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1

The *Apoptosis* of Belief¹

1.1 The manifest image and the myth of Jones: Wilfrid Sellars

In 'Philosophy and the Scientific Image of Man',² Wilfrid Sellars proposes a compelling diagnosis of the predicament of contemporary philosophy. The contemporary philosopher is confronted by two competing 'images' of man in the world: on the one hand, the *manifest* image of man as he has conceived of himself up until now with the aid of philosophical reflection; on the other, the relatively recent but continually expanding *scientific* image of man as a 'complex physical system' (Sellars 1963a: 25) – one which is conspicuously unlike the manifest image, but which can be distilled from various scientific discourses, including physics, neurophysiology, evolutionary biology, and, more recently, cognitive science. But for Sellars, the contrast between the manifest and the scientific image is not to be construed in terms of a conflict between naive common sense and sophisticated theoretical reason. The manifest image is not the domain of pre-theoretical immediacy. On the contrary, it is itself a subtle theoretical construct, a disciplined and critical 'refinement or sophistication' of the originary framework in terms of which man first encountered himself as a being capable of conceptual thought, in contradistinction to creatures who lack this capacity. To understand why Sellars describes the manifest image as a sophisticated theoretical achievement in its own right – one as significant as any scientific achievement since – it is necessary to recapitulate Sellars's now celebrated 'myth of Jones'.

In his seminal 'Empiricism and the Philosophy of Mind',³ Sellars proposes a philosophical fable about what he calls 'our Rylean ancestors', who have acquired language but who lack any conception of the

complex mental states and processes we take to be the precondition for any sophisticated cognitive behaviour. When these Ryleans attempt to explain a human behaviour such as anger, their resources are limited to a set of dispositional terms – e.g. ‘bad-tempered’ – which are operationally defined with regard to observable circumstances – such as ‘ranting and raving’ – these in turn being deemed sufficient to explain the observable behaviour – in this case, ‘rage’. But these operationally defined dispositional concepts severely restrict the range of human activities which the Ryleans can explain. They lack the conceptual wherewithal for explaining more complicated behaviours. It is at this stage in the fable that Sellars introduces his ‘myth of Jones’. Jones is a theoretical genius who postulates the existence of internal speech-like episodes called ‘thoughts’, closely modelled on publicly observable declarative utterances. These ‘thought-episodes’ are conceived as possessing the same semantic and logical properties as their publicly observable linguistic analogues, and as playing an internal role comparable to that of the discursive and argumentative role performed by overt speech. By postulating the existence of such internal processes even in the absence of any publicly observable speech-episodes, it becomes possible to explain hitherto inscrutable varieties of human behaviour as resulting from an appropriately structured sequence of these internal thought-episodes. Similarly, Jones postulates the existence of episodes of internal ‘sensation’ modelled on external perceptual objects. ‘Sensations’ are understood as instances of internal perception capable of causing cognition and action even in the absence of their externally observable counterparts. Following a similar pattern of reasoning, Jones goes on to postulate the existence of ‘intentions’, ‘beliefs’, and ‘desires’ as relatively lasting states of individuals which can be invoked as salient causal factors for explaining various kinds of behaviour: ‘He pushed him because he *intended* to kill him’, ‘She left early because she *believed* they were waiting for her’, ‘He stole it because he *desired* it’. The nub of Jones’s theory consists in establishing a relation between persons and the propositions which encapsulate their internal thought episodes: Jones teaches his peers to explain behaviour by attributing *propositional attitudes* to persons via the ‘that’ clauses in statements of the form: ‘He believes that ...’, ‘She desires that ...’, ‘He intends that ...’. Though not yet recognized as such, these propositional attitudes have become the decisive causal factors in the new theory of human behaviour proposed by Jones; a theory which represents a vast increase in explanatory power relative to its behaviourist predecessor. All that remains is for individuals to learn to use this new theory not merely for

the purposes of explaining others' behaviour, but also to describe their own: one *learns* to perceive qualitatively distinct episodes of inner sensation just as one *learns* to understand oneself by ascribing beliefs, desires, and intentions to oneself. The theory is internalized and appropriated as the indispensable medium for describing and articulating the structure of one's own first-person experience. The philosophical moral to this Sellarsian fable consists in Jones's philosophically minded descendants coming to realize that the propositional attitudes stand to one another in complex logical relations of entailment, implication, and inferential dependency, and that Jones's theory exhibits a structure remarkably akin to deductive-nomological models of scientific explanation. For these philosophers (and they include Sellars himself), Jones's theoretical breakthrough has provided the key to uncovering the rational infrastructure of human thought; one which is crystallized in the sentential articulation of propositional attitude ascription. 'Beliefs', 'desires', 'intentions', and similar entities now become the basic psychological kinds to be accounted for by any theory of cognition.

But what is the ontological status of these psychological entities? It is striking to note that though Sellars himself attributes a *functional* role to them, this is precisely in order to leave the question of their ontological status open. According to Sellars, '[Thought] episodes are "in" language-using animals as molecular impacts are "in" gases, not as "ghosts" are in "machines"' (1997: 104). Thus the point of the Jonesean myth is to suggest that the epistemological status of 'thoughts' (qua inner episodes) vis-à-vis candid public verbal performances is most usefully understood as analogous to the epistemological status of, e.g., molecules vis-à-vis the publicly observable behaviour of gases. However, unlike gas molecules, whose determinate empirical characteristics are specified according to the essentially Newtonian lawfulness of their dynamic interaction, 'thoughts' in Sellars's account are introduced as purely functional kinds whose ontological/empirical status is yet to be determined.

Accordingly, for Sellars, the fundamental import of the manifest image is not so much ontological as *normative*, in the sense that it provides the framework 'in which we think of one another as sharing the community intentions which provides the ambience of principles and standards (above all those which make meaningful discourse and rationality itself possible) within which we live our own individual lives' (Sellars 1963a: 40). Thus, the manifest image does not so much catalogue a set of indispensable ontological items which we should strive to preserve from scientific reduction; rather, it indexes the community of rational agents. In this regard, the primary component of the

manifest image, Sellars suggests, is the notion of *persons* as loci of intentional agency. Consequently, although the manifest image is a ‘disciplined and critical’ theoretical framework, one which could also be said to constitute a certain kind of ‘scientific image’ – albeit one that is ‘correlational’ as opposed to ‘postulational’ (Sellars 1963a: 7) – it is not one which we are in a position simply to take or leave. For unlike other theoretical frameworks, Sellars maintains, the manifest image provides the ineluctable prerequisite for our capacity to identify ourselves as human, which is to say, *as persons*: ‘[M]an is that being which conceives of itself in terms of the manifest image. To the extent that the manifest image does not survive [...] to that extent man himself would not survive’ (Sellars 1963a: 18). What is indispensable about our manifest self-image, Sellars concludes, is not its ontological commitments, in the sense of what it says *exists* in the world, but rather its normative valence as the framework which allows us to make sense of ourselves as rational agents engaged in pursuing various purposes in the world. Without it, we would simply not know what to do or how to make sense of ourselves – indeed, we would no longer be able to recognize ourselves as human. Accordingly, Sellars, echoing Kant, concludes that we have no option but to insist that the manifest image enjoys a *practical*, if not theoretical, priority over the scientific image, since it provides the source for the norm of rational purposiveness, which we cannot do without. In this regard, the genuine philosophical task, according to Sellars, would consist in achieving a properly *stereoscopic* integration of the manifest and scientific images, such that the language of rational intention would come to enrich scientific theory so as to allow the latter to be directly wedded to human purposes.

1.2 The instrumentalization of the scientific image

It should come as no surprise then that the manifest image continues to provide the fundamental framework within which much contemporary philosophizing is carried out. It encompasses not only ‘the major schools of contemporary Continental thought’ – by which Sellars, writing at the beginning of the 1960s, presumably meant phenomenology and existentialism, to which we should add critical theory, hermeneutics, and post-structuralism – but also ‘the trends of contemporary British and American philosophy which emphasize the analysis of “common sense” and “ordinary usage” [...] For all these philosophies can be fruitfully construed as more or less adequate accounts of the manifest image of man-in-the-world, which accounts are then taken

to be an adequate and full description in general terms of what man and the world really are' (Sellars 1963a: 8). Despite their otherwise intractable differences, what all these philosophies share is a more or less profound hostility to the idea that the scientific image describes 'what there really is', that it has an ontological purchase capable of undermining man's manifest self-conception as a person or intentional agent. Ultimately, all the philosophies carried out under the aegis of the manifest image – whether they acknowledge its existence or not – are united by the common conviction that 'all the postulated entities of the scientific image [e.g., elementary particles, neurophysiological mechanisms, evolutionary processes, etc.] are symbolic tools which function (something like the distance-measuring devices which are rolled around on maps) to help us find our way around in the world, but do not themselves describe actual objects or processes' (Sellars 1963a: 32). This *instrumentalist* conception of science is the inevitable corollary of any philosophy that insists on the irrecusable primacy of man's manifest self-understanding. Thus, although they are the totems of two otherwise divergent philosophical traditions, the two 'canonical' twentieth-century philosophers, Heidegger and Wittgenstein, share the conviction that the manifest image enjoys a philosophical privilege vis-à-vis the scientific image, and that the sorts of entities and processes postulated by scientific theory are in some way founded upon, or derivative of, our more 'originary', pre-scientific understanding, whether this be construed in terms of our 'being-in-the-world', or our practical engagement in 'language-games'. From there, one may or may not decide to take the short additional step which consists in denouncing the scientific image as a cancerous excrescence of the manifest image (this is a theme to which we shall have occasion to return in chapters 2 and 3).

To his considerable credit, Sellars adamantly refused this instrumentalization of the scientific image. For as he pointed out, the fact that the manifest image enjoys a *methodological* primacy as the originary framework from which the scientific image developed in no way legitimates attempts to ascribe a substantive primacy to it. In other words, even if the scientific image remains methodologically dependent upon the manifest image, this in no way undermines its substantive autonomy vis-à-vis the latter. In this regard, it should be pointed out (although Sellars does not do so) that to construe scientific theory as an efflorescence from the more fundamental phenomenological and/or pragmatic substratum of our manifest being-in-the-world is to endorse a form of philosophical reductionism with regard to science. Yet unlike its oft-criticized scientific counterpart, the tenets of which are fairly

explicit, even when it cannot carry out in fact the reductions it claims to be able to perform in principle, partisans of this philosophical reductionism about science conspicuously avoid delineating the conceptual criteria in accordance with which the structures of the scientific image might be reduced to the workings of the manifest image. Unsurprisingly, those who would instrumentalize the scientific image prefer to remain silent about the chasm that separates the trivial assertion that scientific theorizing supervenes on pre-scientific practice, from the far-from-trivial demonstration which would explain precisely how, for example, quantum mechanics is a function of our ability to wield hammers.

Sellars never succumbed to the lure of this crass philosophical reductionism with regard to the scientific image, insisting that philosophy should resist attempts to subsume the scientific image within the manifest image. At the same time, Sellars enjoined philosophers to abstain from the opposite temptation, which would consist in trying to supplant the manifest image with the scientific one. For Sellars, this cannot be an option, since it would entail depriving ourselves of what makes us human. However, it is important to note that the very terms in which Sellars formulated his hoped for synthesis between the manifest and scientific images continue to assume the incorrigibility of the characterization of rational purposiveness concomitant with the Jonesean theory of agency. Yet it is precisely this model of rational-purposive agency – along with the accompanying recommendation that the scientific image should be tethered to purposes commensurate with the workings of the manifest image – which some contemporary philosophers who refuse to sideline the scientific image are calling into question. These philosophers propose instead – obviously disregarding the Sellarsian edict – that the manifest image be integrated into the scientific image. While for Sellars it was precisely the manifest image's theoretical status which ensured its normative autonomy, and hence its ineliminability as an account of the nature of rational agency, for Paul Churchland, an ex-student of Sellars who has explicitly acknowledged the latter's influence,⁴ the manifest image is revisable precisely because it is a corrigible speculative achievement that cannot be accepted as the definitive account of 'rational purposiveness'. Indeed, for Churchland, there is no guarantee that the latter notion indexes anything real independently of the particular theoretical framework embodied in the manifest image. Though the manifest image undeniably marked a significant cognitive achievement in the cultural development of humankind, it can no longer remain insulated from critical scrutiny. And while the adoption of the propositional attitude idiom in

subjective reports seems to have endowed the manifest image with a quasi-sacrosanct status, lending it an aura of incorrigible authenticity, this merely obscures its inherently speculative status. Thus, Churchland invites us to envisage the following possibility:

[A] spontaneous introspective judgement is just an instance of an acquired habit of conceptual response to one's internal states, and the integrity of any particular response is always contingent on the integrity of the acquired conceptual framework (theory) in which the response is framed. Accordingly, one's own *introspective* certainty that one's mind is the seat of beliefs and desires [or 'purposes'] may be as badly misplaced as was the classical man's *visual* certainty that the star-flecked sphere of the heavens turns daily.

(P. M. Churchland 1989: 3)

Where Sellars believed stereoscopic integration of the two images could be achieved by wedding the mechanistic discourse of causation to the rational language of intention, Churchland proposes to supplant the latter altogether via a *neurocomputational* enhancement of the scientific image which would effectively allow it to annex the manifest image, thereby forcing us to revise our understanding of ourselves as autonomous rational agents or 'persons'. However, as we shall see below, Churchland's attempt to annex the manifest image to the scientific image is vitiated by a fundamental epistemological tension. Like Sellars, Churchland emphatically rejects the instrumentalist conception of science concomitant with the ontological prioritization of the manifest image: he claims to be a scientific realist. But as we shall see, his realism about science is mined at every turn by his pragmatist construal of representation.

1.3 Cognitive catastrophe: Paul Churchland

In his now-canonical 1981 paper 'Eliminative Materialism and the Propositional Attitudes',⁵ Churchland summarizes eliminative materialism (EM) as:

the thesis that our commonsense conception of psychological phenomena constitutes a radically false theory, a theory so fundamentally defective that both the principles and the ontology of that theory will eventually be displaced, rather than smoothly reduced, by completed neuroscience. Our mutual understanding and even our introspection may then be reconstituted within the conceptual framework

of completed neuroscience, a theory we may expect to be more powerful by far than the commonsense psychology it displaces, and more substantially integrated within physical science generally.

(P. M. Churchland, 1989: 1)

Unsurprisingly, the claim that commonsense psychology may be false has tended to provoke alarm, especially (though by no means exclusively) among philosophers who have devoted their entire careers to the task of integrating it into the ambit of natural science. Thus Jerry Fodor has remarked, 'If commonsense intentional psychology were really to collapse that would be, beyond comparison, the greatest intellectual catastrophe in the history of the species.'⁶ Since professional philosophers of mind are not generally known for their apocalyptic proclivities, the claim that one of their number might be harbouring the instrument of 'the greatest intellectual catastrophe in the history of the species' cannot but command our attention. Contemporary philosophy of mind is a domain of often highly technical controversies between specialists divided by allegiances to competing research programmes, but where the truth or falsity of the eliminativist hypothesis is concerned, the stakes would seem to transcend the bounds of this particular sub-discipline and to have an immediate bearing upon human culture at large. For what Churchland is proposing is nothing short of a cultural revolution: the reconstruction of our manifest self-image in the light of a new scientific discourse. What is at stake in EM is nothing less than the future of human self-understanding.

Churchland's formulation of the eliminativist hypothesis⁷ can be boiled down to four claims:

1. Folk-psychology (FP) is a theory, hence susceptible to evaluation in terms of truth and falsity.
2. FP also encodes a set of practices, which can be evaluated in terms of their practical efficacy vis-à-vis the functions which FP is supposed to serve.
3. FP will prove irreducible to emerging neuroscience.
4. FP's neuroscientific replacement will exhibit practical as well as theoretical superiority over its predecessor.

Given these premises, Churchland cites three basic regards in which FP has shown itself to be profoundly unsatisfactory:

1. There are a significant number of phenomena for which FP is incapable of providing either a coherent explanation or successful

prediction: e.g., the range of cognitive fractionation engendered by brain damage, the precise aetiology and typology of mental illness, the specific cognitive mechanisms involved in scientific discovery and artistic creativity.

2. FP is theoretically stagnant, it has conspicuously failed to develop in step with the rapidly accelerating rate of cultural evolution or evolve in accordance with the novel cognitive requirements imposed by advanced technological societies.
3. FP is increasingly isolated and anomalous with regard to the corpus of the natural sciences; specifically, it is conceptually irreducible to the emerging discourse of cognitive neuroscience.

Critics of EM have responded to each of these charges using a variety of argumentative strategies. They have denied that FP is a theory in the scientific sense and hence that it can be evaluated in terms of 'truth' or 'falsity', or indicted for its failure to explain anomalous psychological phenomena. They have denied that it is stagnant or anachronistic in the face of technological evolution or that it can be judged according to some superior standard of practical efficacy. Finally, they have challenged the claim that reduction is the only way of ensuring the integrity of natural science.⁸

Rather than recapitulate Churchland's premises and the objections to them individually, I shall consider the EM hypothesis from four different angles: (1) the nature of Churchland's neurocomputational alternative to FP; (2) the charge that EM is self-refuting; (3) the latent tension between Churchland's allegiance to scientific realism and his irrealism about the folk-psychological account of representation; (4) the accusation that EM, and reductionist science more generally, is incapable of acknowledging the reality of phenomenal consciousness.

1.4 The neurocomputational alternative

Churchland defines FP in the following way:

'Folk psychology' denotes the pre-scientific, commonsense conceptual framework that all normally socialized humans deploy in order to comprehend, predict, explain and manipulate the behavior of humans and the higher animals. This framework includes concepts such as belief, desire, pain, pleasure, love, hate, joy, fear, suspicion, memory, recognition, anger, sympathy, intention, and so forth. It embodies our baseline understanding of the cognitive, affective, and

purposive nature of people. Considered as a whole, it constitutes our conception of what a person is.

(P. M. Churchland 1998b: 3)

As we saw above, it was Sellars who provided the basis for Churchland's characterization of FP as a quasi-scientific theory within which the notion of 'personhood' plays a central role. However, Sellars introduced propositional attitudes as *functional* kinds, leaving their ontological status deliberately indeterminate. But for Churchland, to attribute causal efficacy to functional kinds is already to have endowed them with an ontological status. What he considers problematic is not the functional role account of psychological kinds, but rather the premise that FP provides anything like a reliable catalogue of psychological functioning. Yet Churchland's antipathy to the characterization of propositional attitudes as functional kinds stems not so much from an antipathy to functionalism per se but rather from a deep suspicion about the reliability of FP as a guide to the individuation of the salient psychological types. Thus, his own neurocomputational alternative to FP proposes a different approach to the task of identifying psychological functions. By way of contrast to the 'top-down' approach to the study of cognition, for which linguistic behaviour is paradigmatic, Churchland champions a 'bottom-up' approach which seeks to ascend from neurobiologically realistic models of rudimentary sensory-motor behaviours to the more sophisticated varieties of linguistically mediated cognitive activity.

Consequently, Churchland proposes to replace FP, according to which cognition is conceived of as an intrinsically linguistic medium structured through the 'sentential dance' of propositional attitudes, with a new model drawing on the resources of connectionist neuroscience. According to this new paradigm, the internal kinematics of cognition find expression in activation patterns across populations of neurons, as opposed to sententially articulated structures, while its dynamics reside in vector-to-vector transformations driven by learned configurations of synaptic connection, as opposed to deductive inferences governed by relations of logical entailment from one sentence to another. Thus, while the brain's basic unit of representation is the activation vector, its fundamental computational operation is the vector-to-vector transformation, as performed on those configurations of neuronal activation. Crucially, according to this paradigm, a 'theory' is no longer to be understood as a linguaformal system of propositions connected to one another by relations of logical entailment; it consists

rather in a determinate partitioning of vector space into a manifold of prototypical divisions and sub-divisions relative to typically reiterated inputs.

Nevertheless, it is important to emphasize how, for all its claims to greater biological plausibility, this new 'prototype vector activation' (PVA) model of cognition remains a computational idealization. In this regard, it perpetuates the functionalist distinction between psychological types and their material instantiation. But where traditional functionalism modelled this distinction in terms of the difference between an abstract computational state (characterized in terms of some Turing machine state) and its biophysical instantiation, it is configured here in terms of the distinction between weight space and vector space. While the weight configuration uniquely determines the partitioning of vector space, only the latter is to be identified with the theory or conceptual scheme in terms of which a network represents the world. Thus it is by acquiring a determinate configuration in synaptic weight space that a brain comes to achieve a specific prototypical partitioning of its vector activation space. And it is this partitioning of vector space, rather than that configuration of synaptic weights, which provides the functional index for the theory in terms of which the brain represents the world. As Churchland puts it:

People react to the world in similar ways not because their underlying weight configurations are closely similar on a synapse-by-synapse comparison, but because their activation spaces are similarly partitioned. Like trees similar in their gross physical profile, brains can be similar in their gross functional profiles while being highly idiosyncratic in the myriad details of their fine-grained arborization.

(P.M. Churchland 1989: 234)

It should be remarked at this juncture that Churchland's claims on behalf of this model's greater degree of biological realism have not gone unchallenged. Churchland invokes a relation of 'resemblance' between these so-called neural networks and brain-structure without specifying what the relation consists in or what the criterion for 'resemblance' might be. The putative 'analogy' between the units of a network and the neurons of a brain provide no guarantee that the network's instantiation of a vector prototype will be isomorphic with the brain's instantiation of a psychological type. Moreover, the unification of psychological categories remains autonomous with regard to the neurobiological level. John Marshall and Jennifer Gurd⁹ have pointed out that

pathology reveals fractionations of psychological functioning which provide constraints on the organization of cognitive function. Behavioural disorders index functional categories which are subject to different neurological instantiations – different physical aetiologies can engender identical cognitive disorders. So although cognitive function is undeniably related to neurological structure, it cannot be straightforwardly reduced to it. Thus while Churchland is undoubtedly right to emphasize the desirability of adopting a bottom-up approach to psychological research, he faces two difficulties.

First, the empirical ‘resemblance’ between brains and neural nets is no guarantee that the latter are inherently superior to other, less neurologically ‘realistic’ models of cognition. For it is the nature of the appropriate criterion for ‘realism’ that is in question here: should it be neurobiological? Or psychological? Churchland cannot simply assume that the two necessarily overlap.

Second, in the absence of any adequate understanding of the precise nature of the correlation between psychological function and neural structure, whatever putative resemblance might obtain between neural architecture and network architecture sheds no light whatsoever on the relation between the latter and the abstract functional architecture of cognition. Where network architecture is concerned, although some degree of biological plausibility is desirable, empirical data alone are not sufficient when it comes to identifying the salient functional characteristics of cognition.¹⁰

We will not pursue this issue further here. But we must now consider a still more damaging objection which is frequently raised against EM: that its very formulation is fundamentally incoherent.

1.5 The ‘paradox’ of eliminativism

Sellars was arguably the first philosopher to discern in the logical infrastructure of folk-psychological discourse, with its relations of inferential entailment, what has since been brandished as the emblem of FP’s irreducibility to neurobiological or physical explanation: ascriptions of belief and desire inscribe the explananda within a normative (conceptual) space of reasons which cannot be reduced to or encompassed by the natural (material) space of causes. This supposed distinction between the putatively ‘rational-normative’ character of FP discourse and the merely ‘causal-material’ factors invoked in reductive explanation has tempted many philosophers to attribute some sort of quasi-transcendental, and hence necessarily ineliminable status to the

FP framework. Indeed, the notion that FP is necessarily ineliminable because it enjoys some sort of quasi-transcendental status motivates what is surely the most popular attempt at a knock-down 'refutation' of EM. Consider the following argument: the eliminative materialist claims to deny the existence of 'beliefs' (and of 'meaning' more generally). But to do so he must believe what he claims (or 'mean' what he says). Thus his belief that there are no beliefs is itself an instance of belief, just as the intelligibility of his claim that there is no such thing as meaning itself relies on the reality of the meaning which it claims to deny. Consequently, the proponent of EM is guilty of a performative contradiction.¹¹ It is important to see why this attempt to indict the eliminativist of self-contradiction is dubious from a purely logical point of view and otherwise suspect on broader philosophical grounds. From a purely formal point of view, the logic of the EM argument certainly appears to conform to the familiar structure of proof by *reductio ad absurdum*: it assumes Q (the framework of FP assumptions), then argues legitimately from Q and some supplementary empirical premises (which we shall describe below) to the conclusion that not-Q, and then concludes not-Q by the principle of *reductio*. There are no glaring or obvious anomalies here. Anyone wishing to denounce eliminativism as self-refuting using this stratagem should be wary lest they find themselves unwittingly indicting all arguments by *reductio* on the grounds that they too begin by assuming what they wish to deny. For the 'self-refuting' objection against EM to be sound, its scope would have to be such as to successfully invalidate all argument proceeding by *reductio* as necessarily incoherent. Although this may turn out to be possible (even if it is extremely doubtful), there is certainly nothing in the attempted refutation as it stands to even hint at how this could be done. Consequently there is every reason to suspect the fault lies in the 'self-refuting' argument against EM, rather than in EM's argumentation by *reductio per se* (cf. P.M. Churchland 1998b: 28–30).

In fact the crucial sleight of hand in this attempted 'refutation' of EM occurs in the second step, specifically the claim that 'the eliminativist's belief that there are no beliefs is itself an instance of belief, just as the intelligibility of his claim that there is no such thing as meaning itself relies on the reality of the meaning which it claims to deny'. But the intelligibility of EM does not in fact depend upon the reality of 'belief' and 'meaning' thus construed. For it is precisely the claim that 'beliefs' provide the necessary form of cognitive content, and that propositional 'meaning' is the necessary medium for semantic content, that the eliminativist denies. Thus Churchland's claim is not that there

is no such thing as ‘meaning’ but rather that our spontaneous experience of ‘understanding’ what we mean in terms of propositional attitude FP does not provide a reliable guide for grasping what Churchland calls ‘the underlying kinematics and dynamics’ of meaning. According to Churchland’s neurocomputational alternative to FP,

[A]ny declarative sentence to which a speaker would give confident assent is merely a one-dimensional projection – through the compound lens of Wernicke’s and Broca’s areas onto the idiosyncratic surface of the speaker’s language – of a four or five dimensional ‘solid’ that is an element in his true kinematical state. Being projections of that inner reality, such sentences do carry significant information regarding it and are thus fit to function as elements in a communication system. On the other hand, being subdimensional projections, they reflect but a narrow part of the reality projected. They are therefore unfit to represent the deeper reality in all its kinematically, dynamically, and even normatively relevant respects.

(P. M. Churchland 1989: 18)

We shall see later just how troublesome this invocation of a ‘normative’ aspect to these multi-dimensional dynamics will prove to be for Churchland. Nevertheless, at this juncture, what should be retained from this particular passage is the following: Churchland is not simply claiming that there is no such thing as meaning *tout court* – a misleading impression admittedly encouraged by some of his more careless formulations – but rather that ‘beliefs’ (such as ‘that FP is false’) and ‘propositions’ (such as ‘FP is false’) are rendered possible by representations whose complex multi-dimensional structure is not adequately reflected in the structure of a propositional attitude such as a ‘belief’, and whose underlying semantics cannot be sententially encapsulated. The dispute between EM and FP concerns the nature of representations, not their existence. EM proposes an alternative account of the nature of representations; it is no part of its remit to deny that such representations occur.

Ultimately, the question-begging character of the ‘self-refuting’ objection to EM becomes readily apparent when we see how easily it could be adapted to block the displacement of any conceptual framework whatsoever by spuriously transcendentalizing whatever explanatory principle (or principles) happens to enjoy a monopoly in it at any given time. Patricia Churchland provides the following example, in

which a proponent of vitalism attempts to refute anti-vitalism using similar tactics: 'The anti-vitalist claims there is no such thing as vital spirit. But if the claim is true the speaker cannot be animated by the vital spirit. Consequently he must be dead. But if he is dead then his claim is a meaningless string of noises, devoid of reason and truth.'¹² Here as before, the very criterion of intelligibility whose pertinence for understanding a given phenomenon – 'life' in this case, 'meaning' in the previous one – is being called into question, is evoked in order to dismiss the challenge to it. But just as anti-vitalism does not deny the existence of the various phenomena grouped together under the heading of 'life', but rather a particular way of explaining what they have in common, EM does not deny the reality of the phenomena subsumed under the heading of 'meaning' (or 'consciousness'), but rather a specific way of explaining their characteristic features.

Obviously, the key claim here is that the possibilities of 'intelligibility' (or 'cognitive comprehension') are not exhaustively or exclusively mapped by a specific conceptual register, and particularly not by that of supposedly intuitive, pre-theoretical commonsense. In this regard, Churchland's point, following Sellars, is that the register of intelligibility commensurate with what we take to be 'pre-theoretical commonsense', specifically in the case of our own self-understanding, is itself theoretically saturated, even if long familiarity has rendered its speculative character invisible to us. Though science has immeasurably enriched our understanding of phenomena by way of techniques and resources quite foreign to commonsense, as those resources begin to be deployed closer to home in the course of the investigation into the nature of mind, they begin to encroach on a realm of phenomena hitherto deemed to have lain beyond the purview of science, specifically, the phenomena grouped together under the heading of 'meaning', which for many philosophers harbour the key to grasping what makes us 'human'. The issue then is whether, as these philosophers insist, science is constitutively incapable of providing a satisfactory account of what we mean by 'meaning', or whether it is the authority of our pre-scientific intuitions about 'meaning' and 'meaningfulness' that needs to be called into question. In debates surrounding EM, it is important to dissociate these broader issues concerning the question of cognitive priority in the relation between the scope of scientific explanation and the authority of our pre-scientific self-understanding from the narrower issues pertaining to EM's own specific internal consistency. As we shall see, the vicissitudes of the latter do not necessarily vindicate those who would uphold the former.

1.6 From the superempirical to the metaphysical

The most serious problem confronting Churchland's version of EM resides in the latent tension between his commitment to scientific realism on one hand, and his adherence to a metaphysical naturalism on the other. To understand why this is the case, it is necessary to appreciate the two-tiered relation between Churchland's PVA paradigm and the linguaformal or folk-psychological accounts it is intended to displace. On the one hand, Churchland explicitly or empirically posits the explanatory excellence of the PVA model on the grounds of what he calls its 'superempirical virtues': conceptual simplicity, explanatory unity, and theoretical cohesiveness (P.M. Churchland 1989: 139–51). On the other hand, that excellence is implicitly or metaphysically presupposed as guaranteed a priori by an adaptationist rationale for the congruence between representation and reality.

Thus, although Churchland's PVA model of cognition remains explicitly representational – with propositional attitudes being supplanted by vector prototypes – it is one wherein representation no longer operates under the normative aegis of truth-as-correspondence. In lieu of truth, Churchland proposes to discriminate between theories on the basis of these super-empirical virtues of ontological simplicity, conceptual coherence, and explanatory power: 'As I see it then, values such as ontological simplicity, coherence and explanatory power are among the brain's most basic criteria for recognizing information, for distinguishing information from noise' (P. M. Churchland 1989: 147).¹³ But as a result, Churchland is obliged to ascribe degrees of neurocomputational adequation between representation and represented without reintroducing a substantive difference between true and false kinds of representation. For by Churchland's own lights, there are no substantive, which is to say ontological, differences between theories: all theories, including FP, consist in a specific partitioning of a brain's vector activation space.¹⁴ Yet there is a noticeable tension between Churchland's insistence that theories are to be discriminated between solely on the basis of differences in degree of superempirical virtue, rather than in representational kind, and his conviction that the PVA paradigm which reveals this underlying neurocomputational structure common to all representations exhibits such an elevated degree of superiority vis-à-vis FP in the realm of superempirical virtue as to necessitate the latter's elimination. As a result, Churchland's case for eliminativism oscillates between the claim that it is entirely a matter of empirical expediency,¹⁵ and the argument that seems to point to the

logical necessity of eliminating FP by invoking the PVA model's intrinsically metaphysical superiority. It is this tension between eliminativism's avowals of empirical humility and its unavowed metaphysical presumptions which we now propose to examine in greater detail.

On the one hand, since 'folk-semantic' notions as 'truth' and 'reference'¹⁶ no longer function as guarantors of adequation between 'representation' and 'reality', as they did in the predominantly folk-psychological acceptance of theoretical adequation – which sees the latter as consisting in a set of word-world correspondences – there is an important sense in which all theoretical paradigms are neurocomputationally equal. They are equal insofar as there is nothing in a partitioning of vector space per se which could serve to explain why one theory is 'better' than another. All are to be gauged exclusively in terms of their superempirical virtues, viz., according to the greater or lesser degree of efficiency with which they enable the organism to adapt successfully to its environment. In other words, if all 'theories' are instances of vector activation, and if the PVA paradigm – to which all other theoretical paradigms reduce according to Churchland – dispenses with the notion of theoretical 'truth', then we are obliged to stipulate that theories be judged pragmatically in terms of the greater or lesser degree of adaptational efficiency with which they enable the organism to flourish:

[I]f we are to reconsider truth as the aim or product of cognitive activity, I think we must reconsider its applicability right across the board [...] That is, if we are to move away from the more naïve formulations of scientific realism, we should move in the direction of pragmatism rather than positivistic instrumentalism [...] it is far from obvious that truth is either the primary or the principal product of [cognitive] activity. Rather, its function would appear to be the ever more finely tuned administration of the organism's behaviour.

(P. M. Churchland 1989: 149–50)

Thus, Churchland is perfectly explicit in explaining why he considers the PVA paradigm of cognition to be 'better' than its folk-psychological rivals, and he proposes a precise formula for gauging theoretical excellence. Global excellence of theory is measured by straightforwardly pragmatic virtues: maximal explanatory cohesiveness vis-à-vis maximal empirical heterogeneity purchased via minimal conceptual expenditure. One theory is 'better' than another if it affords greater theoretical

cohesiveness along with greater explanatory unity while using fewer conceptual means to synthesize a wider assortment of data.

But the problem for Churchland is that it remains deeply unclear in precisely what way the extent of an organism's adaptational efficiency, as revealed by the degree to which its representation of the world exhibits the superempirical virtues of simplicity, unity, and coherence, could ever be 'read off' its brain's neurocomputational microstructure. In what sense precisely are theoretical virtues such as simplicity, unity, and coherence necessarily concomitant at the neurological level with an organism's reproductively advantageous behaviour? Churchland simply stipulates that the aforementioned virtues are already a constitutive feature of the brain's functional architecture without offering anything in the way of argument regarding how and why it is that a neural network's learned configuration in synaptic weight space is necessarily constrained by the imperatives of unity, cohesion, and simplicity. Indeed, Churchland frequently adduces empirical data that would seem to imply the opposite: viz., his discussion of the ways in which a network can stop learning by becoming trapped within a merely local minimum in its global error gradient (P. M. Churchland 1989: 192–4) Perhaps Churchland's reticence in this regard is a matter of caution. For in order to make a case for the neurocomputational necessity of superempirical virtues, Churchland would need to demonstrate that the latter are indeed strictly information theoretic constraints intrinsic to the vector coding process, as opposed to extrinsic regulatory considerations contingently imposed on the network in the course of its ongoing interaction with the environment. However, in pursuing this particular line of argument, Churchland immediately finds himself confronted by a choice between two unappealing alternatives.

The first alternative follows inescapably from the fact that, by Churchland's own admission, the process of informational transduction via which the brain processes incoming stimuli is physically demarcated by the boundaries of the organism. Beyond those boundaries lies the world. Thus, if Churchland tries to integrate the superempirical virtues into the neurocomputational process by pushing the brain's coding activity out beyond the physical boundaries of the organism so that they become constitutive features of the world, he is forced into the uncomfortable position of having to claim that the physical world is neurocomputationally constituted. Since for Churchland perception and conception are neurocomputationally continuous, the result is a kind of empirical idealism: the brain represents the world but cannot be

conditioned by the world in return because the latter will 'always already' have been neurocomputationally represented. We are left with a thoroughgoing idealism whereby the brain constitutes the physical world without it being possible to explain either how the brain comes to be part of the world, or indeed even how the world could have originally produced the brain.

Alternatively, instead of trying to achieve a neurocomputational reduction of the superempirical virtues by projecting the brain's coding activity out onto the environing world, Churchland can abjure the notion of an absolute physical boundary between world and information as already coded by the brain's prototypical vector partitions in order to allow the physical world to reach 'into' the brain, thereby allowing a pre-constituted physical reality to play an intrinsic role in neurological activity. But in widening the focus of his epistemological vision in this way, Churchland will be obliged to abandon the representationalist dualism of brain and world, and to forsake his deliberately neurocentric perspective in order to adopt a more global or meta-neurological – which is to say, meta-physical – perspective. Clearly, however, such a shift threatens to undermine the categorical distinction between processor and processed, network and world, which is fundamental to Churchland's account. Since this distinction underlies Churchland's commitment to neurobiological reductionism, and underwrites all his arguments for eliminativism, we cannot expect him to find this second alternative any more appealing than the first.

Thus, Churchland cannot effect a neurocomputational reduction of superempirical virtue without engendering a neurological idealism, and he cannot reintegrate the neurocomputational brain into the wider realm of superempirical virtue without abandoning eliminativism altogether. Nevertheless, let us, for the sake of argument, set the former of these two difficulties aside for the moment and suppose that Churchland were to manage a successful but non-idealizing reduction of superempirical virtue. The trouble then is that in arguing that simplicity, unity, and coherence are constitutive functional features of the brain's neuroanatomy, Churchland is but one slippery step away from claiming that brains represent the world correctly as a matter of evolutionary necessity, i.e. that they necessarily have 'true' representations. Unfortunately, this is precisely the sort of claim that Churchland had sworn to abjure: 'Natural selection does not care whether a brain has or tends towards true beliefs, so long as the organism reliably exhibits reproductively advantageous behavior' (P. M. Churchland 1989: 150).

Consequently, everything hinges on whether the superempirical virtues are a precondition or a by-product of the organism's 'reproductively advantageous behavior'. Churchland implies the former, on the basis of what appears to be a latent brand of neurocomputational idealism, whereas all available empirical (i.e. evolutionary) evidence seems to point to the latter, and hence towards a less neurocentric account of representation. From the perspective of the latter, that successful networks do indeed tend to exhibit these superempirical characteristics as a matter of empirical fact is uncontroversial, but it is a fact about cognitive ethology, which is to say, a fact which makes sense only within the macrophysical purview of evolutionary biology and in the context of the relation between organism and environment, rather than a fact obtaining within the microphysical or purely information-theoretic ambit of the brain's neurocomputational functioning. That the macrophysical fact has a microphysical analogue, that the ethological imperative is neurologically encoded, is precisely what we might expect having suspended the premise of an absolute representational cleavage between the micro and macrophysical dimensions, and accepted the extent to which these must remain not only physically conterminous, but bound together by reciprocal presupposition.

Thus, considered by itself, the neurocomputational encoding of superempirical virtue is not enough to vindicate Churchland. For Churchland's account is predicated on the idealist premise that neurocomputational representation is the necessary precondition for adaptational success, that neurocomputational function determines evolutionary ethology. Consequently, and in the absence of some non-question-begging account as to how macrophysical facts pertaining to evolutionary ethology ultimately supervene on microphysical facts about the brain's neurocomputational functioning, it seems that the superempirical virtues Churchland invokes in order to discriminate between theories must remain extra-neurological characteristics, characteristics which reveal themselves only in the course of an ethological analysis of the organism's cognitive behaviour within the world, rather than via a neurological analysis of the brain's microstructure.

Accordingly, the tension between eliminativism's avowals of empirical humility and its latent metaphysical pretensions reveals itself when it becomes apparent that the pragmatic or superempirical virtues in terms of which Churchland proposes to discriminate between theories cannot be accounted for exclusively in neurocomputational terms. The superempirical virtues seem to exceed the neurocentric remit of the neurocomputational economy. And it is in trying to accommodate

them that Churchland begins unwittingly to drift away from the rigidly empirical premises that provide the naturalistic rationale for eliminativism towards a metaphysical stance wherein the PVA model begins to take on all the characteristics of a metaphysical *a priori*. As a result, the tenor of the argument for the elimination of FP shifts from that of empirical assessment to that of metaphysical imperative.

For presumably, were Churchland correct in maintaining that the superempirical virtues of ontological simplicity, conceptual coherence, and explanatory power are, as he puts it, 'among the brain's most basic criteria for recognizing information, for distinguishing information from noise', then a conceptual framework as baroque, as obfuscatory, and as allegedly incoherent as FP would have been eliminated as a matter of evolutionary routine, and Churchland would have been spared the trouble of militating so brilliantly for its displacement. If superempirical virtues were already endogenously specified and intrinsic to the brain's neurocomputational microstructure, then it would appear to be a matter of neurophysiological impossibility for an organism to embody any theory wholly lacking in these virtues. Paradoxically, it is the eliminativist's supposition that the former are intrinsically encoded in the brain's cognitive microstructure that ends up considerably narrowing the extent for the degree of superempirical distinction between theories, ultimately undermining the strength of the case against FP. Thus, although Churchland's trenchant critique of philosophies which insist on transcendentalizing FP as an epistemological *sine qua non* is well taken, it would seem that, whatever else is wrong with it, FP cannot be as chronically deficient in the superempirical virtues as Churchland requires in order to render the argument for its elimination incontrovertible – certainly not deficient enough to explain why Churchland insists on ascribing such a dramatic degree of superempirical superiority to the PVA paradigm.

Thus, even as the PVA paradigm continues to insist that all theories are neurocomputationally equal inasmuch as all display greater or lesser degrees of superempirical distinction, EM insinuates that the PVA paradigm is nevertheless more equal, more pragmatic, more superempirically virtuous than all previous folk-psychological paradigms of cognition. What underlies this claim to radical superiority? Given that Churchland seems to accept Quine's thesis that theories are underdetermined by empirical evidence (P. M. Churchland 1989: 139–51), the superiority of the PVA paradigm cannot be held to reside in any precisely quantifiable increase in the efficiency with which it enables the human organism to process information. For according to Churchland,

there can be no absolute – which is to say, theory neutral – measure of superiority when we compare the degree of adaptational efficiency bestowed upon organisms by the theories they incorporate. By transforming the data it purports to explain, every theory shifts the empirical goalposts as far as adaptational efficiency is concerned.¹⁷ Thus, it is perfectly possible to envisage the possibility of ‘subtler’ or more ‘refined’ versions of folk-psychological theory endowing organisms with all the additional discriminatory capacities, conceptual enhancements, and explanatory advantages of the PVA paradigm favoured by Churchland.¹⁸

But if this is the case, it suggests that, for Churchland, the putative superiority of the vector activation paradigm is ‘meta-empirical’ in a sense which is more than pragmatic and quite irreducible to those super-empirical virtues in terms of which Churchland discerns theoretical excellence: a sense which is meta-physical rather than merely super-empirical. This is to say that Churchland holds the PVA paradigm to be irrecusably superior to all available linguaformal alternatives simply because he implicitly supposes that it alone is capable of furnishing a genuinely universal explanation of cognition that encompasses all others. Thus, all theories are equally instances of vector activation, but the vector activation theory of vector activation is *more equal* because it is revealed as the precondition for all the others. Accordingly, the PVA paradigm is at once the latest in a historically embedded empirical sequence, and the latent precondition which explains the veritable character of the succession of paradigms encompassed in that sequence. The PVA paradigm is the universal prototype of which all other models of cognition are merely instantiations. In Hegelese, we might say that the latter are instances of vector coding in themselves, but not yet *in and for themselves*. For Churchland explicitly claims that he has found the veritable material instantiation of what Kuhn called a ‘paradigm’¹⁹: this is precisely what a network’s prototypical partitioning of vector activation space is. And we should also bear in mind that a paradigm in Kuhn’s sense – just as in Churchland’s meta-physically transformed sense – is as much a metaphysical ‘factum’ as an empirical ‘datum’. Thus, a network’s prototypical vector configuration is at once an empirical fact, and the precondition for anything’s coming to count as an empirical fact, for it is what predefines the parameters for all perceptual judgement. In other words, Churchland’s neurocomputational paradigm is at once empirically given as an intra-historical datum, but also, and in the very same gesture, posited as an a priori, supra-historical factum that furnishes us with the supposedly universal explanatory

precondition for our ability to recognize and explain the historical sequence of paradigm shifts for what they were: changing configurations in vector space.²⁰

Ultimately then, Churchland cannot provide a coherent account of the relation between network and world because he lacks any resources for establishing the correlation independently of his prototype vector paradigm. A model of representation cannot be at once a representation of the world and what establishes the possibility of that representation. It cannot represent the world and represent that representation. In Churchland's work, this dichotomy becomes inescapable in the tension between his determination to be a realist about scientific representation while remaining a pragmatist about the genesis of scientific representation in general. But this is not just a problem for Churchland; it vitiates the variety of philosophical naturalism which draws its account of the nature of science from one or other variety of evolutionary adaptationism. As Fodor rightly insists, the success of adaptationist rationales in explanations of organic functioning does not provide a legitimate warrant for co-opting the former in order to account for cognitive functioning.²¹

The trouble with Churchland's naturalism is not so much that it is metaphysical, but that it is an impoverished metaphysics, inadequate to the task of grounding the relation between representation and reality. Moreover, Churchland's difficulties in this regard are symptomatic of a wider problem concerning the way in which philosophical naturalism frames its own relation to science. While vague talk of rendering philosophy consistent with 'the findings of our best sciences' remains entirely commendable, it tends to distract attention away from the amount of philosophical work required in order to render these findings metaphysically coherent. The goal is surely to devise a metaphysics worthy of the sciences, and here neither empiricism nor pragmatism are likely to prove adequate to the task. Science need no more defer to empiricism's enthronement of 'experience' than to naturalism's hypostatization of 'nature'. Both remain entirely extraneous to science's *subtractive* modus operandi. From the perspective of the latter, both the invocation of 'experience' qua realm of 'originary intuitions' and the appeal to 'nature' qua domain of autonomous functions are irrelevant. We shall try to explain in subsequent chapters how science subtracts nature from experience, the better to uncover the objective void of being. But if, as we are contending here, the principal task of contemporary philosophy is to draw out the ultimate speculative implications of the logic of Enlightenment, then the former cannot allow itself to be

seduced into contriving ever more sophisticated proofs for the transcendental inviolability of the manifest image. Nor should it resign itself to espousing naturalism and taking up residence in the scientific image in the hope of winning promotion to the status of cognitive science. Above all, it should not waste time trying to effect some sort of synthesis or reconciliation between the manifest and scientific images. The philosophical consummation of Enlightenment consists in expediting science's demolition of the manifest image by kicking away whatever pseudo-transcendental props are being used to shore it up or otherwise inhibit the corrosive potency of science's metaphysical subtractions. In this regard, it is precisely Churchland's attempt to preserve a normative role for the 'superempirical virtues' that vitiates his version of EM.

1.7 The appearance of appearance

Unfortunately, Churchland is not the Antichrist, and EM's pragmatic accoutrements deprive it of the conceptual wherewithal required in order to precipitate cultural apocalypse. But this is not to lend succour to the defenders of FP, for even if the latter is neither as monolithic nor as maladaptive as Churchland makes out, and hence likely to survive as a set of pragmatic social strategies, all the indications seem to be that it will play an increasingly insignificant role in the future development of cognitive science.²² Nevertheless, Churchland's estimable achievement (along with Daniel Dennett) consists in having driven an irrecusable philosophical wedge between our phenomenological self-conception and the material processes through which that conception is produced. Perhaps more than any other contemporary philosopher, Churchland's work gives the lie to phenomenology's 'principle of principles', which Husserl expressed as follows:

No conceivable theory could make us err with respect to the principle of principles: that every originary presentive intuition is a legitimizing source of cognition, that everything originally (so to speak in its personal actuality) offered to us in intuition is to be accepted simply as what it is presented as being, but also only within the limits in which it is presented there.

(Husserl 1982: 44)²³

The critical force of Churchland's project is to show how the 'limits' which phenomenology would invoke in order to circumscribe the legitimacy of 'originary intuitions' cannot be phenomenologically

transparent since they are themselves theoretically drawn. Moreover, whatever else may be wrong with it, EM is perfectly conceivable, yet this is precisely what phenomenology's transcendental pretensions cannot countenance. Consequently, this conceivability alone suffices to undermine the putative indubitability of our 'experience of meaning', along with the supposed incorrigibility of our 'originary presentive intuitions'. Regardless of the specific shortcomings of Churchland's own PVA paradigm, linguaformal 'meaning' is almost certainly generated through non-linguistic processes, just as our phenomenological intuitions are undoubtedly conditioned by mechanisms that cannot themselves be intuitively accessed. The upshot of Churchland's work, in a word, is simply that we are not as we experience ourselves to be.

In this regard, by drawing attention to the incommensurability between phenomenal consciousness and the neurobiological processes through which it is *produced*, Churchland casts doubt upon the transparency which many philosophers – and not just phenomenologists – claim must be granted to the phenomenon of consciousness construed as 'the appearance of appearance'. These philosophers insist that where phenomenal consciousness is concerned, the appearance–reality distinction cannot be invoked short of occluding the reality of the phenomenon of consciousness altogether, for 'the appearing is all there is'. As Searle puts it, '[C]onsciousness consists in the appearances themselves. Where appearance is concerned we cannot make the appearance–reality distinction because the appearance is the reality.'²⁴ But the notion of 'phenomenon' or 'appearance' in this strong phenomenological sense harbours an inbuilt circularity. This appeal to the self-evident transparency of appearance conveniently dispenses with the need for justification by insisting that we all already know 'what it's *like*' for something to appear to us, or for something 'to be like' something for us, or for other sentient entities capable of registering appearances in the way in which we do (indeed, this is precisely the force of Heidegger's *Dasein*, construed as the locus or *site* of phenomenological disclosure, which ostensibly avoids substantive metaphysical presuppositions pertaining to physical and/or biological differences between 'conscious' and 'non-conscious' entities). It is this seeming, and not its constitutive conditions, that has to be accounted for 'in its own terms'. Indeed, the founding axiom of phenomenology (Husserl's 'principle of principles') could be simply stated as: appearances can only be understood in their own terms. But what are 'their own terms'? Precisely the terms concomitant with the first-person phenomenological point of view. It is this assumption that leads many philosophers to insist that where appearance

is concerned, any attempt to introduce an appearance – reality distinction is absurd, a misunderstanding of what is at stake: viz., the *appearing* of appearance *as such*, and not *as* something else. But if we enquire as to the source for the evidence that this absolute appearing occurs, the reply is invariably that it comes from ‘our own conscious experience’. Thus we are invited to account for the autonomy of the appearing as such, and in order to do this, not only can we not invoke any appearance–reality distinction, we are obliged to stick to describing this phenomenal *seeming* strictly in its ‘own’ terms, without interpretative overlay or editorial amendment. But how exactly are we supposed to describe appearance strictly in its own terms, without smuggling in any extrinsic, objectifying factors? In actuality, the more closely we try to stick to describing the pure appearing and nothing but, the more we end up resorting to a descriptive register which becomes increasingly figurative and metaphorical; so much so, indeed, that it has encouraged many phenomenologists to conclude that only figurative and/or poetic language can be truly adequate to the non-propositional dimension of ‘meaningfulness’ harboured by ‘appearing’. Accordingly, much post-Heideggerian phenomenology has been engaged in an ongoing attempt to deploy the figurative dimension of language in order to sound sub-representational experiential depths, which, it is claimed, are inherently refractory to any other variety of conceptualization, and particularly to scientific conceptualization. In this regard, the goal of phenomenology would consist in describing ‘what it’s like’ to be conscious while bracketing off conceptual judgements about ‘what it’s like’. Yet as a result, an intimate link between phenomenology and literary hermeneutics has to be forged in order to stave off the obvious threat harboured by the phenomenological axiom: that the more we stick to describing pure appearing qua appearing, the more we realize that we invariably have to assume something *inapparent* within appearances in order to be able to describe them at all – we have to *excavate* some originary dimension of (non-propositional) ‘meaning’ or ‘sense’ (as Heidegger and his successors sought to) in order to describe the autonomy of appearances in their ‘own’ terms. Thus phenomenology invariably petitions figurative language in order to carry out its descriptive task. Yet it might be better to concede that the aims of phenomenological description *stricto sensu* are best served through the artifices of literature, instead of hijacking the conceptual resources of philosophy for no other reason than to preserve some inviolable inner sanctum of phenomenal experience. For the more attentively we try to scrutinize our originary phenomenal experiences independently of the

resources of language, the more impoverished our descriptions become. This is not to say that there is no more to consciousness than what can be linguistically mediated and articulated, but on the contrary, to insist that consciousness harbours an underlying but sub-linguistic reality which is simply not accessible to first-person phenomenological description or linguistic articulation. Ironically, and contrary to phenomenology's guiding intuition, the *reality* of consciousness is independent of the subject of consciousness. Only the objective, third-person perspective is equipped with conceptual resources sensitive enough to map consciousness' opaque, sub-linguistic reality. For as Thomas Metzinger has pointed out, it is precisely the simplest, most rudimentary forms of phenomenal content that cannot be reliably individuated from the phenomenological perspective, since we lack any transtemporal identity criteria through which we could re-identify them. And in the absence of such criteria, we are incapable of forming logical identity criteria grounded in phenomenological experience, and consequently cannot form phenomenal concepts for these elementary experiential data. Though we can discriminate fine-grained differences in phenomenal content, we seem to be incapable of identifying those same contents individually. Once these phenomenal primitives have vanished from the conscious present, we cannot access them, whether through subjective phenomenological reflection, or through conceptual analysis operating within intersubjective space. Thus the primitive data of phenomenal consciousness are often epistemically and phenomenologically unavailable to the subject of consciousness. But this is precisely why the only hope for investigating the sub-symbolic reality of phenomenal consciousness lies in using the formal and mathematical resources available to the third-person perspective:

The minimally sufficient neural and functional correlates of the corresponding phenomenal states can, at least in principle, if properly mathematically analyzed, provide us with the transtemporal, as well as the logical identity criteria we have been looking for. Neurophenomenology is possible; phenomenology is impossible.

(Metzinger 2004: 83)

In his recent *Sweet Dreams*,²⁵ Dennett correctly identifies the fundamental quandary confronting those who would uphold the unconditional transparency of the phenomenal realm: if the constitutive features of 'appearing qua appearing' are non-relational and non-functional, and hence inherently resistant to conceptual articulation, then even the

first-person phenomenological subject of experience lacks the resources to apprehend them; he or she will always be separated from his or her own immediate experience of the phenomenon per se by some mediating instance, for every description of a phenomenal *representatum* entails transforming the latter into the *representandum* of another phenomenal *representatum*, and so on. In this regard, Dennett's penetrating critique of some of the more extravagant superstitions entailed by philosophers' 'qualiaphilia' chimes with Derrida's critique of Husserl: the notion of an absolutely transparent but non-relational phenomenal appearance is incoherent much for the same reason as the idea of consciousness as locus of absolute self-presence is incoherent.²⁶ If one acknowledges that the conceit of a phenomenal appearing devoid of all relational and functional properties is nonsensical, then one must concede that phenomenological experience itself shows that we ourselves do not enjoy privileged access to all the properties intrinsic to appearance *qua* appearance. Accordingly, there is no reason to suppose that appearing is absolutely transparent to us, and therefore no reason not to accept the idea (long advocated by Dennett) that the phenomenon of consciousness itself invites a distinction between those features of appearance that are apprehended by us, and those that elude us. For if appearance is sufficient unto itself, the price of upholding the claim that our experience of appearance is entirely adequate to that appearance would seem to be a position perilously close to absolute solipsism (this is precisely the option embraced by some of Heidegger's phenomenological heirs, such as Michel Henry).²⁷ Of course, having conceded that the notion of a non-manifest appearance is not entirely oxymoronic, the question remains whether to raise the stakes by insisting that this latent or non-manifest dimension of phenomenality transcends objective description altogether, as did the early Heidegger, who chose to see in it the unobjectifiable *being* of the phenomenon, which science is constitutively incapable of grasping; or whether to grant that this non-manifest dimension is perfectly amenable to description from the third-person point of view characteristic of the sciences, and hence something which falls under the remit of the scientific study of the phenomenon of consciousness. Obviously, such a choice depends on a prior decision about the scope and limits of scientific investigation, and about whether or not it is right to remove certain phenomena, specifically those associated with human consciousness, from the ambit of that investigation as a matter of principle. More abstractly, this can be characterized as a speculative decision about whether to characterize the latency of phenomena in terms of

unobjectifiable transcendence, as Heidegger does with his invocation of 'being', or in terms of immanent objectivity, as Churchland and Metzinger do when invoking the un-conscious, sub-symbolic processes through which phenomenal consciousness is produced. Our contention here is that the latter option is clearly preferable, since it begs fewer questions; yet it remains compromised by an alliance with pragmatism which vitiates the commitment to scientific realism which should be among its enabling conditions. Naturalism may not be the best guarantor of realism, and in subsequent chapters we will try to define the rudiments of a speculative realism and elaborate on some of the conceptual ramifications entailed by a metaphysical radicalization of eliminativism. Our provisional conclusion at this stage however, is that far from being some incontrovertible datum blocking the integration of the first-person point of view into the third-person scientific viewpoint, the appearing of appearance can and should be understood as a phenomenon generated by sub-personal but perfectly objectifiable neurobiological processes. Indeed, as Metzinger persuasively argues, there are solid grounds for maintaining that the phenomenological subject of appearance is itself a phenomenal appearance generated by in-apparent neurobiological processes. Thus, for Metzinger, concomitant with this subversion of our phenomenological self-conception is a subversion of our understanding of ourselves as *selves*.²⁸ Yet faced with this unanticipated twist in the trajectory of Enlightenment, which seems to issue in a conception of consciousness utterly at odds with the image of the latter promoted by those philosophers who exalted consciousness above all other phenomena, philosophers committed to the canon of rationality defined by Kant and Hegel have vigorously denounced what they see as the barbaric consequences of untrammelled scientific rationalism. Ironically enough, it is precisely those philosophers who see the fundamental task of philosophy as critique who have proved to be among the staunchest defenders of the legitimacy of the manifest image. In the next chapter, we will examine one of the most sophisticated defences of the latter in the shape of the critique of Enlightenment rationality proposed by Theodor Adorno and Max Horkheimer.

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