

Deconstruction, Postmodernism and Philosophy of Science: Some Epistemo-critical Bearings

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Abstract. *This essay argues a case for viewing Derrida's work in the context of recent French epistemology and philosophy of science; more specifically, the critical-rationalist approach exemplified by thinkers such as Bachelard and Canguilhem. I trace this line of descent principally through Derrida's essay 'White Mythology: Metaphor in the Text of Philosophy'. My conclusions are (1) that we get Derrida wrong if we read him as a fargone antirealist for whom there is nothing 'outside the text'; (2) that he provides some powerful counter-arguments to this and other items of current postmodern wisdom; (3) that deconstruction is more aptly viewed as continuing the epistemo-critical approach developed by thinkers like Bachelard; and (4) that it also holds important lessons for philosophy of science in the mainstream Anglo- American 'analytic' tradition.*

I

Very often deconstruction is viewed as just an offshoot – or a somewhat more philosophical sub-branch – of that wider cultural phenomenon that goes under the name of postmodernism. In what follows I propose to challenge this idea by contrasting some of Derrida's arguments with those typically advanced by postmodernist thinkers. It seems to me that one important difference between them, one reason why (to put it very simply) Derrida's work is 'modern' rather than 'postmodern', is that deconstruction is closely related to a distinctive tradition of thought about issues in epistemology and philosophy of science.¹ This is not – I should stress – just a preferential gloss or just one reading among the multitude that are licensed by Derrida's notion of interpretative 'freeplay', often (and wrongly) construed as *carte blanche* for inventing all manner of perverse and ingenious games with texts. Thus Derrida is routinely taken to assert that texts can be read however one likes since there is nothing – no appeal to context or authorial intent – that could possibly decide the issue or limit the range of permissible options in any

given case. On the contrary, he has often been at pains to repudiate this 'anything goes' approach and to lay down stringent criteria for what properly counts as a deconstructive reading (Derrida, 1973; 1975; and, 1982).² Moreover, he has provided numerous examples – for instance in his writings on Plato, Aristotle, Kant, Hegel, Husserl, J. L. Austin and others – of the way that deconstruction both respects and complicates those received (conservative but none the less essential) standards of interpretative truth.³ I shall here look at one particular instance – his essay *White Mythology: Metaphor in the Text of Philosophy* (1982) – since it brings out very clearly the kinds of misreading to which Derrida's texts have been subject by commentators (literary theorists chiefly) who take for granted his indifference to any such standards.

If you read *White Mythology* with adequate care, and without these fixed preconceptions, then you will see that Derrida is simply not saying many of the things that postmodernists want him to say. Indeed, very often, he is saying exactly the opposite. One familiar postmodernist line on Derrida – adopted, for instance, by Richard Rorty (1982) in a well-known essay – is that there is no need to bother with all that difficult (mostly pre-1980) 'philosophical' stuff since his later writings have shown us the best way beyond such narrowly technical concerns.⁴ Rather than work through the complicated arguments of texts like *Speech and Phenomena* (1973) or *Of Grammatology* (1975), we had much better skip straight forward to those gamy productions, such as *The Post Card: from Socrates to Freud and beyond*, where Derrida throws off any lingering attachment to that old 'logocentric' discourse of reason and truth (Derrida, 1987). This approach tends to work out as a series of vaguely deconstructionist slogans or *idées reçues*: 'truth is a fiction', 'reason is a kind of rhetorical imposture', 'all concepts are forgotten or sublimated metaphors', 'philosophy is just another "kind of writing"', and so forth. This is Rorty's postmodernist summation of Derrida and it is one that has understandably gone down well in departments of English or Comparative Literature. (It also appears to have convinced many philosophers that reading Derrida is not worth their time and effort.)⁵

Traditionally, philosophy thought of itself as a specialized, exacting, intellectually rigorous discipline for evaluating truth claims or addressing issues that lay beyond the remit of other, more regional sciences. Above all, it claimed to be a constructive or problem-solving endeavour that brought its special expertise to bear on a range of well-defined topics and problems. Rorty rejects this received self-image as one that has held philosophers captive, that has given them a sense of having something uniquely important to say at the cost of rendering their work simply dull or unintelligible to the vast majority of readers. It goes along with other time-worn metaphors that philosophers have mistaken for concepts, like that of the mind as a 'mirror of nature', or of epistemology as first philosophy since only a theory of knowledge can

provide adequate ‘foundations’ or indubitable ‘grounds’ for our diverse projects of enquiry (Rorty, 1979).

However this picture is now (at last) losing its hold, having more or less defined what philosophy was – or took itself to be – from Plato to Descartes, Kant, Husserl, and the mainstream ‘analytic’ tradition. On the contrary, Rorty urges: philosophy at its best tells us new stories, invents new metaphors, devises new ways of enriching or enlivening the ‘cultural conversation of mankind’. Of course it includes the kinds of story or metaphor that mainstream philosophers are happy with, stories like that of philosophical ‘progress’ as a gradual achievement of conceptual clarity over well-defined problem areas, or kindred metaphors like that of reason as a source of ‘clear and distinct’ ideas. However these tend to be boring, predictable, uninventive stories and metaphors which just recycle the same old themes with some occasional minor variation. Thus the great virtue of Derrida’s texts, for Rorty, is that they show how philosophy can learn to live down to its status as just another ‘kind of writing’ along with all the others, while also living up to this new-found challenge of inventing fresh and original styles of self-description.

But we shall miss the whole point of Derrida’s writing – so Rorty believes – if we take him too much at face value when he slips back into the old style of offering distinctively ‘philosophical’ arguments in the Kantian transcendental or ‘conditions of possibility’ mode. Such arguments may seem to play a large role in some of his early works, as when Derrida reads (say) Rousseau or Husserl on the relation between nature and culture, speech and writing, or the phenomenology of time-consciousness.⁶ Nevertheless we should do much better to assume that these are just apprentice exercises which show Derrida still in the grip of an old philosophical fixation, a habit of thought that he will soon throw off once he sees (like Rorty) that there is just no mileage in pursuing those long superannuated questions. At which point we shall have to acknowledge – again like Rorty – that the best of Derrida is not to be found in his carefully argued early ‘analytical’ texts but in texts that adopt a playful, irreverent, and ‘literary’ stance toward the history of earnest philosophical debate from Plato to Heidegger *et au-dela*.

Now I think it can be shown that Rorty is quite simply *wrong* about Derrida. *White Mythology* is especially instructive in this regard since it offers a lengthy, detailed, and (above all) a meticulously argued account of the role of metaphor in various texts of the Western philosophical tradition from Aristotle to Gaston Bachelard. Up to a point, I should acknowledge, Derrida does say some of the things that Rorty wants him to say. That point is quickly reached – but then just as quickly superseded – in an essay which contains some of the most penetrating commentary ever written on this topic of metaphor *vis-à-vis* the discourse of logic, concept, and reason.

Thus Derrida remarks (following Nietzsche and Anatole France) that philosophy is full of metaphors, figural expressions that were once – presumably – recognised as such but were then literalized, transformed into concepts, and hence became blanched or erased into a kind of subliminal *White Mythology* (Nietzsche, 1964; France, 1923). The very word ‘concept’ is a metaphor from the Latin for ‘taking together’, that is to say, for comprehending various ideas (perceptions, impressions, images etc.) through a relatively abstract process of thought. ‘Comprehension’ is another such metaphor deriving from a kindred etymological root, namely, the idea of intellectual *grasp* as achieved by the mind’s active synthesising power. ‘Metaphor’ is itself a metaphor; in present day Greek it signifies a mode of public transport, a tram or a bus, something that carries you from one place to another, just as metaphors provide the vehicle whereby meanings are transported from one context to another. So the notion of metaphor is in some sense *literally* metaphoric. But ‘literal’ is also a metaphor since it derives from the Latin word for *letter*, i.e., the notion that by looking intently at the letters on a page you can figure out their literal (non-metaphoric or plain prose) meaning. And the same applies to more abstract terms such as ‘theory’. *Theory* derives from the Greek *thea* (= ‘spectacle’) and its verb-form *theorein* (= ‘watch’, ‘spectate’, ‘witness’). So *theatre* is a place where you watch events unfolding out there, in front of you, on the stage, whereas *theory* involves a kind of inward theatre where ideas, concepts, or representations pass before the mind in a state of contemplative review.

Derrida offers a whole series of further such examples, metaphors whose original (‘literal’) meaning derived from the sensory or phenomenal realm, but which were then taken over – so this argument runs – by the abstract discourse of philosophy and thereafter subject to a process of attrition whereby that original meaning was progressively erased. For the most part these metaphors have to do with seeing, with the visual or ocular domain (‘insight’, ‘theory’, the Cartesian appeal to ‘clear and distinct ideas’), or with tactile analogies such as ‘grasp’, ‘comprehension’, or ‘concept’. In each case this passage from the sensuous to the abstract – or from image to idea – is conceived in terms of a parallel decline from the vividness of poetic language to the abstract rigours of conceptual or philosophic thought. Hence Derrida’s title *White Mythology* (*La mythologie blanche*), taken from a Nietzsche-inspired dialogue by Anatole France which arraigns the metaphysicians as a ‘sorry lot of poets’ whose language no longer possesses that power to express or evoke the vivid particulars of sensuous experience (France, 1923, p. 213).

Such was of course Nietzsche’s great complaint against philosophy from Socrates down: that it had lost the courage of its own root metaphors (the sorts of ‘poetic’ expression to be found in the pre

Socratics: ‘everything is fire’, ‘everything is water’, ‘constant change is the principle of all things’) and turned toward a language of lifeless abstraction and arid conceptual precision. For Heidegger, likewise, Socrates figured as the first philosopher of antiquity whose thinking set this unfortunate process in train and who stands behind the whole subsequent course of ‘Western metaphysics’ as a discourse given over to abstract conceptions of truth, justice, beauty, and so forth (Heidegger, 1968; 1971; and, 1975). In short, these thinkers all take the view that the passage from metaphor to concept – or from poetry to philosophy – is a process of epochal decline, one that has worked constantly to obscure that original sense of metaphoric richness and vitality.

Now one might very well be forgiven for reading the first section of Derrida’s *White Mythology* as yet another meditation on this same sorry theme in the manner of Nietzsche, Heidegger, and Anatole France. (Indeed, this portion of the essay is largely devoted to a detailed critical commentary on France’s dialogue ‘The Garden of Epicurus’.) Certainly Derrida stresses the point that philosophy can never fully account for its own metaphorical resources – never survey them from outside and above – since there will always be metaphors that somehow escape its conceptual net, figures of thought so deeply ingrained in the discourse of philosophic reason that they lack any alternative means of expression. Strictly speaking, these figures are examples of the trope *catachresis*, terms for which there exists no literal counterpart, and which cannot be defined or paraphrased without falling back on some other, equally metaphorical substitute term. Thus philosophy will always at some point encounter a limit to its powers of conceptualisation, its attempt to devise a general tropology – a theory of metaphor or philosophy of rhetoric – that would properly control and delimit the field of its own metaphorical production. In Derrida’s words, ‘it gets “carried away” each time that one of its products – here, the concept of metaphor – attempts in vain to include under its own law the totality of the field to which the product belongs’ (1982, p. 219). That is to say, there will always be at least one metaphor that necessarily escapes definition since it plays a strictly indispensable role in the process of conceptual elucidation and critique. (Consider the terms ‘metaphor’ and ‘definition’, along with the phrase ‘conceptual elucidation’, as deployed in the foregoing sentence.)

So one can see why some commentators – Rorty among them – have read *White Mythology* as a wholesale assault on the concept/metaphor dichotomy, along with other cognate distinctions such as those between reason and rhetoric, constative and performative language, or – by extension – philosophy and literature. From here, very often, they have proceeded to draw the lesson that philosophy is indeed just a ‘kind of writing’, a kind that has up to now been distinguished mainly by its failure to acknowledge that fact, but which might yet shed its grandiose

delusions and come to play a useful, if scaled-down, role in the ongoing cultural conversation. To be sure, this account is plausible enough if one gets no further than the early part of *White Mythology*, the part where Derrida is more or less paraphrasing Anatole France and a certain, currently fashionable reading of Nietzsche. But then, in the remainder of the essay, Derrida mounts a second line of argument which effectively turns this thesis on its head. That is to say, he points out that if we are going to think about metaphor at all, or think about it to any purpose, then we shall have to acknowledge that all our concepts, theories, or working definitions of metaphor have been based on certain *philosophical* distinctions, notably that between concept and metaphor. Moreover, they have been refined and developed throughout the centuries by thinkers – from Aristotle down – who have thought about metaphor always in the context of other philosophical concerns.

Thus, in Aristotle's case, the theory of metaphor is closely tied up with his theory of *mimesis* (or artistic representation), and this in turn with his thinking about language, logic, grammar, rhetoric, hermeneutics, natural science in its various branches, epistemology, ontology, and ultimately metaphysics as that branch of knowledge that contains and subsumes all the others (Aristotle, 1924; 1933; 1963; and 1984). In other words, the discourse on metaphor is always a discourse that takes its bearings from philosophy, even when attacking philosophy's pretension to master the field of metaphor. So we cannot simply say that 'all concepts are metaphors', or that philosophy is just another 'kind of (metaphoric) writing', because this circles back to the prior question: what is metaphor? In order to address that question we shall need to take account of those various theories of metaphor that have been advanced either by philosophers (from Aristotle to Max Black and Donald Davidson) or by literary critics (from Aristotle, again, to theorists such Coleridge, I. A. Richards, or William Empson) whose work has drawn upon a whole range of philosophically-elaborated concepts and distinctions (Black, 1962; Davidson, 1984; Empson, 1951; Richards, 1936). Thus the question arises: 'can these defining tropes that are prior to all philosophical rhetoric and that produce philosophemes still be called metaphors?' (Derrida, 1982, p. 255). Any answer will clearly involve something more than a simple re-statement of the Nietzschean (or quasi-Nietzschean) case for inverting the traditional order of priority between concept and metaphor. That is, it will also at some point need to acknowledge that 'the criteria for a classification of philosophical metaphors are borrowed from a derivative philosophical discourse' (1982, p. 224). And although that discourse is itself 'derivative' (i.e., dependent on certain metaphors, those of 'dependence' and 'derivation' among them) it still provides the only possible means of examining metaphor's ubiquitous role in the texts of philosophy. For, as Derrida writes, 'the general taxonomy of metaphors – so-called

philosophical metaphors in particular – would presuppose the solution of important problems, and primarily of problems which constitute the entirety of philosophy in its history’ (1982, p. 228).

No doubt those problems (ontological, epistemological, metaphysical, etc.) are as far from having been solved as philosophy is from attaining a full-scale systematic grasp of the various metaphors that make up its own discourse. But this is precisely Derrida’s point: that we cannot advance a single proposition on the topic of metaphor (least of all on its role in the texts of philosophy) without redeploying a whole range of philosophical terms and arguments, among them the concept/metaphor distinction as developed by philosophers, rhetoricians, and literary theorists from Aristotle down. Thus ‘[t]he concept of metaphor, along with all the predicates that permit its ordered extension and comprehension, is a philosopheme’ (1982, p. 228). A ‘philosopheme’, that is, in the sense that it belongs with those other ‘fundamental and structuring’ tropes which have hitherto defined the very nature and scope of genuine philosophical enquiry. These latter include ‘the opposition of the proper and the non-proper, of essence and accident, of intuition and discourse, of thought and language, of the intelligible and the sensible’ (1982, p. 229).

In order for those distinctions to be held in place it is necessary also that metaphor should occupy a strictly subordinate role *vis-à-vis* the discourse of philosophic reason and truth, a role wherein it can always be treated as a kind of ‘detour’ – a tropological swerve – on the path toward proper or literal signification. In which case one would have to suppose ‘that the sense aimed at through these figures is an essence rigorously independent of that which transports it, which is an already philosophical thesis, one might even say philosophy’s unique thesis, the thesis which constitutes the concept of metaphor’ (Derrida, 1982, p. 229). Undoubtedly Derrida – like Nietzsche before him – sees this as a strictly impossible ideal, one that ignores all the complicating factors which arise whenever philosophy attempts to bring metaphor under the rule of concept, system, or method. However, one should also take note of the numerous passages in *White Mythology* where Derrida insists that any adequate (philosophically informed) treatment of metaphor will need to respect those traditional requirements – of rigour, clarity, conceptual precision, logical consistency, and so forth – which find no place in the postmodern-textualist view of philosophy as just another ‘kind of writing’.

II

White Mythology is therefore a crucial text in Derrida’s *oeuvre* because it shows that he is still very much engaged with distinctively philosophical

interests and concerns. To be sure, he is far from endorsing the idea of philosophy as some kind of master discourse, a discourse uniquely or exclusively aimed toward truth, and marked off from other disciplines by its ethos of pure, 'disinterested' enquiry. However, he is equally far from suggesting that we should henceforth simply abandon such 'logocentric' notions and treat philosophy as one more language game or optional style of talk. Indeed, as can be seen in *White Mythology*, Derrida is still practising what is surely the most basic and distinctive form of philosophical argument, one that goes back to Plato's dialogues but which receives its most elaborate development in Kant. This is the transcendental mode of argument, the argument from 'conditions of possibility'; that which consists in asking questions of the type: How is it possible for us to have knowledge and experience? What are the necessary conditions for such knowledge and experience? How is it that we can understand other people? How is it that we can treat other people as different from ourselves, but also as belonging to a communal realm of intersubjectively intelligible thoughts, meanings, and beliefs (Derrida, 1978)?⁷ And again: What are the necessary conditions for any theory or concept of metaphor, given the extent to which all such theories or concepts are themselves caught up in a chain of metaphorical swerves, displacements, and substitutions which philosophy can never fully control or comprehend?

In this last case, as so often in Derrida's work, the argument takes a negative transcendental (or 'condition-of-*im*possibility') form, where the upshot is to show that certain distinctions cannot be drawn in as clear-cut a fashion as philosophers have sometimes supposed (Gasché, 1986). Thus Derrida devotes a long section of *White Mythology* to discussing the role of metaphor in science and the attempt of various thinkers – from Aristotle to Bachelard and Canguilhem – to specify the precise point at which scientific concepts emerge from a pre-scientific matrix of metaphor, analogy, image-based thinking, and such like 'anthropomorphic' residues. Predictably enough, he raises certain doubts as to whether that point of transition can be fixed or defined, since any such attempt must assume the possibility of drawing a clear-cut distinction between metaphor and concept, and it is just this distinction which – according to Derrida – will always turn out to elude philosophy's utmost conceptual grasp. Nevertheless there is a sense (*pace* the cultural relativists and the 'strong' sociologists of knowledge) in which science does make progress, does advance – in Bachelard's phrase – from 'less efficient' to 'more efficient tropic concepts', and does develop increasingly precise criteria for testing its various hypotheses, theories, observation-statements, and so on (Bachelard, 1938; 1949; 1951a; 1951b; 1953; 1968; 1984). Moreover, the result of this endeavour is most often to exclude (or at any rate to minimise) any errors brought about by the residual attachment to naive, 'common sense', or

anthropomorphic habits of thought. In short, it involves what Bachelard describes as an ongoing process of ‘rectification and critique’, a process whereby certain metaphors (and not others) prove themselves capable of further refinement to the point where they attain a sufficient degree of conceptual or descriptive-explanatory grasp. His examples include the tetrahedral structure of the carbon atom, a ‘tropic concept’ whose history nicely illustrates this progress from the stage of intuitive analogy or illustrative metaphor to the stage of well-supported scientific theory.

Georges Canguilhem, Bachelard’s student, took a similar approach in his work on the history of biology and the life sciences (Canguilhem, 1969a; 1969b; 1978; and, 1988). Here also he discovered some striking cases of advances that could have come about only through the ‘rectification’ of various images or metaphors which started life (so to speak) as borrowings from some other, roughly analogous domain, but which were then subject to the same process of conceptual elaboration and critique. Thus, to take one of Canguilhem’s best known examples: the idea of the cellular structure of organic matter was at first a largely metaphorical notion, one whose intuitive appeal lay in its conjuring up certain anthropomorphic or ‘affective’ values (Canguilhem, 1969b, p. 49 ff.).

These values had to do with cooperative labour, with the image of life at its most elementary level as involving forms of complex reciprocal reliance and support, like the patterns of activity manifested by bees in a beehive. So the cellular theory started out as a metaphor, a useful and suggestive metaphor, certainly, but as yet still tied to an image-based, affective, analogical phase of thought that must be seen as typifying the pre history of the modern (‘mature’) life sciences. For it is a main point of Canguilhem’s argument – like Bachelard’s before him – that science is a progressive enterprise, that its progress involves the advancement through stages of ‘rectification and critique’, and moreover, that historians and philosophers of science have to take their bearings from the current best state of knowledge in any given field. For we should otherwise have no means of distinguishing between scientific truth and falsehood, between successful and unsuccessful theories past or present, or again (to adopt Imre Lakatos’s terminology) between ‘progressive’ and ‘degenerating’ research programmes (Lakatos and Musgrave, 1970). Nor could we make any distinction, on other than pragmatic grounds, between thoroughly discredited or falsified theories (such as Priestley’s phlogiston-based theory of combustion), and those – like Black’s ‘caloric’ hypothesis – which can be seen to have contributed importantly to later scientific developments (in this case the theory of specific heat), even though they involved certain false suppositions. Thus Bachelard speaks of two kinds of history, *histoire sanctionnée* and *histoire perimée*, the first concerned chiefly with episodes that have played some role in the

growth of scientific knowledge to date, the second with episodes that must appear 'marginal' because they made no such contribution.

I hope it will be clear by now why I have taken this brief excursion *via* recent French philosophy of science in the critical-rationalist line of descent from Bachelard to Canguilhem. For it is a point worth making – and one seldom made by Derrida's commentators, friendly or hostile – that his work belongs very much in that line, whatever the problems he raises with regard to the concept/metaphor distinction or the idea of philosophy as a discipline equipped to survey, delimit, or control the field of its own metaphorical production. Most importantly, he shares Bachelard's concern with the *conditions of possibility* for scientific knowledge and also for the kinds of knowledge achieved through philosophical reflection on the history of science at its various stages of development. Moreover he insists – again like Bachelard – that these projects of enquiry, though closely related, cannot be simply run together in a way that would annul the distinction between *histoire sanctionnée* and *histoire perimée*, or history of science (properly speaking) and the history of past scientific beliefs, or again, between critical philosophy of science and other (e.g. cultural-contextualist or 'strong'-sociological) approaches. For this results most often in the kind of wholesale relativist outlook that suspends all questions of truth and falsehood, or which treats all scientific theories – past and present – as products of their own cultural time and place, and hence as strictly on par with respect to their justificatory warrant (Bloor, 1976; Barnes, 1974; Fuller, 1988; Hollis and Lukes, 1982; Latour and Woolgar, 1979; Newton-Smith, 1981; Nola, 1988; Norris, 1997b; Pickering, 1995; Shapin and Schaffer, 1985; Shapin, 1982; and Woolgar, 1988).⁸

This fashionable doctrine has various sources, among them late Wittgenstein (on language games and cultural 'forms of life'), Thomas Kuhn (on scientific truth as 'internal' to this or that historically emergent paradigm), and of course the Strong Programme in Sociology of Knowledge with its systematic drive to suspend or ignore such distinctions (Wittgenstein, 1958; and Kuhn, 1970). They also include Foucault's 'archaeologies' or 'genealogies' of knowledge, hermeneutic approaches deriving from Heidegger or Gadamer, Lyotard's idea of the 'postmodern condition' as it bears on questions of knowledge and truth, and Rorty's full-fledged 'textualist' view of science as proceeding from one revolution to the next through switches of metaphor that apparently occur for no better reason than periodic boredom with old styles of talk (Foucault, 1971; 1977; Lyotard, 1984; Mulhall, 1990; Rouse, 1987; and, Rorty, 1991). Now it is often assumed – sometimes on the strength of Rorty's account – that deconstruction in general, and Derrida's work in particular, is just another version of this postmodern 'turn' against the values of truth, reason, criticism, and conceptual analysis. However that reading ignores the many passages, in *White Mythology* and other texts,

where Derrida affirms the necessity – the ‘absolute and principled’ necessity – of thinking these issues through with the greatest possible rigour and precision. Thus he is far from rejecting Bachelard’s idea of the ‘epistemological break’, the decisive stage of scientific advance where a vague, imprecise, or metaphorical notion gives way to an adequately theorised concept with the power to transform some given field of enquiry. To be sure, Derrida goes further than Bachelard – further (one might say) in a Nietzschean direction – toward showing how certain metaphorical residues will always inhabit the discourse of science or philosophy of science. But he also makes the case that any such argument, his own and Nietzsche’s included, must itself depend on those same analytical resources that philosophy has developed and refined, among them the metaphor/concept distinction and the process of ‘rectification and critique’ described by Bachelard.

Thus there is no point saying that ‘all concepts are metaphors’ unless it is also kept in mind that the *concept of metaphor* is one with a lengthy and complex philosophical history. That is to say, it is a concept whose structural genealogy requires both a detailed comparative treatment taking in the major theories of metaphor from Aristotle, *via* Nietzsche, to Bachelard, and a critical approach that examines those theories in terms of their implicit presuppositions, their ‘unthought axiomatics’, or their covert reliance on metaphor and analogy in their own conceptual formulations. To avoid that task simply by proclaiming the ubiquity of metaphor – in the postmodernist or ‘strong textualist’ vein – is to court the accusation that such thinking has indeed regressed to a stage of confused etymopoetic or pseudo-scientific reverie. It is just this charge that Habermas brings against Derrida: that he has set out deliberately to blur the ‘genre distinction’ between concept and metaphor, reason and rhetoric, or philosophy and literature (Habermas, 1987, p. 185-210). Deconstruction would then figure as just another variant of the current irrationalist drive to revoke the ‘philosophic discourse of modernity’ and thus revert to a pre Enlightenment phase when that discourse had not yet separated out into its various, relatively specialized modes of cognitive, reflective, ethico-political, and aesthetic (or ‘world-disclosive’) thought.

However this is a false or, at any rate, a very partial and simplified reading of Derrida, as I have argued at length elsewhere (Norris, 1990, p. 49-76). For one thing it ignores those writings on Kant in which Derrida affirms the need to ‘keep faith’ with the unfinished project of modernity, even – or especially – where its values are threatened by just those countervailing pressures and tendencies that Habermas calls to account (Derrida, 1992; 1983; 1990). For another, it fails to note the many passages (in *White Mythology* and kindred texts) where Derrida provides rigorous arguments – arguments in the transcendental or condition-of-possibility mode – to the effect that understanding *cannot do without* the

critical resources that philosophy has developed, not least through its refinement of the metaphor/concept distinction and its critique of naive, image-based, or anthropomorphic habits of thought. In Bachelard this took the form of a twofold project, one of whose branches was a 'psychoanalysis' or applied phenomenology of poetic image and metaphor, while the other had to do with scientific knowledge conceived as entailing a definite break with that realm of intuitive, pre scientific 'reverie' (Bachelard, 1963; 1971). There was no question, for Bachelard, that science might simply replace poetry, or that philosophy of science might eventually command the whole field by showing how metaphor and sensuous imagery were the product of merely confused or indistinct ideas. Rather, these two projects should be seen as strictly complementary, as involving different methods and criteria, and hence – between them – as providing a detailed contrastive account of poetic-metaphorical and conceptual-analytic thinking. Besides, it was evident to Bachelard that science would always at some point have recourse to analogy and metaphor, especially during periods of imminent 'revolution' or drastic paradigm change, and therefore that philosophy of science would always have a use for analyses drawn from the other (pre scientific) domain. However, it was vital to keep that distinction in view since otherwise we should lose all sense of the difference – the knowledge-constitutive difference – between changes of metaphor that answer to changes of poetic or imaginative vision and those that portend a decisive shift in the order of scientific theory construction.

For some – Rorty among them – we should do best to let this distinction drop, along with all its other conversation-blocking analogues, such as (for instance) those between philosophy and literature, reason and rhetoric, or the natural and the human sciences. Indeed, one could envisage a comparative study of philosophers who have written on this topic – on the role of metaphor in science – in terms of their various positions on a scale whose end-points are the twin extremes of literalism and wholesale metaphoric-poetic constructivism. This scale would then extend all the way from the belief that scientific theories should properly have no place for metaphor to the Rorty-style textualist persuasion that 'all concepts are metaphors', scientific concepts included, and hence that nothing can be gained by attempting to analyse or elucidate those metaphors. Derrida's point – like Bachelard's before him – is that both extremes are equally untenable, the one failing to explain how science could ever make progress through imaginative 'leaps' beyond the framework of preexistent concepts, while the other fails to provide any terms (any adequate scientific or philosophical terms) for distinguishing valid from invalid theories, or progressive from non-progressive research programmes. This is why Derrida conserves a crucial role for Bachelard's idea of the 'epistemological break', despite the impossibility – as he argues – of pressing *right through*

with that idea as applied to the conceptualisation of metaphor or the treatment of science (and philosophy of science) as a process of ongoing 'rectification and critique'.

III

We can best get a sense of what is distinctive about Derrida's project by comparing the mixed fortunes of Bachelard's work in other contexts of recent French philosophical and cultural debate. His phrase 'epistemological break' was taken over by various theorists, among them the 'structuralist Marxist' Louis Althusser, who deployed it with a view to distinguishing between Marx's early (Hegelian, humanist, or 'pre Marxist') phase and his later (mature, theoretically developed, or properly 'scientific') writings (Althusser, 1969; Althusser and Balibar, 1970). It also served in a range of analogous contexts, as for instance to explain how Marxist 'science' – in this rigorously theorised sense – might relate to the realm of everyday lived experience, or to 'ideology' conceived as an imaginary projection of real (i.e., material) conditions of existence. This is not the place for a detailed account of the rise and fall of Althusserian structural Marxism. Sufficient to say that the project ran into various difficulties, some of them intrinsic and having to do with its wiredrawn conceptual structure, others the result of its reception history at the hands of literary and cultural critics (Benton, 1984; Elliott, 1987; and, Norris, 1996, pp. 127-53). At any rate what followed was a marked reaction against such high theoreticist claims and a turn toward the notion of language, discourse, or signifying systems in general as marking the limits of knowledge and representation from one period to the next. This movement went under the broad title of poststructuralism and was much influenced by Foucault's highly sceptical (indeed ultra-nominalist) approach to issues of interpretative truth and method.

In his earlier works – such as *The Order of Things* (1970) and *The Archaeology of Knowledge* (1971) – Foucault's thinking displayed a clear indebtedness to Bachelard's philosophy of science, especially his theory of 'epistemological breaks'. These latter were conceived by Foucault as marking the crucial point of transition between various historically shifting modes of discursive representation. However he deployed this theory in a manner quite alien to Bachelard's usage and with nothing like the same degree of conceptual precision. That is, it took on a massively expanded scope whereby whole epochs – the Renaissance, the 'classical age', the periods of historicism and emergent modernity – were conceived on the model of a 'discourse' (or ensemble of signifying terms and relations) that encompassed the entirety of knowledge at any given time. Needless to say, this holistic approach left little room for detailed study of the way that specific transformations came about within

particular disciplines or fields of research. Nor could it make any allowance for those stages of advancement in scientific knowledge – attained through the ‘rectification and critique’ of anthropomorphic images or metaphors – which had been a main focus of Bachelard’s and Canguilhem’s work. Rather, it tended to treat such shifts in the currency of accredited belief as more like a series of large scale seismic eruptions, affecting the entire landscape of knowledge and reaching right down to its deepest strata, but occurring for no reason other than the build-up of multiple conflicting pressures and strains. Thus if Foucault still finds a certain use for Bachelard’s idea of the ‘epistemological break’ it is a use that effectively empties that idea of any critical or properly epistemological force.

What is thus ruled out is the idea that science – and philosophy of science – might seek to clarify the sources of its own capacity for advancing beyond the stage of naively metaphorical or image-based thought. For Foucault, such claims are merely the product of a certain phase in the history of knowledge or discursive representation, a phase that is epitomised by Kant’s project of critical epistemology. This project rests on an illusory idea of ‘man’ as the subject-presumed-to-know, a strange ‘empirical-transcendental doublet’ – in Foucault’s famous phrase – who is somehow both object and subject of his own cogitations. That is to say, he is a curiously bifurcated creature somehow capable *both* of achieving objective self-knowledge in the causal, anthropological, or empirically-determined mode, *and* of rising above that realm to vindicate the claims of autonomous selfhood and free-willed ethical or speculative thought. Foucault treats this as just a momentary ‘fold’ in the fabric of discursive representations, one that arose at precisely the time when ruptures had emerged within the previous (‘classical’) order of discourse, an order wherein there was presumed to exist a one-for-one unproblematic match between signs, ideas, and objects-of-thought. Hence Kant’s vaunted ‘Copernican Revolution’ in philosophy, with ‘man’ (the knowing, willing, and judging subject) henceforth at the centre of all those disciplines or fields of enquiry that had hitherto found no need for such a strange and extravagant hypothesis. On the one hand this resulted in the rise of the human sciences, of anthropology, sociology, history, psychology and other such disciplines devoted to the study of human behaviour under its various empirical descriptions and classifications. On the other (‘transcendental’) side it produced both ethics as a discourse on the values of human freewill and autonomy, and epistemology as an investigation of human understanding, its scope and limits, as deduced by a process of *a priori* reasoning from the conditions of possibility for knowledge and experience in general.

Thus ‘man’ is an invention of comparatively recent date and one whose image can be seen, even now, as dissolving back into the element whence he arose, ‘like a face drawn in sand at the ocean’s edge’

(Foucault, 1970, p. 387). For it is Foucault's claim – dramatically heightened in the typical late-1960s French antihumanist vein – that this epoch is already receding from view, having suffered the successive assaults of Nietzschean epistemological scepticism, Freudian psychoanalysis, and the linguistic (or structuralist) turn across various disciplines, all of which developments have had the effect of radically 'decentring' or dethroning the subject from its erstwhile privileged role. So one can see why Foucault has no real use for Bachelard's concept of 'epistemological breaks', except in so far as the phrase continues to function as a vague pointer toward rifts and transformations in the discursive 'order of things'. For these breaks have to do with epistemology only in the sense that they concern what *once counted* as knowledge and truth, 'knowledge' according to the then prevalent structure of signs or representations, and 'truth' as defined by conventional ideas of method or scientific discipline. There is simply no place in Foucault's approach for a normative conception of science (or philosophy of science) that would seek to distinguish true from false or progressive from non-progressive theories, paradigms, research programmes, etc. Still less is there a role for the kind of detailed epistemo-critical analysis that would claim – like Bachelard – to specify the conditions for advances in scientific knowledge.

In Foucault's case – as with so many movements in recent French thought – this seems to spring largely from a will to throw off the legacy of Cartesian rationalism, in particular the concept (or metaphor) of knowledge as consisting in the mind's having guaranteed access to 'clear and distinct ideas'. Thus when Foucault lays such emphasis on the 'decentring' of the subject by language – or its dispersal into various discursively produced 'subject-positions' – then it seems to be Descartes, rather than Kant, whose philosophy provides the chief target. After all, Kant was at great pains to distinguish the various orders of empirical, noumenal, and transcendental subjectivity, and moreover to stress that any confusion between them – any error such as that made by Descartes in his attempt to prove the substantive existence of the first person thinking subject through the formula *cogito, ergo sum* – must give rise to all manner of strictly unthinkable antinomies (Kant, 1964). So there is a strong case for claiming that Foucault's strain of anti-epistemological thought is a product of this curious fixation on Descartes and the problems of a subject-centred discourse of reason, knowledge, and truth.

Now Bachelard likewise defines his project to a large extent against the Cartesian idea of knowledge as proceeding from *a priori* principles grounded in the absolute certainty attained through an exercise of self-reflexive critical thought. His reasons for this should be evident enough from what I have said so far. They include his argument that science makes progress precisely through *breaking* with the kinds of intuitive self-evidence that typify its early (proto-scientific) stages of enquiry, or

that 'stand to reason' just so long as reason has not yet entered upon the path of more adequate conceptual analysis and critique. Thus advances come about at just the point where any *direct* appeal to Cartesian criteria – to 'clear and distinct ideas' – would constitute an obstacle to further, more productive or theoretically elaborated thought. Also there is the argument (taken up by Derrida) that this appeal is itself metaphorical and image-based, deriving from the age-old philosophic *topoi* of knowledge as the 'inner light' of reason, or truth as that to which the mind gains access through its power of accurate and focused inward reflection. In short, Bachelard rejects that whole aspect of Descartes's thinking – along with later, more refined versions, such as the project of Husserlian phenomenology – which equates knowledge with the coming-to-light of truths vouchsafed through the exercise of reason in its critical-reflective (or transcendental) mode (Husserl, 1950; and, 1973). However, he argues, there is an important distinction to be drawn between this, the more familiar Descartes, author of the *Meditations* with its subject-centred epistemological approach, and that 'other' Descartes whose thinking is represented by certain parts of the *Discourse on Method* and kindred texts aimed toward the better 'regulation' of reason in its chiefly scientific or epistemo-critical mode (Descartes, 1967). For in these works there is far less emphasis on the idea of reason as a self-sufficient source of indubitable truths and grounding intuitions. Rather, they are intended as a working guide to the *critical application* of reason, that is to say, the possibility of freeing thought from its adherence to naive (intuitive, common sense, or image-based) modes of understanding. In this respect they are much closer to Bachelard's conception of *le rationalisme appliqué*, his belief that scientific advances can only come about through a constant dialectic – or process of mutual interrogative exchange – between intuitive insight and rational method.

Thus at certain times (i.e., during periods of Kuhnian 'revolutionary' science) it will often be the case that some attractive new hypothesis is put forward without, as yet, finding adequate support from observational data or from a well established theory that can somehow be adapted or extended to cover the case in hand. Such was, for instance, the early situation of Galileo's heterodox astronomy, or of Einstein's Special Theory of Relativity when the Michelson-Morley results appeared to disconfirm it by showing that the velocity of light was indeed affected by its direction of travel relative to an all-pervasive ether. (Subsequent tests produced a contrary (i.e., a nil velocity difference) result and it is now accepted in most quarters that the discrepancy was due to errors of measurement in the first experimental set-up (Harré, 1983)). One could multiply examples to similar effect from various fields of scientific research, among them astrophysics, molecular biology, and the atomic theory of matter from the ancient atomists to Dalton, Rutherford, and Bohr. In each case these theories moved through

a stage (or a series of stages) when their form was indeed metaphoric in the sense that it involved some complex analogical scheme or some intuitive leap to a novel hypothesis beyond their current best powers of experimental proof or adequate conceptualisation. Hence Bachelard's well known example of the tetrahedral structure of carbon, an image (or metaphor) clearly adopted for just such reasons, and one that in fact proved highly conducive to further theoretical refinement and research. So it is that some metaphors (not others) are capable of yielding genuine scientific insight through a process of critical 'rectification' that works to separate their truth content from their origin in forms of analogical, image-based, or anthropomorphic thinking.

Another good example would be Bohr's early model of the atom as a kind of miniature solar system with the nucleus surrounded by orbiting electrons whose paths (that is to say, whose position and angular momentum at any given time) could be specified in terms of just that heuristic metaphor. This idea was intuitively appealing – for obvious reasons – and proved highly fruitful of further discoveries concerning the subatomic structure of matter. However, it was quickly superseded in Bohr's own thinking by the switch to a quantum-mechanical theory that denied the very possibility of assigning such values (except as a probabilistic outcome of the associated wave function), and which thus resisted the utmost efforts of quasi-visual representation (Bohr, 1934, 1958; Honner, 1987). Nor is this by any means a special case or an isolated instance of scientific theory getting into conflict with common sense-intuitive modes of understanding. There is still much debate – among physicists and philosophers alike – as regards the best interpretation to be placed on those quantum-mechanical formalisms and whether they might yet be capable of a realist construal that avoids some of the more mind-wrenching paradoxes of the Bohr-derived orthodox ('Copenhagen') theory (Bohm and Hiley, 1993; Cushing, 1994; Fine, 1986; Gibbins, 1987; Redhead, 1987; and Squires, 1986). But it is also the case across a range of other fields – starting more than a century ago with the development of non-Euclidean geometries – that scientific advances have most often come about through a break with the eminently Kantian idea of knowledge as a matter of bringing intuitions under adequate concepts. That is to say, they have meant abandoning not only the ground of naive sense-certainty but also the appeal to those *a priori* structures of thought and cognition which, according to Kant, were prerequisite to any science of the phenomenal world (Brittan, 1978; Friedman, 1992).

There is no room here for a detailed account of those various closely-related developments – in physics, geometry, mathematics, epistemology, and philosophy of logic – that eventually produced this decisive turn against subject-centred or intuition-based conceptions of knowledge and truth. (Readers may wish to consult J. Alberto Coffa's

recent, highly illuminating study (Coffa, 1991)). My point is that philosophers have responded in very different ways to what is perceived as a kind of legitimation crisis in the discourse of science and philosophy of science. For some – postmodernists like Lyotard among them – it is a sign that we have now moved on into a phase where ‘performativity’ (not truth) is the name of the game, and when cultural theorists can best take a lead from those branches of science (such as quantum mechanics, chaos theory, fractal geometry, and so forth) that have given up the deluded quest for ‘metanarrative’ authority and power (Lyotard, 1984). For others, such as Rorty, the lesson to be drawn is that scientists (like everyone else) can never get outside the various language games, metaphors, or descriptive schemes that happen to prevail at this or that stage in the ongoing ‘cultural conversation’. From which Rorty concludes that there is just no point – professional self-interest aside – in trying to come up with some theory of metaphor (or account of its role in scientific theory formation) that would somehow distinguish ‘good’ or productive from ‘bad’ or non-productive examples of the kind. Then again, there are those – disciples of Foucault and at least a few readers of Quine – who take for granted the dissolution of that old, subject-centred epistemological paradigm, along with the impossibility of maintaining any version of the Kantian dualism between analytic and synthetic statements (Quine, 1961, pp. 20-44).

What these responses have in common, despite their very mixed genealogy, is the turn toward a thoroughly holistic approach to issues of meaning and truth, one that in principle places no limit on the variety of ways in which language can ‘correctly’ describe the world, or – as Quine would have it – on the various options for redistributing truth-values and predicates over the total fabric of currently accepted beliefs. For it is then a short distance to Rorty’s ‘textualist’ idea that things *just are* – for all practical purposes – the way that we represent them as being under this or that favoured range of descriptions, language games, metaphors, etc. In which case, clearly, it is no use seeking to uphold any version of the concept/metaphor dualism or to theorise the structure and workings of metaphor in various (scientific and other) contexts of enquiry. These efforts will always prove circular or self-defeating at the point where their own favoured terms of analysis – terms such as ‘theory’, ‘concept’, and ‘analysis’ – prove to be themselves metaphorical at root or so many items in a language game (a ‘kind of writing’) that gives no hold for such treatment.

IV

Now, as I have said, there are passages in Derrida’s *White Mythology* where he makes just this point about the impossibility of ever producing

a fully elaborated theory or concept of metaphor. 'By definition', he writes,

there is no properly philosophical category to qualify a certain number of tropes that have conditioned the so-called 'fundamental', 'structuring', 'original' philosophical oppositions: they are so many 'metaphors' that would constitute the rubrics of such a tropology, the words 'turn' or 'trope' or 'metaphor' being no exception to the rule. (1982, p. 229)

Thus philosophy *cannot but* attempt to theorise metaphor on its own conceptual terms, terms that have defined the very nature of philosophical enquiry from its ancient Greek beginnings to the present. Yet in so doing it will always find itself caught up in a process of circular reappropriation, a dependence on certain metaphors ('fundamental', 'structuring', 'original' tropes) for which there exist no literal, plain prose equivalents, and which therefore constitute the absolute limit of any such enquiry. Indeed, there is no choice for theorists of metaphor – whether philosophers, rhetoricians, or literary critics – but to work with a concept (that of 'metaphor' itself) that takes for granted the distinction between literal and metaphoric meaning. For it can readily be shown that theorists from Aristotle down have treated metaphor always as a 'detour' on the path to truth, that is to say, as a swerve from the proper or literal sense that is none the less capable of yielding knowledge through a grasp of its various kinds and structural features. But this is to beg the main point at issue: namely, that philosophy wields all the necessary concepts or instruments for analysing metaphor without, in the process, having recourse to a language that is itself radically metaphorical.

In short, as Derrida remarks, 'metaphor has been issued from a network of philosophemes which themselves correspond to tropes or to figures'. Furthermore,

(t)his stratum of 'tutelary' tropes, the layer of 'primary' philosophemes (assuming that the quotation marks will serve as a sufficient precaution here), cannot be dominated. It cannot dominate itself, cannot be dominated by what it itself has engendered, has made to grow on its own soil, supported on its own base. Therefore, it gets 'carried away' each time that one of its products – here, the concept of metaphor – attempts in vain to include under its own law the totality of the field to which the product belongs. (1982, p. 219)

So clearly there is a sense in which Derrida rejects philosophy's 'unique thesis' with regard to metaphor, i.e., the belief that it involves only a 'provisional loss of meaning', a momentary detour from the proper (literal) signification which can always be redeemed – at any rate in the case of 'good', truth-yielding metaphors – through analysis of its various

component terms and structure. This claim was first made by Aristotle when he remarked that, of the various kinds of metaphor, the best are those of the Fourth Type, the sort that involves a complex or four-term structure of analogy ('as A is to B, so C is to D') (Aristotle, 1924). With this type of metaphor it is possible to achieve genuine advances in knowledge, advances that occur through the power of thought to perceive a significant relation or resemblance between hitherto unconnected domains of knowledge. 'Metaphor, thus, as an effect of *mimesis* and *homoiosis*, the manifestation of analogy, will be a means of knowledge, a means that is subordinate, but certain' (1982, p. 238). 'Subordinate' in so far as it approaches truth only by way of complex analogical transfer, that is to say, through a swerve from literal sense that would not be required if we possessed more adequate conceptual and linguistic resources. But 'certain', none the less, to the extent that good metaphors are reliably truth-conducive, working as they do in this oblique fashion to bring about a knowledge that will finally dispense with such short-term heuristic devices.

For Bachelard, likewise, it is the chief virtue of scientific metaphor – a virtue that it shares with the poetic imagination – to enable this creative passage beyond the limits of received or orthodox thinking. But still the main test of a good scientific metaphor, for Bachelard as for Aristotle, is its ability to withstand the rigours of conceptual 'rectification and critique', that is to say, its possessing a complex analogical structure where the various terms can be applied and critically assessed in some given context of enquiry. Thus the tetrahedral structure of carbon and the planetary model of the atom were metaphors that played a significant role in the advancement of scientific knowledge, and which did so precisely through drawing attention to analogies of just this kind, even if those analogies were not yet brought to the highest (scientifically most adequate) stage of conceptual definition. For there is really no point in staging this issue – as it often tends to be staged – as a quarrel between those who maintain that science has to do with matters of strict, literal truth and those others – postmodernists and typecast deconstructionists – who claim that metaphor goes 'all the way down', and hence that truth is itself just a kind of literalized or sublimated metaphor. What is thereby obscured is the crucial difference – as Bachelard very clearly brings out – between metaphors that remain on the side of poetic or imaginative 'reverie', and metaphors which – by virtue of their structure and capacity for further development – may properly be counted among the resources of a developing scientific theory or research programme.

Now it may well come as a surprise to many readers that the above few sentences are a fairly close paraphrase of Derrida's argument in certain crucial passages of the essay *White Mythology*. For as I have said, that essay has acquired the reputation of pushing to the limit (and a

good way beyond) with the notion that ‘all concepts are metaphors’, ‘all science just is a product of the metaphoric will-to-truth within language’, and so forth. But this is not at all what Derrida is saying, even though it fits in well enough with what many commentators – sympathetic or hostile – would undoubtedly wish him to say. In fact the main part of *White Mythology* is given over to a rigorously argued critique of the standard postmodern (or quasi-deconstructionist) idea that scientific or philosophical concepts can be treated as *nothing more* than a repertoire of sublimated metaphors, images, or tropes. Thus, with particular reference to Bachelard: ‘[d]oes not a scientific critique’s rectification rather proceed from an inefficient tropic concept that is poorly constructed, to an operative tropic concept that is more refined and more powerful in a given field and at a determined phase of the scientific process?’ (1982, p. 264). Of course there are other passages – several of which I have cited above – that offer some pretext or apparent justification for readings in the postmodern textualist vein. However it is also Derrida’s contention that any worthwhile critical treatment of metaphor will have to go by way of those various philosophically-articulated theories – from Aristotle down – where that topic has always been closely related to issues of truth and knowledge.

This is why Derrida looks to philosophy of science, and to Bachelard and Canguilhem especially, for his examples of ‘truth-tropic’ metaphors, or figures of thought that have proved their scientific worth through a process of ongoing ‘rectification and critique’. It is also what sets his discussion apart from other, more holistic or generalised claims with regard to metaphor and its role in scientific theory-construction. These would include Rorty’s advice that we drop the concept/metaphor distinction and replace it with one between Kuhnian ‘normal’ and ‘revolutionary’ phases of science, the former typified by its willingness to stick with routine, literalized, or ‘dead’ metaphors, the latter by its seeking out new turns of thought to move the conversation along (Rorty, 1991). Kuhn himself had certain reservations with regard to this kind of textualist or strong descriptivist talk (Kuhn, 1977). All the same one can see how Rorty gets there by taking Kuhn’s thesis that scientific ‘revolutions’ involve a wholesale paradigm switch (so that scientists before and after the event may be said to ‘live in different worlds’), and grafting it onto the Nietzschean idea of language as radically metaphorical. He can then treat Kuhn’s more cautious pronouncements or circumspect choices of metaphor – such as that of scientists viewing the same world ‘through differently coloured spectacles’ – as unfortunate lapses which can safely be ignored by those who have abandoned that old objectivist style of thought. Much better, he advises, that we push right through with the Kuhnian argument and cease the vain effort to articulate a theory of metaphor that would somehow hold

the line between 'properly' scientific and other (e.g. poetic or imaginative) modes of description.

I should not wish to claim – against the evidence of passages from *White Mythology* like those cited above – that Derrida is altogether out of sympathy with this way of thinking about metaphor and its role in the discourse of philosophy or science. If any further such evidence were needed then the following passage explains very clearly just why he thinks it impossible that a theory of metaphor could ever dominate the field of its own metaphorical production.

The criteria for a classification of philosophical metaphors are borrowed from a derivative philosophical discourse. Perhaps this might be legitimate if these figures were governed, consciously and calculatedly, by the identifiable author of a system, or if the issue were to describe a philosophical rhetoric in the service of an autonomous theory constituted before and outside its own language, manipulating its tropes like tools. This is an undoubtedly philosophic, and certainly Platonic, ideal, an ideal that is produced in the separation (and order) between philosophy and dialectics on the one hand and (sophistic) rhetoric on the other, the separation demanded by Plato himself. Directly or not, it is this separation and this hierarchy that we must question here. (1982, p. 224)

So there is no question but that Derrida sees immense problems confronting any theory of metaphor – or epistemology of tropes – once alerted to the kinds of metaphorical language that inhabit its own discourse. However, it is also important to remark that this passage is aimed against a certain understanding of what it would mean for philosophy to 'dominate' the field of metaphor, or for the 'author of a system' – a philosophical rhetoric – to attain that degree of lucid theoretical grasp. In fact Derrida's target is not so much 'philosophy', 'theory' or 'system' as such but rather the idea that any progress toward a more rigorous (conceptually adequate) treatment of metaphor in the texts of philosophy must go by way of a consciousness fully in possession of the requisite concepts. This point should scarcely need making for any reader acquainted with Derrida's work on (for instance) Plato, Aristotle, Rousseau, Hegel, Husserl, and J. L. Austin. In each case – he argues – these thinkers have been mostly been construed on just such a theory of self-present meaning or authorial intent. That is to say, it is assumed by the majority of exegetes (1) that their texts both say what they mean and properly, reliably mean what they say; (2) that the authors were themselves fully conscious of the various implications (logical and rhetorical) of the theses advanced under their name; and (3) that this provides an adequate basis for the claim that we can know what an author intended in adopting some given theoretical position or particular form of words. Moreover (4), any argument to contrary effect – such as Derrida proposes in his deconstructive readings of

philosophers from Plato to Austin – can then be safely dismissed out of hand as a product of ignorance, incompetence, or wilful misinterpretation.

This is not the place for a detailed account of the arguments that Derrida brings to bear in questioning the 'logocentric' order of values and priorities which has standardly governed the reading of philosophical texts. I shall here just mention – having argued the case at much greater length elsewhere – that these issues are focused with particular clarity in his essay on Austin and speech-act theory, an essay that raises all sorts of problems with regard to the logical implications of Austin's approach, but which does so always through a close attentiveness to matters of textual detail (Derrida, 1989). My point is rather that there is no good reason – *pace* opponents like Searle – to suppose that deconstruction is any less rigorous, responsible, or philosophically adequate on account of its rejecting the straightforward appeal to notions such as authorial intent or normal (as opposed to deviant) contexts of speech-act utterance (Searle, 1977). For there do exist other criteria by which to assess the cogency of philosophic arguments, namely those that Derrida implicitly invokes in the above-cited passage from *White Mythology*. What that passage calls into doubt is not so much the idea that philosophy might have something useful to say about metaphor but the notion (to repeat) that any knowledge thus attained is dependent on 'these figures [being] governed, consciously and calculatedly, by the identifiable author of a system', or on their somehow being placed 'in the service of an autonomous theory constituted before and outside its own language, manipulating its tropes like tools' (1982, p. 224). It is the same kind of metalinguistic delusion that leads some speech-act theorists – Searle among them – to pass clean over the complex, self-implicating logic of Austin's text in the hope of producing a classificatory system (a generalized theory of performatives) that would command the entire field, so to speak, from outside and above (Searle, 1969; and 1979). However this is not to suggest that we reject the whole enterprise of speech-act theory, any more than it endorses a Rorty-style case for just accepting that 'all concepts are metaphors' ... 'all philosophy is a kind of writing', etc., and letting the issue go at that. Rather, it is to make the more specific point – here as in Derrida's early texts on Plato, Rousseau, and Husserl – that such gestures of command over language are often premised on the notion of a consciousness fully in command of its own expressive resources and hence able to dictate in advance what shall count as an adequate theory of metaphor or speech-act classification.

This is why, as Derrida remarks, such theories evince 'an undoubtedly philosophic, and certainly Platonic ideal', one that always refers back to 'the identifiable author of a system', and which moreover is produced 'in the separation ... between philosophy or dialectics on the

one hand and (sophistic) rhetoric on the other' (1982, p. 224). Thus the claims of system and method are closely bound up with the idea of language as placing itself at the sovereign disposal of a subject whose speech-acts, meanings, and intentions should properly be construed in accordance with rules laid down on its own self-authorising warrant. Now it is wrong to suppose (as many commentators do) that Derrida is a wholesale anti-intentionalist, one who quite simply rejects the idea – the old-fashioned fideist idea – that interpretation or textual exegesis have anything to do with respect for an author's original or governing intent. In fact he has some strong statements in *Of Grammatology* to the effect that reading cannot dispense with such 'elementary protocols' of interpretative fidelity and truth, even though these standards provide only a 'guard rail' that prevents exegesis from going off 'in any direction whatsoever' (Derrida, 1975, p. 158). What deconstruction aims to show, on the contrary, is the precise relation in any given case between that which an author expressly intends to say, and that which the text constrains him or her to mean through effects (such as the 'logic of supplementarity' in Rousseau's writing) that cannot be reduced to any straightforward intentionalist account.

It is a similar case that Derrida is making with regard to metaphor and the various attempts – by philosophers, rhetoricians, and literary critics – to elucidate its structure and workings from a metalinguistic standpoint. What is questionable about these attempts is *not* their commitment to the highest standards of conceptual clarity, detailed analysis, or rigorous argumentation. Nor is it the fact (as Derrida points out, following Nietzsche) that even such seemingly abstract criteria are themselves derivative from a range of covert or sublimated metaphors which philosophy can never expunge from its own discourse. After all, there is no reason to conclude from this that philosophers are merely wasting their time when they try to attain a more detailed, conceptually adequate knowledge of those various 'fundamental', 'structuring', or 'original' tropes. To draw that conclusion – as Rorty does – is to mistake what is undoubtedly a complicating factor in the philosophic discourse on metaphor for a knock-down argument against the very notion (maintained by theorists from Aristotle to Bachelard) that philosophy does indeed have something to learn from the analysis of metaphor, not least as applied to the texts of its own tradition.

Where this claim becomes dubious, rather, is at the point where it joins with that traditional 'logocentric' idea of knowledge as somehow vouchsafed to the thinking subject through a direct (privileged or first person) access to meanings, intentions, or ideas. It is ironic that Searle should accuse Derrida of himself being in the grip of a typically 'French' Cartesian illusion, that is to say, the belief that if speech-act categories cannot be made absolutely rigorous (or ideally clear and distinct), then one might just as well give up altogether on the effort to distinguish

constatives from performatives, or genuine from non-genuine speech-acts, or 'normal' from 'deviant' contexts of utterance (Searle, 1977). For it is precisely Derrida's point against Searle's (though not, I should emphasise, Austin's) treatment of these issues that it claims the kind of proprietary warrant – or self-assured interpretative grasp – that can only come from an authorised appeal to what speakers (or writers, Austin included) properly and genuinely mean by their words. And that appeal goes along with the systematising drive to erect a full-scale theory of speech-acts on the basis of strongly normative distinctions (such as those instanced above) which are themselves held in place by the assumed possibility of knowing how they work, so to speak, from the inside.

Now one way to understand Derrida's argument – with respect to both metaphor and speech-act theory – is to see it as part of the wider present day shift from subject-centred epistemologies to alternative conceptions of meaning, knowledge, and truth. I have already traced a line of descent for this approach that has to do chiefly with issues in philosophy of science and which includes Bachelard's and Canguilhem's work on the role of metaphor in the process of scientific theory construction. I have also suggested that the shift has come about in response to various developments (from non-Euclidean geometry to relativity theory and quantum mechanics) which are counter-intuitive sometimes to the point of resisting any effort of concrete or quasi-visual representation. These developments challenged the Kantian conception of synthetic *a priori* knowledge, along with the idea – common to many schools of thought in philosophy of science – that phenomenal intuitions (or observational data) must be 'brought under' adequate or corresponding concepts. Above all they established a different, more dialectical relationship between speculative thinking (often conducted at the level of heuristic metaphor) and critical-evaluative methods for assessing the results of such thought. It is this relationship that Bachelard seeks to characterise through his studies of *le rationalisme appliqué*, and which can also be seen in Derrida's analyses of metaphor in the texts of philosophy.

V

In conclusion I should like to return briefly to some passages from *White Mythology* where Derrida discusses Aristotle's theory of metaphor and, more specifically, the way that metaphor figures as a 'detour' on the path to a reappropriation of literal, self-present truth. What guides this theory is the idea of language as aspiring to a perfect structural homology between word, idea, and referent such that the noun (in its literal usage) would provide an anchor point for the process of signification, and the other parts of speech then assume their proper

place as elements in a well regulated system. For the noun is (according to Aristotle) the 'first semantic entity', the 'smallest signifying element', one whose parts are without meaning but which unites in itself the two dimensions of sound and sense. It is therefore the point at which language begins, i.e., properly human language (belonging to creatures in possession of *logos*), as opposed to mere inarticulate animal noises. Moreover, it is always with implicit reference to the noun as a locus of proper (literal) meaning that Aristotle defines those other distinctively human activities – among them metaphor and *mimesis* – which offer a 'subordinate but certain' means of acquiring veridical knowledge. Thus:

[t]he condition for metaphor (for good and true metaphor) is the condition for truth. Therefore it is to be expected that the animal, deprived of *logos* ... also would be incapable of mimesis. *Mimesis* thus determined belongs to *logos*, and is not animalistic aping, or gesticular mimicry; it is tied to the possibility of meaning and truth in discourse ... The power of truth, as the unveiling of nature (*physis*) by *mimesis*, congenitally belongs to the physics of man, to anthropophysics ... For the same reason, pleasure, the second 'cause' of *mimesis* and metaphor, is the pleasure of knowing, of learning by resemblance, of recognising the same. (1982, pp. 237-8)

So metaphor occupies a place in what Derrida calls the 'great immobile chain' of Aristotelian ontology, a chain whose various links include 'its theory of the analogy of Being, its logic, its epistemology, and more precisely its poetics and its rhetoric' (p. 236). But if the chain were indeed 'immobile' – if everything fitted together in this preordained fashion – then it is hard to see how knowledge could advance or how new discoveries could ever come about through fresh observation and the exercise of speculative thought.

This is of course where metaphor comes in, that is to say, the 'good' (truth-conducive) kind of metaphor that enables us to 'see resemblances', or to break with routine habits of thought and perception. Yet in order to do so, Aristotle argues, metaphor must always accept its role – its properly 'subordinate' role – with respect to those other values that determine what shall count as a 'good' metaphor. In Derrida's words:

Mimesis is never without the *theoretical* perception of resemblance or similarity, that is, of that which always will be posited as the condition for metaphor. *Homoiosis* is not only constitutive of the value of truth (*aletheia*) which governs the entire chain; it is that without which the metaphorical operation is impossible. (1982, p. 237)

But again there is a problem if one asks what scope this could allow for discoveries or changes in scientific thinking, given that every link in the

chain – from *aletheia* (truth), through *homoiosis* (correspondence or representation), to *mimesis* (imitation) and then metaphor (perception of likeness) – is governed by a strictly ‘immobile’ order of truth-preserving relations. Only if metaphor were *not* thus reduced to a properly ‘subordinate’ role could one explain how knowledge can at times make progress by breaking with established patterns of thought or habits of perception. For it would otherwise forever be held within the limits of an immutable paradigm extending all the way from ontology, *via* epistemology, to logic, grammar, and rhetoric. In which case one could make no sense of Aristotle’s claims for the advancement of human understanding, whether through ‘good’ (heuristically productive) metaphors or indeed through other, more strictly regulated modes of observation, experiment, theory-construction, etc.

This is not to say, in postmodern-textualist fashion, that since all language is radically metaphorical – scientific language included – therefore it is impossible to theorise metaphor or distinguish its various structures or modes of operation. Rather, it is to make Bachelard’s (and Derrida’s) point: that although such attempts will always fall short of a full-scale systematic treatment – for reasons that Derrida explains in *White Mythology* – nevertheless they are a part of that continuing dialectical process through which all advances in knowledge come about. What resists adequate theorisation is not so much the process itself as the activity of thought that produces those advances, occurring as it does – most often – at a level inaccessible to conscious awareness or punctual reflective grasp. As I have said, this is where Bachelard marks his distance from that whole philosophical tradition that comes down from Descartes to Kant, and thence from Husserl to various schools of (mainly French) phenomenological thought. It is a distance captured by Bachelard’s phrase *rationalisme appliqué*, but also by Popper’s idea of ‘epistemology without the knowing subject’ and other such ways of acknowledging the fact that modern science has entered a phase of development where intuitions can no longer be ‘brought under’ adequate concepts.

The following passage from *White Mythology* – again *à propos* Aristotle’s theory of metaphor – may help to make this point more clearly. ‘The discourse on metaphor’, Derrida writes,

belongs to a treatise *peri lexos*. There is *lexis*, and within it metaphor, in the extent to which thought is not made manifest by itself, in the extent to which the meaning of what is said or thought is not a phenomenon of itself. *Dianoia* as such is not yet related to metaphor. There is metaphor only in the extent to which someone is supposed to make manifest, by means of statement, a given thought that of itself remains inapparent, hidden, or latent. Thought stumbles upon metaphor, or metaphor falls to thought, at the moment when meaning attempts to emerge from itself in order to be stated, enunciated, brought to the light of language. And yet

– such is our problem – the theory of metaphor remains a theory of *meaning* and posits a certain original *naturality* of this figure. (1982, p. 233)

It is not hard to see how this passage relates to Derrida's early work on Husserl and his deconstructive readings of various texts in the Western 'logocentric' tradition. Thus his argument here concerning metaphor – that it marks the non self-present character of thought and language in general, or the extent to which 'the meaning of what is said or thought is not a phenomenon of itself' – is also the argument that Derrida pursues in a wide range of other contexts. What is less often noticed is its bearing on those issues in epistemology and philosophy of science that were raised within the French critical-rationalist tradition by thinkers like Bachelard and Canguilhem, and which have also been central to recent Anglo-American debate. For this is precisely Derrida's case with regard to Aristotle: that his treatment of metaphor leaves open certain crucial questions concerning the limits of an 'anthropophysical' account, one that would treat all knowledge (including that produced by 'good', truth-tropic metaphors) as subject to an order of changeless, 'immobile' truth grounded in the very nature of human cognitive powers and capacities.

Thus, as Derrida remarks, '[t]his truth is not certain. There can be bad metaphors. Are the latter metaphors? Only an axiology supported by a theory of truth can answer this question; and this axiology belongs to the interior of rhetoric. It cannot be neutral' (1982, p. 241). One response – that offered by the current 'strong' textualists and promoters of so-called 'postmodern' science – is to say that truth is indeed a linguistic, a metaphorical, performative or fictive construct, and that philosophers are therefore embarked upon a hopeless endeavour when they seek to theorize its structure and workings in adequate (philosophical) terms. However this is not Derrida's response, as can be seen from his framing the above question in a sharply paradoxical but *not* a purely rhetorical or dismissive form. Rather, it is a matter – for Derrida as for Bachelard – of re-thinking the concept/metaphor relationship (or that between science, philosophy of science, and the analysis of scientific image and metaphor) so as to acknowledge those decisive transformations that have occurred in various post 1900 areas of research, theoretical physics chief among them. For it is largely as a consequence of just these changes – along with earlier developments such as the emergence of non-Euclidean geometries – that philosophy of science has been led to revise some of its most basic conceptions of truth and method. When Derrida questions such ideas it is not for one moment in order to suggest that we should henceforth abandon the 'logocentric' values of conceptual precision, logical rigour, or rational accountability. On the contrary: these remain imperative values for philosophy as well as for the physical sciences,

whatever the new sorts of challenge that arise when thinking abandons the security of 'natural' (commonsense-intuitive) knowledge. Thus:

it is indispensable to study the terrain on which the Aristotelian definition [of metaphor] could have been constructed. But this study would lose all pertinence if it were not preceded, or in any event controlled, by the systematic and internal reconstitution of the text to be reinscribed. Even if partial and preliminary the task is not limited to a commentary on a textual surface. No transparency is granted it. The issue already is one of an active interpretation setting to work an entire system of rules and transformations. (1982, p. 231)

In which case the critical reading of philosophic texts – of Aristotle's texts on metaphor, or of Derrida's text on the theories of metaphor advanced by Aristotle and Bachelard – must itself exemplify the same kind of rigour and logical precision as applies to the assessment of scientific theories, hypotheses, or truth-claims. That is to say, it cannot rest content with simply reproducing the manifest sense (or intuitively evident purport) of whatever it is given to interpret. Rather, it must pass beyond the illusion of 'transparently' accessible meaning to a level where different, more exacting criteria come into play. *White Mythology* is one of the very few texts on this *topos* of metaphor in the discourse of science and philosophy that manage to sustain such a high level of detailed analytic commentary.

Notes

1. On this topic, see also Christopher Norris (1997a, 1997b).
2. See, for instance, Jacques Derrida (1975, p. 158).
3. See Derrida (1975, 1973, 1981, 1982).
4. See also Norris (1989) and Rorty (1989).
5. See Norris (1996).
6. See entries under Note 3, above.
7. See especially the essays on Husserl, Levinas, Foucault and others collected in Derrida (1978).
8. For the best known statement of this strong sociological 'principle of parity', see Bloor (1976).

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