Śaṅkara’s words:

... this universe, that is believed to be a product of Brahman, is seen to be different from Brahman, it being insentient and impure, whereas Brahman is declared in the Upaniṣads to be dissimilar in nature from the universe, It being conscious and holy. It is not a matter of experience that things differing in nature can be related as the material cause and its effect. ... this universe – insentient, full of happiness, misery, and delusion as it is – must be the product of something which is insentient and abounds in happiness, misery and delusion. But it cannot be the product of Brahman, which is dissimilar. That the universe is dissimilar to Brahman is to be understood

from noticing the former's insentient and impurity. This universe is impure because it abounds with happiness, sorrow, and dejection, and as a result leads to enjoyment, grief, and delusion etc. and it remains diversified into such high and low states as heaven, hell, etc. [BSB II.i.4]

Śaṅkara's way of dealing with the challenge admittedly shows a certain ambivalence towards PMC, but by and large he tries to meet the challenge by arguing that his account of *brahman* as the material cause of the experienced world is quite consistent with it after all. Focusing on the issue of *sentience* or *consciousness*,<sup>8</sup> his immediate response is that this property is indeed present throughout the effect, even though it may often be unmanifested because of the absence, in particular objects, of its means of manifestation: 'The non-perception of consciousness is caused by some peculiarity of the transformation. Just as the sentience of the souls, which is a patent fact, is not felt in the states of deep sleep, unconsciousness, etc., similarly the sentience in wood, lumps of earth, etc. can remain unmanifest', [BSB II.i.4]. And later in the discussion he argues that another central feature of *brahman* is also transferred to the effect, namely *existence* [BSB II.i.6].

But on Śaṅkara's account of *brahman* this response really will not stand up. *Brahman* is pure consciousness, not the mundane kind of intentional consciousness which concerns itself with the multitude of differences found in the empirical world. Consciousness in *brahman* and consciousness in sentient creatures are just not the same property, so Śaṅkara should not be trying to argue that what is present in his material cause is also present in the effect. In the same way, existence is hardly a property passed on from *brahman* to the objects in this world, for those objects are – in accordance with *vivartavāda* – merely apparently produced out of *brahman*. *Brahman* is the real, and the objects within ordinary experience are not.

There is a major conflict between Śaṅkara's account of *brahman* as pure consciousness and the real, his belief that *brahman* is the material cause of the world of experience, and his commitment to PMC. Perhaps a recognition of this is behind his otherwise quite odd alternative strategy of attempting to raise doubts about the plausibility of PMC after all:

... it is a matter of common experience that from a man, well-known as a conscious being, originate hair, nail, etc. that are different in nature (being insentient), and scorpion etc. grow in cow-dung etc. known to be insentient.

*Opponent*: Is it not a fact that the insentient bodies etc. of men and others are the sources of the insentient hair, nails, etc, and the insentient bodies of scorpions etc. are produced from the insentient cow-dung etc.?

The answer (of the *Vedāntin*) is: Even so, there is this difference that some insentient things constitute the basis for some sentient beings, while others do not. Besides, the departure from their own source (by hair, nails, etc.) through transformation is very great indeed, since human bodies and hair, nails, etc. differ in

<sup>8</sup> The Sanskrit term *cit* is variously translatable as 'sentience', 'consciousness' and 'intelligence'. Gambhirananda tends to favour the first two and Thibaut the third.

appearance, (size), etc. Similar is the difference between a scorpion etc. and cow dung. Had they been quite similar, the very conception of cause and effect would have vanished. [BSB II.i.6]

Śaṅkara cannot have this reply as well as his previous one. Either he adopts PMC and defends his account of the origin of the experienced world in the light of it, or he moves away from PMC at least in the version in which we have so far formulated it. Perhaps there is a more plausible version which Śaṅkara's (and the Sāṅkhyan rival philosopher's) favourite examples of material causes will support, but before exploring that question it is worth noting yet one more problem which PMC seems to raise for Śaṅkara.

This can be called the problem of inquination.<sup>9</sup> The Sāṅkhyan philosophy includes the idea that the course of creation, from *pradhāna* through to the diverse world as we experience it, is periodically reversed so that the *guṇas* return to a state of equipoise. Śaṅkara is committed to a similar idea in believing that, once ignorance (*avidyā*) has been replaced by a proper grasp of the true nature of *brahman*, the illusion of an experienced world of diversity will no longer be manifested. This question is, will not the end result be tainted by the diversity of the original effect? The challenge is raised under BSB II.i.8, and under the next *sūtra* we find Śaṅkara's reply:

... there are illustrations to show that even though the effects merge in their causes, they do not pollute the latter with their own peculiarities. For instance, such products as plates etc., fashioned out of the material earth, have the peculiarities of being high, medium, and flat during their separate existence; but when they become reabsorbed into their original substance, they do not transfer their individual features to it... Reabsorption itself will be an impossibility if the effect should persist in the cause together with its peculiarities. And though cause and effect are non-different, the effect has the nature of the cause and not vice versa... [BSB II.i.9]

Śaṅkara does indeed point out that the Sāṅkhyan philosopher's position is as much open to this challenge as his own (BSB II.i.10), and perhaps could have pointed out that the problem for that position is even more acute. For the Sāṅkhyan must be treating the process of original evolution and ultimate reabsorption as a continual process whereby an earlier stage is seen as the material cause of a later stage. Śaṅkara's own position need not treat the experienced world at any stage as the material cause of the final elimination of ignorance, so that world is never the material cause of such an effect. His reply does however offer a logically untenable claim about cause–effect relations: cause and effect are non-different, the effect (in accordance with PMC) has inherited its properties from the cause, and yet the cause has none of the properties of the effect. Clearly something has gone very wrong.

<sup>9</sup> In Thibaut's translation. Gambhirananda's translation uses the term 'pollution'.

The term ‘material cause’ (for which the Sanskrit is *upādānakāraṇa*)<sup>10</sup> is undoubtedly a philosophers’ one, and quite what it means must be gleaned from the examples which are used by them. Taking those examples which have been mentioned so far in the debate between Śaṅkara and his Sāṅkhyan opponents, it soon becomes clear that PMC needs to be formulated differently for different kinds of cases if it is to have any plausibility. Śaṅkara’s failure to do this has its explanation in his peculiar insistence on the identity of the material cause and the effect, which drives him into far too simple a version of PMC.

#### *Aristotelian cases*

Some of the examples, though not the most frequently used ones, might be called Aristotelian since they come very close to the kind of thing Aristotle has in mind.<sup>11</sup> Take the case of a golden ornament, fashioned out of gold. We may call the gold the material cause of the ornament, meaning no more than that it is what the ornament is made of. The properties of the gold such as its colour, density and resistance to tarnishing are in a very direct sense ‘inherited’ by the ornament – for the ornament has all these properties (call them ‘ $\alpha$ -properties’) as well as those newly introduced (‘ $\beta$ -properties’) such as shape and value, by the work of the goldsmith. Arguably, the term ‘inherited’ is a little misleading here, since the  $\alpha$ -properties in question are not duplicated in the gold and in the ornament, but are on the contrary one and the same.

We can formulate a plausible version of PMC for Aristotelian material causes as follows:

PAMC: All the properties of the material cause are inherited by the effect.

This has two interesting features, not necessarily shared by plausible versions of PMC for the other cases to be considered. The first is that it claims that *all* the properties of the material cause are ‘inherited’, not just *some* of them. All the  $\alpha$ -properties are in such cases properties of the material cause as well as of the effect. The second is that it does not preclude the introduction of new properties,  $\beta$ -properties such as shape and value, which are due to the craft of the goldsmith. But what of the objection that shape and value are surely there already in the lump of gold before the goldsmith starts his work,

<sup>10</sup> This term, as used by Śaṅkara and the Sāṅkhyan philosophers, is standardly rendered as ‘material cause’. We will see that there are some similarities but also important differences between the term for the Indian philosophers and the Aristotelian sense. Moreover, the distinction between *upādānakāraṇa* and *samavāyikāraṇa* is important: the latter term, used by Nyāya–Vaiśeṣika philosophers, is usually translated as ‘inherence cause’, but Śaṅkara rejects the notion of ‘inherence’ (*samavāya*) as logically untenable.

<sup>11</sup> See, eg, Aristotle’s *Physics*, Book II, ch. 3.



and that his craft involves the modification of these properties and not their introduction? Should we not have  $\gamma$ -properties in the picture too, being properties which are modified from material cause to effect as opposed to simply inherited or newly introduced? The reply is that we should distinguish the Aristotelian material cause from the fabricating material cause discussed below. The whole point of the Aristotelian cases is that nothing is being *done* to the stuff out of which the effect is made. There is no actual production of one thing out of another.

### *Unfolding cases*

The case cited above from BSB II.i.19 of the folded cloth seems to call for a different version of PMC. Let us call that, and like examples, ‘unfolding cases’ – the folded cloth is unfolded to reveal its shape, size, and pattern; the closed bud opens into a leaf to likewise reveal its shape, colour and so on. Unfolding cases are clearly of central interest to Śaṅkara, and a plausible version of PMC might go as follows:

PUMC: All the properties of the material cause are inherited by the effect, and there are no others.

Like the Aristotelian cases, the unfolding cases involve no actual production of one thing out of another, but the sense in which this should be taken is somewhat different now. The central feature is that the work of the unfolder (or nature, in the case of the leaf) introduces no properties which were not there originally in the material cause. All properties in the effect are  $\alpha$ -properties, properties which are identical to those of the material cause. There are no  $\beta$ -properties introduced by the unfolder, for nothing is actually produced out of something else. There equally are no  $\gamma$ -properties, for none of the properties in the material cause are modified by the unfolding.

Yet the unfolding cases differ from the Aristotelian cases in that now something is being done to the material cause after all – though nothing new is being produced, what was there *unrevealed* because of the folded state is now *revealed* by the unfolding. The  $\alpha$ -properties, unchanged though they are in themselves, are such that they are only now available for inspection. Such cases are peculiarly well-suited to Śaṅkara’s *vivartavāda*, by which all production is merely apparent change in the material cause.

But if there are no  $\beta$ -properties, no properties added to the  $\alpha$ -properties of the material cause, might we object that there is really no material cause–effect relation here? Remember Śaṅkara’s suggestion above that the very conception of cause and effect seems to require a difference after all. This is a real problem for Śaṅkara to resolve, for if that suggestion is right it would militate against his claim that there is only an *appearance* of change from material cause to effect. Either the manifestation of previously unrevealed properties is a real change or it is not. The unfolding cases do, whatever

Śaṅkara's final decision would be, nevertheless once again exhibit a peculiarly intimate kind of 'inheritance' of  $\alpha$ -properties, since they are one and the same in the cause and the effect.

*Fabricating cases*

In the quotation above from BSB II.i.19, immediately following the unfolded cloth example, Śaṅkara introduces what seems to be a rather different kind of material cause, notwithstanding his insistence on their similarity. The yarns are brought together by the activity of causal agents such as the shuttle, loom and weaver, and the end product is the cloth. The cloth, we may say, is fabricated out of the yarns. Equally a house is fabricated out of bricks and mortar, and the tree – by the actions of nature – is fabricated out of the atoms which constitute it. For such fabricating material causes we need a rather different version of PMC:

PFMC: Some of the properties of the material cause are inherited by the effect, others are transformed or newly introduced by the process of production.

There are  $\alpha$ -properties which go over without change from the yarns to the cloth, for the colour of the yarns remains unchanged, as do their length, their material (cotton) and their strength. But there are also  $\gamma$ -properties, for amongst other things the relative positions of the yarns are changed so that there are transformations of previously existing properties. And equally there are  $\beta$ -properties, newly introduced in the fabrication of the cloth: the size and shape of the piece of cloth, and the pattern produced by the different colours of the yarns. Without such  $\beta$  and  $\gamma$ -properties there would be no fabrication.

Similarly with the tree. There are  $\alpha$ -properties which go over without change from the atoms to the tree, for after all the tree is fabricated out of them: the distinguishing features of the atoms and their quantity remain the same. But there are also  $\gamma$ -properties, for amongst other things the relative positions of the atoms are changed so that there are transformations of previously existing properties. And equally there are  $\beta$ -properties, newly introduced in the fabrication of the tree: the size and shape of the tree, and the pattern produced by the relative positions of the atoms. Again, without such  $\beta$  and  $\gamma$ -properties there would be no fabrication.

All this makes unfolding and fabricating material causes rather different. Whereas the former transfer their properties through 'inheritance' in a very strong sense, the properties being  $\alpha$ -properties, the latter only transfer some of their properties in that manner. What sense can we make of the relationship between  $\alpha$ ,  $\beta$  and  $\gamma$ -properties? They are not, as we have seen, a simple matter of the effect inheriting properties from the fabricating material cause.

If they were, then the aptness exhibited by nature could be captured by

the simpler sort of PMC contained in PAMC or PUMC. But the aptness of nature is a bit more complicated than that. That there is *some* close connection between  $\alpha$ ,  $\beta$  and  $\gamma$ -properties is what the idea of the aptness in nature implies, but these fabricating cases show that simple inheritance is not always the mechanism of causal production. It is reasonable to assume a connection of some kind between  $\alpha$ -properties which are inherited unchanged and those  $\gamma$ -properties which are the modifications of previously existing properties. And it is reasonable to assume a connection of some kind between both these  $\alpha$  and  $\gamma$ -properties and the new  $\beta$ -properties which are brought about by the activity of the weaver, the builder or nature. It is after all *because* the fabricating material causes have the properties they have that they give rise, in the right circumstances and with the right effort exerted on them to such products as cloth, building and tree. It is because the yarns have a certain colour, shape, texture and so forth that the cloth has the properties it does have; and it is because the atoms are what they are that the tree is what it is. But this is not simply the properties of the material cause being inherited by the effect in either case. To capture this point will mean the introduction of at least one more kind of property, the need for which is perhaps even more clearly shown by the last sort of candidate for material cause.

#### *Cooking cases*

The production of curd from milk involves a complex process of physical and chemical changes, even though the technique is a simple one. Producing milk by feeding grass to your cow is similarly both complex and simple. And the application of heat in a common cooking case brings about complex physical and chemical changes. In general we can call all such processes 'cooking cases', and the general issues raised concerning cooking material causes can be addressed without delving in too much detail into the physics and chemistry. Śaṅkara and the Sāṅkhyan alike make frequent reference to such cases, and their common feature seems to be that they involve the production of something which is in a sense *new* out of material which is peculiarly *apt* for such a product.

The nature of cooking material causation cannot be captured by a simple version of PMC, such as PAMC. For PAMC requires that *all* the properties of the material cause are simply inherited by the effect. Now there probably are *some* such  $\alpha$ -properties identifiable in any cooking case, for example in the production of curd. Curd is a coagulated substance produced from milk by the action of particular acids, and we can specify some such  $\alpha$ -properties as colour and edibility, and undoubtedly physical and chemical continuants as well. Such specification in other cases such as milk production from grass might be more difficult, but in principle it is not likely that we are dealing with a *total* change in the stuff of the cooking material cause in any case. It

is, however, equally easy to specify properties of the cause which are not simply inherited by the effect: in the case of curd, the original liquidity of the milk has been lost, and in the case of the milk the original consistency, structure and colour of the grass have been left behind.

Equally, we cannot capture the nature of cooking material causation by the unfolding version of PMC, PUMC. That principle requires not only that the properties of the material cause are simply inherited by the effect – which we have just seen not to hold for cooking cases – but moreover that there are no new properties in the effect, no  $\beta$ -properties. The version of PMC we need for cooking cases comes closer to PPMC, in that we have to include  $\gamma$ -properties, those which are transformed by the process of production; and we have to include  $\beta$ -properties, those which are newly introduced by that process. And here we begin to understand why a simple version of PMC is really no answer to the question of aptness in nature after all.

Why does the cooking process produce *just those* new  $\beta$ -properties, and *just those*  $\gamma$  modifications of pre-existing properties? What is it about the material cause, such as grass, which explains the properties of the end product, the milk? One way we can answer this is to say that the grass has a peculiar *power* to produce just those changes in its properties and the new properties, given the cooking process involving the cow. The milk is, we might say, *latent* in the grass. And this suggests that we need yet one more kind of property – call them  $\delta$ -properties – which are dispositional in nature. Whatever those properties are in the case of the grass–milk cooking process, it is clear that they are connected with all the other kind of properties introduced above. And it is also clear that this is where an explanation of the aptness of nature is to be found.

A  $\delta$ -property is a dispositional property which a material cause possesses and provides the explanation why, during processes of cooking, the nature of the effect is as it is. The most plausible way to formulate a version of PMC for the cooking cases is therefore along the following lines:

PPMC: Some of the properties of the material cause are inherited by the effect, others are transformed or newly introduced by the process of cooking.

And now we have gone quite a long way from the spirit of the original formulation of PMC, which took simple inheritance as the explanation of the aptness in nature. The  $\alpha$ -properties which are inherited by the effect might in fact be subsumed under the notion of a  $\delta$ -property, for they are trivially properties which the material cause has a disposition to produce under the cooking process. The  $\beta$ -properties which are newly introduced by the process are consequences of the dispositional properties within that process. And the  $\gamma$ -properties which are the modifications of properties existing in the material cause are again to be explained in terms of the  $\delta$ -properties of the cause. All

the work, in trying to explain the aptness of nature, which the original very simplistic idea of simple inheritance was trying to do is in fact now being done by the idea of dispositional properties, powers to produce new properties or modifications of previously existing properties through the process of cooking.

A final version of PMC for the cooking cases might then be:

PCMC: The  $\alpha$ ,  $\beta$ , and  $\gamma$ -properties manifested in the effect are a consequence of the  $\delta$ -properties present in the material cause.

## VI

We have gone through the various kinds of candidates for the role of material cause with which Śaṅkara and his Sāṅkhyan opponents work, and seen that they cannot all be treated in the same manner in the context of PMC. The cooking cases in particular, and arguably the fabricating cases too, require the introduction of a new kind of property to make sense of the relation between material cause and its effect. It is, however, Śaṅkara's position that the different kinds of material causes must all be treated on the model of the unfolding cases.

The unfortunate consequence for Śaṅkara is that, faced with the attack from the Sāṅkhyan philosopher which is framed in terms of such a simple version of PMC, he seems to have no option but to try to argue that the limited number of properties contained within an unqualified *brahman* – pure consciousness and existence – are indeed simply inherited by the effect, the experienced world. And this is a most uncomfortable position for Śaṅkara, since pure consciousness is not at all like the sort of differentiated consciousness – consciousness *of* distinct things in experience – which is manifested (sometimes) in the empirical world, and existence or reality is had *only* by *brahman*.

The reason why Śaṅkara is forced into this position lies in his rejection of the very logical tenability of  $\delta$ -properties. His argument, which is repeated in other sections of his commentary on Bādarāyaṇa's *Brahmasūtras*, is most fully presented in BSB II.i.18. It takes the form of an infinite regress argument against the Nyāya concept of inherence (Skt *samavāya*).

Suppose, Śaṅkara argues, we try to make sense of the aptness of nature by proposing that the material cause has a peculiar *potency* or *power* to produce its effect – that milk has a special potency for curds, of equivalently that the curds are latent in the milk. But how can we conceive of the links between what are being thought of as three distinct things – the cause, its power and its effect? They cannot be merely a matter of conjunction, but must be more tightly connected by the relation of inherence. The power inheres in the cause, and the effect inheres in the power. Yet introducing this relation of inherence raises the question of how it, too, is related to the three terms in

our picture. Inherence is not connected to its terms by conjunction, but has to be taken as itself related by inherence to the terms to which it relates. And an infinite regress is begun.

The way to resolve the regress is, thinks Śaṅkara, to recognize that the Nyāya notion of inherence is untenable. The aptness of nature cannot be understood in terms of power –  $\delta$ -properties – after all, and the relation between material cause and effect is simply one of identity.

Here is Śaṅkara's argument for his doctrine of the identity of cause and effect. Here, too, is his logical proof of the *vivartavāda* doctrine. And here, finally, is the reason behind his adoption of the very simple version of the principle of material causation.

We have seen that very different versions of the principle of material causation have to be formulated for different cases to have any plausibility. The Aristotelian, unfolding, fabricating and cooking cases present us with a number of important differences such that PMC in its original simple formulation is at best a rough sketch of these different principles. Yet Śaṅkara has conflated all these different cases, and treated them all on the model of the unfolding case. We have seen that this is no simple oversight on Śaṅkara's part, but follows as a direct consequence of his explicitly and carefully argued case against the logical tenability of the very idea of a  $\delta$ -property. Since  $\delta$ -properties are rejected, Śaṅkara can claim that an effect is not merely the *outcome* of its material cause but actually *identical* to it. And since effects and their material causes are identical, there is no real transformation involved in the cause–effect process but a *merely apparent manifestation* of the effect. Śaṅkara's quite implausible conflation of the different kinds of material causes is thus logically tied to his central doctrines of the identity of cause and effect, and of *vivartāvada*.

## VII

The simple challenge laid down by the Sāṅkhyan philosophers is a profoundly difficult one for Śaṅkara, being in essence that the fundamental thesis of Advaita Vedānta concerning the nature of *brahman* as an undifferentiated, pure consciousness stands in direct conflict with these other doctrines. It is not at all obvious that Śaṅkara can salvage that thesis. The following approaches<sup>12</sup> clearly lead to unsatisfactory results for Śaṅkara's philosophy as a whole.

<sup>12</sup> The Advaita Vedānta tradition after Śaṅkara is enormously rich in commentarial and independent treatises, which address such difficulties in Śaṅkara's monism. Composed shortly after Śaṅkara were texts by Sureśvarācārya and Vācaspati among others. The limited options I briefly explore here obviously by no means constitute the only possible manoeuvres available to an Advaitin. Which of these options Śaṅkara himself is tempted to take is clearly a matter of interpretation of his commentary on Bādarāyaṇa's *sūtras* and other works. I have assumed that he developed his version of *satkāryavāda* – the prior existence of the effect in the material cause – to give support to his central thesis of *vivartavāda*. As an alternative,

Śaṅkara could follow out the implications of his treatment of material causation, salvaging the ideas of identity of cause and effect and of the merely apparent manifestation of a new effect, by accepting – as he seems tempted to do – that the properties of *brahman* and of the experienced world are indeed the same. Existence is the very same thing for *brahman* and for the diverse and complex world of experienced objects; and consciousness is the very same thing, be it pure or intentional. *Brahman* and its effect are therefore of the very same nature after all. But clearly Śaṅkara would find these consequences most unpalatable – for Advaita Vedānta could no longer hold that reality is but a single, undifferentiated, pure consciousness which is quite unlike the world of ordinary experience.

A second approach would be to reinstate dispositional properties. The relation between material cause and effect could then take the variety of forms we have explored, and the all-important difference between *brahman* and the experienced world could be maintained. But at what price? The doctrine of *vivartavāda* must now be given up, as must the doctrine of the identity of material cause and effect. *Brahman* stands now in relation to the experienced world as a cooking material cause, containing within it the  $\delta$ -properties which give rise to the real properties of that world. Existence and pure consciousness are themselves these  $\delta$ -properties or the non-dispositional grounds of them, and *brahman* is no longer the single, non-differentiated reality of Advaita Vedānta.

Could Śaṅkara limit his account of the production of the experienced world to its relation to *saguna*, rather than *nirguṇa*, *brahman*? After all, *saguna brahman* – conceived as the deity – has all the properties one may wish for to explain the production of that world. Śaṅkara would not need in that case to appeal to the doctrines of *vivartavāda* and the identity of cause and effect. But then, Śaṅkara would have no explanation of the relationship between *nirguṇa* and *saguna brahman* for which those doctrines were proposed. *Saguna brahman* is after all just a special case of an effect of the one fundamental material cause of everything, *nirguṇa brahman*. The Sāṅkhyan challenge does indeed constitute a profound problem for Śaṅkara's Advaita Vedānta.

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we might read Śaṅkara as defending *satkāryavāda* on the level of the experienced world alone: that would be to see Śaṅkara taking the final of the options discussed, leaving *vivartavāda* unsupported by that thesis and the relation between *nirguṇa brahman* and the experienced world simply unexplained. The philosophical tension between Śaṅkara's extreme metaphysical monism and his orthodox project of defending the origination theme of the Vedic literature would then be dissolved, but then so would be the expectation that the monism would rationally consolidate that literature.