

The background of the entire slide is a painting. It depicts a vibrant rainbow arching across the sky. Below the rainbow is a body of water, rendered in shades of blue and grey. In the center of the background, behind the rainbow, is a large, glowing red sun or moon. The overall style is painterly and somewhat abstract.

Worlds Apart: A Copernican Critique of Kantian Idealism

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Abstract

In spite of his claim to have established with certainty and without omission the many transcendental grounds of experience, there is something fundamental pertaining to every possible experience which the ‘critical’ philosophy of Immanuel Kant fails to explain. The obstacle blocking the path to a solution is the critical method itself and the ingenious but misguided orientation which informed the Kantian enterprise from its inception. Kant compared this new orientation to ‘the first thoughts of Copernicus’ and indeed, ever since, ‘The Copernican Revolution in Philosophy’ has stood as title for that seismic shift in philosophical consciousness. Yet it is to Copernicus that we owe our problem and it is the Copernican world-view, acknowledged by Kant to be ‘true’, which requires us to reverse his dictum that ‘objects conform to our cognition’. The necessity for this rests on the most basic of observations: human beings – *together with their faculties of apprehension* – travel through space and time in a *non-apprehensible* way, implying that spatiotemporality exists independently of the observing subject since it is in virtue of this true movement alone that all apparent motion is generated, which appearances, however, ‘contradict’ the reality. The ‘something’ which Kant cannot explain, therefore, is the phenomenon of *observer motion* (in contrast to *observed motion*, the most his approach accommodates) since his ontological denial regarding space and time and his equivalence thesis in respect of ‘experience’ and ‘objectivity’ requires that he discount this phenomenon on principle. In determining, therefore, the ontological and epistemological implications of the opposing Copernican principle that it is our cognition that conforms to objects, it is argued that space and time are transcendently real and the apprehending subject physically (rather than ‘empirically’ or ‘noumenally’) constituted, leaving the reader with a simple choice: Kant or Copernicus, but not both.

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Abbreviations

Kant's *Critique of Pure Reason* (first edition 1781, second edition 1787) is referenced using the standard 'A' and 'B' format respectively. Abbreviated titles of additional works by Kant cited herein and the dates of their original publication are as follows:

<i>Directions</i>	<i>Concerning the Ultimate Ground of the Differentiation of Directions in Space</i> (1768)
<i>Dissertation</i>	<i>On the Form and Principles of the Sensible and the Intelligible World</i> [Inaugural Dissertation] (1770)
<i>Dreams</i>	<i>Dreams of a Spirit-Seer Elucidated By Dreams of Metaphysics</i> (1766)
<i>Groundwork</i>	<i>Groundwork of the Metaphysics of Morals</i> (1785)
<i>Judgment</i>	<i>Critique of Judgment</i> (1790)
<i>Metaphysical Foundations</i>	<i>Metaphysical Foundations of Natural Science</i> (1786)
<i>Morals</i>	<i>The Metaphysics of Morals</i> (1797)
<i>Negative Magnitudes</i>	<i>Attempt to Introduce the Concept of Negative Magnitudes into Philosophy</i> (1763)
<i>Perpetual Peace</i>	<i>Toward Perpetual Peace</i> (1795)
<i>Philanthropy</i>	<i>On a Supposed Right to Lie From Philanthropy</i> (1797)
<i>Practical Reason</i>	<i>Critique of Practical Reason</i> (1788)
<i>Prolegomena</i>	<i>Prolegomena to Any Future Metaphysics That Will Be Able to Come Forward as Science</i> (1783)

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In its transcendental efforts... reason cannot look ahead so confidently, as if the path on which it has travelled leads quite directly to the goal, and it must not count so boldly on the premises that ground it as if it were unnecessary for it frequently to look back and consider whether there might not be errors in the progress of its inferences to be discovered that were overlooked in its principles and that make it necessary either to determine them further or else to alter them entirely.

Immanuel Kant (*Critique of Pure Reason*, A735=B763)

Introduction

Only a single proposition is to be argued for in what follows which is that *experiencing subjects inhabit a world*. The grounds to be presented in support of this claim do not rest directly upon experience itself but, rather, upon a transcendental argument to the effect that experience would not be constituted in the manner it is were it the case its subjects did *not* inhabit a world. The ironic nature of these introductory remarks will not be lost on the reader who will know of a philosopher who argued, transcendently, the direct opposite, namely that *a world is something which inhabits experiencing subjects*.

Despite its monumental scope and labyrinthine complexity and despite the immense influence it has exerted on all subsequent thought, Immanuel Kant's transcendental philosophy ultimately rests on the single principle: *Objects conform to our cognition*. Objects, that is to say, and to explicate this principle in as brief a manner as possible, are not mind-independent 'things' (A492=B520) but cognitive constructs since it is we ourselves who 'make' them (B288) and any reality they possess is wholly limited to the possibility of their being 'objects of experience' (*Metaphysical Foundations*, 4:554). The term 'transcendental', therefore, is used, not in reference to objects as they may be constituted in themselves or independently of experience but, rather, to 'our mode of cognition of objects insofar as this is to be possible *a priori*' (A11=B25); such 'modes of cognition' that we possess being the pure intuitions of space and time and the categories of the understanding, which 'forms' are jointly applied to the given 'matter' of sensation (A20=B34) in constructing and regulating the empirical world of nature (*mundus sensibilis*).¹

¹ All translations of Kant are cited with the standard *Akademie* pagination. Details of translations are provided in the Bibliography.

That our minds construct empirical objects with all their spatiotemporal and causal–material attributes is what Kant thus means by the principle ‘Objects conform to our cognition’. And it seems clear, conversely, that objects regarded in a transcendently real sense or as existing independently of our experience (if we are to assume such objects at all) at least cannot be constituted in spatiotemporal and causal–material terms because objects only possess these attributes in virtue of our cognizing them this way. The constitution of things as they exist ‘in themselves’ remains, for us, unknowable and even the idea of such things serves only to limit that which is knowable (the world of experience), with any transgression of its boundaries leading inevitably to a conflict of reason with itself where, just because these things are unknown, anything at all can be asserted of them, assertions that often contradict one another.

Given the striking originality of his ideas as outlined here it is surprising that, rather than Kant’s name marking the ‘revolution’ brought about by his principle, it bears that of another man, Nicolaus Copernicus. Kant’s work has certainly been as influential as Copernicus’ (in philosophical circles undoubtedly but in cultural terms also) although one questions whether he fully grasped the implications of his principle at the time he proposed it. Had he done so the now famous remark made at the end of his *Critique of Practical Reason* (subsequently becoming his epitaph) would *instead* have read: Two things fill the mind with ever new and increasing admiration and reverence... *the starry heavens within me and the moral law above me*. And this is not so far from the truth if one considers the following remarks taken from the *Critique*:

[The thing in itself] is not the object we understand by the representation of matter and corporeal things; for these are merely appearances, i.e., mere modes of representation, which are always found only in us. (A372).

[Thus] we should turn our self–knowledge away from fruitless and extravagant speculation toward fruitful practical uses, which... takes its principles from somewhere higher, and so determines our behaviour, as if our vocation extended infinitely far above experience, and hence above this life. (B421).

It is to be contended here (the Copernican analogy specifically considered in Chapter 1) that Kant’s principle flatly contradicts Copernicus’ insight which analogises far more appropriately with the opposing proposition. Moreover Kant’s epistemological reversal leads him explicitly to assert things no Copernican could possibly accept, as with the

following astronomical phenomenon advanced in proving the reality of ‘objects in space outside us’ (B274):

[T]he change in outer relations (motion) relative to that which persists in space (e.g., the motion of the sun with regard to the objects on the earth). (B277–8).

Of course the earth, Copernicus at least argued, does not actually ‘persist in space’² or the sun move in relation to it, though certainly things appear to us this way. So how is one to reconcile the Ptolemaic nature of experience (in which celestial motion and the earth’s immobility are indeed really apparent) with the Copernican reality from which standpoint these motions are only apparently and not physically real? That is to say, and adopting Kant’s alternative formulation: ‘What is the ground of the relation of that in us which we call ‘representation’ to the object?’ (*Correspondence*, 10:130). In solving this problem one is required to reverse Kant’s principle in a manner similar to that of the Copernican reversal of Ptolemaic theory, only here our concern is the ‘conditions of possibility’ of experience in general and not the movements of this or that celestial body. Because if ‘objects, or what is the same thing, the *experience* in which alone they can be cognized (as given objects)’ conforms to this cognition of ours (Bxvii) that which we experience ought to be objective (given that experience and objectivity are, according to Kant, ‘the same thing’); and this even allowing for dreams or optical illusions where the subjective nature of the appearances is generally acknowledged. But it seems clear, from the Copernican standpoint, that nothing objective is given in experience, indeed that nothing objective can possibly be given in this mode; which is not to suggest that the *existence* of things (ourselves included) is not registered by us by means of subjective experience but, rather, that the *nature* of those things as they exist independently of experience can only be ‘thought’ (on the basis of empirical evidence, granted) but not *manifested* in experiential terms. While this opposes the anti–realist claim that the merest thought of something existing independently of a possible experience is an incoherent one, it opposes, also, the claims of naïve realism to the extent that perception alone is inadequate at determining the nature of things as they exist in themselves. It is a peculiarity of Kant’s metaphysical criticism that he combines

² By which ‘persistence’ is not meant ‘endures through time’ (this obviously applying to the sun as well) but, rather, ‘*remains at rest*’ and this in contrast to the proposed ‘motion’ of the sun.

aspects of both naïve– and anti–realist thought because when reality is denied things in a transcendental sense then it is in experience alone that objects acquire reality.

To explain further what will be meant here by the seemingly paradoxical assertion that ‘nothing objective is given in experience’ while yet, by this means, we can ‘register the existence of things’. The situation is to be considered directly analogous to objects as they appear in the reflective surface of a mirror, which is to say that if, in nature, there were no reflective surfaces and no perceivers also, although it could not be deduced from this that no objects would then *exist*, it can legitimately be claimed that no objects would then *appear* (either as reflections or as things perceived). For a thing to appear, therefore, one must presuppose some terminus in which or to which it can appear (the ‘terminus’ being, for example, a mirror or a human being respectively). This allows for a distinction to be made between an object as it exists and an object as it appears and while the ‘object’ in both cases is the *same* existent, the *objectivity* of the one and the *objectivity* of the other are distinguishable, the former concerning the object simply *as it exists* (in a physical sense), the latter, *as it appears* (in an empirical sense). Since the former does not presuppose for its determination the existence of a perceiver while the latter does, the ‘objectivity’ of an object’s appearing to oneself presupposes a *joint* determination, with this latter constituting our *experience* of things. For Kant, however, a ‘perceiver’ is not a ‘terminus’ to whom objects appear but, rather, an *originator of objective appearances*, which ‘objectivity’ he equates to objects as they exist in a *physical* sense while yet deeming such empirical *in their nature*. It is this characterization of experience which is being opposed by the claim that ‘nothing objective is given in experience’ because the ‘objectivity’ which actually constitutes our empirical awareness of things derives from a joint determination (i.e., as determined by both observer and observed as they exist *physically*).

These distinctions are to be illustrated by examples throughout but the existence of an objective realm which subsists independently of experience while conditioning the latter (a possibility discounted by Kant’s transcendental philosophy at the outset) is a conclusion the Copernican insight inevitably leads one to. Thus from the Copernican standpoint celestial motion is necessarily perceived in consequence of our being made to revolve by the earth; but this physical, rather than apparent, motion cannot possibly be perceived, requiring that the subject observe *herself* revolve with the earth as from an

outside or ‘transcendent’ perspective; but the observer, to herself, necessarily appears motionless in this regard while it is the sun that appears to move.³ The Kantian and Copernican world-views, therefore, are not only ‘worlds apart’ in a theoretical sense but, for Copernicus at least, the *empirical* world of our experience must be distinguished from the *physical* world that conditions it; worlds distinguishable to the extent, even, that they ‘contradict’ one another.

Our account shall begin, therefore, by illustrating how these opposing world-views, while they both indeed reverse that perspective which asserts our capacity adequately to apprehend things in themselves, nevertheless do so in opposing ways. So while Kant opposes naïve realism in the manner he makes objects conform to our cognition, he remains content to assert, through his doctrine of ‘empirical reality’, that ‘everything remains just as if I had never undertaken this departure from the common opinion’ (*Prolegomena*, 4:291). In experiential terms this means his having to postulate such anti-Copernican notions as the earth’s ‘persisting in space’ because, if this is what our experience presents to us and if this ‘experience’ is something ‘real’, then objective this persistence must be. The Copernican reversal, by contrast, while it adheres to the naïve realist’s assertion of the *existence* of things in themselves and accepts, also, that our cognition is *conditioned* by such, holds that the conditioning does not make that which is transcendently real experientially apparent when our experience in fact presents the opposite (e.g., the parallax effect). The reason for this is simply that the ‘conditioning’ at issue pertains to ourselves as *physical* beings (not ‘apprehending’ beings) who share in the earth’s physical motion and whose experience presents, in consequence, an empirically distorted view of reality.

³ Although the appearance of celestial motion results from the *rotational* motion of the earth, as an observer situated on the planet’s surface one in fact *revolves* through space since one’s body does not rotate about its central point (as the body of the earth does) but describes an imperfect circle through space during each of the earth’s rotational cycles. In this regard, and somewhat ironically, the daily motions described by our bodies constitute epicycles along the course of the earth’s annual revolution around the sun. None of this is itself ‘observed’ by the subject (indeed, for the subject herself, it is non-observable) and the contrast between rotational and revolutionary motion is a subtle one but will bear upon the problem of explicating motion to be addressed further on.

Chapters 2, 3 and 4 will expand upon the distinctions drawn here in progressively broader terms, culminating, in Chapter 4, with an examination of Kant's *Metaphysical Foundations of Natural Science* in which we find his most sustained attempt at a practical application of his principle to the phenomenon of matter in motion. Drawing on arguments developed in the preceding it will be established, against Kant, that the Copernican world-view presupposes for its vindication not an 'empirical' space and 'relative' motion but a *physical* space and *absolute* motion; which presupposition, however, is adequately inferred on the basis of our experience itself. That one can only 'infer' the existence of this absolute or unconditioned realm of physical reality (as opposed to its being self-evident) of course provides succour to sceptics and idealists alike because no argument is sufficient (so it is claimed) to discount this Kantian notion that it is we ourselves who 'make' the experiences we have. Chapter 5, therefore, confronts this challenge directly by proposing, not an 'empirical' proof of the reality of external things but a transcendental proof, founded on the very circumstance which the sceptic asserts counts against realism. For what else would be required in gaining a transcendent vantage point on ourselves so as to observe the relation presumed to obtain between 'inner' and 'outer', between our experiences and their causal grounds, but that we occupy two places at once in acquiring the desired perspective? And what else could prevent such an occurrence but this *external* hindrance, provided for by space and time conjoined, which renders our ability to occupy two places at once impossible? Conversely, if space and time are held to be 'immanent' in nature then *nothing* would prevent our 'experiencing' ourselves (as we are 'physically' or 'objectively') in an 'external' sense since this presumed capacity we have to render the 'empirical' world of objective reality ought to provide as clear a perspective on our physical selves as on any other object; and yet this is not the case, especially as regards the observer motion of Copernican theory.

The forgoing is a 'transcendental' argument, of course, since it demonstrates 'that something must be so because it constitutes a condition of the possibility of something else' (Hamlyn, 1984, 46); only in this instance it is a condition of *impossibility* (not, however, an *impossible condition* because the sceptic cannot argue the logical impossibility of this 'external' world) which is provided for by the spatiotemporal structure of external reality and which accounts for our inability to transcend ourselves (this latter affirmed by the sceptic also but self-contradictorily given that transcendence,

as stated, ought indeed be possible on the ‘immanent’ account). If one is to accept this argument, however, there remains plenty of scope to be ‘sceptical’ about things, a notable example in contemporary debates (addressed in Chapter 6) being the claim that our *conceptions* of this external world are determined, not by the world itself or our experience of it, but solely by the ‘language–game’ or ‘conceptual scheme’ we inhabit (‘inhabit’ used here in the sense that it is the ‘logical space of reasons’ in which we dwell (Sellars, 1997, 76), not the ‘space of natural–scientific understanding’ (McDowell, 1996, xxiii)). Of course the world itself (the existence of which, to repeat, is not denied in this case) plays a ‘causal’ role in determining how it is that we conceive it but it is emphatically denied that these ‘brute impacts’ have any bearing at all on the question how it is we acquire the ‘awareness of something as something’ (Brandom, 1997, 150); this ‘awareness’, so it is claimed, being itself conceptually conditioned.

In arguing the contrary, use is made of Kant’s assertion that ‘concepts’ are empty in and of themselves, requiring for their meaningful application the ‘material’ provided for them by our *experiential* awareness; which awareness, however (and *pace* Kant), allows for the recognition of spatiotemporal particulars (ourselves included) in non–conceptual terms. It will be argued, in other words, that we do not *think* objects but have an immediate perception of them, our experience in turn being that which links us to the physical world we genuinely inhabit, although it is the world itself which determines whether our conceptions of it are true; because if meaning entailed truth *simpliciter* we could establish matters of fact simply by ensuring that our assertions about the world do not contradict themselves (non–contradiction being the negative condition of truth). So while there *is* a condition of truth here – that of analyticity – in our synthetic judgments we suppose more than this, namely a capacity to amplify our assertions so that they refer to matters beyond the concepts used in expressing them and for this we require experience. The positive condition of truth in this case, however, likewise does not reside in experience itself (as though we could establish matters of fact, solely on this basis alone, regarding that which our experiences are *of*, i.e., the things which appear to us) but, rather, in these things themselves as they exist in themselves, making the concept of ‘truth’ employed here that of verification–transcendence. That Copernicus worked with the same conception indicates his relevance to this debate; how one can hold the seemingly inconsistent views (applicable to him as much as to ourselves) that

our experiences are *of* things yet the veracity of our experiences may be otherwise than we actually suppose, to be explained in Chapter 5.

Kant, therefore, and in opposition to the language philosophers cited, held that all thought was meaningless – literally, ‘without **sense**, i.e., without significance’ (A240=B299) – which made no reference to sensibility. But despite this and although he denied, on speculative grounds, the existence of things in themselves, he felt compelled for ‘practical’ or moral reasons to argue for this noumenal realm in establishing our ‘dignity’ as autonomous beings. Although he certainly contravenes his own stricture here regarding the meaningfulness of thought in the absence of sensible constraint, the issue to be addressed in this instance instead concerns the influence his practical philosophy had in motivating the critical project as a whole. In the final chapter, therefore, it is argued that Kant’s appeal to this realm in legitimizing our ‘Supersensible’ interests did not in fact follow his epistemological reversal but preceded it, contributing to its ‘idealistic’ character from the beginning. In order to ‘make room for faith’, that is to say (Bxxx), it was necessary for Kant to deny the absolute physical reality of Copernican theory which, on the assumption that this does hold, makes entirely unwarranted the postulation of all things supernatural, i.e., ‘**God, freedom and immortality**’ (A3=B7).

This thesis necessarily consists of an extended engagement with, and commentary upon, Kant’s writings, the sheer volume and complexity of which dictates that his works dominate the references cited. Indeed it would not have been possible to develop my arguments to a sufficient depth in the space permitted had I not utilized this to present Kant’s ideas to the extent I have. While this has meant that space which might have been devoted to contemporary debates between, for example, realists and anti-realists, has been sacrificed, in addition to my finding his work more stimulating on an intellectual level and in opposing the widely held view that we can know nothing at all about the world in a ‘transcendent’ sense, I have found it preferable instead to address the source of these disputes. Furthermore, the deeply entrenched consensus regarding the ‘accurate’ nature of Kant’s Copernican analogy (Tarnas, 1991, 489, note) has required that I devote a significant portion of the argument to revealing what seems to

myself, at least, an absurd comparison which has actually caused damage to our understanding of Copernicus (certainly) but, and more importantly, damage to our concept of 'reality' itself (which misunderstanding has carried with it 'real world' consequences however). Hence the effort spent exposing this absurdity in setting the record straight, as it were, is something for which I make no apology. So let us now turn to the source of these controversies and begin our attempt to answer Kant's foundational question: *What is the ground of the relation of that in us which we call 'representation' to the object?*

1. Reversing Perspectives

(i) The Objective Subjective

That something physical should exist or occur though it remains impossible to perceive (as with the postulated observer motion of Copernican theory) is not at all to be permitted on the Kantian model where it is in a possible experience alone that an object's actuality is assured us. From the Copernican standpoint, however, physical reality is never the object of a possible perception as this would require that one attain a perspective on things which is in fact non-perspectival; there being no 'perspectives' in nature considered independently of a subject's experience of it. To present an obvious example in this regard, the distance between one's forefinger and thumb is miniscule compared to the size of the sun, yet the latter, from our perspective, can be enclosed within the bounds of the former. Size (magnitude of extension) as given in perception never equates to size as a physical attribute and the same holds for every other experiential phenomenon including shape, directionality and motion itself. Kant presents several examples of his own in this regard, deeming them illusions 'that cannot be avoided at all... just as little as the astronomer can prevent the rising moon from appearing larger to him, even when he is not deceived by this illusion' (A297=B354). But one would like to know how Kant's transcendental idealism can be framed so as to 'avoid' any perceptual illusion (the apparent change in size of the rising moon being typical here, not exceptional; Kant's list of examples in this passage capable of being extended indefinitely so as to include every possible experience). Because if one accepts that perception is the *sine qua non* of every experience while acknowledging that there is no perception at all which gives a 'true' representation of things (there being no perspectives in nature itself), the fundamental problem confronting Kant centres on his equating our experience of things with objective reality.

To illustrate what would be required in order that a thing's actual size be perceived: the apparent extensive magnitude of an object is strictly determined by the distance separating observer and observed. But for an object's size to be truthfully rendered would require that no distance separates the two. This, however, would require that the observer's senses and the object itself occupy the same place; it being impossible for

two different things to occupy the same place at the same time. The extensive magnitude of the object itself is therefore never given in experience.¹

Regarding that which is given in perception there is an inverse ratio at work here, namely that relating the size of an object to the distance separating observer and observed. Thus if an object is situated two meters distant from an observer and another, equal in size to the first, four meters distant, the second object will appear half the size of the first. Or again, if two objects are perceived, one of which is twice the size of another though twice as far removed from the observer, both objects will appear the same size. That the same sized objects should appear different or that different sized objects should appear the same illustrates the difficulty faced by any theory intent on demonstrating the mere ‘empirical’ status of objects when appearances, in this instance, ‘contradict’ the objective reality. This illustrates, also, what is meant by the claim that there are no perspectives in nature, with objects here maintaining their size despite the obviously perspectival nature of perception.²

The inverse ratio law governing an object’s perceived extensive magnitude illustrates two principles which oppose, in a fundamental way, Kant’s dictum that ‘Objects conform to our cognition’. The first is that it is *subjects themselves* who are objectively constituted while their experience is merely subjective since it is only by virtue of observers occupying the same spatiotemporal reality as the objects observed that these observations appear as they do (which observations depend for their realisation, for example, upon the *distances* separating observer and observed). That is all well and good, it might be countered, since our pure modes of cognition work to ‘construct’ ourselves as physical beings also; but if that were the case we would have as objective a

¹ On counterarguments to the suggestion that two things cannot occupy the same place at the same time see Hamlyn, *op.cit.*, 72–75. The possibility that two things can become *one* thing by means of coalescence for example (as it has been argued in the case of clouds) is certainly acknowledged; but it is only when coalescence is achieved that two things become one thing existing at the same place and time and at this point, of course, it is only *one* thing that exists here, something the possibility of which was never in doubt.

² The possibility of a solar eclipse depends on this inverse ratio since the variation in size of the moon and sun is directly proportionate to the distance separating them; *viz.*, the sun is 400 times larger than the moon but that much further away from the observer; hence they appear the same size and the one can eclipse the other.

perspective on ourselves as on any other ‘revolving’ object; yet, and as a matter of ‘empirical’ fact, we do not. So although an astronaut may well be in a position to observe the earth’s motion from space, *she will never be in a position to observe her own motion while orbiting the planet in space*; implying that the subject herself, as *object*, is no mere cognitive construct.

The second opposed principle concerns the necessity of distinguishing ‘phenomenal’ and ‘physical’ objects. An object, *as it appears to us*, should never be equated with the object as it is *in itself* (i.e., physically), otherwise the moon’s appearing ‘larger’ would entail that it actually changes size as it rises above the horizon. The most one can say in this instance, therefore, is that *observations* conform to observers (i.e., to an observer’s position in the world relative to the object) but not that objects do. That perceptions conform to the perceiver is, however, a trivial point which few would seek to challenge.³ And Kant’s principle, unlike Copernicus’, cannot be taken to mean that the physical world is that *in which* we have experience, having been constructed prior to our perceiving things, since our ‘transcendental’ faculties can perform no constructive tasks until sensation is first ‘given’, which sensation is to be ‘ordered’ in conformity with these faculties (A193=B238). The world itself, therefore, is first presented in experience and does not precede it. That which is presented, however, is not objective at all, as this and further examples demonstrate. Kant admits this possibility himself by stating that ‘either deceptive illusion or truth can arise’ in consequence of our modes of cognition being applied to the data of sense (*Prolegomena*, 4:291). All that is maintained here is that nothing ‘true’ can possibly be given in perception; which is not to deny that we can avoid being ‘deceived’ in these cases since we can indeed ‘think’ the opposite; but

³ The example often used to illustrate Kant’s take on things to the uninitiated, namely the wearing of red-tinted spectacles which result in the world appearing red, goes some way toward demonstrating the prosaic fact that ‘perceptions conform to the perceiver’ but no way at all toward demonstrating that, in ‘truth’, the world *is* red or that *objects* conform to the perceiver. This example, however, illustrates very well the position adopted here, namely that it is the physical reality in which an observer finds herself that conditions her experience of things (not the observer her experience of physical reality) because, upon removal of this physical apparatus (the red-tinted spectacles), an entirely new vista opens up before one; no less subjective (things are not ‘in themselves’ multi-coloured either) and no less conditioned by physical reality (one’s unadorned eyeballs), but physically conditioned nevertheless.

thoughts and perceptions are not the same thing and our thinking that the moon does not change its size makes not the least difference to our perception and thus experience of it.

The thing actually discovered by Copernicus, or at least utilized to revolutionary effect, was the physical occurrence of an *observer's motion* and the distinction between this and any motions *observed*, which observations contradict the reality because it is the sun that appears to move while the observer, to herself, appears motionless. His insight concerns physical rather than empirical reality (*mundus physicalis* as opposed to *mundus sensibilis*), his primary contention being that the physical world as it exists in itself pertains to the way things stand independently of experience although it accounts for the appearances too. This distinction is recognized by Kant also (at least with respect to Copernicus if not his own transcendental philosophy where the terms 'empirical' and 'physical' are coextensively employed) since he held that Copernicus:

...ventured, *in a manner contradictory to the senses yet true*, to seek for the observed movements not in the objects of the heavens but in their observer. (Bxxii, note; my emphasis).

That something is the case yet it 'contradicts the senses' might stand as a succinct *definitio* for transcendental or independent reality; certainly the contention is at odds with transcendental idealism as defined by Kant where it is in a possible experience alone that an object has its being. But this admission by Kant that it is the 'observer' who revolves while our 'senses' speak otherwise threatens to undermine his assertion that objects are 'given' in experience. It threatens, also, his acknowledgment that things may possibly exist independently of experience but in non-spatiotemporal and non-causal-material terms because that an observer 'revolves' at all presupposes their being conditioned by such; although this motion itself occurs independently of experience which, for the observer, presents the opposite (motionlessness).

For Kant, therefore, and in one sense at least, 'cognition' is equivalent to 'experience' which in turn is defined as 'a cognition that determines an object through perceptions' (A176=B218), with 'perception' further defined as 'sensation of which one is conscious' (A225=B272) and 'sensation' referring 'to the subject as a modification of its state' (A320=B376). It is here that our cognition 'begins' (B1) since 'All our cognition starts from the senses' (A298=B355). But what is it, first, that has its state

‘modified’ and, secondly, brings about the ‘modification’? Alternatively, what precedes that with which our cognition begins? Specifically, what is the nature of the ‘subject’ or ‘observer’ in Kant’s philosophy (frequently referred to by the pronouns ‘my’, ‘we’, ‘us’, ‘our’, etc.) and what is the nature of those things that modify her (presupposing, in the case of outer if not inner appearances, that she does not modify herself)? In neither case can the nature of these things be ‘sensible’ when it is the existence of sensation itself which calls for an explanation. In one respect this question is left unanswered by Kant because, for him, and referring to the subject, one ‘cannot cognize as an object itself that which... must [be] presuppose[d] in order to cognize an object at all’ (A402). Hence because ‘objects’ are, in part (and for Kant at least), sensible constructs and since we only ‘cognize’ sensible things, it is clear, in accounting for sensation in the first instance, that this is not something we could become cognisant of. This does not mean, however, that we are unable to ‘think’ about these things, the possibility of thought itself providing the answer for Kant. The subject and the world are, in themselves, intelligible things (*mundus intelligibilis*), something that is negatively conceptualised (non-sensible, non-spatial, etc.) but the possibility of which is admitted in grounding Kant’s theoretical philosophy (since one cannot have an appearance ‘without anything that appears’ (Bxxvi)), its necessity asserted in grounding his practical philosophy (given that morality in a purely ‘natural’ world would be impossible).

But it is questionable whether this solves our problem in respect of reconciling the Ptolemaic nature of experience with the Copernican reality. There is a blind-spot in Kant’s critical philosophy which only the most committed Kantian could fail to acknowledge; a seemingly insignificant anomaly which nevertheless carries with it immense ramifications. The subject, *as revolving object*, is never experientially rendered by the subject herself. That is to say, an objective experience of the human object, in the form of oneself, is impossible. It is not a case here (as with the ‘rising moon’) of the subject’s perceptions being *merely* subjective (a fact acknowledged by Kant in terms of ‘mere alterations of our subject, which can even be different in different people’ (A29=B45)), since in this case an observer’s revolutionary motion, which presupposes spatiotemporality (deemed by Kant ‘subjective’ also but in a ‘lawful’ and thus necessary sense), is something it is *impossible to perceive*, whether in an arbitrary or lawful sense, yet we assume its occurrence.

Now it is often said that ‘we never see ourselves in the same way others do’, meaning the opinion we have of ourselves, positive or negative, fails to concur with the opinions of others. But the same can be taken in a literal sense – that we never *perceive* ourselves, visually, in the same way others do. The present work seeks to investigate the conditions of possibility of this fact (one which seems, at first glance, a mere trifle) because if objective reality were truly given in ‘a possible experience’ we would have as objective a perspective on ourselves as others do (as when one says, in referring to another, ‘I can see you moving over there’). But we do not and cannot possibly experience ourselves in this third person way (i.e., ‘I can see myself moving over there’); a fact that demands to be explained since the experience of oneself as an ‘objective’ being (in the first person) is diametrically opposed to the experiences others have (in the third person), yet it is in experience alone that objects are said to be given. But for experience to be truly objective would require that it be given in the third, not first, person, a possibility which will never arise, implying that one could ‘transcend’ oneself in gaining the desired perspective or, equally impossible, requiring that ‘my’ experience in fact be someone else’s.

So might this account for Kant’s proposal that the sun moves in relation to that which persists in space (*viz.*, the earth) since it is this which constitutes our experience of things, it being impossible, for one situated on the planet, to perceive the true motions in question? Whatever Kant’s reasoning here an extended philosophical analysis of the Copernican insight in respect of its ‘metaphysical’ grounding would seem warranted. In the course of this analysis several distinctly non-Kantian conclusions emerge. Chief among them, or as a necessary presupposition in respect of the rest, is the assumption that *our cognition must conform to objects*; not in the naïve mode of Ptolemy who took the celestial motions he observed for the ‘real thing’, as it were, but in the more sophisticated sense that our observations result from something which cannot be observed at all or of which we have no experience, namely the objective or physical world of nature as it exists in itself (observer and observed included). In illustrating the contrast between this and Kant’s opposed principle we can briefly examine the Copernican analogy he draws at the beginning of the *Critique*:

[L]et us once try whether we do not get farther with the problems of metaphysics by assuming that the objects must conform to our cognition... This would be just like the first thoughts of Copernicus, who, when he did not make

good progress in the explanation of the celestial motions if he assumed that the entire celestial host revolves around the observer, tried to see if he might not have greater success if he made the observer revolve and left the stars at rest. (Bxvi).

It is the most striking feature of this analogy that Kant associates our own revolutionary motion with the ‘cognitive’ ground of the appearance when the motion in question is a physical occurrence and not a ‘mental’ act and when ‘our’ clearly refers to ourselves as objects, i.e., as physical rather than thinking beings, since it is as physical beings only that we are capable of movement. For Copernicus the ‘appearance’ of celestial motion (which remains unaltered whatever one considers generates this appearance) results from the objective occurrence of an observer’s motion which is why it is a case, for him, of our cognition conforming to objects (i.e., the human object in the form of oneself). In seeking an answer to the question whether Kant’s comparison is a legitimate one – when an observer’s revolutionary motion is never and in no instance an ‘object of the senses’ for the observer herself and when that which is observed (a revolving sun) is not in fact objectively the case – one will be forced to conclude not only that is his analogy is false but in accounting for the objective reality of an observer’s motion and the merely apparent motion of the sun one must adopt a principle wholly opposed to Kant’s.

(ii) The Empirical and the Physical

A distinction between two types of ‘fact’ must be drawn in facilitating this analysis – ‘phenomenal’ and ‘physical’. By ‘phenomenal fact’ is not meant, as is usually the case (following Kant), facts in respect of the natural world such as the boiling temperature of water at a given altitude or the rotational speed of the earth, but facts in respect of ‘experience’ itself; for example, the fact that the subject’s ocular organs never directly appear within the visual field (i.e., an observer cannot see herself seeing) or the fact that the ‘parallel’ edges of a road surface appear to converge in the distance though they remain parallel in themselves. Phenomenal facts concern perceptual content in respect of that which *does* and *does not* appear. Physical facts, by contrast, concern those spatiotemporal/causal-material objects and events which exist or occur independently of experience and which account for what *can* and *cannot* appear; for example, the causal interaction between an observer’s retinal tissue and the light impacting it, something that cannot possibly be given in experience itself (that is to say, regarding the

subject whose experience it is) because, first, experience (in respect of visual perception) presupposes this physical event and, secondly, one would require a third person perspective on oneself in perceiving the stated interaction (i.e., an observer would need to see herself seeing, just as others can).

Allied to this distinction between physical and phenomenal facts is that of a ‘conditional’ and ‘consequential’ necessity. The ‘If... then...’ of the conditional judgment is asymmetric with respect to ‘necessity’ inasmuch as something (the consequent) may indeed follow of necessity if *something else* is posited but this first thing (the condition) does not itself exist or occur necessarily (hence the ‘If’ preceding it). That the earth rotates about its axis or that the earth exists at all does not imply that it does so of necessity (at least not in a ‘logical’ sense since its non-rotation or non-existence is logically possible; in respect of ‘real’ possibility this is a question to be addressed separately). But that, given its rotation, certain things follow of necessity, one of them being that an observer situated on the planet will perceive the sun moving at the same speed but in the opposite direction, is not something that can be logically countered by citing the contrary – that the sun may *not* appear to move at all. Any such statement of the contrary in fact amounts to a denial of the condition rather than the consequent since, if the condition is granted, one cannot then deny the consequent without falling into contradiction. In the case of the earth’s rotation, to accept this as given only to assert the possibility of the sun not appearing to move would be both to accept and to deny the condition (the earth’s rotation) since only in the case of the earth’s non-rotation (for an observer situated on the planet) would the appearance of an immobile sun be possible. In this latter instance we are indeed considering ‘real possibility’ as opposed to logical, namely that which is determined by the world as we find it. And in respect of real possibilities there are correspondingly real contradictions also, the latter being things which cannot *happen* as opposed things which cannot be *thought*.⁴

⁴ This notion of real possibility is shared by John McDowell as evinced by his claim that our beliefs are ‘answerable to the world’ (op.cit., xii). The question to what extent his ideas cohere with the argument advanced here will be addressed further on.

The principle ‘Our cognition conforms to objects’ entails that ‘phenomenal facts’ are *consequentially grounded* in ‘physical facts’ or in the world as it exists in itself. An initial corollary of this Copernican reversal of perspective, therefore, is that everything given in perception *happens of necessity* since it follows as the necessary effect of events occurring in a world ‘external’ to experience; the logical contingency of this transcendental world itself, however, remains in place. If one were to honour the study of these facts, ‘phenomenal’ and ‘physical’, with the title ‘science’, the former would constitute the science of ‘phenomenology’ and the latter that of ‘physics’. It will be seen, in consequence of this revised interpretation (revised since, for Kant, phenomenology is equivalent to physics), that physics itself is a *metaphenomenal* science in as much as it determines the conditions of possibility which must be presupposed in accounting for experience. *Metaphysics*, therefore, the ‘proper’ objects of which include, as Kant states, ‘**God, freedom and immortality**’, is in danger of becoming redundant; a danger Kant was certainly conscious of, admitting that ‘we do not need it in order to expand or correct our knowledge of nature, or in fact any theory whatever’ (*Judgment*, 6:482).⁵

Returning to our theme, the representation we have of the sun is not a corresponding but *consequential* representation, following as the necessary effect of our actually revolving through space while corresponding to nothing ‘in itself’; and that which does exist in

⁵ If physics is to be deemed an ‘empirical’ rather than metaphenomenal science its objects of study ought to be given in a possible experience. However, not only would this presuppose the absurdity, in accounting for the possibility of experience itself, that a scientist could perceive the physical conditions determining her perception (as with the example of light impacting the retina), it is also the case that no scientist, as a matter of fact, has yet perceived her own revolutionary motion through space (a predicament which is unlikely to change). Certainly, physics relies upon empirical *clues* (i.e., ‘evidence’) on the basis of which objective reality can be thought; but, and *contra* Kant, the thoughts and empirical data do not act in unison in generating objective reality simply because nothing studied in physics *is* the object of a possible experience. All ‘evidence’ must be interpreted, of course, and to that extent one must presuppose a theoretical framework by means of which the evidence is assessed. But the framework of concepts and theories remain non-determinate with respect to the evidence, otherwise a scientist could confirm her hypotheses before conducting her experiments. That which is given through an electron microscope or Hubble telescope is therefore not the *object itself* but a mere ‘empirical object’ on the basis of which certain inferences can be drawn or hypotheses satisfied as regards *that which exists in itself*. Referring to physics as an empirical science is thus to confuse the evidence it relies on with the objects themselves.

itself cannot possibly be represented, requiring that an observer perceive herself from an external or transcendent perspective which is a physical (hence experiential) impossibility, implying that she could occupy two different places at the same time, the place where she is *observed* (on the earth) and the place where she *observes* (in cosmic space). But although a physical impossibility (e.g., occupying two places at once) implies an experiential impossibility (the impossibility of perceiving one's revolutionary motion through space), the converse does not hold. Hence that an observer cannot possibly experience her own revolutionary motion through space does not imply that it is physically impossible for an observer to revolve; which is as much as to say that the possibility of experience is grounded in physical reality, not physical reality in a possible experience, as Kant maintains (A158=B197).⁶

Phenomenal and physical facts are, as one might infer from this, incongruent, which is why Kant can rightly state that the truth 'contradicts the senses'. But just as the reflection of one's left hand in a mirror is of a right hand (and *vice versa*) the incongruity can be accounted for in terms of the transposition of light rays as they journey from the hand itself to the reflective surface and back to the eye of the perceiver; so 'empirical' phenomena in general can be explained in spatiotemporal/causal-material terms as the transposition of physical events in respect of the causal interaction of observer and observed. Thus, and in the case of the sun's motion, it appears to move from east to west because it is we who move from west to east; this incongruity the effect of the sun's light rays impacting our 'revolving' organs of sense; although we ourselves appear motionless since, wherever these organs go, we inevitably follow, creating the impression of our being at rest the whole time since we remain in the same place relative to these organs throughout.⁷

⁶ The 'physical reality' in question here concerns macro rather than micro (sub-atomic) reality where it is claimed things can indeed be in two places at once or in a state of 'suspension' between them, that is, neither here nor there. The problem of translating macro explanations into micro and *vice versa*, however, is as equally applicable to cutting-edge physics as to philosophy, with the incommensurability acknowledged here, certainly, but not admitted as a possible objection to the thesis that 'macro' things (observers included) cannot occupy two different places at the same time.

⁷ Richard Rorty's conception of the 'mirror of nature' is far more accurate than he actually supposed, having used it to ridicule the idea that philosophers gain access to the world as it exists in itself (1980, *passim*). But in this respect he misunderstood his own metaphor because the thing that defines a reflection is precisely its 'reversal' of

The Copernican reversal of perspective advanced here, therefore, consists in the following: Perception is only made possible *in* a world, it is not *in* perception that a world is made. That things appear to us the way they do is not because *subjects are minds* but, rather, because *subjects are objects* ('revolving' objects in fact), which objects, even in the case of ourselves, are never given in experience but must be presupposed in accounting for experience. It is physical, not intelligible, beings who *have* experiences which, just because these beings are individuals, does not entail that the experiences had are subjective in the arbitrary sense of that word as such is nevertheless objectively or physically grounded.⁸ The possibility of experience presupposes our being in space and our being in time, our being physically constituted and our causally interacting with other matters (the effect of all of which is the subjective phenomenon we call 'experience'); it does not presuppose that our minds 'order' sensation in generating the appearance of objects; first, and fundamentally, because if this were the case then our experience would *be* objective (which it is not, nor can it possibly be); secondly, the existence of this 'fundamental material' (sensation) is left entirely unaccounted for and, finally, it undermines the science of physics itself because, were science in general a matter of our 'applying' concepts to intuitions, the truth as regards physical reality would be wholly negated since this exists, and of necessity, independently of our intuition of it. Instead one would be left with a mere 'Phenomenology' (see *Metaphysical Foundations*, 4:554ff.) and propositions such that the sun moves in relation to that which 'persists in space'; which may certainly be the case in terms of our experience but which, as with any other example, makes a mockery of true science.

objective reality, a fact that accurately mirrors experience itself. But from this reversal all sorts of things can be deduced about objective reality without one having to gain access to the real thing, as with the rotational and orbital speeds of the earth which can be calculated solely on the basis of the apparent celestial motions (the parallax effect). All that is required is that one not treat one's experience of things as *in itself* objective but to conceive of objective reality as that which exists independently of, while nevertheless conditioning, experience; just as one does not regard a reflection in a mirror to be the real thing but the mere effect of such.

⁸ The *having* of an experience is objective but the *given* of experience is not; a remark which will obtain full significance only upon completion of the argument.

(iii) The Copernican Analogy

Few would dispute Richard Tarnas' assessment, in his survey of the development of Western thought, that more than 'any other single factor, it was the Copernican insight that provoked and symbolized the drastic, fundamental break from the ancient and medieval universe to that of the modern era' (op.cit., 248). What is clearly open to dispute, however, is his subsequent assertion that 'although strictly speaking the term 'Copernican revolution' may postdate both Copernicus and Kant, both the term and the comparison are accurate and illuminating' (ibid., 489, note). 'Accurate' (unsurprisingly) the analogy demonstrably isn't; 'illuminating' yes, but only in the manner it accentuates their differences.

Regarding his broader speculative shift from the determinable to the *determining* subject, therefore, and returning to the analogy he drew at Bxvi, Kant's comparison of his with the Copernican insight can be interpreted in two distinct ways, one of which interpretations can be considered weak, the other strong. The former holds that Kant sought merely to indicate, by means of the Copernican analogy, that his approach reversed a commonly held perspective (that 'all our cognition must conform to the objects'), just as Copernicus' approach had reversed what was, at the time, the orthodox Ptolemaic theory (that the sun revolves around the earth). His talk of imitating, 'insofar as their analogy with metaphysics, as rational cognition, might permit', the disciplines of 'mathematics and natural science, which have become what they now are through a revolution brought about all at once', would seem to support this limited view. The strong interpretation, while it does not preclude this aspect of the analogy, makes the further claim that Kant's transcendental philosophy directly relates to Copernicus' heliocentric hypothesis apart from the fact that this superseded, 'all at once', standard Ptolemaic theory. Copernicus is first mentioned, that is, after Kant's suggestion that 'objects must conform to our cognition', with this principle being equivalent to 'the first thoughts of Copernicus' who 'made the observer revolve and left the stars at rest'. Although Kant's suggestion that Copernicus was also of the view that 'objects conform to our cognition' makes his claim that 'Up to now' (i.e., the time at which Kant wrote) the converse had been assumed a mistaken one (because Copernicus, it seems, drew the same conclusion as Kant some 230 years prior to his writing the *Critique*, if we are to take the posthumous publication of *On the Revolutions of Heavenly Spheres* as the

occasion when the principle in question was first ‘trialled’); there seems little room for doubt that Kant saw in Copernicus’ revolving ‘observer’ the analogue or indeed equivalent of ‘our faculties’ of intuition and understanding which are utilized ‘in a similar way’ to that of Copernicus. Thus our experience does not passively conform to ‘the constitution of the objects’ but, rather, it is the objects which are ‘at rest’ and we who actively constitute them.

Whether or not Kant’s comparison, on the strong interpretation, is a legitimate one, when an observer’s revolutionary motion (a physical occurrence anyway, not an intuitive or discursive mode of constructing things) is never an ‘object of the senses’ for the observer herself and when that which is observed (a revolving sun) is not in fact objectively the case, will be considered shortly. But Hanson, espousing the weak interpretation, takes issue with the stronger version, insisting that:

[Although] Copernicus tried a new hypothesis in place of older theories... [that he] (like Kant) had hit on a hypothesis whose main point was to take what had been regarded as characteristics of the observed object and explained these in terms of the characteristics of the observer himself – this interpretation of Copernicus is not at all explicit in Kant’s own exposition... [Thus] we must, in the interests of scholarship, distinguish the explicit from the implicit features of Kant’s own claim. (1992, 43).

While agreeing that an explicit parallel cannot be gleaned from the content of Kant’s text in as much as he does not explicitly state that ‘My transcendental speculations are the equivalent of Copernicus’ astronomical speculations’, certainly the context implies this since otherwise Copernicus would have been referred to at the beginning of the text where Kant speaks of imitating the ‘revolutions’ brought about in science and mathematics, not where he actually appears following Kant’s assertion that ‘objects conform to our cognition’. In addition Kant does not claim, in respect of heliocentrism, that Copernicus ‘made the *earth* revolve and left the stars at rest’ (which, as we shall see, is how Copernicus actually describes things) since this would have defeated his purpose in drawing the analogy, namely to indicate how, ‘just like’ Copernicus, Kant also deemed objects themselves to be the passive elements in this picture and ‘observers’ active. The analogy would have failed had he substituted ‘earth’ for ‘observer’ though one is tempted to say that Copernicus would have forgone any mention of observers since, for him, the earth would revolve around the sun whether

there were observers on it or not. But even if Kant meant to draw his comparison only in the weakest sense, the necessary Copernican distinction between an observer's revolutionary motion and any motions observed needs to be accommodated by his transcendental philosophy and it is just this possibility which is being called into question; a vital question because if the existence of an objective realm not given in any experience can be proven, Kant's principle that 'objects conform to our cognition' ought, of necessity, to be rejected. But Hanson is right to insist that 'Kant's understanding of what Copernicus actually did can only be ascertained by comparing the texts of the *De Revolutionibus Orbium Coelestium* and the *Kritik der reinen Vernunft*' (ibid.), so it is to this task that we now turn.

It should be stated, first, that the argument presented here does not rest on the oft-quoted objection, addressed by Norman Kemp Smith, that while the Copernican revolution entails a 'reduction of the earth from its proud position of central pre-eminence', Kant's philosophy has the 'direct opposite' consequence, in the manner it elevates the human being to the position of lynchpin in the natural order of things, so that it 'may perhaps be described as a Ptolemaic, anthropocentric metaphysics' (2003, 22–23). Kemp Smith, who supports the strong interpretation (despite his reference to Ptolemy) and is here rehearsing the objection only in order to reject it, does not use the epithet 'Ptolemaic' in a pejorative sense but adopts it as an appropriate term by which to describe Kant's metaphysics. That the label perhaps reveals more about Kant's position than Kemp Smith recognizes is unfortunate for the latter but of great utility here because it distinguishes a metaphysics which fails sufficiently to address the problem of observer motion in contrast to the metaphenomenal science that solves it. Kemp Smith's *Commentary to Kant's Critique of Pure Reason* figures centrally in what follows, however, especially his claim to have discerned in Kant's *Critique* a doctrine of the 'empirical object' as a form of 'objective existence mediate between the merely subjective [i.e., our representations] and the thing in itself' (ibid., 206). This allows him, if not directly in reference to an observer's motion, to render the latter explicable in 'realist' terms (ibid., 313) while remaining true to Kant's critical principles and his denial of the 'absolute reality' of a spatiotemporal/causal–material world (A37=B54).⁹

⁹ Although the term 'spatiotemporality' as a fundamental characteristic of physical reality may perhaps be readily grasped (that every thing, for example, exists at a certain time and place), the term 'causal–material' needs to be further explained. It is opposed

But the objection here is grounded on the fact that it is only by assuming a transcendental realm of absolute physical reality (and a capacity of the conscious mind to grasp this realm intellectually) that the Copernican system can be made in the least comprehensible. Copernicus' worldview is only vindicated, therefore, upon the assumption that the system of nature it describes has an observer-independent status. Not that it was his intention simply to rob us of our sense of significance in the natural order of things but merely to discover the truth, however 'absurd' it might appear (Copernicus, 2002, 4).

This interpretation contradicts all prior 'philosophical' analyses of Copernicus where an observer's powers of apprehension are deemed precisely those which give the *observed world* its specific character, since here it is the non-empirical world itself which gives *our observations* their specific character, a position which can alone justify his insight. So one can certainly acknowledge, and on analytical grounds, that the *observation* of a revolving sun would not exist in the absence of an observer but not that the *physical world* would cease to exist (an observer, for Kant, being the *conditio sine qua non* of objective reality, when in truth an observer is merely the *conditio sine qua non* of observations); because, first, the sun does not revolve around the earth anyway so the loss of this 'appearance' does nothing to affect things as they stand independently of the observer and, secondly, an independent realm of physical (as opposed to empirical)

to that causality through freedom which Kant advances as a practical postulate determining subjects as noumena, in contrast to the theoretical category he applies to objects of experience (A533–4=B561–2). The 'material' in this instance, however, and as against Kant, is throughout to be considered non-sensible in nature without at this point explaining exactly what that entails. And while the concept of 'causality' as implying a relation of necessity inhering between objects and events is common to both perspectives, here it is not an applied 'category of the understanding' but an aspect of physical reality as it exists in itself, independently of the subject's experience; a claim again to be justified further on in the piece. That the term 'causal-material' should be hyphenated serves merely to indicate that all causal power in the universe resides in its matter, not in its spatiotemporality, since, as regards space and time, no part of either relates causally to any other and neither, in combination with the other, causally affects matter itself (although certain properties of matter, i.e., its mass, might affect space, as massive heavenly bodies cause it to curve). The hyphenation also indicates that 'matter' and 'causality', rather than distinct entities or processes, are in fact the same, so that it would not be possible that a matter should exist though nothing would 'happen' until causality were added to the mix, when, if a matter does exist, its properties alone account for everything that happens (i.e., $E=MC^2$).

objects and events must necessarily be presupposed in explaining how things do appear whenever an observer's presence is assumed. Hence the conditions of possibility of these empirical or apparent effects are indeed transcendental, only really and not ideally so, the existence of a non-empirical yet physically real world being necessarily presupposed in explaining them; a physical reality which underlies, and causally grounds, the physical appearances in question.

That our cognition conforms to objects, however, implies neither that our observations are objective nor that the objective is adequately observed because the representation we have of the sun, and as previously stated, is not a corresponding but consequential representation, following as the necessary effect of our actually revolving through space while corresponding to nothing in itself. Kant, on the other hand, adheres to the notion of truth as correspondence or as 'the agreement of cognition with its object' (A58=B82) and merely reverses the direction of conformity, so to speak, inasmuch as it is the object that agrees with our cognition, not our cognition with the object. It is on the basis of this reverse correspondence that he formulates his notion of 'empirical reality' (A28=B44) whereby objects are adequately represented in experience since it is we who construct them; an idea Copernicus would no doubt have rejected since it is impossible for our own revolutionary motion to be represented 'empirically' and that which is represented (a revolving sun) follows in consequence of our being moved by the earth, which true (non-apparent) motion is postulated as the cause of the appearance in question.

In supporting this conclusion, and as a supplement to Kant's, we shall examine a contemporary account of 'Copernicanism' by Sebastian Gardner, a staunch advocate of the strong interpretation:

By drawing the analogy with Copernicus... Kant does not mean therefore that transcendental philosophy demotes man from a position of centrality in the cosmos, in the way that Copernicus' discovery may have been felt as doing; in fact it has precisely the opposite – humanistic – implication that we stand at the centre of the natural world. Kant means by the comparison that his philosophy, like Copernicus' heliocentrism, explains what appears to be a wholly objective phenomenon in subjective terms: just as Copernicus explains the *apparent* movement of the sun in terms of the movement of the observer on the earth, Kant explains our knowledge of *apparently* independently constituted objects in terms of our mode of cognition. In both a phenomenon which had been regarded previously as having independent reality is redescribed as an appearance,

dependent on the subject. In that respect both Kant and Copernicus break with common sense. (1999, 42).

Copernicus, Gardner suggests, holds that the appearance of objects is 'dependent on the subject' when, in truth, it is the subjective appearances that are dependent on objects, something Copernicus clearly affirms in the following:

[W]hy not admit that the appearance of daily revolution belongs to the heavens but the reality belongs to the Earth? And things are as when Aeneas said in Virgil: 'We sail out of the harbour, and the land and the cities move away'. As a matter of fact, when a ship floats on over a tranquil sea, all the things outside seem to the voyagers to be moving in a movement which is the image of their own, and they think on the contrary that they themselves and all the things with them are at rest. So it can easily happen in the case of the movement of the Earth that the whole world should be believed to be moving in a circle. (Op.cit., 17).

The reality, then, 'belongs to the Earth', it is not sought for 'in the observer' where it instead appears 'at rest'; and it is the motion of the earth which produces the 'appearance' of celestial motion, not the observer's immanently derived powers of constructive apprehension. On the basis of this passage alone, therefore, the term 'reality' for Copernicus lacks the meaning it has when combined with 'empirical' since he distinguishes 'appearance' and 'reality' at the outset and to the maximum extent possible, namely that they 'contradict' one another; and so how things 'seem' to observers or the voyagers of his example stands in direct opposition to that which actually occurs.¹⁰

Now a somewhat bizarre aspect of the strong interpretation is the suggestion that Copernicus took a phenomenon previously deemed 'independently real', redescribed it as an 'appearance' and, discounting altogether the notion of independent reality, held that *we* constructed the appearance in question. But does the claimed fact that the sun's motion, previously deemed independently real but now deemed 'empirically real'

¹⁰ Kant utilizes a distinction between reality and appearance or 'semblance' cast in purely immanent terms and some may think this capable of explaining the contrasting apparent and real motions described by Copernicus. It might also be thought that the notion of a 'possible experience', as opposed to 'actual experience', allows one to account for the empirical reality of terrestrial motion to the extent that it is possible for an observer to perceive this from the vantage point of cosmic space. These and associated claims will be considered shortly.

because constructed by the subject upon which this object (the sun) and its attribute (motion) now depend, make the ‘appearance’ of a revolving sun any less illusory than in the case of Ptolemy whose naïve realism is what led to its being classed independently real in the first instance and whose standpoint was supposedly trumped in such a sophisticated manner by Kant? How is Kant’s transcendental idealism, that is to say, any less naïve in its outlook than Ptolemy’s just because the sun’s motion is now deemed empirically rather than independently real (an ‘appearance’ and not ‘a thing in itself’) when it was precisely Copernicus’ point that the sun does not and never has revolved around the earth since, as regards things in themselves, the opposite is true? It is as though someone were to adopt a highhanded tone with Ptolemy and declare: ‘How naïve of you to think that the sun, *in itself*, revolves around the earth when what you see is not a thing in itself which has somehow migrated over into your power of representation but a mere appearance that you yourself have constructed’; then offering the consolation: ‘If you wish to speak in *this* sense of a revolving sun then by all means do so because the sun really *does* revolve around the earth in an empirical sense and everything remains just as if we had never departed from the common opinion; but the motion you observe conforms to your cognition, not your cognition to the motion. There is no ‘motion in itself’ to which you have direct or unmediated access and the proud ontological insight you profess must be replaced with the more modest claim that you merely construct the natural world in its entirety (!)’.

In respect of this ‘modest’ approach to things (A246=B303),¹¹ another bizarre aspect of the strong interpretation is the suggestion that the sun’s motion is actively constructed by the observer because it is *our* motion which generates its appearance. But this is equivalent to, and no less absurd than, suggesting oxygen is ‘subjectively dependent’ because it is *we* who inhale it. And just as it is we who depend on oxygen and not oxygen that depends on us, so it is we who depend on the earth in generating the appearance of celestial motion, not the earth’s motion which depends on us. Because the earth’s motion, and thence our own, does not itself appear and so is not something we ‘make’ in the first instance since this would imply that we observe ourselves revolving

¹¹ At 17:646 (*Notes and Fragments*) Kant asserts ‘I am the original of all objects’; a statement which strikes one as more hubristic than modest in scope. It is as altogether immodest to suppose that we ‘make’ objects as it is to suppose that we cognize things in themselves.

with the earth which is a physical (hence experiential) impossibility; and even assuming that we could generate the appearance of celestial motion (for others at least) by running on the spot, as on a log in water, at 1000 miles per hour with enough downward pressure to make the earth spin on its axis at the speed it currently does, this would be a physical act, not an intellectual or intuitive act whereby celestial motion is experientially generated. Gardner is therefore correct in stating that Copernicus explained ‘the *apparent* movement of the sun in terms of the movement of the observer on the earth’, but wholly incorrect in his assertion that this physical, as opposed to apparent, motion corresponds in any way to ‘our modes of cognition’ which in fact subvert rather than substantiate the Copernican insight.

The naïve idealist,¹² which anyone who interprets Copernicus in this way unfortunately is, is therefore grievously mistaken on two counts. First, the sun’s motion is indeed merely apparent and not ‘something in itself’ but this appearance depends for its realisation upon an independently real (non–apparent) occurrence, namely the earth’s motion which is something in itself precisely because it is not mere appearance. And it is indeed ‘our motion’ which generates the appearance but this motion of ours, itself a *physical occurrence* and not an *act of intellection* whereby the sun’s motion is experientially generated, results entirely from our being situated on the earth which imparts to us, as passive subjects, its rapid motion. And although it is possible for the sun to be observed from a vantage point beyond the earth whereby it will be perceived not to revolve about the latter, this is simply to say that it is the *earth’s motion*, as the one remaining variable, which is a necessary condition for our perceiving the sun move when we are situated on this planet and not anything found ‘in the observer’ herself who, when situated elsewhere, is as likely to perceive the sun *not* revolving about the earth. For Copernicus ‘the movement of the observer on the earth’, which Gardner cautiously avoids describing as an ‘appearance’ and with good reason since this movement does not appear, is in no manner or form a subjectively dependent phenomenon but, as something which is not even apparent, is wholly generated by the object upon which the subject depends.

¹² Etymologically speaking, the term ‘naïve’ derives from the Latin ‘*nativus*’ or ‘native’ and is thus equally suited to both Ptolemaic realists and Kantian idealists since it is to *themselves* that the actuality of things is referred, whether as something that is respectively ‘revealed’ or ‘rendered’.

That the earth *does* move when it does not *appear* to move – in contrast to the sun appearing to move when it does not ¹³ – is rarely, if ever, noted by commentators who thereby implicitly suggest that Copernicus (a proto-transcendental idealist one is to assume) similarly denied the existence of a physical world in itself, redescribing all of this as mere ‘appearance’ instead; an appearance, in the case of the sun’s motion, it is suggested is directly generated by the ‘subject’ and not the apparently motionless planet upon which they stand. But the strong interpretation necessarily implies, if the sun’s motion really *is* subjectively dependent, that it is therefore an empirically real phenomenon, in which case one would be imputing Ptolemy’s hypothesis to Copernicus (hence the appropriateness of Kemp Smith’s epithet). But the sun’s motion, although it is *really apparent*, it is still only apparently and not physically real. The reality belongs solely to the earth’s motion but this, from the moving observer’s perspective, is not even really apparent since it does not appear at all. The only adequate sense one can give to the notion of ‘empirical reality’ is with regard to those things that are really apparent; while the question as to what here is actually the case concerns physical reality itself, in respect of which we abstract entirely from empirical content which only ever presents apparent reality (as the term ‘empirical’ suggests), never physical reality as it is in itself.

It undoubtedly suits Kant’s purposes that he equates empirical reality with something that is only apparently real (rather than really apparent) because his chief concern is to deny the ‘absolute reality’ of the physical world itself. But one denies nothing in respect of this absolute reality by using as an example the sun’s merely apparent motion – the implication being, because this is *nothing in itself*, that therefore all of physical reality is nothing in itself – because this appearance depends for its realisation upon an absolutely real occurrence, namely the earth’s motion. Kemp Smith’s account is typical in

¹³ This is only true to the extent that the sun does not revolve around the earth in the manner it appears to us to do because in addition to rotating about its own axis the sun revolves around our galaxy’s core; something Copernicus, who correctly hypothesised that the earth rotated about its axis and revolved around the sun while nevertheless getting a good deal wrong (e.g., that its orbit was circular rather than elliptical and that the sun itself remained motionless), was not then sufficiently divorced from the Ptolemaic system to be able to postulate. In this respect Copernicus’ hypothesis is as much heliostatic as heliocentric in nature but this does not affect his essential insight into an observer’s revolutionary motion or the negative implications which this has for Kant’s transcendental philosophy.

exemplifying this Kantian subterfuge in that he acknowledges that the ‘apparently objective movements of the fixed stars and of the sun are mere appearances, due to the projection of our own motion into the heavens’, but suggests that the Copernican hypothesis, in line with Kant’s idealism, gives ‘a subjective explanation of apparently objective motions’ (op.cit., 24–5), forgetting, it seems, that ‘our own motion’ and that of the earth which generates it (something he similarly avoids describing as an appearance) is absolutely objective because it does not appear at all and forgetting, also, that if the ‘apparently objective’ motion of the sun is indeed subjectively dependent in the Kantian sense then it must be, for that very reason, a ‘real’ phenomenon. Here Kemp Smith is guilty of the same confusion as one who takes our inhalation of oxygen to be a necessary condition for its existence, only for him it is ‘our own motion’ (which, like inhalation, is a physical occurrence anyway, not an intuitive or discursive mode of constructing things) which is the condition of possibility for the empirically real phenomenon of celestial motion (which, anyway, isn’t physically real). As Kant himself does, Kemp Smith altogether reverses the Copernican insight by making that which is merely subjective (the sun’s apparent motion) into something ‘objective’ while that which is truly objective (the observer’s physical motion) becomes the ‘subjective’ ground of the appearance.

Copernicus, contrary to these bizarre interpretations, provides an *objective explanation of subjectively apparent motions*, the opposite of Kemp Smith’s assertion. That is to say, it is not the observed object (the revolving sun) which is governed by a rule derived from the subject but the observing subject (the revolving human being) who is governed by a rule derived from an object; in this case an ‘object of the heavens’, the planet earth, which, as Copernicus long ago taught, is ‘one of the wandering stars’ (op.cit., 19). So it is indeed the case that one makes no progress in the explanation of experience by assuming, in Ptolemaic fashion, that ‘the entire world revolves around the observer’ since our experience itself results from our being made to revolve by the earth; unless, that is, one seeks to equate our experience of things with physical reality itself, in which case the earth really does persist in space since its being at rest is what constitutes our experience of it.

All scholarly interpretations of Kant can be considered a misconceived extrapolation of his use of the preposition ‘in’ – with his suggestion that Copernicus sought ‘for the

observed movements *not* in the objects of the heavens but *in* their observer’ – as though it is here that the answers to one’s questions will be found, when the observed movements actually found here are of a mobile sun and immobile earth. One distorts the facts in respect of heliocentrism by claiming that the sun’s motion is ‘just an appearance’ as long as one fails to explain that this appearance depends for its realisation upon something physically real which does not appear, namely the earth’s motion. It is in this sense that our cognition conforms to objects while emphasising that the objects or events in question are not in themselves cognizable *adaequatio intellectus et rei*; not, at least, for the subject whose experience it is which in any instance conforms to these objects.

Thus Copernicus’ ‘explanation of the celestial motions’ involved his postulating an objective realm which was yet no object for us, a position as far removed from Kant as it is possible to get since, for Kant, it is only that which exists ‘for us’ (A255=B310) which can be deemed objectively real – such existences, otherwise, being ‘nothing at all if one abstracts from the subjective conditions’ (A36=B52). For Copernicus, however, it is the subjective appearances that are nothing at all if one abstracts from the objective conditions (because the sun would not appear to move were the earth not itself mobile) and his position bears no relation to the Kantian project of redescribing as an appearance ‘a phenomenon which had been regarded previously as having independent reality’; or rather it does but only to the extent that the earth’s being at rest and the sun’s being in motion are described as appearances, with the ‘independent reality’ (a concept emphatically retained by Copernicus) consisting of the reverse scenario of a mobile earth and immobile sun – the former directly conditioning the contradictory appearance in us of the latter, not our supposed modes of cognition which, even if this were the case, would have to be held in contempt simply for making a world (*mundus sensibilis*) which contradicted reality.

2. Experience and the Human Object

(i) The Parallax and Parallel Effects

Making crystal clear their differences once more: while Copernicus describes the sun's motion as an appearance in order to distinguish this from physical reality or the world as it exists in itself, Kant takes this appearance of Copernican theory and deems it real; empirically real, admittedly, but as real as anything 'objective' can be. He then denies, further, that anything physical exists independently of possible experience. But the earth's motion, from the moving observer's perspective, does not itself appear and so cannot be described as an appearance and the sun's motion can be described as an appearance but only inasmuch as it depends upon independent reality. From the terrestrial standpoint the earth's motion is 'wholly objective' in that it moves (and the sun remains motionless) *despite appearances*; it is not that these objects do or do not move *in virtue of their being appearances*, as thus made by the subject. This motion is therefore not 'dependent on the subject' (since the subject can neither apprehend nor, *a fortiori*, construct it); ergo, it does possess independent reality. The only manner in which the appearance of celestial motion depends on the subject is in an objective sense in as much as the observer's body and faculties of apprehension are together situated on the earth and move along with it at a parallel velocity. Hence it is the actual motion of an observer which produces the apparent motion of an object. Alternatively, one observes the sun *while moving*, a movement which in itself is non-observable although it is the earth's motion, to which our experience directly conforms, which produces the merely apparent motion of the sun.

For Kant a subject's faculties of apprehension, being outside the realm of empirical reality because the generative basis of such, are not in themselves capable of 'movement' which he deems 'an empirical datum' (A41=B58) (and this despite his acknowledging that Copernicus' hypothesis 'contradicts the senses', in which case it is difficult to comprehend in what way the true motions involved are 'empirical'). But on this presupposition it becomes impossible to explain the parallax effect generated by the earth's motion since it is only by virtue of the inherent motion of our faculties of apprehension that the appearance of the sun's motion (the parallax effect) is generated. And by 'faculties of apprehension' is not meant merely one's eyeballs, optic nerve or

brain (without which, however, no observer could register the light emanating from the sun, whether the latter moves or not) but also the brain's ('mind's' for Kant) functionality it possesses in generating our conscious observations which, if this was instead deemed not to be immanently related to the physical hardware of our observational organs but somehow outside them would require one to explain how the functions involved could possibly keep pace with the rapidly moving organs (our light receptors) and thence generate the consciously observed effects. Because if the sun does not really revolve around the earth how else can one account for its appearing to if not by ascribing to the *apprehending* subject that which was previously ascribed to the *apprehended* object, i.e., the capacity to change place? But if one does that then space and time (and I would suggest causation and matter too) become determining grounds, not of that which *appears* (the revolving object) but of that which *apprehends* (the revolving subject).

It would seem impossible to argue here, also, that the parallax effect itself conforms to our cognition since this, once again, would make the sun's motion real (given that 'truth' is held to consist in the agreement of perception with pure cognition); but neither can one claim that an observer's motion conforms to her cognition since, to reiterate, the observer herself cannot possibly cognize it. But that our cognitions should, *de facto*, conform to objects it is sufficient that they do so without it being at the same time necessary that we experience these objects since the conditions determining the subject are physical and not empirical; a distinction denied by Kant in his case but admitted in that of Copernicus whose physically-grounded hypothesis 'contradicts the senses'. So it is because we are contiguously related to the earth that we share in its physical motion, but this is never experientially rendered given that wherever the earth goes we inevitably follow, creating the impression of our remaining at rest the whole time since, in relation to ourselves, everything on the earth remains *in situ*. This subjective phenomenon, and although it lacks a name, is the complement of the parallax effect whereby objects appear to move when they are in fact stationary (as opposed to objects appearing stationary when they in fact move) and necessarily accompanies the latter in every instance. In specifying what amounts to a law of 'observed' motion Copernicus states that 'no movement is perceptible relatively to things moved equally in the same directions – I mean relatively to the thing seen and the spectator' (op.cit., 12). Thus because the earth (the thing seen) and the spectator (the thing seeing) move at the same

speed and in the same direction, ‘no movement is perceptible’. On the Kantian model something physical which cannot possibly be perceived cannot possibly exist either: ‘[S]omething, which can be perceived neither in itself nor in its consequences... is thus *in itself* nothing, and no object at all’ (*Metaphysical Foundations*, 4:481). To the extent that objects are only given in experience this is a consistent view to hold. But Copernicus’ law directly contradicts this assumption by asserting as *necessarily imperceptible* the parallel motions of observer and observed while affirming the objective reality of both.

A possible counter to this would be to suggest that because the ‘consequence’ of our being moved by the earth is the parallax effect whereby the sun appears to move, this would be sufficient for Kant to affirm the earth’s physical motion as that which causally grounds the appearance of a mobile sun despite the earth’s motion being ‘in itself’ imperceptible. An example of this is given by Kant in respect of magnetism:

[W]e cognize the existence of a magnetic matter penetrating all bodies from the perception of attracted iron filings, although an immediate perception of this matter is impossible for us given the constitution of our organs. For in accordance with the laws of sensibility and the context of our perceptions we could also happen upon the immediate empirical intuition of it in an experience if our senses, the crudeness of which does not affect the form of possible experience in general, were finer. Thus wherever perception and whatever is appended to it in accordance with empirical laws reaches, there too reaches our cognition of the existence of things. (A226=B273).

It would have been more in keeping with Kant’s critical principles here if he had stated: ‘Wherever perception reaches, there too reaches the existence of things’ which is a synthetic proposition (there being nothing in the concept of ‘perception’ which implies an existential dependency of things); not: ‘Wherever perception reaches... there too reaches our *cognition* of the existence of things’, which is in fact an analytic proposition since our law–governed perception (cognition) of the existence of things reaches exactly as far as our cognition of the existence of things. The example also fails as a comparison with celestial motion because the iron filings really are attracted to the magnet but the sun does not at all revolve around the earth so that, even if one were to get to the very bottom of this appearance, nothing but illusion would remain.

Despite this the argument is no answer to the Copernican claim that an observer's motion cannot possibly be perceived because 'our organs' of sense could be infinitely finer than they happen to be yet still we would not observe this motion of ours. The reason for this is simply that our organs of sense, infinitely fine or not, are themselves physically constituted and thus equally subject to the spatiotemporal/causal-material factors which, first, condition our movements as physical beings and, secondly, condition our contradictory experience which follows in consequence of our moving. Hence in order to perceive our own motion our eyes and whatever is appended to them (if we consider just visual perception in this instance) would have to be located in a position outside ourselves from where our true motion as physical beings could be observed. But not only would our integrity as physical organisms be destroyed by such a thing so that, even if our eyes were extended on stalks a thousand miles above us, as attached to our bodies they would remain subject to movement and to the experiential distortions generated by this movement; and in acquiring a genuine observation of ourselves by severing these stalks and detaching our eyes from this motion we would observe nothing at all, the possibility of 'observation' itself depending on this physical unity such that my observations of motion would not then all together be *my* observations in the absence of such unity (cf.B134); – even if we could observe ourselves in this detached sense Kant would have to maintain that subjects can occupy two different places at the same time – the place where they are observed and the place where they observe. But it is the fact that we can only observe ourselves from where we are observed to be and not 'from over there', as it were, which disproves this idea and this, not least, because the observation of something 'over there' presupposes that one is 'here'; but if one could observe oneself *from* over there then one would not be here at all but over there, in which case it would be false to say that one can observe oneself from over there since 'over there' would in this instance become 'here'. This is a further example of the incongruity of experienced and physical reality because nothing exists 'over there' in a physical sense, the indexical concept 'over there' presupposing, and being conditioned by, that of 'here' while, from an independent standpoint, one must not speak of nature being indexically conditioned at all but as constituting, in spatial terms at least, 'everywhere'; there being no possible perspective on things which would constitute 'a view from everywhere' because that one 'views' things at all presupposes that one does so from the definite location that is 'here' (with everything we observe being 'over there' to some degree or other). Kant's claim that pure space is 'a given

infinite magnitude' (i.e., 'everywhere' in an *a priori* sense (A25=B39)) which cannot itself be perceived but makes possible the perception of things as occupying specific places cannot be offered as a solution but itself becomes problematic when the subject is considered as *object* (here referred to as the 'outer I') since this particular object (the human object), and like any other, occupies a specific place too. The question to be considered is how, in Kant's scheme of things, subjects as objects can occupy '*a priori*' space when this ought to entail that we could indeed perceive ourselves 'in the round' or 'over there'.

It is doubtful, too, whether Kant could have availed himself of the scientific mode of explanation whereby our perceptions are held to be *causally grounded* in non-sensible things outside them. This is because the causal category applies to *what* we perceive but does not explain the fact *that* we perceive since in order for this category to be applied at all empirical 'matter' or sensation must already be presupposed as that to which it is applied, in which case the causal category cannot account for the appearances being caused in the first instance. Kant's characteristic expression for this circumstance whereby our sensible impressions are causally 'ordered' but not themselves caused (since this would imply that the causal category can be applied in the absence of sensation, in which case it would not be 'applied' at all) is that they are simply 'given' (A19=B33); and if the causal category is applied merely to what we perceive the parallax effect ought necessarily to be deemed a 'real' phenomenon since *what* we perceive is a revolving sun. The causal origins of our sensible impressions is one of the more obscure topics of transcendental philosophy although some have held the seemingly paradoxical notion that appearances are *empirically* caused (paradoxical because, as that which constitutes the properly 'empirical' element of experience (A342=B400), our impressions of sense would then exist *causa sui*, making their existence no more explicable than things that are simply 'given'); a topic to which we shall return in due course. But it is the world that exists outside our perceptions which constitutes 'independent reality' for Copernicus and it was the observed effect produced in observers (motionlessness) as caused by the parallel motions of observer and observed (though not *as* observed but *in themselves*) which led those who could not grasp the idea that the earth upon which they stood firm was in fact constantly moving to label him 'absurd' for suggesting such a thing. The metaphenomenal implications of

what I suggest is called (for obvious reasons) the *parallel effect* remain far more significant than one would initially suppose; but more on this shortly.

(ii) An Impossible Experience

It is a central thesis of Kant's that experience implies nature and nature, experience. That is to say, the conditions of possibility for the one are the same as those for the other (A158=B197). It is also to say that there is nothing in nature that cannot be, or cannot possibly be, experienced and there is nothing we do experience that is not at the same time nature. One consequence of this equivalence thesis is that there is nothing *physical* which is not also *empirical*, or nothing that is physically possible which is not also empirically possible. It will assist us in examining these latter concepts, and the manner of their assimilation, if we first consider the etymologies of the terms, the former deriving from the Greek *phusis* or 'nature', the latter from the Greek *empiria* or 'experience'; and here it becomes clear, on this basis alone, why Kant should have sought to assimilate the physical to the empirical given his equivalence thesis in respect of nature and experience. Now there is nothing in the concept of the physical itself or of nature itself which implies its perceptibility, any more than the concept 'ontology' implies that of 'epistemology' (beyond someone's merely stipulating that it does). There is no contradiction, in other words, in claiming that something physical might be non-perceivable or non-empirical or that there are things in nature, indeed, that it might be impossible to experience.

That it is not necessary for us to perceive objects and their attributes despite our perceptions conforming to them in a physical respect does not, however, apply in the opposite case because for objects to conform to our cognition it *is* necessary that we perceive them since, according to Kant, empirical content is necessarily required in applying our pure modes of cognition (B1). That is to say, if no object exists *unless* it can be perceived then in order to exist an object *must* be perceivable. The only contrast between this and Berkeley's *esse est percipi* is a modal one in that Kant allows the possibility of our perceiving something to be a sufficient condition for its existence even if we never actually perceive it (although something actual must be presupposed as that from which a possible perception can be derived, as in the causal regress from conditioned to condition (A495–6=B523–4)); whereas Berkeley's doctrine seems more

instantaneous so that it is only when something is actually perceived (*'percipi'*) that its existence is assured us. Kant's motto would thus read, in contrast to Berkeley's, '*esse est possibilis perceptio*'. But his position still generates the two equally unsatisfactory conclusions that either experience is impossible, because by equating 'experience' with 'physical reality' in this instance an observer's revolutionary motion *cannot possibly be perceived* and therefore experienced by the revolving observer herself; or, if experience is possible, then the sun really does encircle the earth (and the earth really does persist in space) because it is this motion (or lack of it) which forms the empirical content of the moving observer's experience. From our perspective, of course, experience is self-evidently possible, although that which is given in experience (the earth's persistence in space) cannot be equated to physical reality. So while, for Kant, 'there is nothing objective which cannot possibly be perceived' entails, by conversion, 'only perceived things are objective'; from the Copernican standpoint, 'nothing perceived is physically real' entails, by conversion, that 'physical reality is non-perceivable'.

But let us consider again Kant's notion of 'a possible experience' (A226=B273) – in contrast to the *possibility* of experience – which could be utilized in proving the empirical reality of the earth's motion to the extent that it is possible to occupy a place from where such becomes perceivable, i.e., in cosmic space. An observer's revolutionary motion, however, does not concern the motion of this or that body but solely the *observer's* body together with her immediate surroundings (whatever these are), the motion of which, though objective, is in every possible instance non-observable for the observer herself (although this inability to observe does not concern those parts of the observer's body which can be freely moved in directions and at speeds opposed to that of the body as a whole and are thus perceivable). So, and to repeat an earlier example, an astronaut may well be in a position to observe the earth's motion from space but will never be in a position to observe her own motion while orbiting the planet in space since her body and the vehicle she travels in will always appear at rest – whatever her non-immediate surroundings – and, upon moving, it is these surroundings which instead appear to move about her. The obvious example of this phenomenon, therefore, is in those cases where we travel at some speed in a vehicle. The surrounding environment appears to rush towards and away from us as we move through it while our body and the vehicle itself (our 'immediate' surroundings in that this vehicle is contiguously related to our body) appear motionless the whole time. Certainly, a

spectator situated in a non-parallel location outside us is able to experience our moving objectively as we pass him (though not ‘wholly’ objectively since the spectator’s body, to which the observed movement relates, will still appear motionless to the spectator himself despite their also being in motion) but, and unless one sought to claim that the world we ourselves experience is the product of another’s cognitive powers (as perhaps Berkeley did, the ‘other’ being God), the problem as regards the non-experienced motion of the subject herself remains. And this example is just a reflection, in miniature, of that which we experience on a cosmic scale with the earth as our vehicle since everything appears to move about us here too; and among ‘us’ we must include the spectator, of course, who took himself to be ‘at rest’.

The objective, physical reality of an observer’s motion and whatever is contiguously related to her which is yet non-observable for the observer herself (the parallel effect)¹ and, by contrast, the merely apparent motion of the non-immediate surroundings which in fact remain stationary in relation to her as she traverses them (the parallax effect), together constitute a problem for Kant’s philosophy which equates ‘objectivity’ and ‘experience’ and consequently denies objectivity in the absence of any possible experience. But on this basis, as pointed out, we either have a ‘false’ experience or no experience at all.

There are thus two factors accounting for the impossibility of experiencing ‘our own motion’ and which account, too, for the noticeable fact that commentators never refer to such as mere ‘appearance’. The global factor, or spatiotemporal condition, derives from the impossibility of occupying two places at once which would necessarily be required in gaining a transcendent perspective on ourselves if we were to observe our true motion as physical beings. The local factor, which follows in consequence of the former, derives from the parallel effect whereby the parallel velocities of observer and observed

¹ In the case of the earth’s motion the Coriolis force generated by its rotation and the gravitational force resulting from its mass are sufficient to maintain an observer on a parallel trajectory even when they lose contact with the earth (by jumping in the air for instance) so that they still manage to land, as seems to them, on the same immovable spot. Thus alignment by means of ‘force’ can produce the same observed effect (motionlessness) as contiguity (although, and in physical terms, ‘contiguity’ is itself a product of opposing forces at the atomic level and not one of direct contact between bodily surfaces that it appears to us to be).

result in no motion being perceived. Were it possible to occupy two places at once the parallel effect would not occur since the one observed and the one observing could follow non-parallel trajectories and the latter would observe the former objectively. The mere occurrence of the parallel effect (in presupposing the global condition) thus proves the impossibility of occupying two places at once and, as a consequence of this, the *transcendental unity of the physical self* because were we more than one in this respect we could easily assume an external perspective on ourselves and thus negate the parallel effect.

It may seem a somewhat underwhelming suggestion that we constitute a unity as physical beings since this is obvious even in an empirical sense. But to postulate the *transcendental* unity of the physical self (or to postulate that the transcendental self is indeed ‘physical’) is to go beyond the empirical altogether and affirm something that, from Kant’s perspective, is wholly impermissible. That is to say, and just as we might consider what constitutes the thinking self in a transcendent sense (that it is simple, numerically identical, etc.) opposing determinations might equally apply such that the thinking self could instead constitute a series rather than a unity (see A363–4, note), so one’s empirical body as it is in itself (the ‘I’ which accompanies all outer appearances rather than the ‘I’ which accompanies all inner appearances) could instead derive from a multiplicity of things rather than a unified thing.

But two questions worthy of consideration here are, first, why there should be an ‘outer I’ at all that accompanies every outer experience (the I, that is, being referred to by such expressions as ‘I am six-feet tall’); because although the existence of human beings in general is something that is first cognized only on an empirical basis, that the *cognizing subject’s* outer experiences should always be accompanied by this form is not something that is of mere empirical import when, by Kant’s definition, nothing universal is given on a merely empirical basis; yet every possible outer experience is accompanied by this human form (to just the same extent that every outer experience is spatiotemporally ordered). And this is true however distinct we might otherwise be as human specimens because *some bodily form* always accompanies the outer experiences (a consequence, once again, of our not being able to ‘escape’ ourselves, although we can escape from any other object that may, contingently, come before us in experience). This phenomenal fact would seem to demand a ‘transcendental’, rather than empirical,

explanation although it will be left to others to explain why, from the standpoint of transcendental idealism, there should be an outer I at all (the inner I, as the ‘empirical’ counterpart of the ‘thinking’ self, being perhaps explicable in Kantian terms; the outer I, as non-thinking, being neither the ‘outer’ counterpart of this ‘inner’ appearance nor that of the ‘intelligible’ subject as she exists in herself); and why, unlike any other object we encounter (including other humans), it is directly experienced as being *sensitive* and not merely *sensed*, something that cannot be said even of the inner I since thoughts, perceptions, etc., are not sensitive to anything; and finally, given the existence of this outer I, why it should accompany every outer experience when it constitutes a mere ‘empirical datum’ which ought as likely not be present as be so or at least be something we can *distance* ourselves from as we can any other object of the outer senses. None of these problems arise on the presupposition that the *experiencing* subject is a physical being or that the possibility of experience is grounded in physical reality because one cannot distance oneself from that which must be presupposed as a necessary condition for *distancing* oneself from anything, i.e., the physical self.

The second question of concern here is why is the outer I, as given in appearance, always perceived by us to be in the same relative place (i.e., just below our necks)? This question seems to be sufficiently answered by the fact that our perceiving organs also remain in the same place (i.e., just above our necks); and this suggests, first, that our sensing organs (as opposed to our *sensed* organs) are physically constituted since they occupy a definite spatial location and, secondly, being physical objects themselves, that our ocular organs ought to be no less observable in space than any other objects we perceive; yet our eyes are just those things that cannot (directly at least) be perceived in the visual field. This is because they are necessarily presupposed in accounting for the possibility of visual perception in the first instance and that which accounts for the possibility of visual perception cannot be, without arguing in a circle, a mere visual perception. Continuing with this theme: ears are not sounds just as eyes are not colours (nor are our noses smells, our tongues tastes and our tactile organs – for want of a better word – ‘feels’). The distinction is as necessary to make as that between the *sensing* of something and this same thing as it is *sensed*. The former in each case constitute the physical conditions of possibility of the latter, the latter being given, the former that which gives (the proof of this distinction being easily established by the removal or disabling of one or all of these sensing organs whereupon nothing will be sensed).

These sensing organs are clearly not ‘sensible constructs’ since they must first be presupposed before anything sensible is given. Kant makes the distinction clear himself, although against his purported intentions, when he famously remarks that things are not *in themselves* (as opposed to apparently) extended because this would be akin to supposing ‘that the sensation of red is similar to the property of cinnabar that excites this sensation in me’ (*Prolegomena*, 4:290). This is, at the least, an admission that our ‘perceptions’ of things should not be equated with these same things as they are in themselves (there being, it seems, such a thing as cinnabar in itself which possesses properties *not* to be equated with our perception of it, which properties exist independently of experience since they first ‘excite’ sensations in me, this further presupposing that subjects possess the capacity – I would suggest physical organs of sense – to become ‘excited’ in the first instance). That the appearance of space should not be equated with things as they exist in themselves is not so easily argued, however, because that things may be *spatially intuited* (rather than *intuited spatially* as Kant maintains; an example, in our case, being the aperture of the eye – never visible to the one who owns it – which makes possible our perception of extended things) is something which escapes Kant since here it is not *matter* or sensation that is in question (i.e., colours) but *form*, namely, as regards that which *senses*. Aristotle would seem to concur here, remarking that ‘that which perceives must be an extended magnitude’ (*De Anima*, Ch.12, 424a 17) – a perception of extension, in other words, presupposes the extension of the perceiving organ – an example being the visual field which, for us humans at least, constitutes a span of 180° (including peripheral vision) as a result of the spatial properties of our eyes (position, shape, etc.).

The fact that we spatially intuit things would seem to put an end to the long-running dispute with Kant over the possibility, as Kemp Smith puts it, ‘that an extended object may yield extended sensations’ (*ibid.*, 86); a thesis denied by Kant who deems sensations to have merely intensive, not extensive, magnitude, concluding that space must instead be ‘in us’ (A370). But here it need only be pointed out that we can indeed accept that space is a native phenomenon and not an immigrant ‘drawn from outer experiences’ (A23=B38), agree that ‘objects do not strike the senses in virtue of their form’ (*Dissertation*, 2:393) but deny that our spatial representation of objects must therefore be due to ‘an inner principle in the mind’ in virtue of which objects take on this form (*ibid.*). No, the reason our sensations take on a spatial form is because *our*

sensing organs are spatially formed. Objects may not strike the senses but light strikes objects, that which is not absorbed being deflected toward us and striking, in a scattered effect, our light-sensitive retinas. These objects (our retinas) possess an extensive magnitude all of their own, one that does not result from our minds having ‘formed’ sensation into an extensive magnitude since the existence of our extended eyes must be presupposed before any visual sensations are given (should this be doubted one is advised to cut out the eye that offends thee, so to speak). It will be seen, however, that when everything Kant regards as contributed by the mind in the construction of objects is transferred to the objects themselves (space, time, causality, etc., and, among the objects, observers themselves), everything rights itself and his position stands in perfect accord with things as they actually are. Thus, and to affirm once again, it is ‘objects of sense’ which are subjective and subjects themselves, objective; this constituting our Copernican reversal of perspective.

(iii) Empirical Perspectives

The possibility of experience is grounded in physical reality, not empirical reality in our object– (e.g., eyeballs) generating intellectual or intuitive faculties since we cannot see ourselves seeing despite the fact that ‘seeing’ is a physically-grounded occurrence. And this is true even of one’s reflection in a mirror because to imagine that one sees oneself seeing in a mirror would be to suppose that the reflection itself is looking back at one when, clearly, the reflection itself sees nothing. So we perceive our eyes (indirectly) in a mirror but we never see ourselves seeing. And even in the case of one’s eyes being extended on stalks that can be articulated to face each other, thus giving one a 360° panoramic view of oneself (although it remains the case that neither eye can intuit *itself*), the parallel effect remains, in the final analysis, to undermine any suggestion that we possess an ‘objective’ perspective on things. All of the foregoing explains why an outer I accompanies every outer experience given that the *experiencing*, as opposed to *experienced*, self is, in a ‘transcendental’ sense, physically constituted (extension, shape, place, etc.).

That Kant had some ‘sympathy’ with the view of science (i.e., *physics*) on these matters is recognized by Strawson (1966, 253) who correctly states, however, that the view of science ‘is not a *view* at all’ (ibid., 252), deeming physical reality to be that which

causally grounds experience, not that which can possibly be given in experience. From this perspective it is not that our experience is *of* phenomena but, rather, that experience *is* a phenomenon (an *epiphenomenon* it will be argued here); the product, therefore, of those same spatiotemporal and causal–material factors which Kant insists are exclusively applied to phenomena encountered *in* experience. But Kant’s ‘sympathy’ here, despite these reservations, extended to the following. A cardinal rule of the critical philosophy has already been breached several times thus far, namely the equating of ‘things in themselves’ with physical reality which is never given in itself but which can be inferentially established or ‘thought’ on the basis of mere empirical data. The following quotation from the *Critique* to a degree concurs here:

[W]e would certainly call a rainbow a mere appearance in a sun–shower, but would call this rain the *thing in itself*, and this is correct, as long as we understand the latter concept in a merely *physical* sense, as that which in *universal experience* and all different positions relative to the senses is always determined thus and not otherwise in intuition. But if we consider this empirical object in general and, without turning to its agreement with every human sense, ask whether it... represents an object in itself, then the question of the relation of the representation to the object is transcendental, and not only these drops are mere appearances, but even their round form, indeed even the space through which they fall are *nothing in themselves*, but only mere modifications or foundations of our sensible intuition. (A45–6=B63; my emphasis).

Now it is clear that Kant regards this ‘thing in itself’ in a ‘physical sense’ to be still something empirical since it is determined ‘in intuition’ or with regard to ‘every human sense’. But there is an ambiguity here since that which is determined ‘thus and not otherwise’ in ‘all different positions relative to the senses’ might presuppose two different things: either the ‘empirical object’ itself can assume every possible position relative to the senses or our senses themselves can assume every possible position relative to the object. If it is the latter then whatever possesses these senses is constituted in spatiotemporal and causal–material terms, as presupposed by its adopting ‘all different positions’ relative to the object; if it is the former then this still presupposes the spatiotemporal/causal–material nature of the sensing being since an object could not adopt all positions relative to these senses unless both shared the same spatiotemporal reality. In fact both scenarios are correct because sensing beings, like the objects themselves, are physically constituted and are thus able to adopt any position relative to the objects just as objects can relative to the senses.

Acknowledging this shared reality, therefore, the appearance of an object moving away from oneself or the appearance of this same object as I move away from it is identical in terms of the object appearing to diminish in size to precisely the same extent and its appearing to move away in a given direction (because even in the case of an observer's motion, and by virtue of the parallax and parallel effects, the object itself will appear to move while the observer herself will appear motionless). This demonstrates two things. First, any change in position of either observer or observed changes the *appearance* of the object (in terms of its size, shape or 'form', not merely its colour as in a rainbow) and because every change in position results in a change of appearance no empirical phenomenon at all can be determined 'thus and not otherwise' in 'all different positions relative to the senses' (as though an object could maintain the same shape and size 'in intuition' no matter where one's senses were positioned relative to it, in which case the rising moon ought not to appear 'larger' at all). Secondly, it demonstrates that appearances are non-determinate with respect to physical reality because when numerically distinct appearances are, *in appearance*, exactly alike while they nevertheless derive from opposing grounds (as with an object's moving away from oneself or oneself moving away from an object) they must be deemed non-determinate with respect to these opposing grounds (otherwise the appearances would be as distinct as the grounds themselves). Kant's claim that experience is 'a cognition that determines an object *through* perceptions' is false simply on the grounds that nothing objective *is* determined through perception. The truth, instead, being that objects – both observer and observed – determine our perceptions.

It may seem that Kant circumvents the problem of changing appearances of the same object by choosing something with a 'round form' (i.e., raindrops) because something with this form would maintain its shape (though not always its size) no matter where one's senses were positioned relative to it; unlike something cuboid, for instance, the parallel edges of which, due to certain laws of perspective (i.e., linear perspective), are rendered non-parallel in appearance though they remain parallel in themselves.² It is not

² The sense of touch, unlike the sense of sight, might be thought more reliable here in terms of rendering, in a sensible manner, the 'objective' qualities of objects, as with the appearance of a stick bent in water due to the refraction of light, an illusion dispelled by feeling the stick along its length and rendering its 'true' straightness apparent. But tactile sensations, no less than visual, are still perspectival in nature since, to an organism small enough to reside on the stick, its surface might feel jagged rather than

always the case, however, that something spherical appears spherical (as with the sun which appears disc-like instead) and the mere possibility of this in respect of the one form that might be determined thus and not otherwise in intuition calls for an alternative definition of the ‘physically’ real. Rather than that which appears the same in all different positions relative to the senses, the thing in itself in a physical sense is that which is determined thus and not otherwise *however* it appears and, indeed, *whether or not* it appears (given that, because every appearance bears a mere consequential relation to things in themselves, whether or not something appears is equally irrelevant. Appearances would only be relevant if objects as they exist in themselves were *given* in experience which, however, they are not).

The formal properties of empirical phenomena are no less contingently determined than the material since an object may from one position assume a circular form but from another, that of an ellipse (when in purely geometrical terms a circle is always a circle and an ellipse is always an ellipse; it is never the case that the one can be mistaken for the other). Similarly when viewing a pyramid, one never perceives the entire object (something which would require one to adopt every possible position relative to the object *at once* – here referred to as the ‘view from everywhere’) but, say, two of its faces, which aspect certainly cannot be distinguished from two triangles adjoined along opposing sides (and, for all we know, this may actually be what it is) entailing, again, that if one is to rely merely upon the intuition of objects in determining their formal properties one’s judgment will be no less contingently grounded than those regarding colours. This is because we never experience objects ‘in the round’, as it were, but are always limited to a perspective (this applying to round things too).³ The essential

straight and to a degree no less marked than that caused by the refraction of light; which example enforces the point, when things in themselves in a physical sense are considered, that one ought abstract altogether from the given of perception unless it is to use such merely as grounds for inference or in the confirmation or refutation of hypotheses.

³ Georges Dicker presents a case, although in a different context, which could be used as a potential counter-argument to this, declaring it a mere contingency that we cannot experience objects ‘in the round’ or in non-perspectival terms since ‘if we had eyes at the ends of numerous long tentacles, with which we could simultaneously see all the sides and the roof of a house’, this argument I have made ‘could not get off the ground’ (2008, 98). The reason, however, we must continue to affirm the necessarily perspectival nature of experience is because the *physical processes* involved in

characteristic of primary qualities, however, is that they are non-perspectival or absolute in nature, there being, I would suggest, no such thing as an absolute or 'universal experience' whereby things are perceived in the round (i.e., in 'all different positions relative to the senses'). And this remains so even if one sought to 'construct' an object in the round through a synthesis of the different perceptions had of it (e.g., the various aspects of a pyramid). In this instance it would be distorted perspectives one were combining in an attempt to construct a whole; but one would require an absolute perception of each part in order to construct an absolute whole, something the essentially perspectival character of our experience prevents. We would instead be combining one skewed perspective with another in the hope that something 'regular' results. This contingency of form leads one to question, on the one hand, how the 'apodictic' science of geometry, in being constitutive of the pure intuition of space, could possibly ground our experience of objects in relation to their formal properties and, on the other hand (and granting that this is not the case), how our experience of spatial objects, as perspectival as it is, may nevertheless be grounded in the absolute properties of things in themselves (observer and observed included since it is only by virtue of their causal interaction that appearances appear in the first instance).

Now if, instead of raindrops, we consider the subject herself in a 'physical sense' we find that the subject is not 'determined... in intuition' at all, something which would require that she be perceived, at least possibly, in 'all different positions' relative to her senses, which would require that her *senses* adopt positions relative to her senses, which would require that she transcend herself so as to occupy two places at once in gaining the desired perspective. But the subject herself is unable to adopt *any* position relative to her senses since these and the subject herself occupy the same position, with any change in one presupposing precisely the same change in the other. Only if experience were grounded in a third person perspective would it be possible for a subject to adopt positions relative to her senses, which further demonstrates that space and time condition experience in an external rather than immanent sense, the impossibility of

perception (e.g., the angular deflection of light from an object's surface, its radiating outwards from the point of deflection with an ever-widening circumference which accounts for linear perspective, etc.) will always make it impossible for an observer, however many eyes they have and wherever they are positioned, to perceive an object in absolute or non-perspectival terms.

occupying two places at once determining what the subject *can* and *cannot* intuit, not what *is* intuited.

The partial or contradictory nature of experience is better described as its perspectival character, an ineradicable element of every experience.⁴ But what exactly is a ‘perspective’? Far from a matter of personal *fiat* or ‘interpretation’, perspective is that in the appearance which is determined by one’s *position*, in both space and time. Not, therefore, a view from nowhere, nor a view from everywhere, but a view from somewhere (and somewhen). Kant and Ptolemy are equally mistaken, however (as is any theory which equates ‘objectivity’ and ‘experience’), in their claim that an adequate, and not merely perspectival, experience can be had of objects, whether as something ‘revealed’ or ‘rendered’ and whether this cognition is thought to conform to the object or *vice versa*. Because although the naïve realist adopts the principle *adaequatio intellectus et rei* in his dealings with the world, Kant’s idealism is equally assured in its claim that we possess an adequate cognition of things (though these things conform to our cognition, not our cognition to these things). The naïve realist and naïve idealist thus join one another on the equants of their respective theories and it is only the direction of conformity which distinguishes the two. But no such faithful or adequate experience is possible because if our experiences are nothing but the effects of unseen causes then it is inevitable that we should fail to see causality in action, as it were, being availed of the effects alone which serve only to obscure these causes. For Hume this led to scepticism in regard to causality but realism actually requires that the causal grounds of one’s experience remain hidden given that one would not expect to discern any ‘causes’ by means of that which itself is an ‘effect’.

⁴ This characterization of experience as perspectival in nature is unrelated to Nietzsche’s doctrine of ‘perspectivism’ which *derives* objectivity from a multitude of perspectives, rather than *presupposes* objectivity in accounting for our perspectives (see Nietzsche, 2000, 555). Nietzsche’s doctrine, being grounded in the dubious ‘inter-subjective’ concept, can no more deliver an ‘objective’ perspective on things than Kant’s. In nature itself considered independently of an individual’s experience of it there are, of course, no ‘perspectives’ at all given that objects, in this case, do not exist as ‘aspects’; a fact that Kant, with his reliance on subjective appearances, will be in no position to accommodate.

The Copernican insight thus presupposes a distinction between empirical and independent reality, between our experience of things and things in themselves; although for Copernicus, in contrast to Kant, empirical reality is not the equivalent of physical reality but comprises the mere apparent effects of external causes derived from a physical world of things in themselves. Kant, instead, divides objects in general into phenomena and noumena, the latter entirely divested of physical properties making the concept of such, for that very reason, problematic since noumena can be thought but not represented in any experience. The possibility that things exist ‘outside’ us in a transcendental sense is therefore acknowledged by Kant although, whatever these things are, they are not ‘phenomenal’ in the empirical signification of that term. Things are either phenomenal in the sense of being physically or empirically constituted (these adverbs being coextensively applicable for Kant) or transcendental in terms of being noumenally constituted (whatever that may entail). This division discounts, however, the essential Copernican concept of transcendental objects and events which are physically real yet non–empirical and which, as necessary theoretical postulates, alone account for his insight. Because if perceptions exist only ‘in us’ empirical phenomena cannot possibly be ‘external’ for ‘one cannot have sensation outside oneself, but only in oneself, and the whole of self–consciousness therefore provides nothing other than merely our own determinations’ (A378). But if things do exist or occur outside us they cannot possibly be ‘empirical’. Hence if there are things which exist or occur in a physical sense which are not given in any experience we have the requisite candidates for the said transcendental objects and events. One such transcendental occurrence is an observer’s revolutionary motion although every empirical phenomenon (and wholly illusory phenomena such as our dreams and imaginings too) presupposes a transcendental occurrence as its generative cause (brain events in the latter instances).

3. Experience and Physical Reality

(i) Absolute and Relative Places

In *Concerning the Ultimate Ground of the Differentiation of Directions in Space* (a pre-critical paper written by Kant which adheres more closely to the Copernican view of these matters simply in virtue of its being ‘pre-critical’), and just as an attempt has been made above to prove that the possibility of experience presupposes the physical (rather than ‘thinking’ or ‘intuiting’) self, so Kant argues that the manner in which we sensibly orientate ourselves and ‘things which exist outside ourselves’ in space derives from ‘the relation of these intersecting planes to our *bodies*’ (2:378–9; my emphasis) and not a capacity of our faculty of intuition to ‘order’ the matter of sensation. He was wont to do this, first, because ‘it is only in so far as they [i.e., objects] stand in relation to ourselves [as embodied beings] that we have any cognition of them by means of the senses at all’ (2:379) and, secondly, that our ‘relation to absolute space [in which ourselves and these other objects dwell]... cannot itself be immediately perceived’ (2:381). Thus ‘the impression made by the visual object’ places it, as regards its position relative to our bodies, above or below, to the left or right, in front or behind (2:379). But these are not true determinations of the object itself as regards its physical orientation but sensible determinations resulting from the perceiving subject’s body as it is positioned relative to the object. As with the indexical concepts ‘here’ and ‘over there’, there is no ‘above’ or ‘below’, ‘in front’ or ‘behind’, ‘left’ or ‘right’ in a physical sense, although things are still orientated to one another but in a manner that is non-perceivable (because what counts, sensibly, as ‘in front’ for me may count as ‘behind’ for you, a difference that cannot be explained in terms of what is deemed our shared form of ‘pure intuition’ since the resultant experiences are diametrically opposed, implying that it is our bodily locations which account for the difference and thus a physical, not intuitive, ground). Kant illustrates the point, in a different pre-critical context, with the following:

When heaven is spoken of as the seat of the blessed, ordinary people tend to represent it as existing above, high up in the measureless spaces of the universe. What is forgotten, however, is the fact that our own earth, if viewed from those regions, would also appear to be one of the stars in the heavens, and that the inhabitants of other worlds could point to us with as much justification and say: Behold! The dwelling place of eternal bliss, a heavenly home which has been prepared for our eventual reception there. (*Dreams*, 2:332–3).

So what is ‘below’ me (the earth) may be ‘above’ you – how things stand independently of the observing subject being beyond our perceptual grasp since our experience is constituted solely in these indexical terms. As a general observation on the physical/phenomenal divide, therefore, the absolute nature of physical reality would be as weird and wonderful an apparition were it ever possible to perceive it as adherents of Kant’s sometimes positive stance toward the pneumatological realm take it to be since its apprehension, as for one who is ‘disembodied’, would constitute a ‘view from everywhere’ rather than a view derived from a particular location as determined by the place of one’s body.

Clarifying the problem confronting ‘critical’ Kant as regards the contradictory nature of experience, a distinction must be made here between the ‘absolute’ and ‘relative’ places each embodied individual occupies in the world. Relative place is that occupied by an object as it is situated relative to others; absolute place, that occupied by an object irrespective of its relation to others. Now an object’s relative and absolute places are not *different* places since each object has only a single point constituting its place and that is its absolute place, with any changes thereof applying to this.¹ The difference that pertains concerns the experience of the place one occupies. In respect of the parallel effect we appear to remain in the same place in relation to another body throughout a certain period of time (e.g., the chair one is sitting on); and indeed our relative place (where our body is situated relative to another) does remain unchanged. Our absolute place, however, and that of the chair also is constantly changing since both objects are situated on a planet which is itself changing place in an absolute sense (although, in relation to us, its relative place remains unchanged, i.e., the same piece of earth lies beneath our feet). The parallax effect results from a change in relative place following a change in absolute place (as with the sun’s rising and setting consequent to the observer on the earth changing place); the parallel effect in maintaining one’s relative place despite a change in absolute place of both observer and observed; and from this the

¹ ‘If one wants to determine the distance of the moon from the earth, one wants to know the distance between their places, and for this purpose one does not measure from an arbitrary point of the surface or interior of the earth to any arbitrary point of the moon, but chooses the shortest line from the central point of the one to the central point of the other, so that for each of these bodies there is only one point constituting its place’. (*Metaphysical Foundations*, 4:482).

appearance of oneself remaining in the same place when in reality one changes place becomes explicable. The subject's absolute place and any change in this cannot possibly be perceived because what we actually observe, in respect of our own place, is either the parallel effect when we maintain our relative place or the parallax effect when this alters (e.g., the land 'moves away'), and both these effects are mere appearances. Now it is claimed here that these apparent effects prove the absolute reality of space and time because were these merely immanent to experience the parallel and parallax effects would similarly not occur since, presupposing such immanence, our movements as physical beings would be as 'objectively apparent' here as with any other object because it is we who make ourselves in a physical respect (so it is claimed) by means of these pure modes of intuition.²

The parallel effect is as much a consequential representation as the parallax since it similarly corresponds to nothing in itself and hence can be spoken of as mere appearance. But the two effects together comprise every possible experience because even if one were free-floating in space and in the absence of contiguously related objects (that is, when the 'thing seen' is the spectator) one's body as one observed it would appear motionless given that one's observational organs are an integral part of it and move in unison with the body as a whole, while everything in the surrounding space would appear to move but in the opposite direction to that in which one actually travels. As with two of Kant's 'concepts of reflection' (A260=B316) – only here it is 'objects themselves' we are considering and not our manner of reflecting on them – things move either at the *same* velocity or at *different* velocities (or they are not subject to movement

² It should now be apparent that if 'independent reality' is substituted for '*a priori*' then everything Kant argues for would stand in accord with the Copernican insight. In other words, what Kant considers the subjective intellectual or intuitive conditions grounding things as 'objects of experience' (space, time, causality, etc.) are in fact, from the Copernican standpoint, objective or physical attributes of things in themselves (both observer and observed) which condition the merely subjective phenomena of experience (the fact that our sensations are spatiotemporally ordered explicable solely in terms of the spatiotemporal nature of our sensing organs). In both cases the conditions of possibility are 'transcendental' only in one they are ideal and in the other real, and in both cases the same explanandum is in view, namely experience. The latter is the pivot about which these viewpoints oppose one another although, since Copernicus has little need to prove himself in this debate, it lies with Kant to demonstrate how his transcendental idealism can possibly account both for the phenomena of experience and for that which it seems cannot be experienced, *viz.*, the Copernican reality.

at all, in which case it is pneumatological things we are referring to). When movable things are considered, therefore, that they either share or differ in their movements constitute the sole possibilities which is why our experience, in respect of our own motion, comprises the parallel effect (when we share our movements) and parallax effect (when we differ) alone. Copernicus' insight, and as unaccustomed as we are to using the expression, thus concerned the *human object* (i.e., our own bodies and observational faculties) which he argued, contradictory to the senses yet true, travelled through space in tandem with the earth; the subjective but necessary effects of these 'matters of fact' being that the sun appears to move while the observer appears motionless. Kant's 'metaphysics of experience', by contrast, fails to account for the one thing that is essential for Copernicus and the only thing that would validate a comparison, namely the subject as 'revolving object'.

The concept of absolute reality, however, is neutral as regards the specific nature of any proposed realia which, as regards space and time and as current relativity theory has it, are not absolute in the Newtonian sense. But neither should relativity theory itself be deemed 'subject-dependent' in virtue of the fact that space-time frameworks are determined as much by the position and motion of the observer as of the phenomena because Einstein's theory, as with Copernicus', treats the observer as a *human object* with a movable body and immanently related faculties of apprehension, not as a disembodied, non-locatable source of world-constructing thought-power. Thus relativity theory incorporates the parallel effect to just the same degree that Copernican theory does, only specifically with regard to the temporal parallel effect. Time appears to us to run smoothly when in fact our motion as physical beings determines the passage of time such that an astronaut travelling at speeds far exceeding those on planet earth would, upon their return, have aged less than those remaining on the planet. This phenomenon can be accounted for solely in terms of the parallel motions of observer and observed whereby the astronaut's body moves parallel with the vehicle conducting them at these higher speeds for what may seem only a few months; while for those remaining on the planet and moving at non-parallel speeds years would have passed between the astronaut's departure and return.

It is the temporal parallel effect which accounts, in general, for our experience of residing in the present since, just as we cannot get 'outside' ourselves, so can we not

‘get ahead of ourselves’ by speeding into the future leaving the rest of the world behind nor, by the same token, can we ‘dwell in the past’ by applying the brakes on ourselves while everything else moves on, all because we are bound to our bodies and thus follow a determinate temporal course. Only in the case of a ‘disembodied’ individual i.e., one who is not time-bound, might the situation differ since in that case a ‘view from everywhen’ ought to be possible.³ In this respect, and in keeping with Kant’s mentalistic mode of expressing his transcendental idealism, we are simply not clever enough to create or render the objective world that the physical sciences deal with. In fact, if such a term be permitted, we have been rather ignorant in getting things completely back to front in this regard; something that is amply demonstrated by humanity’s pre-Copernican (and sometimes *post*-Copernican) conceptions of the matter. And even when we acknowledge Copernicus’ take on things we will never be in a position to observe this motion of ours as it truly occurs but will be forever stuck with the appearances.

Returning to Kant’s drawing of the Copernican analogy and if we ignore, at this point, Kant’s description of his own position (i.e., the assumption that objects conform to our cognition) and focus on his account of Copernicus instead: in what way, for the purpose of analogising, can the latter be assimilated to transcendental idealism? From the Kantian perspective of transcendental inquiry Copernicus, in charting a new course, still does not advance beyond the level of empirical inquiry since his concern remains with ‘objects’ – whether that of an observer’s body or stellar-sized objects – and their states of either motion or rest. And yet, as Kant rightly contends, Copernicus also proceeded in a manner contradictory to the senses yet true – but what sort of ‘empirical’ inquiry is it that can contradict the senses? And what sort of ‘truth’ is it that does not apply to the given of sensibility? His anti-empiricist or verification-transcendent stance thus indicates a novel methodology as much as a novel hypothesis but before considering this some additional comments on Kant’s construal of the Copernican position.

³ The situation here, regarding the temporal parallel effect, is directly analogous to our appearing motionless on the earth in that we appear to *remain* in the ever present present, as it were (along with everything else we perceive), while yet, in reality, we constantly *move* from one moment to the next (which motion holds exactly parallel with our moving from one *place* to the next; our experience being, in other words, *spatiotemporally* conditioned).

Regarding the limited, so-called ‘empirical’ mode of inquiry undertaken by Copernicus, this is explicitly stated by Kant in the only other passage in the *Critique* (and in all his other critical works in fact) where Copernicus receives a mention,⁴ together with some cautionary words on how one should avoid misconstruing the latter’s position:

I find in the writings of the moderns an entirely different use of the expressions of a *mundi sensibilis* and *intelligibilis*... In accordance with this usage some have been pleased to call the sum total of appearances, so far as it is intuited, the world of sense, but the connection of them insofar as it is thought in accordance with general laws of the understanding, the world of understanding. Theoretical astronomy, which expounds the mere observation of the starry heavens, would be the former, contemplative astronomy on the contrary (explained, say, according to the Copernican world-system or even according to Newton’s laws of gravitation) would be the latter, making an intelligible world representable. But such a perversion of words is a merely sophistical evasion for escaping from a difficult question by reducing its sense to a commonplace... The question is thus: whether beyond the empirical use of the understanding... a transcendental one is also possible, pertaining to the noumenon as an object – which question we have answered negatively. (A256–7=B312–3).

It is interesting to note, first, that in this passage (which appeared in the first edition of the *Critique* and thus before Kant’s celebrated comparison with Copernicus) the latter’s position is portrayed as a transcendent doctrine which flouts Kant’s most important distinction. And though it is to certain ‘moderns’ that Kant ascribes a misuse of concepts and not necessarily Copernicus himself, it is nevertheless significant that he should single out modern astronomers rather than practitioners engaged in other speculative fields – biology, say – who might similarly have asserted (if mistakenly

⁴ Hanson, citing the *Kant-lexikon* of R. Eisler, suggests that ‘the entire Kantian corpus makes no reference to Copernicus other than the two occurrences (quoted above) [and already quoted in this work] in the *Vorrede* to the second edition of the *Kritik*’ (op.cit., 38). In fact there is a third reference (to be quoted here) in the chapter on phenomena and noumena which appears unaltered in both editions. That such an elementary mistake in scholarship should have been made in the first instance and then repeated by others also, I do not attribute to carelessness but to an evasion of the Copernican arguments advanced here. The ‘Analogy’ has exerted such influence over those who have studied him, in other words, that scholars have been blinded to the true implications of Copernicus’ work and it is for this reason, also, that references I might have cited either in support of or in opposition to my specific take on Copernicus have not been presented simply because I have been unable to find any. This is certainly not to imply that the phenomenon of observer motion is unknown but only that its implications for Kant’s critical project have yet to be fully considered. Now, admittedly, this could be because the arguments presented here are so spurious that no one has troubled themselves to take them seriously; a verdict I shall simply have to await.

according to Kant) a transcendent insight into the noumenal conditions of things, as with the famous *élan vital* concept, for instance. Physicists too, with their notion of the ‘ether’ as a matter that can only be ‘thought’ and not subjected ‘to our experiments’ (*Metaphysical Foundations*, 4:534), might also have faced this same accusation of concept subreption (although Kant’s reference to Newtonian gravity may allude to this). Is there perhaps something entirely distinctive about the ‘Copernican world–system’ which forcefully motivates its adherents to claim more than just an ‘empirical’ insight into things when, after all, the underlying reality postulated by this system ‘contradicts’ all the empirical evidence (if such is taken to represent true motion rather than the effect of some non–empirical reality)? And though it may indeed be a ‘commonplace’ in scientific discourse that things are referred to as existing independently of our experience of them or that certain astronomers distinguish ‘empirical’ evidence on the one hand (*‘mundus sensibilis’*) and physical reality on the other (*‘mundus intelligibilis’*), the onus surely rests with Kant to account for this mode of discourse when, for him, it is objects that conform to *our* cognition and not *vice versa*.

Kant’s intention in this passage, anyway, is to stress how one should avoid confusing the empirical use of the understanding which, as applied to the data of sense, actively constructs the law–governed world–system only as it appears to us with a transcendent use capable of representing the world as it is in itself. But in what way can Copernicus be said to ‘represent’ the world? It would appear not ‘empirically’ because, as Kant himself acknowledges, ‘contemplative astronomy’ is not grounded in ‘mere observation’ and a moving observer is in no position to sensibly represent the true motions in question since these representations always contradict the reality. But neither does he represent a noumenal or intelligible world (at least as Kant understands these terms) which abstract from all spatiotemporal and causal–material concepts. Copernicus, instead, represents *physical reality* by means of his *conscious intellect* and in this manner alone does he attempt to ‘think’ or contemplate things. By failing to distinguish physical and empirical reality (and ‘conscious’ and ‘pure’ intellect) Kant is in danger himself of misconstruing Copernicus. Thus one can ask: What is it, in Kant’s description of heliocentrism, that conforms to the observer’s cognition? It is certainly not the ‘revolving observer’ because this is not observed at all (indeed, for the revolving observer herself, the motion here is non–observable). All that remains, in that case, is the motion of ‘the entire celestial host’ which is to stand in conformity with the

observer's modes of cognition; but this would only serve, *contra* hypothesis, to make these appearances real. We have already seen how Kant's philosophy has an inbuilt tendency to 'leave everything as it is' in this respect,⁵ but might the distinction he makes between 'appearance' and 'experience', whereby the latter is lawfully determined in accordance with the schematised categories of the understanding, permit him to account for the reality of observer motion in the face of the recalcitrant appearances? In pursuing this question it is necessary to consider in broader terms just what Kant himself understands by the 'scientific method'.

(ii) 'Rendering the Objective'

It has been shown that Copernicus indeed confounds appearances (as does Kant) but that the two do so in mutually opposed ways. Copernicus explains what 'seems' to be objectively the case as a product of our being misled by truly objective conditions which distort our perceptions to the extent that they become inversely related to the facts, i.e., we perceive a mobile sun and stationary earth, perceptions caused by a mobile earth rotating about its axis and, annually, revolving around a stationary sun – stationary in relation to the earth, that is.⁶ In this respect Copernicus did not make trial whether he could explain what were believed to be objective perceptions by an appeal to our subjective constitution but, on the contrary, he sought to account for our subjective view of the world by appealing to an objective (independent) reality. It is only by virtue of this appeal, indeed, that the notion of something's being merely 'subjective' or 'objective' is rendered intelligible. That is to say, one can intelligibly assert that a thing

⁵ Kant certainly enlightens us as to the consequences of his position when, having denied that space is 'something inhering in things themselves', goes on to claim, as regards our experience of the world, that 'everything remains just as if I had never undertaken this departure from the common opinion' (*Prolegomena*, 4:291). When absolute reality is denied space what remains is the Ptolemaic misrepresentation of our common opinion. Copernicus, by contrast, insists his stance stands 'in opposition to common sense' (op.cit., 3) and that this will remain the case because 'the appearances' inevitably contradict 'the reality'.

⁶ Even here, however, the sun is not wholly stationary in relation to the earth since the gravitational pull of the latter (in relativistic terms, the curvature of space caused by the earth's mass) as it revolves around the sun in fact draws the sun toward it to a degree, creating a characteristic 'wobble' which those searching for planets orbiting other stars (and in addition to the 'transit' method) use to indicate the existence of such planetary bodies given that these are not, at present, directly detectable.

is objective to the extent that it is *not* subjective (or *non-apparent* since the reality in fact ‘contradicts’ the senses); but is Kant in a position to say this? On one level he certainly can’t because, for him, a thing is objective precisely to the extent that it is subjective – to what extent he can intelligibly assert this being the central question posed here.

Returning to the Copernican standpoint, observers do not make the planets move but, rather, it is our planet that *moves us* and generates a perception of motion where there is none while at the same time foreclosing those true motions – the earth’s and, thereby, our own – that do occur. Kant, on the other hand, and instead of explaining the ‘subjective’ by means of the ‘objective’, takes the opposite path and explicates objectivity by means of subjectivity. And by ‘subjectivity’ we can accept Cassirer’s reading of Kant whereby this concept does not entail ‘individuality and arbitrariness’ but, rather, ‘a specific lawfulness of cognition, to which a determinate form of objectivity (be it theoretical, ethical, or aesthetic in kind) is to be traced back’ (1981, 151). The same, however, applies to Copernicus, at least to the extent that it is no ‘arbitrary’ occurrence that the celestial host appears to revolve about the moving observer, only the cause of these appearances is traced back to an absolute realm of physical reality, not an immanent realm of cognitive faculties (which, if it were, would only serve to make these appearances real). And though it may be granted that Kant too distinguishes the subjective (in terms of ‘individuality and arbitrariness’) and the objective – a distinction roughly marked by the notions of ‘appearance’ and ‘experience’ – for Copernicus the subjective phenomenon of the sun’s motion (whether one calls this an ‘appearance’ or ‘experience’ since both are irremediably subjective and are thus equivalent terms) is due to the objective occurrence of an observer’s motion (which is non-apparent or non-observable yet physically real), the latter *preceding* the former as a cause precedes its effect. For Kant, however, our cognition of objects ‘begins’ with subjective impressions (B1) which prompt our cognitive faculties into action in constructing the objective world of our ‘experience’; although he misstates his position here by claiming that our ‘cognition begins with experience’ since our cognition in fact ends in experience once the given of sensible impressions, which ‘prompt’ our cognitive faculties into action, have been utilized in constructing *material*

forms or nature in general.⁷ The thing to note is that, for Kant, the ‘subjective’ element of cognition (the ‘matter’) precedes the objective (material forms) in the *process* of constructing the world of nature that we finally experience; while recognizing that the ‘forms’ (concepts and intuitions) are always there lying dormant, as it were, awaiting the spark of sensible impressions in igniting them into formative action. How Kant can claim that anything precedes the igniting of our inner sense into formative action when the notion of something’s ‘preceding’ something else in fact presupposes this sense is not a problem that will be pursued here. This is, at least, a reversal of the Copernican perspective whereby the objective world of nature precedes (in temporal order if not lapse of time) our subjective experience of it and makes it possible, since for Kant our cognition terminates in objective phenomena and is not preceded by this.

Continuing our exposition and as a definitive example of Kant’s approach to the matter, in one of the few places where he addresses the problem of observer motion Kant fails to illustrate how ‘a specific lawfulness of cognition’ can possibly account for this physical occurrence because he acknowledges that the ‘pure’ (non-conscious) understanding is unable to determine the true motions in question. Kant fails, that is, and even allowing for merely subjective phenomena (‘individuality and arbitrariness’), to render any of our experiences objective. In demonstrating how Kant’s ‘explanation of the celestial motions’ presented in a *subjective* manner contrasts with Copernicus’ mode of objective explanation, we can refer to a passage in *Prolegomena*, First Part, Note III (4:291) and to a supplementary passage taken from his *Metaphysical Foundations of Natural Science* (4:555) where Kant discusses the manner in which the pure understanding establishes ‘truth in the determination of... object[s]’ (*Prolegomena*, 4:290):

The course of the planets is represented to us by the senses as now progressive, now retrogressive, and herein is neither falsehood nor truth, because as long as one grants that this is as yet only appearance, one still does not judge at all the objective quality of their motion. Since, however, if the understanding has not taken good care to prevent this subjective mode of representation from being taken for objective, a false judgment can easily arise, one therefore says: they appear to go backwards; but the illusion is not ascribed to the senses, but to the

⁷ Kant corrects himself at A298=B355 by stating that ‘All our cognition starts from the senses’ rather than ‘begins with experience’; experience being the end-product, sensation a mere constituent.

understanding, whose lot alone it is to render an objective judgment from the appearance.

At issue here is not the transformation of semblance into truth, but of appearance into experience; for, in the case of semblance, the understanding with its object-determining judgments is always in play, although it is in danger of taking the subjective for objective; in the appearance, however, no judgment of the understanding is to be met with at all.

The first point to note is that, although Kant regards motion in general to be a mere empirical datum, this does not mean it remains ‘undetermined’ by the categories of the understanding as though it were purely *a posteriori* in nature, as indicated by his reference to the ‘objective quality’ of planetary motion. But it is immediately apparent, also, that Kant does not regard the subjective appearance of planetary motion to be related in any way to the actual (non–apparent or true) motion of the observer, instead trying to gauge how the pure understanding can possibly ‘transform’ these given appearances into the ‘experience’ of a heliocentric solar system. His critical principles simply won’t allow him to posit the actual motion of an observer since this never ‘appears’ and so, without an appearance, there will be nothing for the understanding to judge. The contrast with Copernicus is also clear in Kant’s beginning his account with appearances from which he must then construct an experience, which latter he no doubt holds equivalent to physical reality as described by the natural sciences; while for Copernicus the appearances follow, rather than precede, physical reality which is not given in any experience, the latter equivalent to mere appearance. In addition to all of this and although it is a commonplace in Kantian scholarship that ‘illusions’ only arise when the understanding acts independently of the senses, here we see otherwise in that, even when applied to appearances, the pure understanding can be led astray. But to what are we to attribute these ‘physical’ as opposed to ‘metaphysical’ illusions? It would seem that when Kant speaks of a ‘subjective’ mode of representation he uses this term as though it entailed the ‘individuality and arbitrariness’ referred to by Cassirer. Kant, indeed, defines ‘illusion’ as ‘taking the subjective basis for a judgment to be objective’ (*Prolegomena*, 4:328). How one is to avoid illusion when the understanding is necessarily restricted to the subjective basis of a judgment (appearance) is thus, potentially, a significant problem. There is only a single means at Kant’s disposal for rendering an objective judgment from the subjective appearances (as he expresses it) and that is ‘the understanding with its object–determining judgments’. But how is

illusion to be dispelled by this faculty and its determinative judgments without disposing of, in the sense of completely abstracting from, the appearances themselves (since these judgments are to be ‘applied’ to the appearances)? Kant’s answer is both revealing in its honesty and momentous in its consequences:

[As] we connect our intuitions of the senses, whatever they may contain, in space and time according to rules for the connection of all cognition in one experience, *then either deceptive illusion or truth can arise, according to whether we are heedless or careful.* (ibid., 4:291; my emphasis).

Leaving aside, for the present, the startling admission that our understanding can render things illusory as well as truthful in the determination of objects, Kant nowhere explains how one can be either ‘heedless’ or ‘careful’ with respect to a faculty that is operative at an entirely non-conscious (*a priori*) level, something recognised by Kemp Smith who remarks that he ‘frequently speaks as if the synthetic processes were conscious activities exerted by the self’ (op.cit., 276). This would seem to be a case in point although Kemp Smith merely acknowledges this habit of Kant’s without elaborating on it further. The *Critique of Pure Reason* itself, as with all his works, would have been executed by means of Kant’s conscious intellect and not (directly at least) by any ‘pure’ mode of thought although it is not clear that this alone accounts for the habit. Kant distinguishes pure and conscious intellect at the beginning of the *Critique* while acknowledging that the work itself (one of empirical reflection) is a product of the latter:

[I]t could well be that even our experiential cognition is a composite of that which we receive through impressions and that which our own cognitive faculty (merely prompted by sensible impressions) provides out of itself, which addition we cannot distinguish from that fundamental material until long practice has made us attentive to it and skilled in separating it out. (B1–2).

The ‘long practice’, ‘attentiveness’ and ‘skill’ here characterise the conscious intellect and its capacity, through analysis, to ‘separate out’ the various formal and material elements of experience (which is thus already given); while our experience itself is the product of the ‘synthesising’ power of pure intellect which must be attributed to even the most intellectually-challenged among us since their experience is no less ‘objective’ despite their perhaps lacking in reflective capacity. Because the conscious intellect itself, as a constitutive or *a posteriori* element of experience, must also be grounded in pure intellect as its condition of possibility, it would appear that the conscious intellect

is the means by which the pure intellect comes to know itself. Not that one can attribute any ‘intentions’ to the pure understanding in bringing this about since this faculty cannot *intend* to produce anything, despite Kant sometimes referring to things this way in terms of ‘heedlessness’ and ‘care’. In the absence of sensible impressions there may be ‘thoughts’ but no ‘thinking’ and, hence, no intending:

[A]s long as intuition is lacking, one does not know whether one thinks an object through the categories... [which] are not by themselves **cognitions**, but mere **forms of thought** for making cognitions out of given intuitions. (B288–9).

In this respect the pure understanding is more mechanical than intellectual in its operations since it does not make its object in isolation but must be ‘prompted’ to act and, when thus prompted, ‘forms’ its object in much the same way that casts shape molten iron.

The question how a non-intentional faculty can be held responsible, as condition of possibility, for an intentional one – the conscious intellect which would seem capable of operating, in addition to carefully and heedlessly, also in isolation from ‘impressions of sense’ by virtue of abstracting from the latter, as proven by its ability to ‘separate out’ the material and formal elements of experience – is a question that is left moot here. It may seem initially suspect, however, to call this pure faculty one of ‘intellect’ when dullards no less than geniuses possess it, when it would seem more reactive or mechanical than spontaneous in its operations and when it can neither intend that things should happen nor prevent things happening despite its ‘making’, with what it’s given, everything that does happen. And if it would be absurd to suggest that the earth ‘thinks’ its way around the sun, is it any less absurd to suggest that *we do its thinking for it* by sending it on its way with a little intuition and understanding? Perhaps in a ‘purposive’ natural order it would make sense to suggest this (hence Kant’s teleological approach to the matter) but it at least seems a fair characterisation of Kant that he holds the course taken by the earth as it revolves around the sun (which he acknowledges is the case, despite examples to the contrary) to be akin to a *discourse* derived, as it is, from our ‘discursive’ mode of making the world.

The suggestion here is that Kant adopts this manner of expression (‘heedlessness’, ‘care’, etc.) whenever it is clear that the objective conclusions he is attempting to

establish (that regarding observer motion being a prime example) cannot possibly be reached by means of his critical principles which require that one be able to *perceive* – at least possibly – the moving objects in question. That is to say: ‘Matter is the movable insofar as it, as such a thing, can be an object of experience’ (*Metaphysical Foundations*, 4:554). He then resorts, always in the absence of such perceptual matter (as with the parallel effect whereby matter is the movable insofar as it is *not* an object of experience), to what I have called the conscious intellect in affirming the desired conclusions because this is not entirely restricted to the deliverances of sense in the way that Kant’s non-conscious, pure faculty of thought is. In fact the conscious intellect necessarily abstracts from empirical content without thereby losing sight of the physical (which can be thought, to a degree, in an ‘imaginative’ sense) and, by evading this restriction to sense, it is no bar to speculation for the conscious intellect that our empirical intuitions should contradict the reality (the parallax and parallel effects which, derived as they are from Copernicus’ laws of observed motion, govern every possible experience). Furthermore, for Kant to claim that the pure understanding’s rules will deliver ‘either deceptive illusion or truth’ (while itself implying that some other standard other than that supplied by the understanding is required in determining truth) is certainly to exhaust the possibilities but is of little use in resolving the vexed question of how our solar system works or in helping one arrive at ‘science’ rather than a ‘mere groping’.

Kant’s pure understanding, and rather than establish truth in the determination of objects, is actually responsible for creating a mere semblance of things – that mode of cognition where ‘the understanding with its object-determining judgments is always in play’. And this admission follows directly from his considering the problem of observer motion, although this is not to deny that the rendering of a mere semblance of things in fact constitutes an advance for the understanding since, otherwise, disconnected and ‘unruly heaps’ of representations would pertain (A121). It is regarding the next step that must be taken in rendering an ‘objective’ state of affairs that the pure understanding seems to falter.

The problems for Kant in accounting for the movements of observers – and for our observations of movement – do not end here however. If it is the pure understanding which makes our experience objective then it is in no position to judge whether

something is merely subjective or, rather, objectively the case, since its role consists in *delivering* objectivity, not in discovering it. Kant simply cannot claim, therefore, that the understanding ‘is in danger of taking the subjective for objective’ when it falls to the understanding itself to determine objectivity and not to discern it; that is to say, not to *take* things a certain way but to *make* things a certain way. This is another respect in which it seems inappropriate to refer to the pure faculty of understanding as one of ‘judgment’ since this presupposes a capacity to determine, with whatever one is given, either what is (‘truth’) or what is not (‘falsehood’) the case; but *nothing* is objectively the case prior to the understanding’s becoming active so it seems that there is nothing to judge. And when the ‘given’ is presupposed it is, after all, ‘subjective’ by definition, being that which is to be ‘objectified’. The pure understanding, as Kant defines it, and despite what has already been said in respect of its mechanistic nature, must also be originally creative in that it *posits* its object rather than judges something already given to be *either* subjective *or* objective. So the pure understanding is both reactive and proactive: it must be prompted to posit. But there is no independent standard to which the pure understanding might appeal when distinguishing subjective and objective since, on this question at least, it supplies the standard; hence the difficulty to which Kant alludes.

(iii) The Twofold Standpoint

Copernicus, by contrast, can ‘easily’ account for our subjective viewpoint by an appeal to the non-subjective or physical reality which grounds it; whereas Kant must somehow account for both a subjective and objective state of affairs from one and the same standpoint – that of the observing subject. Subjectively, therefore, in the case of heliocentrism, the moving observer will appear stationary while the observed will appear to move; objectively, the observed is in fact stationary while the observer moves. If the pure understanding is involved in constructing both our subjective viewpoint (inevitably one of ‘semblance’) and the world as it actually is (‘objectified’, as it were, but in an ‘empirical’ rather than noumenal sense), on what basis is the pure understanding to construct the correct scientific experience when it could also be possible that the observer is in fact stationary while the observed moves although the appearance remains the same (as in the case of the sun actually encircling the earth)? The only route out here for Kant would be if the pure understanding could render the

subjective appearances truly objective so that the observer would be seen to move while the observed remained *in situ*. But this is precisely what cannot be achieved *from the standpoint of the observer* who, were they able to render things like this, would observe their own body speeding away from themselves into the distance as it ‘revolved’ with the earth – in the same way, that is, that a spectator in cosmic space would observe them moving. But here it is *our* experience that we are to construct, not someone else who is to construct it for us. And although it may seem an exaggeration to assert that Kant’s philosophy leads to a ‘scientific experience’ being required in enabling us to distinguish subjective appearances and objective nature, consider the following:

[I]f, e.g., the course of the planets is given to us as circular through a (still not fully corrected) experience, and we find variations, then we suppose these variations to consist in an orbit that can deviate from the circle through each of an infinity of intermediate degrees according to constant laws; i.e., we suppose that the movements of the planets that are not a circle will more or less approximate to its properties, and then we come upon the ellipse. (A662=B691).

Kant’s parenthetical remarks tend to be far more revealing than anything disclosed ‘unparenthetically’, as it were. For what is a ‘still not fully corrected’ experience if not one that falls short of a ‘fully corrected’ one? And does this mean that no one ever experienced anything correctly until Kepler ‘supposed’ the movements of the planets (ours included) to be elliptical rather than circular and, now that this supposition has been made, do we all have a ‘fully correct experience’ of the matter, the elliptical motions now ‘given to us’? We have to recall that Kant had a habit of pronouncing upon the objective by means of his conscious intellect whenever empirical materials failed him but, even so, to imagine that anyone on earth has ever or could ever ‘experience’ themselves following a circular trajectory around the sun, never mind an elliptical one, is to ‘pervert’ the concept of a *mundus sensibilis* to far greater a degree than any moderns were in the habit of doing.

Here, then, is a clue to the discovery of the independently real – that the *objectifying* subject cannot possibly ‘construct’ their own motion as *objectified* subjects; or alternatively expressed: an observer’s motion is objectively unrenderable. And we have arrived at this point by proceeding, using Kant’s terminology, ‘analytically’ – taking a given phenomenon of experience (that an observer’s body is not rendered mobile and external objects stationary by the moving observer herself) and seeking for its

conditions of possibility. And here it transpires that because ‘motion’ presupposes the existence of a spatiotemporal/causal–material world in which an observer is able to move and since an observer’s motion is not something that can possibly be constructed by the observer herself (as though she could distance herself from her body in perceiving its revolutionary movement through space), the reality of all this (*mundus physicalis*) must instead be determined independently of the observing subject.

From the Kantian perspective, where it is the observed world that is dependent on the subject, his characterization makes us all, in effect, into immobile if ‘active’ spectators who observe everything happening objectively, rather than as inhabitants of the world whose irremediably subjective observations depend on the objective world itself in respect of form and content. Kant clearly intends his rendering of ‘experience’ to be equivalent to that of the physical reality described by natural science; a wholly untenable claim as far as the latter is concerned because physical reality, so described, consists precisely in that which cannot be experienced (which is why we call it *physics* instead of *phenomenology*), despite science ultimately accounting for the appearances too and utilizing such as empirical clues for describing reality.

What all of this demonstrates is the futility of any attempt to determine ‘objectivity’ from a *single standpoint* – that of the ‘subject’ whose ‘single self–consciousness is the absolutely first and synthetic principle of our thinking in general’ (A117, note); and the impossibility of reconciling subjectivity taken in its ‘individualistic and arbitrary’ sense with subjectivity regarded as a ‘specific lawfulness of cognition’ (as though a thing’s being ‘objective’ is a question of its being *doubly* subjective instead of non–subjective) because anything ‘rendered’ by this latter capacity is necessarily restricted to the former and so can neither transform nor dispose of it. This much is proven by experience itself because the ‘appearance’ of a setting sun is never magically transformed into the ‘experience’ of a rotating earth, though it ought to be if Kant were right in equating the postulates of natural science with the phenomena of experience. Unless we are to suppose, as Hanson does, that when two people have different *conceptions* of this world they inhabit (for instance, a Ptolemaic and a Copernican conception), the *experiences* they have actually do conform to these opposing conceptions such that they can be said to have *different* observations of what is naively thought to be the same thing. Thus:

Let us consider Johannes Kepler... imagine him on a hill watching the dawn. With him is Tycho Brahe. Kepler regarded the sun as fixed: it was the earth that moved. But Tycho followed Ptolemy... the earth was fixed and all other celestial bodies moved around it. *Do Kepler and Tycho see the same thing in the east at dawn?* (1958, 5; Hanson's emphasis).

The clue is in his description of the situation: they clearly *see* the same thing, namely the sun rise '*in the east at dawn*'. It would have been somewhat far-fetched of Hanson, in other words, to have Kepler remark from atop his hill in this scenario, not that he could see the sun rise in a westward direction *but that he could see the earth spin in an eastward direction*; although nothing would stop Kepler *thinking* that this was the case. It is suggested here, therefore, that our *experiences* are not in the least *theoretically*-informed, although *physically*-informed they certainly are (a topic to be expanded on in Chapter 6).⁸

To suggest, furthermore, that of all the objects we experience, our body (the movement of which in fact conditions every possible experience) constitutes an exception in terms of its motion being objectively unrenderable, would be to propound what is the very

⁸ Imagine the reverse scenario to this so that Kepler and Brahe are not stood atop a hill but are placed some thousands of miles above the earth in space. Are we to suppose, in that case, that Brahe would still *see* the sun revolve around the earth with the latter remaining fixed in space? Now it certainly happens that, due to some heartfelt belief, people can be 'blinded to the truth'; but when the facts are literally staring one in the face and *still* one remains 'in denial', this we must explain in terms of a psychological disorder or mental illness, not in philosophical terms as a case of 'theoretically-informed perception'. It might be opposed, however, that Kepler, when stood atop his hill, had the facts staring him in the face also in respect of the earth's *immobility* but the difference in this case concerns his conception of what it is that constitutes a 'fact' and for him, unlike Brahe, this would undoubtedly have been a verification-transcendent conception. But regarding the fact of heliocentrism, the 'evidence' for this is readily available to us if we are located in space where we would not fall prey to the parallax effect generated by the earth's motion, thus enabling us to *see* the planets lined up concentrically around the sun as they revolve around it, each spinning on its axis as it does so. But if, from this *same* position, Brahe and Kepler were to see Jupiter and Venus doing loop de loops as they revolved about the earth, the evidence would instead support Ptolemy. Since this is not the case, however (there being no 'underdetermination' from *this* perspective), Kepler's is the better theory because founded on stronger evidence but none of this makes for a 'better' experience when we are situated on the planet, a fact sufficiently explained by the theory itself; while for Brahe and on the basis of Ptolemaic theory, it would be impossible to explain this elevated experience of his and it is the theory's *failure* to incorporate the twofold standpoint which likewise explains this.

definition of an arbitrary claim. But were it ever possible to render our own motion objective observers would always have had a correct scientific experience of themselves revolving (elliptically) around the sun and Ptolemy's hypothesis would never have been postulated; just as Copernicus would have been laughed off the stage for stating the obvious. The solution, therefore, is to abstract from the subjective appearances altogether and attempt to think things (consciously) as they may be 'in themselves' independently of experience ('the thing in itself' being a physical object), while ultimately reconciling the two in a causal manner by making the former (appearances) depend on the latter (the objects themselves). The causal nexus postulated does not 'appear' but one would not expect it to, the possibility of this requiring that we gain an external perspective on ourselves in perceiving our causal interactions with the world, this in turn requiring that we occupy two places at once and neither circumstance, quite obviously, is possible. Additionally this is simply what 'independent' reality entails – that which is neither apparently real nor really apparent but non-apparent. Thus, for example, light impacts our retinas and generates, *via* the optic nerve and brain, the appearance of the sun – the light, our retinas and their causal interaction not appearing at all, of course, merely a bright disc in the sky.

Hence the sun only appears to revolve around the earth because the earth actually rotates about its axis (not that we can or ever will perceive this, as long as we are situated on the planet), which 'actuality' is clearly not to be equated with the matter of sensation, whether in the form of 'raw' sensible data or appearances spatiotemporally ordered by pure intuition. This all points to the necessity of distinguishing *two* standpoints – that of the subject, human being or observer and that of the objective world they inhabit – which objectivity cannot possibly be rendered by the subject herself, rather, it is the objective world that determines a subject's experience of it. On this supposition the 'space' we inhabit is an *external* extension, not an immanent one, since we move *through* space and do not 'project' it (A328=B384) as from a fixed point analogous to that of the 'equant' of Ptolemaic theory. It is for this reason that our experience is characterised by the parallel and parallax effects, the appearances of which follow as the necessary effects of our actually revolving through space. In order to 'transform' these appearances into correct scientific experiences they would have to be diametrically altered so that the observer would be seen to move while the space they traversed remained motionless; something a spectator is indeed able to experience

(because they are actually situated outside us) but never the observer herself. Yet it is the observer in herself or ‘the transcendental subject’ (A492=B520) who is credited by Kant with having actively constructed the world they experience; an elevating (if rather immodest) thought it is true, but a profoundly erroneous one – the disenchanting insight of Copernicus being closer to the truth.⁹

But in case it should be thought that the argument thus far suffers from an ocular bias, as it were, in that there are other sensory modes that can be utilized in detecting our motion and thence proving its ‘empirical’ reality;¹⁰ in addition to the sense of sight which, in the case of the parallel effect, fails to detect the earth’s motion, the kinaesthetic sensations of the observer’s body as a whole give no clue as to its movement since nothing is detected in this respect either. As with sight, no kinaesthetic sensation is experienced in relation to the earth’s motion because the observer’s body moves at the same speed and in the same direction; and just as the visual detection of motion requires a *difference* in motion (in either speed or direction) of both observer and observed, so the kinaesthetic detection of motion requires a difference in motion (acceleration or deceleration) of the observer. The parallel effect is also applicable in the case of sound. The Doppler Shift, whereby sound waves respectively shorten or lengthen as the sound–source (e.g., motorised vehicle) first approaches and then passes an observer, creating the characteristic auditory experience indicative of this phenomenon, does not occur when observer and observed (the sound–source) follow a parallel trajectory but can only be detected in the case of non–parallel observations. Tactile sensations too are subject to the parallel effect, as evinced by feeling the arm of the chair one is sitting on whereupon no movement will be felt (since one’s hand and the chair’s arm are moving in unison). Hence while travelling in a vehicle (or on a

⁹ One can only feel ‘disenchanted’, of course, if one has previously felt ‘enchanted’; otherwise one is simply accepting of the fact that this is just the way things are (by which is meant ‘realism’ as a state of mind rather than a philosophical theory). On the moral question, to be addressed in the final chapter, whether we should just ‘accept the way things are’, this can be disputed because we have a vested interest here in actively *improving* matters, as dictated by our physiological and emotional needs.

¹⁰ Visual perceptions remain, however, the most significant indicators of motion since, even when walking at a quick pace, if one closes one’s eyes and after a period of time the impression of movement is drastically curtailed; an experiment most will be in a position to conduct although, clearly, some caution is advised in the conducting of it.

planet) at a uniform velocity there will be no empirical data whatsoever which might signify this motion (given that our olfactory and gustatory organs do not come into the equation here, although the motions of things, i.e., molecules, still pertain in these cases).

The common factor determining all these empirical effects is the necessary postulate of the twofold standpoint – that of the observer and the world which they inhabit – the *interactions* of which condition the observed or subjective phenomena which, just because these are mere effects and not in themselves causally efficacious (the ‘appearance’ of a mobile sun, for example, does not interact with anything), are therefore epiphenomenal in nature. A sufficient definition of an ‘epiphenomenon’, indeed, would be this: The phenomenal effect of an organism’s physical interaction with its environment; the same applying to our dreams and imaginings too – for example those areas of the brain connected with memory and those connected with sensory inputs which, in combination with one another, might generate a particular image in a dream–sequence as prompted by an external happening such as a violent disturbance of the air (i.e., a loud noise).

Now we only ever have one experience such that it is not possible for us to have an experience of celestial motion and an experience of terrestrial motion both at the same time. If we experience the first then the second is not given; if we experience the second then the first is not given. Neither experience is sufficiently determinate as regards what actually occurs since both are equally apparent. This forces us to consider two possible alternatives: either actuality is determined independently of experience or actuality is determined by means of experience. From neither standpoint can one profess a deeper insight into things and what differences there are concern one’s orientation in explanation, so to speak. Thus, in the former case, it is not so much that one’s belief in independent reality (a mobile earth for instance) suffers from the problem of ‘underdetermination of theory by evidence’ but, rather, an underdetermination of evidence by reality. Because the ‘evidence’ we possess (the appearance of an immobile earth which, in evidential terms, is equally apparent from both perspectives and thus ‘underdetermined’) is theoretically explicable in terms of the twofold standpoint hypothesis such that there is an external world which we, as physical beings, inhabit and which accounts for our experiencing immobility in terms of the parallel motions of

observer and observed, which ‘parallelism’ is rendered explicable only on the assumption that there really is at least one object external to ourselves which moves parallel with us (neither motions being ‘evident’ however) since, clearly, a single being (were this all that reality consisted of) could not move ‘parallel’ with itself. In granting the existence of these independent motions we vindicate the Copernican world–system at the same time as we account for the indeterminate and indeed contradictory evidence. The alternative is to assume that evidence determines actuality directly and not indirectly. On this basis the world is either Ptolemaic or Copernican (if our experience consists either of celestial or of terrestrial motion), both Ptolemaic and Copernican (if we experience first celestial then terrestrial motion) or neither Ptolemaic nor Copernican (if we experience neither celestial nor terrestrial motion). On this supposition the *world itself* changes in conformity with our experience, not our experience in conformity with changes in the world (e.g., our position within it). The parallel effect, in the case of this latter alternative, is not an ‘effect’ at all but the appearance of immobility is taken to be direct evidence that the earth actually persists in space (at least during the time one experiences this). That the ‘evidence’ in both cases is equally apparent has a bearing on the question of proof in deciding between the alternatives. Such proof, if it is to be forthcoming, can only be grounded in a transcendental argument to the effect that experience would not be constituted in the manner it is were transcendental objects and events not admitted as necessary theoretical postulates; an attempt at just such an argument to be presented in Chapter 5.

Assuming, for now, the truth of the Copernican world–system, the parallel and parallax effects comprise every moment of every experience. It happens in every particular case, in other words, that things appear to us in this contradictory manner – appearances which therefore do not occupy a ‘subordinate place in a system of fully categorically ordered experience’, as Gardner claims dreams and suchlike do (op.cit, 164) implying, on those occasions when we are not ‘just seeing things’, that we have a correct scientific experience of ourselves revolving through space in an objectively rendered fashion. It is Kant, therefore, who fails to account for the observer’s perspective, proceeding as though the world of nature is experienced as a purely objective one (because that is how he defines ‘experience’, as inter–definable with ‘objective’); and it must rank as another great irony that those of a Kantian persuasion who would accuse transcendental realists of feigning a ‘God’s eye view’ of the world should seek to constitute experienced reality

in a manner which suggests *nothing escapes their view*. But an observer's motion, as the Copernican insight demonstrates, will always escape their view simply because it is impossible to experience such motion objectively (presupposing, of course, that it is impossible to perceive oneself from outside or to transcend oneself in an 'out-of-body' fashion and thus be in two places at once in acquiring the desired view from everywhere); while at the same time he sufficiently explains how our subjective experience (an oxymoron for Kant) nevertheless depends upon an objectively constituted nature. Copernicus' God's eye view thus derives from an intellectual insight into the universal features of our contradictory, human perspective on things – an empirical perspective that naturally, but necessarily, reverses things, requiring that we reverse things again, intellectually, in discerning the truth.

Now Kant has no difficulty accounting for the movements of most 'objects', whether bodily appendages or planets, but then neither does Ptolemy. They only differ in that Kant claims an object moves *because we cognize it that way*, Ptolemy, that we cognize it that way *because it moves*. Both, however, place us 'at the centre of the natural world' and both result in the same empirical reality where the sun moves and the earth 'persists in space'. From neither standpoint, however, can one account for the movements of *subjects* and present things as they really are, heliocentrically speaking; in Kant's case, because if our objective motion conforms to our cognition then our cognitions would be of our moving or revolving, not of everything external moving in the opposite direction while we remain at rest, but this is how we necessarily observe the situation, it being cognitively impossible to experience things otherwise. In Ptolemy's case, if it is our cognition that conforms to our motion then, once again, our experience would be of our moving, not of everything external to ourselves moving while we remain at rest. Only the Copernican standpoint, whereby an object moves *though we do not cognize it that way* or an object does not move *though we cognize it that way*, offers the correct solution here because, rather than our motion conforming to our cognition or our cognition conforming to our motion, the reality bears no relation to our cognition at all, if one means by that relation something our mind either *reveals* to us (which it doesn't) or something it originally *constructs* (which it can't). An observer's motion, and by virtue of its non-cognizability (for the observer herself that is), is thus an independently real occurrence and this fact alone grants one the possibility, at least, of discerning ('speculatively') the *actual* movements of things.

The concept of ‘independent reality’ as regards things existing or happening independently of ‘experience’ does not imply, however, independent of experience in general but independent of any particular, individual experience. Hence that an observer’s motion is, for the observer herself, *non*–observable does not imply that it is *unobservable* since others situated outside us are in a position to observe our own motion, if not ‘wholly’ objectively, at least more objectively than we can. A transcendental idealist, however, cannot rely on the fact, in arguing the mere ‘empirical’ status of observer motion, that outside spectators can *observe* this motion of ours experientially, since they would then have to explain what spectators *existing outside us* – which alone makes *their* observations of ourselves possible – entails if not the transcendental reality of space. But concerning the status of the ‘spectator’ in general with respect to ourselves, we commonly rely upon the testimonies of other experiencing subjects in making good the various experiential ‘blind–spots’ each of us as individuals are subject to. To give a prosaic example, someone might point out to us that we have a mark on our face which they offer to wipe off. In virtue of this and numerous other examples we acquire the idea of objective reality – a spatiotemporal world which allows for the taking up of *different* positions with respect to the *same* objects and events *at one and the same time*. It is for this reason too that we extend the domain of the concepts ‘empirical’ and ‘phenomena’ to include the physical world as a whole and not merely our own sensory experience of it, assuming that because others can *see* those aspects of the objective world that we cannot, that therefore these blind–spots must be just as ‘colourful’ (so to speak) as those aspects we can perceive. This does not negate the fact, however, that an ‘experience’ is something only *individuals* can have, any particular instance of which is capable of evincing but a *single* perspective on the world. This is why it is illegitimate to ascribe empiricity to the world itself or to speak of ‘objective’ and ‘universal’ experiences (as Kant is apt to do) because at best this argues for a multiplicity of singular empirical perspectives *on* the world but not for an empirical or phenomenal world itself.

Hence although we never share the same *experience* which is always conditioned by the individual’s specific point of view (which ‘point’ is the single point of the place they occupy and which, in being a mere point, cannot therefore be occupied by another in some kind of dual–occupancy), we do share the same *world* such that I can observe your motion and you mine, although neither of us can observe (directly at least) our

own. But it should not be assumed from this that independent or objective reality might instead be an *inter*-subjective construct since, although not equivalent to an *intra*-subjective capacity where I might use my mind to gain direct access to yours, an *inter*-subjective construction would still entail a combination of my experience with yours in providing us both with an ‘empirically rounded’ perspective on things. But this again presupposes a capacity to unify, from a transcendent perspective, both experiences, which capacity certainly belongs neither to you nor me as members of this supposed interrelationship, especially since it was the impossibility of acquiring a ‘transcendent’ perspective on things which led to the postulate of ‘*inter*-subjectivity’ as a suitable alternative for ‘objectivity’ in the first instance. But I am no more able to combine or compare my experience with yours than I am those representations with the ‘objects’ I take them to be representations of. The concept of ‘*inter*-subjectivity’ is therefore self-contradictory and our experiences are no less cut-off from each other in a cognitive sense than our bodies are in a physical sense, with the cause of this cognitive divide being itself derived from the physical (i.e., the fact we have physically discrete central-nervous systems).

The relation that does obtain between objects (i.e., observer and observed as they exist in themselves) and our observations is that of cause and effect respectively. Suffice to say at this stage that we need be no more capable of adequately observing the causes in question in the form, perhaps, of an ‘impression’ of the thing that ‘impresses’ than the indentation of a cushion caused by a lead weight is an adequate impression of the weight itself. And this fact as regards the partial and indeed contradictory nature of certain effects (the indentation is, after all, concave while the impressing weight is convex) can stand as a useful analogy for the effects in general we call our ‘experiences’, as with the experience of a house, for instance, which, as one stands in front of it, comprises merely the façade (analogous to the indentation of the cushion), not the house *in toto*. And the contradictory effect would remain even if the house were transparent since the impression received, due to certain laws of perspective (i.e., linear perspective), would not be of a ‘square’ building but of a shape whose receding edges are foreshortened and thus progressively contracted, not parallel which the house itself possesses. The contingent nature of our physical organs of sense, which much of the argument so far may seem to depend upon, does not undermine the general contention that our experience, while subjectively limited (i.e., individualistic in nature), is

nevertheless objectively grounded. But this ‘objectivity’ is not then further subjectively grounded in the sense of its being traced back to ‘a specific lawfulness of cognition’ because, among other things, this would only be to multiply entities beyond necessity. Hence, other than the subjective (the apparently real, e.g., the effect that is the sun’s motion) and the objective (the physically real, e.g., the cause that is the earth’s, and thence our own, motion) nothing more need be postulated of an ‘intelligible’ nature, whether in the form of transcendental faculties of the mind or noumenal things in themselves (collectively, a *mundus intelligibilis*).

So if the human object actually is, despite appearances, constantly moving and if our scientific understanding of the world, which depends on this fact, is to remain valid, the existence of an absolute or independent realm of physical reality must of necessity be granted. To repeat, however, the thesis that space and time possess absolute reality is not to be confused with the Newtonian concepts of absolute space and absolute time; the concept of absolute reality merely indicating that the things in question are not subject– or mind–dependent in the manner that idealism construes them but rather the opposite being the case – that it is the mind or subject that is object–dependent as regards the manner it construes things. The term ‘absolute’ is used with the same sense given to it by Kant who contrasts it with that which ‘is merely comparative, or valid in some particular respect; for the latter is restricted to conditions, while the former is valid without any restriction’ (A326=B382). In contrast to Kant, however, it is not physical reality which is restricted to the conditions of our cognition but our cognition which is restricted to the conditions of physical reality. But when ‘objects’, as in Kant’s philosophy, are limited by ‘subjective conditions’ it is the subject herself, at least from a practical point of view, who becomes absolute or unconditioned (or perhaps self–conditioned) as demonstrated by her capacity to impose the moral law on herself, as a rational being acting in the world, unconditionally. And this serves for us as a clue in understanding Kant’s motivation for reversing the Copernican perspective in the first instance when it can be argued that he believed there was a moral imperative to do so; a topic to be explored in greater depth in the final chapter.

Returning to Kant’s pure understanding, it is no more likely to deliver a lawfully–determined, scientific experience of the cosmos than a series of indeterminate or illusory representations of now progressive, now retrogressive, ‘wandering’ objects;

which is to say that it is as likely to create a mere semblance of things as to lay down laws for their strict determination. In addition to the wandering objects, however, are the stationary ones we perceive (our own bodies and immediate surroundings), objects which in truth are nothing of the kind despite our never being in a position to observe this. Our entire experience presents us with a mere semblance of things (apparent reality) and Kant's claim that the pure understanding can transform appearances into experiences (i.e., lawfully-determined and hence true perceptual cognitions (A176=B218)) would make his notion of an 'experience' into something it is impossible for anyone to have (this *reductio* standing at the heart of the Copernican critique of Kant). Only this is not how things stand in reality if we assume the truth of the Copernican insight. The trajectories of these objects is not the result of various goings-on inside observers – our 'subjective mode of representation' or the understanding's capacity or otherwise 'to render an objective judgment from the appearance' – it is instead the result of the course followed by another wandering object: the planet earth. When an observed planet 'appears to go backwards' this is because our planet actually goes forwards (at a greater velocity); and if it appears to go forwards that is because, relative to this, ours is going backwards. Adopting Copernicus' 'easy' take on things: '[T]he stoppings, retrogressions, and progressions of the wandering stars are not their own, but are a movement of the Earth' (op.cit., 20). Like Kemp Smith and Gardner after him, Kant was conscious of the fact that he could not describe the earth's motion as an 'appearance' so he dismissed this movement from his thought altogether (when working on 'critical' matters, that is). But Copernicus has shown that it is not 'in the observer' that the observed world originates but 'outside'; it is not our observational faculties which inform the movements of bodies but the movements of bodies which inform our observations. In plain terms, it is the object that determines the subject, not the subject, the object. It is the physical reality in which the subject finds herself that conditions her experience of things, not the subject her experience of physical reality. On no basis other than this can the Ptolemaic nature of experience be reconciled with the Copernican reality.

Directly contradicting all of this is Kant with his insistence that it is not how things stand independently of the thinking or apprehending subject which determines the truth of our thoughts about, or observations of, the world of nature, but, rather, it is our pure thoughts and intuitions themselves which, working on the raw material of sense,

determine the truth in every instance. Thus, ‘as exaggerated and contradictory’ as it sounds, ‘the understanding is itself the source of the laws of nature’ (A127) – ‘the land of truth... even the source of all truth, i.e., of the agreement of our cognition with objects, in virtue of containing the ground of the possibility of experience, as the sum total of all cognition in which objects may be given to us’ (B294–6). Within this ‘sum total of all cognition’, however, is the one object that is not given to us at all, though it certainly ought to be, namely the subject as revolving object. Be that as it may, Kant’s concern was not so much with the nature of the world as with ‘the nature of our mind’ (A125) or ‘the nature of our reason’ (A669=B697) since it is this which ultimately accounts for our experience of the world. But in doing justice to this cognocentric stance (as one might call it, in contrast to Copernicus’ physiocentrism) it is necessary to consider in greater detail than hitherto a work in which the phenomenon of motion constitutes the sole topic, namely the *Metaphysical Foundations of Natural Science* (which can be regarded, appropriately enough, as Kant’s ‘*Principia*’, although critically informed), and here we find that Kant does indeed address the problem of ‘underdetermination of theory by evidence’ and those other matters which it had initially seemed could not be surmounted by the critical method. It is to this work, therefore, that we now turn.

4. Kant's 'Applied Metaphysics'

(i) 'Empirical' Space

The content of the work itself, due to its highly technical nature, borders on prolixity in many places (as Kant readily admits (4:547, note)), but the clearest account of his position as it relates to the movements of subjects is found in the fourth chapter, 'On the Metaphysical Foundations of Phenomenology', where Kant prefaces his discussion with the following remark (4:554):

Motion, like everything that is represented through the senses, is given only as appearance. For its representation to become experience, we require, in addition, that something be thought through the understanding – namely, besides the mode in which the representation inheres in the *subject*, also the determination of an *object* thereby. Hence, the movable, as such a thing, becomes an object of experience, when a certain *object* (here a material thing) is thought as determined with respect to the *predicate* of motion.

Notice that Kant states '*besides* the mode in which the representation inheres in the subject, *also* the determination of an object', indicating how he must still accommodate, rather than abstract from, the subjective appearances in his attempt to construct a scientific experience. And notice, again, that whereas previously motion was deemed a mere 'empirical datum', now it must be determined *a priori* 'through the understanding', the implications of which will become clearer as we proceed. What we must consider, therefore, is whether Kant, when the thing in question is a moving observer, is able to determine such a thing with respect to the predicate of motion. This requires that we suppose (although he never uses the expression) that it is the human object, in the form of the moving observer herself, considered materially, who would here become an 'object of experience'; a supposition which depends on the further possibility that the subject is both determining and determinable as regards the objective rendering of their motion. This predicament brings to mind the apparent paradox relating to inner sense where, in determining the inner I as appearance, we must exercise our understanding upon 'the **passive** subject' (B153). The same applies here, only as regards outer sense too, since the subject is to determine the empirical intuition of herself (the determinable and hence passive self or 'outer I' as I have called it) with respect to the predicate of motion. Now initially it appeared that an observer's motion

would remain non-determinable from the standpoint of the observer herself since it required the physical impossibility of occupying two places at once if one were to render it objective. Here, however, Kant argues that although our experience may not directly testify to this motion of ours its actuality can nevertheless be indirectly determined by an appeal to the ‘dynamic’ quality of all motion, which force is experientially demonstrable from the standpoint of the observer herself. This indirect approach perhaps indicates an admission on Kant’s part that there is a blind-spot as regards a subject’s rendering of herself – in much the same way that an eyeball cannot visually intuit itself – but that this will not undermine the critical method if the actuality of an observer’s motion can instead be established *via* an indirect route – just as an eye can intuit itself indirectly by means of reflected light.

Summarising his account leading up to this point – where Kant will attempt to determine, if only indirectly, the modal status of an observer’s motion in terms of its possibility, actuality or necessity – he has run through each of the other category headings pertaining to the movable in general as they concern its quantity, quality and relations (chapters respectively entitled ‘Phoronomy’, ‘Dynamics’ and ‘Mechanics’). In this way Kant demonstrates, from the ground up, how one ‘constructs’ a movable object and establishes, in the process, a scientific discipline for which he must be acknowledged the founder, namely ‘applied metaphysics’ (4:482) (the material upon which the pure intellect is applied being, of course, ‘empirical’). First, then, and when the movable is considered as a mere point, all material qualities of the movable being abstracted, the quantity of motion, consisting in the speed, is determined in accordance with the structure of space (directionality): ‘*unity* of line and direction, *plurality* of directions in one and the same line, and the *totality* of directions, as well as lines’ (4:495). Next the quality of the movable as now extended matter is explicated, the quality itself consisting of two opposing forces, repulsive and attractive, without which matter could not itself fill a space (rather than merely occupy a space, as with geometrical figures). The three moments pertaining to the qualitative aspect of motion (as suggested by the relevant category class) are:

[T]he *real* in space (otherwise called the solid), in the filling of space through *repulsive force*; *second*, that which in relation to the first, as the proper object of our outer perception, is *negative*, namely, attractive force, whereby, for its own part, all space would be penetrated, and thus the solid would be completely

destroyed; *third*, the *limitation* of the first force by the second, and the determination of the *degree of filling* of a space that rests on this. (4:523).

The mechanical explication of the movable then follows under the category class of relation wherein Kant aligns his Propositions to two of Newton's 'Laws of Motion' and to the conservation law of classical physics: '*First Law of Mechanics*. In all changes of corporeal nature the total quantity of matter remains the same, neither increased nor diminished' (4:541); '*Second Law of Mechanics*. Every change in matter has an external cause. (Every body persists in its state of rest or motion, in the same direction, and with the same speed, if it is not compelled by an external cause to leave this state.)' (4:543); '*Third mechanical law*. In all communication of motion, action and reaction are always equal to one another' (4:544). Kant adds, by way of transcendental explication, that these laws 'precisely answer to the categories of *substance*, *causality*, and *community*, insofar as these concepts are applied to matter' (4:551). Finally, in the 'Phenomenology', Kant proves the following three Propositions determined in accordance with 'the three categories of *modality*' (4:558): 'The rectilinear motion of a matter with respect to an empirical space, as distinct from the opposite motion of the space, is a merely *possible* predicate' (4:555); 'The circular motion of a matter, as distinct from the opposite motion of the space, is an *actual* predicate of this matter' (4:557); 'In every motion of a body, whereby it is moving relative to another, an opposite and equal motion of the latter is *necessary*' (4:558).

Kant's account, which is liberally illustrated with examples and diagrams throughout, is far more involved than this simplified outline suggests. Ultimately, however, each class of category, which is not limited merely to the developmental stage associated with it in the foregoing, is seen to function in conjunction with every other class in producing the observed world of causally-interactive, quantitatively conserved substances capable of filling and traversing space at varying velocities. As quoted above, it is in regard to the second Proposition of the 'Phenomenology' that Kant sought to prove the actual motion of the earth and the merely apparent motion in the opposite direction of the space enclosing it. Another vital element of this construction, therefore, is that of the 'empirical space' in which bodies are to move and which is itself the subject of motion:

In all experience something must be sensed, and that is the real of sensible intuition, and therefore the space, in which we are to arrange our experience of

motion, must also be sensible... and this, as the totality of all objects of experience, and itself an object of experience, is called *empirical space*. But this, as material, is itself movable. But a movable space, if its motion is to be capable of being perceived, presupposes in turn an enlarged material space, in which it is movable; this latter presupposes in precisely the same way yet another; and so on to infinity. (4:481).¹

Before proceeding to an examination of Kant's argument for terrestrial motion (and therefore, indirectly, our own) we shall first consider his general account of matter in motion. The subject is obscured from the beginning, however, because Kant provides the now familiar explication of 'Nature' as 'the whole of all appearances, that is, the sensible world, excluding all non-sensible objects' (4:467); but since he holds the defining characteristic of matter or 'objects of the *outer* senses' to be motion, his following elaboration presents us with a difficulty: 'The basic determination of something that is to be an object of the outer senses had to be motion, because only thereby can these senses be affected' (4:476). Now how is it possible for motion to be the defining characteristic of 'objects of the outer senses' at the same time as it characterizes those things that 'affect' this sense and which, therefore, are presumably non-sensible? This suggestion presents no difficulty for the realist who would agree that non-sensible things in nature affect us in generating 'objects of the senses'; but Kant has already excluded 'non-sensible objects' from the realm of nature. And it would hardly be possible for him to propose a distinct class of objects which, while not 'things in themselves', are not sensible either since they first 'affect' our senses, namely

¹ Before his 'Inaugural Dissertation' of 1770 which first expounded a 'critical' perspective on things, Kant's last pre-critical work was *Concerning the Ultimate Ground of the Differentiation of Directions in Space* (already referred to) in which he was still of a mind to talk of 'physical space' (2:378) rather than empirical space because he had not yet imposed the limiting condition of sensibility on himself which would subsequently inform the work now under discussion. There is only one mention in the *Metaphysical Foundations* of 'physical' space which is also 'non-empirical', to be commented on shortly. That Kant should have undergone such a drastic shift in perspective, however, in wanting first to prove, in *Directions*, our bodily 'relation to absolute space... [which] cannot itself be immediately perceived' (2:381) to arguing, a mere two years later, that space and time are 'inherent in the mind... [which] co-ordinates for itself that which is sensed' (2:393), is something which warrants further exploration but is here left for others to pursue. It is my contention, suffice to say, that Kant suffered a crisis of religious faith leading up to his 'silent decade' which he resolved in a manner befitting his genius, producing the most brilliant apologetic (evinced as much in his speculative as in his practical works) that has ever been constructed or is ever likely to be constructed.

non-sensible appearances, since the fundamental characteristic defining an appearance is precisely its ‘sensible’ character. And even if it were granted that it is the movements of objects (as non-sensible appearances) which give rise, through affection, to the perceived motions of ‘objects of the outer senses’, one cannot claim that these former motions are then ‘given’ in a sensible mode since, as the parallax and parallel effects demonstrate, the movements sensibly represented by us ‘contradict’ those that give rise to them, in which case the appearances would not be ‘objective’.

This ambiguity concerning the sensible representation of objects and our senses being ‘affected’ by objects permeates much of Kant’s work and figures most prominently in his ‘Refutation of Idealism’ to which we shall proceed in the following chapter. But since Kant is generally quite insistent that ‘real’ things are ‘empirical’ things and that ‘In all experience something must be sensed, and that is the real of sensible intuition’, we shall ignore his reference to things affecting our senses and focus on the appearances as already ‘given’ (ibid) and which, as thus given, are characterised by motion; that is, we shall accept his claims that ‘every *object of the outer senses* is matter’ (4:481) and that ‘*Matter* is the *movable* in space’ (4:480) and assume that the ‘matter’ in both statements is sensible in nature. There remains the question how to explicate motion itself. Kant approaches this question by presenting a typology of motions – rectilinear, curvilinear, rotational, etc. (4:483). By this means he arrives at the explication – ‘Motion of a thing is the *change of its outer relations* to a given space’ (4:482) – and offers such in opposition to the ‘common explication of *motion as change of place*’. His reason for doing so, however, unfortunately rests on the following example: ‘[A] body can move without changing its place, as in the case of the earth rotating around its axis’ – a ‘change of place’ defined as the rectilinear or curvilinear motion of a body’s physical ‘central point’ (ibid.). Despite Kant going halfway toward meeting Copernicus here by acknowledging the daily rotation of the earth, we know, and given his definition of a change of place, that while the earth rotates about its axis it is constantly changing place since it follows an annual course around the sun. Kant does present the true picture further on from this example (4:484), acknowledging that the earth revolves around the sun at the same time as it rotates about its axis (thus that it does not rotate ‘without changing its place’ – the centrifugal force to which every rotating body is subject being one factor that ensures this); but even without this example his explication is insufficient because by it, and if a thing does *not* change its outer relations to a given

space, it ought to remain motionless. But as the distinction made above between a thing's relative and absolute place indicates, one's outer relation to a *given* space (e.g., the room one is sitting in) can remain unchanged yet still one will be in motion (together with the room). A sufficient explication would therefore be: Motion of a thing is *change of absolute place*.

Now Kant would deny the claim that anything pertaining to nature is 'absolute' in the sense that we can abstract from our mode of cognizing it although, and despite this, the concept of 'absolute space' is still 'necessary, not as a concept of an actual object, but rather as an idea, which is to serve as a rule for considering all motion therein merely as relative' (4:560). The final element of his construction is therefore the 'idea' of absolute space which, in being a mere idea, is 'one to which no congruent object can be given in the senses' (A327=B383). But unlike the regulative use of ideas as regards the *boundary* of the spatial world in which the *regressus in indefinitum* is stipulated such that we never encounter an absolute boundary but must continue indefinitely our search for remoter spaces (A520=B548);² here the suggestion is that all observed motion and rest:

...is merely relative; and the space in which it is perceived is a relative space, which itself moves in turn in an enlarged space, perhaps in the opposite direction, so that matter moved with respect to the first can be called at rest in relation to the second space, and these variations in the concept of motions progress to infinity along with the change of relative space. (4:481).

To suppose that the indefinite progress from one empirically moved space to another possibly at rest to another once more in motion reaches its zenith in:

...a pure, non-empirical, and absolute space... is to transform the *logical universality* of any space with which I can compare any empirical space, as included therein, into a *physical universality* of actual extent, and to misunderstand reason in its idea. (4:482).³

² Kant's antinomy regarding the finite or infinite extent of the spatial world was famously undone by Einstein on the basis of whose work it is now possible to conceive of the spatial world as being finite but unbounded; a view which involves one in no contradiction when the space in question is in fact curved.

³ This is the only passage I have encountered in Kant's critical writings where he equates the terms 'physical' and 'non-empirical', if only in a disparaging sense. For Copernicus, of course, the equation is axiomatic.

It will assist us in understanding Kant's concept of relative motion if we consider an example he gives in expounding it, having first remarked:

To make the motion of a body into an experience, it is required that not only the body, but also the space in which it moves, be objects of outer experience, and thus material... But in all relative motion the space itself, since it is assumed to be material, can in turn be represented as either at rest or as moved. The first occurs when, beyond the space in which I view the body as moved, no further enlarged space is given to me that includes it (as when I see a ball moving on the table in the cabin of a ship); the second occurs when, beyond the given space, another space that includes it is given (in the example mentioned, the bank of the river), since I can then, in relation to the latter, view the nearest space (the cabin) as moved, and the body itself [the ball] as possibly at rest. (4:487–8).

This example has some interesting implications for Kant's 'Second Analogy' in which he sought to demonstrate an objective order of events as determined by the category of causality (A188=B232ff.). He presents the example of 'a ship driven downstream', the apprehension of which constitutes an '**objective sequence**' since 'it is impossible that in the apprehension of this appearance the ship should first be perceived downstream and afterwards upstream'. But what in the appearance is it that actually moves? Since, as with his example of a ball in the cabin of a ship (and as something deemed to apply to all 'rectilinear' motions (*Metaphysical Foundations*, 4:488)), it is possible that the ship being driven downstream, assume from right to left, is in fact motionless while it is the stream and surrounding land, together with the observer, that is moving from left to right (generating the parallax effect); either view gives the same appearance and indeed the same sequence, with the ship first appearing upstream and afterwards downstream, meaning that an 'objective' apprehension (i.e., one the opposite of which is 'impossible') has yet to be established as regards what it is that actually moves. Because even if one apprehends an objective *sequence*, this in itself does not guarantee that the *motions* perceived are objective, an example being our planet's sun which, in daylight hours, appears above the eastern horizon (at sunrise) *before* appearing above the western horizon (at sunset). The sun itself, however, has not moved in relation to the earth's horizon at all, rather the horizon has moved in relation to the sun and in what is certainly an objective sequence because the sun appears above different horizons in a definite order. So night follows day, certainly, but it is we who move from the sun's glare, not the sun from us.

A further indication of Kant's failure, in the 'Second Analogy', to account for objective motion rather than objective sequence is his example of a house, the successive apprehension of which is merely subjective: 'The apprehension of the manifold in the appearance of a house that stands before me is successive' – i.e., I can first look at its roof and then proceed to the ground floor, or I can begin at the ground floor and proceed to the roof; the succession in the appearance is an arbitrary one – 'Now the question is whether the manifold of this house itself is also successive, which certainly no one will concede' (A190=B235). On the contrary, the house itself, though its parts remain in the same place relative to each other, has, *in toto*, successively changed place throughout the time one apprehends it (from west to east, analogous to 'upstream' and 'downstream'), though an objective apprehension of these successive changes is impossible given the parallel effect. All of which seems to imply that we should not look directly to 'experience' in determining the actual movements of things; rather, we should look directly to physical reality as that which determines our experience of things.

Kant explains, following his example of the moving ball, that we do not actually have to be present in these various spaces in order to experience bodies as being either in motion or at rest since these spaces can be 'thought' if not directly experienced:

[I]f the observer locates himself in that space [in the cabin] as at rest, the body counts as moved for him; if he locates himself (at least in thought) in another space [on the river bank] comprehending the first, relative to which the body is likewise at rest, then that relative space [the ship's cabin] counts as moved. (4:555).

By 'at least in thought' Kant must be utilizing the 'idea' of absolute space here, not a category of the understanding (causality) since nothing empirical is given to which this category might be applied in generating the appearance of motion (i.e., that of the ship, the movement of which is merely 'thought'). He is forced to take this explanatory route since otherwise he would be committed to the view that 'observers' can occupy two places at once – both in the cabin and on the river bank.

But what are we to make of Kant's claim that all motion is relative motion (in respect both of empirical space and the bodies enclosed therein)? Kant's understanding of 'empirical space' and 'relative motion' would seem to be undermined by a single

observation – that, indeed, its legitimacy rests on the fact that only a *single* body is considered in relation to the empirical space enclosing it. But our experience is not so impoverished as to consist at any one time of a single body and the empirical space enclosing it and the addition of just one other body occupying the same empirical space is a sufficient basis upon which to dismiss his characterisation because when two bodies move towards each other (and thus in opposite directions) but without impacting one another (e.g., two balls on a ship's table), the empirical space enclosing them (or the ship itself) does not tear itself apart; but this would be the inevitable consequence if the balls were instead 'thought' to be at rest from the standpoint of a remoter empirical space (i.e., the river bank) since the space enclosing the first ball would have to move in the opposite direction to that enclosing the second. The situation is further compounded if one varies the speeds of motion so that Body A moves at half the speed of Body B, in which case Empirical Space B would tear itself away from A at twice the speed if both balls were instead thought to be at rest (since Empirical Space B it is to move 'in the opposite direction with the same speed' to that of Body B (4:488)). But all of this would warp the very fabric of space beyond all recognition and would bear no relation to the space we actually experience or even think about.

Kant's further developed argument in 'Mechanics' as regards a community of motions inhering between two bodies approaching one another does not remedy the situation because, if a third is added, the same problem arises. The validity of Newton's law of the equality of action and reaction is not in question here, merely Kant's incorporation of 'empirical space' into his reasoning and his assertion that all motion is relative motion or, what amounts to the same, that 'no *motion* that is to be *moving* with respect to another body, can be *absolute*' (4:548). Thus:

In phoronomy, where the motion of *a* body [my emphasis] was considered merely with respect to space, as change of relation *in space*, it was all the same whether I wanted to grant motion to the body in space, or an equal but opposite motion to the relative space instead; the two yielded entirely the same appearance... But in mechanics... it is no longer arbitrary, but rather *necessary*, to assume each of the two bodies as moved, and, indeed, with equal quantity of motion in the opposite direction – but if one is relatively at rest with respect to the space, to ascribe the required motion to it, *together with the space*. (4:547; note).

Kant's suggestion here is that when a body approaches another seemingly at rest just as much motion, but in the opposite direction, must be ascribed to the resting body and the empirical space enclosing it (and presumably to the observer viewing the body at rest, in which case the parallel effect applies). But if a third body approaches the one seemingly at rest from the opposite direction to that of the first, the empirical space enclosing the body at rest would again tear itself apart since it is to move at the same speed but in the opposite direction to that of the approaching body. But here two bodies approach the one at rest from opposite directions, in which case the same problem arises as in phoronomy.

One is not denying the possibility here, as Kant states in *Negative Magnitudes* (2:171), that the 'motive force of a body in one direction and an equal tendency of the same body in the opposite direction' results in the body remaining at rest (as would happen to the body in our example where two others approach it from opposite directions), since it is the movement of these two other bodies that is to be determined 'relative' to the empirical space enclosing them, which space would have to move in opposite directions and thus tear itself apart. Kant acknowledges 'the somewhat unaccustomed character of this mode of representing the communication of motion' (*Metaphysical Foundations*, 4:547) but to what, at core, are we to attribute his idiosyncratic account of the matter? It would appear to nothing more than a blank refusal to acknowledge absolute motion in physical space. And why this refusal? Because by acknowledging absolute motion in physical space Kant's ontological denial as regards things existing or happening independently of the cognizing subject who is 'to arrange' their experience of matter in motion would be thoroughly undermined.

(ii) Absolute Motion

But assume, at this point, the absolute motions of things in space; what would be the Copernican mode of representation here? The case is precisely stated thus:

[E]very apparent change in place occurs on account of the movement either of the thing seen or of the spectator, or on account of the necessarily unequal movement of both. For no movement is perceptible relatively to things moved equally in the same directions – I mean relatively to the thing seen and the spectator. (Op.cit., 12).

This is Copernicus' statement of what I have called his laws of observed motion in which he insists that the physical movements of observer and observed 'account' for the 'apparent' movements. It is not a case, therefore, of our cognitive faculties being 'applied' to the appearances, transforming them into objective experiences (since nothing objective is given in experience) but, rather, and just as the perception of extended things presupposes the extension of the perceiving organ, so the perceived movements of things presupposes the actual movement of the thing seen, of the spectator or of both. Thus whenever it appears that 'the whole world... [is] moving' (ibid., 17) this is accounted for in terms of the movement 'of the spectator'; whenever it appears that things are 'at rest' this is accounted for in terms of the parallel motions of observer and observed (of 'the thing seen and the spectator'). All other apparent changes in place are due to the 'necessarily unequal movement' of both because, and despite Copernicus' suggestion that an appearance of motion might be due *either* to the object *or* the spectator implying that one or other might then be in a state of absolute rest relative to the thing in motion (when if a thing appears to move while we appear at rest this is because it is moving faster than us or in a different direction or both, it is not that we *are* at rest); in truth every thing is in constant, no doubt reciprocal, motion (except space itself which is neither in motion nor at rest; the concept of an 'expanding' universe to be addressed shortly). It is to be assumed here that absolute rest is impossible, implying that a thing can remain in a fixed place or, what amounts to the same, that it would be impossible for this thing to be *displaced*. And this applies also to those bodies which are subject to the opposing forces of other bodies (as with the example in 'Mechanics') because the body at rest is so only in relation to the two approaching bodies while *all three* are subject to the motive forces of yet other bodies surrounding them. Absolute rest is, in itself, a dubious concept since it would require that the thing at rest possess a force of repulsion, even for just an instant, greater than the combined penetrative force of everything else; something not even galaxy clusters possess, these being numerous in the universe with no single example possessing a force of resistance greater than that of the others combined.

The denial of absolute rest entails that *it is impossible for a thing to occupy the same place at different times*; a proposition which seems counter-intuitive since, even if we do not *remain* in a fixed place, surely we can *return* to the same place, as when we return home after a day's work? It must be emphasised, however, that things do not

carry their places around with them as some kind of spatial accoutrement and for every hour one is away from home it has actually travelled 68,000 miles away from the place it once occupied (68,000 mph being the speed of the earth as it revolves around the sun). And even when the earth completes a revolution it does not return to the place it set off from since the solar system as a whole has departed from that place at an even greater speed as it follows its revolutionary course around our galaxy's core (the same applying to our galaxy, of course). The places we either remain at or return to are therefore relative places, not absolute and so when everything impossible has been accounted for what remains is the possible. Since it is impossible for a thing to occupy different places at the same time or the same place at different times, the remaining possibility is that things occupy different places at different times. This is equivalent to the assertion that every thing is in constant motion (though one should perhaps mention a final possibility, Kant's 'pneumatological' one, i.e., those things that do not occupy any place at any time).

Things constantly change place, therefore, and for this to happen we must assume a principle of interactive force or activity (since, and by virtue of the law of inertia, things cannot move themselves). But *places* do not change their place since this would entail yet another space in which these places could change place; but if universal space is that which constitutes 'everywhere' there would be nowhere left wherein these places could change place; similarly for rest since this would again presuppose a space in which places remained in the same place. This accounts, too, for the possibility of an 'expanding' universe which yet neither moves nor remains at rest since every place constituting this space remains where it is, despite the expansion, *relative to every other place*, not relative to *another* space.

Space, therefore, does not change its place, only things *in* space; the occupation of space a defining characteristic of 'things' as opposed to space given that space itself is not *in* anything but is rather that which accounts for a thing's being in anything. Copernicus' reference to 'the necessarily unequal movement of both' should therefore be considered a qualification to his statement that it is 'either the thing seen or the spectator' who moves; absolute motion confirmed to us empirically by the *differences* in speeds of the things moved (which differences are inexplicable on the presupposition of relative motion since that to which a thing's motion relates would have to move at the *same*

speed but in the opposite direction). And the presupposition that space itself does not change its place accounts very well for the absolute motions of things when these are observed to occupy the same space (as with two balls approaching one another) because were these motions deemed observable only in a sense relative to the space enclosing them the empirical space here would tear itself apart since it is to move ‘in the opposite direction with the same speed’ to that of the bodies in motion. But the space we observe does not depart from itself in this manner (since it does not move at all), ergo, it is not relative but absolute (i.e., physical) space and the objects that move in it (both observer and observed) do so in an absolute sense. Whenever it is the case that space does appear to move (as with ‘the entire celestial host’) this is due to one thing and one thing only – to the movement of the spectator (the parallax effect) in which the space one inhabits indeed moves ‘in the opposite direction with the same speed’ but only in an *apparent* sense; the fact that it appears to move at just this speed (i.e., ‘the same speed’) and in just this direction (i.e., ‘the opposite direction’) being entirely due to the *spectator’s* motion, not that of the space. It may seem uncharitable to imply with all this that Kant’s utilization of ‘empirical space’ and ‘relative motion’ (rather than physical space and absolute motion) in his argument is due entirely to a failure to acknowledge motion of the spectator and the consequent parallax effect but, nevertheless, this seems the only logical explanation for his approach.

In contrast to Ptolemy, therefore, we have what can be called the Copernican *disquant* – the point of observation which is subject to constant displacement. And in contrast to Kant our observations of movement do not depend on the cognitive powers of non-movable subjects who ‘arrange’ their experience of motion but, rather, every ‘apparent change in place’ presupposes the actual change in place of the things moved (both observer and observed).

(iii) The Revolving Observer

But we can proceed now, at last, to a consideration of Kant’s argument for terrestrial motion in which curvilinear, as opposed to rectilinear, motion is at issue. His account of the matter is made far more involved than it ought to be simply because he cannot avail himself of the ‘revolving observer’ in his explanation of terrestrial motion. Instead he embroils himself in all kinds of convoluted thought just in order to account for what, in

truth, is the most basic of phenomena. Thus it is a question for Kant ‘of *true motion* as distinct from *semblance*, but not of absolute motion in contrast to relative’ (4:561). But what is the ‘true’ motion here and what ‘semblance’? And how is one to account for a semblance of motion in contrast to true motion when one would suppose them to be derived from opposing grounds?

Beginning with the first, Kant specifically considers ‘the axial rotation of the earth relative to the stars of the heavens’ (4:560) (as he surely must, given the contradictory appearances involved), acknowledging that the earth’s motion is a ‘true (actual) *motion*, which does not, however, *appear* as such, so that, if one wished to evaluate it merely in accordance with empirical relations to space, it could be taken for *rest*’ (4:561). Since Kant has, up to this point, deemed all motion to be ‘externally relative’ (ibid.) he finds himself in the difficult position of having to deny that the sun’s motion is ‘completely equivalent to the former [i.e., the earth’s]’ (4:560), seeking to prove, instead, that the earth’s motion is ‘true’ while that of the celestial host, mere ‘semblance’. Because the earth’s rotation is not to be considered externally relative what other recourse is there but to consider the ‘matter *within its space*’! – an example given that of ‘a deep hole descending to the centre of the earth’ which, should a stone fall into it, would then continually deviate from its perpendicular course from west to east, leading one to ‘conclude, therefore, that the earth is rotating on its axis from west to east’ (4:561).

In all of this, however, Kant speaks as one already in possession of the (non-empirical) facts. Because, and limiting oneself to the ‘given’ of sensibility, what is to prevent one assuming instead, like Democritus and his atoms, that the stone itself has a tendency, by means of an internal motive force, to swerve from its perpendicular path as it falls through space (rather than assume the earth’s Coriolis force to be the cause)? Of course we *know* this not to be the case but our knowledge in this instance does nothing to inform our experience wherein the earth remains stubbornly at rest. Like all good science, therefore, Kant is here inferring something actual on the basis of mere empirical evidence; it is not that something actual (the earth’s rotation) is empirically evident. Hence the stone’s deviation from its perpendicular path ‘assuredly indicates’ the earth’s rotation (ibid.) with ‘indicates’ being the operative word; in contrast to the actual motions here constituting an empirical ‘illustration’ (A94=B126) which Kant usually insists is the case with our law-governed experience.

Kant, however, and quite naturally, makes appeal to Newton's laws in his account and not Democritus' swerve, though this does little to improve matters. Thus:

[S]ince, according to the law of inertia, a motion, in so far as it arises, must have an external cause, while the body, at every point on this circle (according to precisely the same law), is striving, for its own part, to proceed in the straight line tangent to the circle, which motion acts in opposition to this external cause, it follows that every body in circular motion manifests, by its motion, a moving force. But the motion of the space, as distinct from that of the body, is merely *phoronomic*, and has no moving force. Thus the judgment that here either the body is moved, or the space is moved in the opposite direction, is a *disjunctive* judgment, whereby, if one of the terms (namely, the motion of the body) is posited, the other, (namely, that of the space) is excluded. Thus the circular motion of a body, as distinct from that of the space, is an *actual* motion, so that the latter, even though it agrees with the former according to the appearance, nevertheless contradicts it in the context of all appearances, that is, of a possible experience, and so is nothing but mere semblance. (4:557).

First (though as an adjunct to the main point), Kant refers to the merely phoronomic status of space which lacks the 'dynamical' moving force of those bodies occupying this space. But in what sense is the 'material' of empirical space to be distinguished from the material constituting those bodies 'we are to arrange' in this space? (4:481).⁴ Because it is not clear that any of the categories are 'applied' to this spatial material despite every category being applied to the material bodies occupying this space. But how is this possible given that the materials in both cases are exactly alike in being 'sensible' and exactly alike in being 'movable'? On Kant's rendering of the issue everything material, including the matter of 'empirical space', ought to be equally dynamical, in which case there would be no distinguishing 'true' motion and mere semblance. The pure understanding thus has no means to pick and choose which matters it applies itself to, the materials here being entirely homogenous in this regard. Only if one distinguishes the matter of 'appearances' (sensation) and *physical* matter, which are entirely heterogeneous in nature, might it be possible to distinguish true motion and mere semblance; precisely the course espoused here.

⁴ Admittedly, this way of describing the situation, i.e., that 'we arrange' objects in space, sounds dangerously like patent nonsense but this, it must be said, has everything to do with Kant's rendering of the issue and nothing to do with my describing of it. It is simply a case of Kant's conscious intellect exerting itself again.

Regarding the main point, therefore, even though one accepts the ‘lawful’ motions of the bodies concerned, in respect of physical reality a scientist’s stance is always *interrogative*, never *imperative* as Kant describes it such that we ‘compel nature’ (Bxiii) to be ‘thus and not otherwise’. Hence it is not a case of one’s asserting: *Curvilinear motion is actual* but, rather, of one’s enquiring: *Is this motion actually curvilinear?* In answering this question the last thing one should do is look directly to experience given the appearance, here, of a very large, very bright object which exhibits a definite circular motion and which, for scientists of old, was taken as ‘proof’ that the sun actually revolves around the earth. Kant, however, accepts that the sun’s motion agrees with the earth’s ‘according to the appearance’ but ‘contradicts it in the context of all appearances, that is, of a possible experience’. One assumes from this, and just as before he spoke of a ‘universal experience’, that were one to adopt the appropriate position (i.e., in cosmic space) the earth’s rotation would be seen to be actual and that of the sun, mere semblance. But if this is what Kant means by ‘the context of all appearances’ why should he insist that circular motion is a ‘true (actual) *motion*, which does not, however, *appear* as such’ when, in adopting the appropriate position, the earth’s rotation would appear to oneself in all its actuality? Or are we to assume, instead, that curvilinear motions never appear? A strange idea given this seems the case whenever we empty our baths, for instance, the escaping water itself subject to the aforesaid rotational motion. But there is a deeper problem here since until this point (and throughout the entire critical corpus in fact) Kant has equated ‘actuality’ and ‘sensation’; to present just one example: ‘The postulate for cognizing the **actuality** of things requires **perception**, thus sensation of which one is conscious’ (A225=B272). Yet in this instance, as regards the earth’s axial rotation, we have a ‘true (actual) *motion*, which does not, however, *appear* as such’. If one were to select a single quotation from Kant’s critical works which indicated both the correct path to follow in addressing this problem (the transcendently real path) and the path to avoid (the critical path which, as demonstrated here, even Kant had difficulty following), this would be it.

There is a simple reason, of course, why the earth’s motion, though true, does not appear as such and that is because the observer moves at the same speed and in the same direction (the parallel effect). But if the observer ascended to the appropriate position the earth’s rotation would certainly appear; the observer’s motion would never do so, however, not even in ‘the context of all appearances’, since it is impossible for the

observer to experience this despite its being ‘true’. Hence only of an observer’s motion, whether rectilinear or curvilinear, can one say that there occurs here a ‘true (actual) *motion*, which does not, however, *appear* as such’.

But let us consider the second question: how one is to account for a semblance of motion in contrast to true motion when one would suppose them to be derived from opposing grounds. As highlighted above, a ‘semblance’ of things is as much a product of the pure understanding as the genuine article (4:555). But are we to assume from this that a semblance of motion and true motion are derived from the same source (i.e., the pure understanding)? If this is the case then the prospect of accounting for a semblance of things and for truth seems hopeless when there is no determining subjectivity and objectivity from a single standpoint. Or perhaps one possible means to do so (though it is scarcely that) is to assume that the ‘appearance’ of celestial motion results from one’s ‘experience’ of terrestrial motion, which cannot really be the case given that, if one is in a position to perceive the earth’s rotation there would be no semblance of celestial motion because, from this elevated position, one would not fall prey to the parallax effect and which, anyway, contradicts Kant’s own account where it is a question of transforming ‘appearance into experience’, not of deriving the former from the latter.

This Gordian Knot of a theory is at once severed upon adoption of the Copernican insight from which standpoint ‘it can easily happen in the case of the movement of the Earth that the whole world should be believed to be moving in a circle’ (op.cit., 17). From this dual standpoint – that of ‘independent’ reality and ‘subjective’ experience – everything falls into place. Hence, and if one might speak paradoxically, there is no *illusion of objectivity* here but, rather, an *objective illusion* which follows as the necessary effect of our actually revolving through space. That subjectivity (semblance) is grounded in objectivity (truth), that there would be no illusion, even, without truth, is what sets Copernicus apart from the sceptic and idealist alike. In accounting for the appearances in this instance we must therefore consider, not the metaphysical foundations of natural science but the metaphenomenal foundations of experience, being that which, by any rational standard, genuinely constitutes ‘natural science’.

5. Transcending Experience

(i) 'Empirical' Causation

Sensation, and sensibility in general, has long received a bad press in the Western philosophical tradition, just as sensuality has in the Judeo-Christian tradition (and the two are not unrelated). Hence, and rather than mirroring the world, it is as though one looked through a glass darkly, the true nature of things illuminated by thought alone. This is an understandable prejudice for those who trade in 'ideas' but does little justice to the true nature of things. One could go so far as to propose, indeed, not the Cartesian formula *Cogito, ergo sum*, but the less rarefied: I *sense*, therefore I am. Descartes, of course, found everything sensible thoroughly dubious though, try as he may, he could not doubt these doubts themselves. Of greater certainty than this, however, is the existence of that without which no thoughts would be entertained at all, namely the given of sensibility. It is to Kant's credit that he recognized that 'All our cognition starts from the senses' (A298=B355); creditable, also, that he deemed all thought meaningless – literally, 'without **sense**, i.e., without significance' (A240=B299) – which made no reference to sensibility. It is to his discredit, however, that sensibility was, for him, but the poor relation to our 'higher' faculty of thought, thus enforcing the age-old philosophical prejudice.

The error in Kant's thinking on sensibility, from a Copernican perspective at least, is rooted in his very definition of the term: 'The capacity (receptivity) to acquire representations through the way in which we are affected by objects is called **sensibility**' (A19=B33). But what is it that is here 'affected'? – '[An] object is given to us... only if it affects the mind in a certain way' (ibid.). Sensibility, for Kant, is therefore a *mental* and not a physical or bodily capacity. Indeed it is only through this mental capacity that 'bodies' arise in the first instance:

The representation of a **body** in intuition... contains nothing at all that could pertain to an object in itself, but merely the appearance of something and the way in which we are affected by it; and this receptivity of our cognitive capacity is called sensibility and remains worlds apart from the cognition of the object in itself. (A44=B61).

So while one might reasonably assume that a discussion of sensation would warrant mention of our bodily organs (ears, eyes, etc.), none of this is to be found in Kant. Instead certain vague references are made to ‘the senses’ (A42=B59) or to ‘a particular situation or organization of this or that sense’ (A45=B62); these deemed, as the body itself is, ‘only empirical’ (ibid.).

That our organs of sense are themselves empirically constituted is a paradoxical notion which would seem easily countered. But we shall first consider Kant’s definition. Our minds are ‘receptive’ to things but what is it that we ‘receive’ in this regard? Do we receive, for example, sensations? – Are there sounds and colours out there which we take up into our minds in acquiring sensible representations? No, a sensation is the ‘effect of an object on the capacity for representation’, not the object itself (A19=B34). We do not receive the two forms of intuition either, space and time, since these ‘lie ready... in the mind *a priori*’ (A20=B34). Since sensations (‘matter’) and the pure intuitions of space and time (‘forms’) comprise all that there is to sensibility, it is not clear that we receive anything at all in this regard. The term ‘receptivity’ would seem a misnomer, perhaps better employed in the commonplace sense that one is receptive to the ideas or beliefs of others. The term *sensitivity* would seem a more appropriate one to employ when considering how it is that we ‘acquire representations’ since it indicates a capacity to register the existence of things, shall we say, without the added complication of deciding what it is in the representations that corresponds to the things registered (a problem encumbering Kant’s term). Now is there anything other than an organism’s body that might be considered ‘sensitive’? Does the mind, for instance, flinch when it feels something hot, squint when it sees something bright, retch when it tastes something bitter? Because while the hotness, brightness and bitterness are one thing (i.e., sensations), the flinching, squinting and retching indicate something else altogether, namely that the sensing being is indeed sensitive. But is anything comparable to be found in respect of our mental capacities? One speaks, to be sure, of ‘sensitive souls’ who might *balk* at the utterance of an expletive or *swoon* at the sight of a lover but, and although sensations play their role here (one hears the utterance and sees the lover), one’s balking and swooning do not concern the auditory or visual sensations themselves but the expletive uttered or the lover seen. Something more than sensitivity is at work in these latter instances, namely a capacity to recognize or

comprehend *what it is* one has sensed and the emotional response this produces, not a mere physical response to physical stimuli.

So what of these physical responses (flinching, squinting, retching, etc.)? First, none of them can be classed among our sensations, i.e., they are not comprised of colours, sounds, tastes, etc. – one does not ‘flinch hotly’ or ‘retch bitterly’, for instance. Secondly, they are all bodily responses to bodily dangers which exist solely in order to preserve our bodies. Thus we squint at something bright to preserve our eyes; flinch when we touch something hot to preserve our hand; retch when we taste something bitter to expel it from our mouths. Such, no doubt evolved, responses are hard-wired into the central-nervous system of the organism to safe-guard it from whatever potential dangers exist in its environment. But take away the body and its environment and what remains of sensitivity? The ‘mind’ perhaps? For Kant this precedes the body and its environment, consisting, in part, of that ‘capacity (receptivity) to acquire representations through the way in which we are affected by objects’. This capacity, however, does not exist in order to preserve the mind from potential dangers in its environment since, according to Kant, the mind does not reside in an ‘environment’, it has not ‘evolved’ and the objects that affect it, though one cannot say what they are (just as one cannot say what the mind is), are not physical objects.

If it is unclear just what ‘sensitivity’ consists in on the Kantian model, what about sensations themselves? What status do they have in respect of ‘experience’ in general and, if they are ‘caused’ (leaving aside the problems relating to their ‘reception’), what kind of causality is at work here? Concerning their relation to experience, Kant’s account is again unclear. On the one hand sensation ‘stands for what is merely subjective in our presentations of things outside us, though in its proper meaning it stands for what is material (real) in them (that through which something existent is given)’ (*Judgment*, 6:189). But on the other hand: ‘In all experience something must be sensed, and that is the real of sensible intuition’ (*Metaphysical Foundations*, 4:481). The former quotation suggests that it is *through* sensation that a real existent is given, the latter that sensation *is itself* the real existent. The first quotation would seem descriptive of a representationalist account of the matter, the second, an empirical realist account. This definitional conflict, it would seem, stems from his equating sensation with the ‘matter’ of external objects which are ‘presented’ in experience. Clearly, his

transcendental idealist conception of the issue coheres better with the second quotation but at the same time he must distinguish things ‘outside us’ from merely ‘subjective’, inner goings-on; something which is ordinarily achieved precisely by *distinguishing*, rather than equating, materiality in the physical sense and the empirical content of our perceptions. This problem is attempted a resolution by Kant in his most sustained attempt to distinguish ‘outer’ and ‘inner’ occurrences, namely that presented in his ‘Refutation of Idealism’, a consideration of which, however, to follow an examination of our second question, that concerning the causal origins of sensation.

The initial statement of Kant’s ‘Copernicanism’, namely his request that we should ‘once try whether we do not get farther with the problems of metaphysics by assuming that... objects must conform to our cognition’ rather than ‘assum[ing] that all our cognition must conform to... objects’, should not mislead one into thinking that he believed a strict either/or as regards the direction of conformity, so to speak, obtained here. Although he denied that ‘all’ our cognition conformed to objects, a significant part of it did. Thus:

There are only two possible cases in which synthetic representation and its objects can come together, necessarily relate to each other, and, as it were, meet each other: Either if the object alone makes the representation possible, or if the representation alone makes the object possible. If it is the first, then this relation is only empirical, and the representation is never possible *a priori*. And this is the case with appearance in respect of that in it which belongs to sensation. But if it is the second, then since representation in itself (for we are not here talking about its causality by means of the will) does not produce its object as far as its **existence** is concerned, the representation is still determinant of the object *a priori* if it is possible through it alone to **cognize something as an object**. (A92=B124–125).

Although Kant seems to grant an ‘object’ the power of making a representation possible in terms of ‘that in it [i.e., the representation] which belongs to sensation’, what he in fact claims is that, as far as appearances are concerned, the subject is not responsible for generating the sensation contained therein ‘by means of the will’. The subject’s powers of representation are determinant, however, in respect of transforming ‘appearance into experience’, as he has elsewhere expressed it, and thus of first making the cognition of objects possible (although appearances, in a formal as opposed to material sense, owe their existence to these powers too). One therefore needs to distinguish the sense in which Kant refers to an ‘object’ as that which produces sensations in us since, however

it is that sensations are generated, it is only by means of the subject's powers of representation that 'objects' in an empirical sense first become possible. Whatever it is that makes *sensation* possible – and Kant grants that *something* makes it possible, 'otherwise there would follow the absurd proposition that there is an appearance without anything that appears' (Bxxvi) – an 'object', in the cognizable sense of that term, is produced by means of the representative powers alone (although the term 'object' can certainly stand as proxy for whatever the 'something' is that generates sensation).

In respect of the non-cognizable origins of sensation, therefore, Kant suggests that 'that which corresponds to the sensation in these [i.e., objects as appearances] is the transcendental matter of all objects, as things in themselves' (A143=B182). In Kantian scholarship the question regarding the status of 'things in themselves' – 'objects' in the transcendent sense of that term – is widely disputed. What is beyond dispute, however, is that Kant felt it necessary to utilise the term 'transcendental', not only as referring to those cognitions which were 'occupied not so much with objects but rather with our *a priori* concepts of objects in general', but also as referring to a realm which existed independently of the thinking subject; notwithstanding the difficulties this caused him in terms of presenting an entirely coherent picture, as indicated by the following passages:

There are things given to us as objects of our senses existing outside us, yet we know nothing of them as they may be in themselves, but are acquainted only with their appearances, that is, with the representations that they produce in us because they affect our senses. Accordingly, I by all means avow that there are bodies outside us, that is, things which, though completely unknown to us as to what they may be in themselves, we know through the representations which their influence on our sensibility provides for us, and to which we give the name of a body... Can this be called idealism? It is the very opposite of it. (*Prolegomena*, 4:289).

[O]ne can indeed admit that something that may be outside us in the transcendental sense is the cause of our outer intuitions, but this is not the object we understand by the representation of matter and corporeal things; for these are merely appearances, i.e., mere modes of representation, which are always found only in us. (A372; see also *Prolegomena*, 4:314–315 where Kant propounds an even stronger claim to the effect that it is 'inevitable' we accept the existence of causally efficacious things in themselves).

The incoherence concerns his transcendent use of the term 'outside' (a spatial concept designating the location of things in themselves relative to the subject) and the causal

concept (with regard to things in themselves having the capacity to ‘affect’ our sensibility; although this concept, as in the case of ‘object’ above, could stand as proxy for whatever the process is whereby things in themselves generate sensations). Ordinarily these concepts concern just those ‘*a priori* concepts of objects in general’ to which Kant gives the generic title ‘transcendental’ but taken in its other sense (i.e., not independent of the subject but wholly immanent).

A potential objection to this charge of inconsistency, however, should be addressed. The objection centres upon the claim just made that Kant posited the existence of an independent realm in providing a causal explanation for the existence of our sensations – the one instance, as regards human cognition, whereby the latter conforms to the object and not *vice versa*. For Kant, sensations, in addition to constituting the empirical in general and as material elements in all *a posteriori* cognition, just because they are neither caused ‘by means of the will’ nor ‘lie ready... in the mind *a priori*’, must for these very reasons (since their existence is not self-explanatory) be considered the effects of underlying causes which stem from a realm ‘outside’ the thinking subject. Some have read Kant differently, however, and have sought to preserve his complementary theses that things in themselves are unknowable and that the pure forms of intuition and categories of the understanding admit of immanent, as opposed to transcendent, use only. In the above quotation, after all, Kant speaks of an ‘empirical’ relation obtaining between objects and the sensations they generate, in which case the ‘objects’ in question are not to be conceived of as independently real existents but as mere objects of experience which exist on the same phenomenal plane as our organs of sense and which are therefore causally related to the latter in the permissible sense that their causality (and the sensation this generates) derives from an application of the causal category to appearances.

In case one has failed to notice the implicit contradiction in this view (since ‘appearances’, as Kant defines them, already presuppose sensation), let us make it more obvious. Kemp Smith, in denying the existence of ‘things in themselves’, cites the following quotation from the *Critique*: ‘Colours are not objective qualities of the bodies to the intuition of which they are attached, but are... only modifications of the sense of sight, which is affected by light in a certain way’ (A28). Kemp Smith then comments: ‘Light reflected from objects, and acting on the retina, gives rise to sensations of colour.

For such causal interrelations there exists, Kant teaches, the same kind of empirical evidence as for the causal interaction of material bodies' (op.cit., 275). This interpretation, and it would appear Kant himself in this instance, is grievously mistaken since in both their accounts the 'empirical' objects or 'material bodies' cited and the causal forces linking them ('light acting on the retina') already presuppose sensation in virtue of their being *material bodies* and therefore can in no conceivable way constitute the ground of explanation for the existence of sensations. Quite obviously, one cannot rely upon 'empirical evidence' in determining how 'the empirical' originates. In the Kantian scheme of things one empirical object can certainly affect another, but nothing empirical can be deemed the cause of that which is empirical *per se* without one's explanation revolving in an obvious circle. This 'like begets like' misconception involves Kemp Smith in the 'absurdity' he himself accuses others of, namely the 'professed explanation... of attempting to account for the origin of the phenomenal world by means of events which can exist only under the conditions which it itself supplies' (ibid., 276).

If all our cognition 'begins' with sensation and if our *a priori* concepts of objects remain dormant until there *is* sensation, it is an absurdity to claim that empirical objects cause sensations in us; 'empirical objects' presupposing sensation and not accounting for it. In denying themselves the simple expediency of an appeal to independent, physical reality, therefore, proponents of this view are left with what can only be called the Kantian Circle which, like the Cartesian Circle before it, assists in merely obscuring the issue rather than illuminating it. Unless, that is, Kant means to argue for a distinction *within* the phenomenal world between 'that which is originally itself only appearance... [and which] counts in an empirical sense as a thing in itself' (he gives the example of a rose) and its colour, 'which yet can appear different to every eye' (A29–30=B45). It is then the rose as an empirical thing in itself, the human eye as an empirical thing in itself and reflected light as an empirical thing in itself which together cause colour sensations. This again, however, utilizes a distinction which simply cannot be made because the 'colour' of a rose is precisely that which makes it an *appearance* (and which excites the formal intuition of space in providing the rose with its shape), there being no merely 'formal' appearances (i.e., ones lacking the material of sense such as colour) because these are by definition 'empirical intuition[s]' (A20=B34), which is to say *material forms* – the only purely formal intuitions being space and time. Kant is

here attempting to twist and turn his concepts to avoid admitting the obvious (while in other places, as we have seen, he freely admits it) – that if one grants that sensations are not self-generated (or generated in the mind of God, as Berkeley believed) then there is no alternative but to acknowledge the validity of transcendental realism in accounting for the existence of our sensations. These are caused, however, by *physical* and not empirical things in themselves since it is impossible that our sensations should be caused by something sensible (or, what is the same thing, ‘empirical’). Pushing our enquiry one step further back, however – the question what is it that makes *causation* possible – we admittedly hit bedrock here and merely posit that this is what nature ultimately consists in: the *power* of physical causation including, among other things (although of relevance to sensory perception), the electrical power which drives our neurophysiology and contrasted, anyway, with Kant’s *mind* power as when he speaks of the ‘[u]nderstanding and the power of judgment’ (A131=B170) or the ‘power of representation’ (*Prolegomena*, 4:282).

(ii) The Thing in Itself and Appearances

Exploring further Kant’s notion of the thing in itself *vis-à-vis* experience: this expression – ‘The Thing in Itself’ – has, following Kant’s use of it, assumed an altogether profound, portentous and even mystical air of significance about it that is difficult to comprehend. For what is there that is *not* ‘a thing in itself’? Kant describes time, for instance, as ‘something real, namely the real form of inner intuition’ (A37=B53), so why should he then insist that it ‘is not on that account something in itself’ (A37=B54, note) as though what he has just described time as being concerns *something else* and not itself? Isn’t everything something in itself with only nothingness, properly speaking, being nothing in itself? If he means merely to say that *things* are not what they appear to be then this is an uncontroversial and non-mystical point which most would be willing to grant. One cannot claim, after all, that *appearances* are not what they *appear* to be because it is precisely in its appearance that an appearance is what it is. Appearances, that is to say, *are* what they appear to be (they are ‘really apparent’) and if anything is not what it appears to be then it can only be ‘things’ and not appearances themselves. But an appearance is something and, to that extent, is it not something in itself? For supposing there is something that is nothing in itself, what justifies one in asserting that there is anything here at all in terms of

distinguishing this something from the nothingness that certainly is nothing in itself? Is it not the fact that this something itself *is* that distinguishes it from nothing? Thus everything is something in itself *to the extent that it is itself something as opposed to nothing*. The expression ‘The Thing in Itself’ is in truth a tautology because a thing that was not something ‘in itself’ would not itself be or, alternatively, it would be something else, which amounts to the same thing. By the mere fact of being, therefore, a thing is something in itself. So one can speak of things and one can speak of nothing but it makes no sense to speak of ‘things in themselves’ other than in contrast to ‘appearances’ *simpliciter* which are no less ‘things in themselves’ and differ only in causal origin to the things that are contrasted with them by means of this latter expression and which generate the appearances in question – because this implies either that there could be something that is nothing in itself, in which case this something is not what it is and that is a contradiction, or else there might be something that is something else in itself in which case, again, it is not what it is.

Kant affirms this much himself by citing as the fundamental ontological division ‘the concepts of *something* and *nothing*’ (*Morals*, 6:218, note) without then further dividing the concept ‘something’ into those things that are ‘things in themselves’ and those that are ‘nothing in themselves’ (since obviously the concept ‘nothing’ cannot be divided in this way). Kant maintains, however, that the members of the cited division have, as the higher concept they divide, ‘that of an *object* in general’ (ibid.). Now in what sense does an object in general, in contributing to its conceptualisation, have the concept ‘nothing’ attributed to it? That an object is identical with itself and *nothing else* perhaps? In which case the concept serves in a negative fashion to delimit objects so that they are identified with themselves only. Negation can serve in another *relational* sense (i.e., in relation to something) to determine a thing’s place in the temporal order, as when we speak of a time when we did *not yet* exist (pre-conception) and of a time when we *no longer* exist (post-mortem). In itself, however, aside from its relation to something, the concept nothing signifies nothing and to use the concept, not in a relational sense (i.e., the relation of a thing to itself and nothing else – identity – or of a thing to something else – to a time when it did not yet or no longer exists) but in a *constitutive* sense, as one would be by saying of something that it is *nothing in itself*, makes no sense at all because, by saying this, one negates everything that this something is.

In proposing, therefore, that the sun does *not* revolve around the earth one is not saying that the sun's motion is something, namely an appearance, which is nevertheless nothing in itself (which is what Kant seems to be saying), since one is not commenting on appearances at all. What one is saying is that the sun, which is something, does not move relative to something else, the earth, so that negation is being used in a relational and not constitutive sense – the relation, that is, of one existent thing to another. But even when referring to appearances, by stating that the sun merely appears to revolve around the earth but does not really do so, one is not saying that the sun's apparent motion is nothing in itself since it *is* something in itself, namely an appearance or something which is really apparent. What it is not is a true reflection of reality in which case, again, negation is being used in a relational sense – the relation of an appearance to reality. All of this, and despite his standard pronouncements, is perfectly in accord with what Kant states elsewhere in the *Critique*:

Logical negation... is never properly attached to a concept, but rather only to its relation to another concept in a judgment, and therefore it is far from sufficient to designate a concept in regard to its content. The expression 'non-mortal' cannot at all give the cognition that a mere non-being is represented in the object, but leaves all content unaffected... [Thus negation] signifies a mere lack, and where this alone is thought, the removal of every thing is represented. (A574–5=B602–3).

Now the 'thingness' of appearances is not necessarily to be taken in a 'substantial' sense since their nature as argued for here is neutral as regards both substantial and non-substantial accounts (the 'sense data' account, for instance, in contrast to the 'adverbial' account of perception). That one is required to distinguish 'appearances' and the things they are appearances of, however, is an obvious necessity if one is to account for perceptual illusions and the like. In this latter case, therefore, one can speak of things being 'apparently real' or, as in the case of a sunset, that this is 'really apparent', and both these expressions, while they make reference to 'appearances', are clearly neutral as regards the substantial or non-substantial nature of appearances or 'sensations' themselves, being used merely to demarcate the physical and the empirical. That the impression of substantiality remains simply in virtue of our discussing 'appearances' is unavoidable given the reification these words by themselves, especially in nominal form, tend to produce but still, the preceding explanation should be borne in mind in the following.

That the being of appearances consists *only* in what they appear to be is a claim that would require further justification because it is not at all obvious that there is *nothing more* to appearances than simply what they appear to be, as a phenomenalist might claim for instance. We are, after all, talking about *something* here and thus can draw a distinction between the *appearance* of an appearance and the *being* of an appearance. The former concerns the content of an appearance, what it is *of*, e.g., a sunset or a patch of green; the latter concerns the nature of appearances themselves – what they *are*, not what they are *of*. Appearances, therefore, are of things certainly but they also are things (or, if not ‘things’, they constitute an ‘occurrence’ of some sort, i.e., an object ‘appears’ to us in some way). Now, appearances are never in themselves what it is they appear to be of. That is to say, the appearance of a sunset is not itself a sunset; the appearance of a green patch is not itself a green patch. If we were to open up someone’s brain we would not find these things inside there, a setting sun or a patch of green; a fact that is often used to disprove the physical nature of appearances in respect of their existential status. But one would not expect to find these things here given that appearances are never in themselves what it is they appear to be of. This is not to say that they are not in themselves physical, however, but only that the physical properties they possess do not equate to the *apparent* physical properties they represent. An appearance in itself may not be spherical or emit light but it could still be physically constituted because these physical characteristics are not exhaustive of physical properties in general; just as a painting of a sunset does not itself emit solar radiation or light but is still something physical for all that. All sorts of things can be represented by means of paint and canvas and all sorts of things can be represented by means of neurons and electrical impulses (so, at least, a physicalist would maintain).

Now were the appearance of a sunset itself a sunset there would be, strictly speaking, no ‘appearances’ at all but just sunsets or whatever it is that we nominally say an appearance is of. Idealism is restrictive in this sense because it does not posit a distinction between the representational (what they have as their object) and existential (what they are in themselves) status of appearances. *Things* are as they appear to be, in other words, although for the idealist the ‘stuff’ constituting these things is ‘ideal’ or ‘mind-like’ in nature, not physical or material in nature. But let us consider the main point: How can one thing (an appearance) be *of* something else (a sunset)? We know that something *is* simply by virtue of its being something as opposed to nothing, but

what does it mean to say that something is *of* something else? Fundamentally, how is *representation* possible? This problem does not arise for idealism (where things are as they appear to be) because there are no ‘representations’ or things to represent; things, that is to say, are *identified* with their appearances as far as idealism is concerned; appearances *instantiate* certain properties and do not *represent* them. It is here, therefore, that we must seek to determine whether appearances are self-subsistent, as idealism maintains, or physically-dependent, as realism maintains. In the former case an appearance just is what it is and nothing more; in the latter, an appearance, while something in itself, nevertheless represents something else which, in denying the arbitrary possibility of a pre-established harmony between the two, is the cause of the appearance in terms of both its representational and existential status. Appearances, in this latter case, are therefore epiphenomenal in nature because causally inefficacious – they do not cause the sun to set, in other words. If the opposite held then we would have to say that appearances do not represent things at all but cause things to happen, in which case to call these things ‘appearances’ would be a misnomer since they would be active causes of things and not representations of them.

For Copernicus, a sunset, while really apparent, is still only apparently and not physically real, a status belonging solely to the earth’s motion. The realist, therefore, must speak of a rotating earth and not a setting sun; it is *our position* in the world that changes and our experience conforms to this, not the world to our experience. But appearances are really apparent and so things in their own right. So what justifies one in positing these things, their causal relation to other things that are non-apparent and their capacity to exist as representations? And does an appearance represent anything real since, according to the realist, the sun does not actually set and yet it is this that constitutes the appearance of the appearance? So what is it that is here being represented? It is as though nothing is being represented because a sunset, according to the realist, is nothing in itself! But how can one claim that things may *not* be as they appear to be while insisting, nevertheless, that appearances are *of* things? This question in fact puts the cart before the horse. If appearances are epiphenomenal in nature then it makes no sense, in the first instance at least, to ask in what respect the *appearance* of something relates to its causal ground but, rather, to ask in what sense the *causal ground* relates to the appearance. Considered in this way, the cause of a ‘sunset’ is the earth’s rotation which, because we dwell on it, generates the appearance in us of a mobile sun

travelling in the opposite direction to that in which the earth actually moves. Now none of the actual events, it is true, is represented by us in terms of the appearances ‘corresponding’ to reality but it is legitimate to claim that *appearances represent the consequence* of our being moved by the earth, which consequence or effect manifests itself as a sunset. It is only in this way, indeed, that one can maintain a distinction between the appearance of an appearance and its existential status, hold additionally that appearances (as appearances) are epiphenomenal in nature and claim that things may not be as they appear to be although the appearances in question still represent something (i.e., the effect of our being moved by the earth). Appearances are therefore consequential and not corresponding representations, just as brush strokes on a canvas result from the artist having previously daubed his canvas with a paint-soaked brush. The appearance, however, is no ‘trick of the light’ or hallucination because, unlike the latter which can be thought of as internally rather than externally derived (although, as Kant legitimately states, the possibility of hallucination might still depend upon ‘the reproduction of previous outer perceptions’ (B278)), a representation derives its existence and appearance from an objective ground, i.e., one that is external to it.

The thing that cannot be represented – the claimed Achilles heel of realism which the idealist exploits to the maximum – is the causal nexus itself as it is deemed to obtain between appearances and the ‘world as it is in itself’. In response to this one can first remark that if this did manifest itself as an appearance then one could not distinguish ‘appearances’ and ‘things in themselves’ at all but, rather, one would become an idealist oneself and equate things with their appearances. That the causal nexus itself does not appear, while a necessary corollary of the realist’s *theory*, would necessarily follow if the world itself and our experience of it was constituted in the manner suggested by realism. That is to say, in virtue of their being epiphenomenal in nature our experiences are merely the effects of external causes, in which case it is obvious that we can have no experiential access to the causes themselves when these are obscured by the very effects they produce in us. To repeat an earlier example, how could one see the sun itself if the *thing seen* is an effect it produces in us (an appearance)? The most this might argue for, however, is the consistency of realism as a theory and not its truth because, as Norris states in respect of the sceptic’s position, it claims to be no less consistent since ‘our experience is perfectly compatible with the non-existence of those various objects, properties, causal powers and so forth which we take (naively) as bearing out the case

for scientific realism' (2004, 14–15). So let us turn to the fundamental premise of idealism, the fact that we cannot 'transcend' our experience in an attempt to determine the matter either way.

(iii) Departing from One's Senses

As alluded to above, Kant sought to distinguish 'outer' and 'inner' in his dispute with the problematic idealism described here and in support of his own transcendental idealism. It is a question not lacking in significance, however, why a philosopher who initiated a 'Copernican revolution in philosophy' advanced the following argument in proving 'the existence of other things' outside him:

I am conscious of my existence as determined in time. All time–determination presupposes something **persistent** in perception. This persistent thing, however, cannot be something in me, since my own existence in time can first be determined only through this persistent thing. <Thus the perception of this persistent thing is possible only through a **thing** outside me and not through the mere **representation** of a thing outside me. Consequently, the determination of my existence in time is possible only by means of the existence of actual things that I perceive outside myself.> (B275–6).¹

As previously cited, the example Kant gives of 'this persistent thing' (the anti-Copernican nature of which I have yet to see mentioned by any commentator on Kant) is 'the change in outer relations (motion) relative to that which persists in space (e.g., the motion of the sun with regard to the objects on the earth)' (B277–8). Now Kant is to be applauded, of course, for seeking to establish that there are things outside his representations, the doubt (or denial) that there are such things being 'a scandal of philosophy and universal human reason' (Bxxxix, note). But the fact that he states 'I perceive' these things 'outside myself' or that there is 'something **persistent** in

¹ Kant subsequently wanted to alter the last two quoted sentences in this passage (see Bxxxix, note) which he believed contained 'some obscurities' in their expression (without their being mistaken) and replace them with what he took to be a clearer account (given in the note). None of this detracts from the import of the original text, however (itself a reworking of an earlier argument of the first edition), and indeed something is lacking in his alternative rendering which is essential to his manner of addressing the problem namely that, although the persistent things in question exist 'outside' our representations, they are nevertheless *represented by us as being outside*. The example he gives of this persistent thing, to be considered next, was never amended by Kant.

perception' still makes one question whether he fully appreciated what *things existing outside his representations* actually meant. Of no less concern, however, is Kant's Ptolemaic example used in convincing one of the existence of 'actual things' when the earth (and everything on it) does not actually persist in space and the sun does not actually revolve around it despite our perceiving things this way. The example is also peculiar because it is 'my own existence in time' that is held to be determined by this persistent thing, not the existence in time of an outer thing (the sun and its change of outer relations to a persistent thing – the earth – which persistence presumably allows for *its* temporal determination). Unless, perhaps, it was Kant's intention to implicate the earth's 'persistence in space' as that which makes possible our perception of a sun moving in relation to it, in which case his example is still misguided since it is in fact a change in the earth's motion which generates this perception, the perception itself revealing to us no 'actual thing'. And although it is with regard to 'time–determination' that the motion of the sun in relation to the earth is to be utilized (as with a sundial for instance), which temporal effect 'in experience' (B277) serves just as well whether it comes about by means of the earth's diurnal rotation or a motion of the sun itself; the clear intention behind Kant's argument is to establish, *contra* problematic idealism, 'the existence of actual things... outside myself', an intention that can never be satisfied through examples of things we perceive, especially in respect of the earth from which standpoint, although we have *actual perceptions* here, its true motion cannot possibly be perceived as it actually is.

There are two aspects of his argument as a whole, however, which it is possible to address separately and which ought to be distinguished at the outset. This is the sense, first, in which 'alteration' presupposes 'persistence' and, secondly, in which 'inner' presupposes 'outer'. Because it does not follow from the fact that I am conscious of my existence in time that actual things outside myself are not also temporally conditioned (since 'temporality' and 'consciousness' do not exclusively imply one another), in which case the issue of alteration and persistence could apply to both inner and outer things. So in Kant's example it is presumably an outer thing – the sun – that here 'changes' while it is another outer thing – the earth – that 'persists', both of which presuppose space but also time, despite Kant seeming to imply here that space (outer sense) accounts solely for persistence while alteration relates solely to consciousness in time. But the motion of a thing (a non-conscious thing in Kant's example) necessarily

presupposes space and time while recognizing, in addition, that space may be no less alterable than the things that move in it, as in the case of an ‘expanding’ universe. But that ‘inner’ presupposes ‘outer’ is a special problem concerning myself only (in the form of my inner consciousness) from which, just because I am conscious, it does not follow that things outside me are also conscious so that the proposed relation between inner and outer may not apply there. But this is to assume, of course, that there *is* a realm outside me and so it is primarily with regard to ‘inner’ and ‘outer’ rather than ‘alteration’ and ‘persistence’ that a refutation of idealism should direct its argumentative force.

Regarding my inner representations, therefore, it is not equivalent whether I perceive things ‘outside myself’ or perceive things *from* outside myself (since in the former case I could be imagining these external things). But it is surely questionable, if things really do exist outside me and if perceptions are on the contrary in me, whether I could ever perceive things *from* outside myself (a contradiction in terms surely, since my perceptions are undoubtedly in me); though it would be just this that would be required in providing an experiential ‘proof’ of the existence of external things. But the idea that I could *represent* a thing *as being outside my representation of it* is a logical absurdity. This is not to deny that there *are* things outside me or that these things are not *related* to my representations despite existing outside them, but merely to make the analytical point that ‘experience’ proves nothing because I can have no experience outside my experience.² Kant’s rendering of the issue is thus a strange hybrid whereby, on the one hand, perception ‘is possible only through a **thing** outside me’, in which case this thing has an inferred existence and is not in perception itself; but on the other, that all ‘time–determination presupposes something **persistent** in perception’, in which case it is given immediately and not inferentially. Due to the constraints of transcendental idealism it was necessary that Kant should have made the existence of this persistent thing somehow inherent to outer sense since our existence in time or our *inner* sense

² Again, however, this is not to deny that *others* can have experience outside my own but only that I cannot. Someone who acknowledged the existence of other subjects of experience or other minds outside himself while denying the existence of ‘external things’ as such might be called a realist idealist in contrast to the solipsist who simply acknowledges his own existence. The realist idealist, however, would have to account for the possibility of separately existing subjects of experience in non–spatial terms; a difficulty which is only touted here without pursuing the subject further.

would not otherwise be determined. What allows for its determination, of course, is the fact that outer sense is 'in us' too, that is, 'a property of our mind' (A22=B37), with Kant insisting further that 'Space itself... together with time, and, with both, all appearances, are **not things**, but rather... representations, and they cannot exist at all outside our mind' (A492=B520). So something that was genuinely outside us (our 'minds' included) might have no determining effect at all or, if it did, the problems of 'inference' and 'interaction' would then arise. This is why he states that it is 'experience and not fiction, sense and not imagination' which assures us of the existence of outer things (Bx1) with his equating of 'actuality' and 'sensation' no doubt another factor determining his strategy here. This would account, too, for his suggestion that the earth 'persists in space' since this actually constitutes our perception of it and so it is clear why Kant claims to *perceive actual things* since he has previously assured himself of this by definition. On this interpretation, therefore, Kant's 'refutation' is simply a restatement of his transcendental idealism whereby nothing is genuinely outside us because this concept itself is derived from within. And the same holds for 'persistence' which, based as it is upon 'the concept of a substance... is not drawn from outer experience, but rather presupposed *a priori* as the necessary condition of all time-determination' (B278).

But he also sought to disprove problematic idealism, proponents of which doubt, scandalously according to Kant, whether anything exists outside our minds, so the persistent things in this instance must be 'external' to perception. Kant's ambivalence regarding this issue is present in his note amending the main text of the 'Refutation' where he states, on the one hand, that we have the 'representation of something **persisting** in existence', but on the other, that our representations are 'related to something permanent, which must therefore be a thing distinct from all my representations and external' (Bxli). It is not possible that both hold because the something which is 'related' to me, perhaps in a causal sense, is 'distinct from all my representations' and therefore not given to me in this mode. So, is this thing 'represented' and thus in perception or only 'related' to it as something non-perceptual existing outside it? Nothing is decided while this ambiguity remains and so the theoretical conflict between realism and idealism (problematic or otherwise) also persists. His attempt to satisfy these contradictory demands clearly accounts for the

ambiguity but it is difficult to see how one can refute this form of scepticism on the grounds that inner sense presupposes outer sense when ‘outer sense’ is ‘in us’ too.

A more profitable strategy in this regard would be to admit the sceptical premise that there is no ‘transcending’ one’s experience or perceiving things from outside oneself in proving or disproving the existence of external things and seek for the conditions of possibility (or rather impossibility) of *this*; that is, the impossibility of transcendence. Because the possibility that one could perceive things from outside oneself (an ‘external experience’ as opposed to an experience of externality) is not discounted solely on logical grounds as a conceptual impossibility derived from the principle of non-contradiction but also on real grounds as a physical impossibility derived from the nature of ‘things’.³

Regarding this impossibility, therefore, idealist or sceptical thinking, of whatever variety, takes as its foundational premise the fact that we cannot get outside our heads, our perspective or our experiences in confirming whether or not that which is ‘inside’ relates to something external, as an impression to the thing that impresses or an effect to its cause. But in respect of this universally acknowledged fact there is a fundamental question which philosophers never seem to ask themselves: *Why* is it impossible to transcend one’s experience? As a representative sample here are two philosophers who fail to ask themselves this question, simply stating and not explaining the fact. Using, as an example, the experience of our standing in a rain shower, Donald Davidson maintains that one cannot be certain a ‘confrontation’ between the rain and one’s body is actually happening because ‘[n]o such confrontation makes sense, for of course we can’t get outside our skins to find out what is causing the internal happening of which we are aware’ (2001, 144). Richard Rorty stresses the same point, only with a linguistic angle in his case: ‘[I]t [is] impossible to think of language [e.g. ‘It is raining’] as something which may or may not (how could we ever tell?) ‘fit the world’’ (1986, 337–

³ Kant holds to this distinction between logical and physical impossibility himself while wittily reproaching Lambert and others who held that matter filled a space simply because the ‘concept’ of something real in space included, as predicate, its ‘solidity’, with Kant exclaiming that ‘the principle of noncontradiction does not repel a matter advancing to penetrate into a space where another is found’ (*Metaphysical Foundations*, 4:497–8).

338). This shoulder shrugging response to the problem, I would suggest, does not befit the philosophical significance of the issue – the most fundamental of all in many ways since it colours everything else we care to think about – and so an attempt at a solution would at least seem warranted. And here, to borrow a phrase from Kant while rejecting his take on the subject, the game that idealism plays can with greater justice be turned against it; because what reasons or circumstances are there that could possibly account for this fact? There would appear to be no intermediate or neutral position here so that either ‘experience’ and its subjective ground is all that there is, meaning there is no ‘outside’ place we could occupy in acquiring the desired perspective on ourselves and our supposed relation to external reality; or there is such a place, a physical world if you will, consisting of non-empirical things existing outside our experiences which condition the latter in the same way that causes condition their effects. Let us call the former the ‘inside-out’ thesis (i.e., ‘outside’ is really ‘inside’ in respect of its being subjectively derived and not in itself transcendent or ‘external’) and the latter, ‘outside-in’ (whereby ‘inside’, i.e., the empirical content of our consciousness, derives from ‘outside’ or, in the case of the subject’s body, occupies the same objective plane as the latter which accounts for the possibility of a causal relation between the two).

Kant’s idealism suffers from a crucial ambiguity (concerning the status of ‘things in themselves’ *vis-à-vis* experience) which has been the subject of debate since the *Critique*’s inception. Whether one or other of the alternative interpretations is accepted (since it does not appear that the issue can be resolved to both sides’ satisfaction) will determine whether his position should be read as essentially ‘inside-out’ or ‘outside-in’. Thus on the one hand and as regards the:

...concept of a **noumenon**, i.e., of a thing that is not to be thought of as an object of the senses but rather as a thing in itself... we have no insight into the possibility of such *noumena*, and the domain outside of the sphere of appearances is empty... The concept of a noumenon is therefore merely a **boundary concept**. (A254–55=B310–11).

Accepting this negative conceptualisation of things in themselves places Kant firmly within the ‘inside-out’ camp since there is no ‘domain outside’ to be occupied in gaining a transcendent vantage point on ourselves; a corollary of this being that objects we perceive outside ourselves are not ‘**inferred**’ to exist at all but are ‘really immediate’ (B276). But on the other hand, as previously cited:

I by all means avow that there are bodies outside us, that is, things which, though completely unknown to us as to what they may be in themselves, we know through the representations which their influence on our sensibility provides for us, and to which we give the name of a body... Can this be called idealism? It is the very opposite of it. (*Prolegomena*, 4:289).

This positive characterisation, which those in the opposing camp deem ‘semi-critical’ at best, suggests an ‘outside-in’ conception of things in themselves which are inferred to exist ‘through the representations which their influence on our sensibility provides for us’; although this does not preclude those bodies that are *sensibly* represented by us having an immediate as opposed to inferred existence, since it is an uncontroversial point to hold that an object’s appearing to oneself occurs ‘in us’ or that the ‘really apparent’ is something we have direct awareness of or is indeed that which constitutes ‘awareness’. One should add to these considerations the fact that, as well as our not getting ‘outside’ ourselves (for whatever reason), that which may possibly be outside cannot get ‘in’ either; which is to say and to quote Kant, a thing’s ‘properties cannot migrate over into my power of representation’ (*Prolegomena*, 4:282).

In an attempt to settle this issue let us see what bearing the preceding discussions have on the matter. Whether one subscribes to the ‘inside-out’ or ‘outside-in’ thesis, in both cases it is acknowledged that there is no transcending experience, the difference residing in the explanation as to why this should be so. It is only in the latter case, however, that one can propose anything like a satisfactory solution and this in terms of the very circumstance which seems to generate the problem in the first instance. For what else would be required in gaining a transcendent vantage point on oneself and external reality but that one be capable of occupying two different places at the same time and, in so doing, observe the relation that obtains between inner and outer, between one’s experiences and their causal grounds (never mind that this ‘observing’ would also be a kind of experience – perhaps a transcendent as opposed to immanent experience – because the scenario, as has been admitted, is not a realisable one). But what else could *prevent* one’s transcending to this vantage point but the fact, inherent in the very nature of the space-time continuum, that it is impossible to occupy two different places at the same time? – the place one occupies constituting a point such that, in occupying a *different* place, one is required to *move* to it, which motion takes time and thus a change in that too. Hence it is this *physical impossibility* which accounts for or conditions the

impossibility of transcendence as well as supporting the claim that it is we who are immanent to the world, not the world that is immanent to us.

And so the reason one cannot ‘transcend’ oneself seems obvious – it would require that one literally climb out of oneself to get a good look at things *from* outside – but then, if this were at all possible, the ‘one’ doing this would not be ‘one’ but ‘two’. An idealist, of course, cannot claim that it is the fact we have only *one body* that prevents our being externally related to ourselves because this would be to adopt a transcendent, physiocentric view of the matter which gives primacy to bodies in all questions concerning the possibility of experience; that is, it would not account for the impossibility of transcending experience but would presuppose its physical impossibility.

It is an *external impossibility*, however, which conditions the internal one (the impossibility of transcendence), not *an impossibility of the external* because if space and time were instead in us or in our experience alone – immanent and not transcendent in nature – then what would prevent our experience being such that we could very well occupy two different places at the same time to the extent that we could ‘render ourselves objective’ and perceive our physical selves, to take a pertinent example, rotating rapidly in space while situated on the earth as it spins on its axis? If the possibility of experience (and the possibility of ‘objectivity’ itself) rests within us then, like the equant of Ptolemaic theory as the non-movable place from where everything external is objectively revealed (or rendered, as with Kantian idealism) there would be nothing it would be impossible to experience, not only of ourselves as we may be objectively but also *an experience of ourselves experiencing something*, as when we hold a mirror in front of another, the resultant reflections of ourselves rebounding to infinity, creating the characteristic impression of a world within a world within a world. This ‘holding a mirror to oneself’ or being a spectator of oneself (as one is physically) would be the inevitable consequence of an internalist critique of space-time, lacking as it does an external restraint upon internal happenings; unless, that is, and as stated previously, one held the wholly arbitrary thesis that our body constitutes an exception in terms of its motion being objectively unrenderable. But if space and time are immanent in nature what is there to prevent our experiencing ourselves in as objective a fashion as any other putative object? It seems that nothing would prevent us, on the immanent

account, being externally related to ourselves – being the spectator *and* the moving object, the observer *and* the observed, at one and the same time – and so, in effect, being in two places at once and rendering ourselves objective. This, indeed, would be the inevitable outcome of our rendering objectivity from a single standpoint, which standpoint ought to provide as clear a perspective on one's physical self as on any other object. But it is because we can't render ourselves objective at all – because of the impossibility of transcending experience or of perceiving ourselves 'on the move' that was thought to generate the problem of external reality in the first instance – that we can be assured that space and time are not derived from within because it is only these phenomena in combination with one another which account for our inability to do so. On the contrary, were these phenomena thought to be so derived we would have as adequate and objective a perspective on our bodies as on any other moving object and so actually would be capable of transcending ourselves.

Thus Kant's idealism deduces its own absurdity because he first denies that we can apprehend things 'outside' ourselves in a transcendent sense but then suggests, in place of scientific realism, that space and time are internally derived, in which case there ought be no barrier at all to our perceiving ourselves (as physical beings) *from* outside as we revolve around the sun since it is we who place the *experienced* self, as its condition of possibility, in a physical world or in 'the space, in which we are to arrange our experience of motion' (remembering that 'experience', for Kant, evidences 'actual things'). And it does not seem possible to argue, specifically with respect to the visual field, that it is because our eyes are orientated outwards that we fail to perceive ourselves from an external perspective because, as physical objects themselves, our ocular organs ought be no less available to experience than any other objects we arrange in space; but these objects never appear within the visual field, just as our revolutionary motion does not. This all suggests that Kant's philosophy, both literally and metaphorically, contains a fatal anomaly in the form of a 'blind-spot' whereby something that ought to be the case – that our physical selves in space ought to be no less an object of experience than any other – does not in fact pertain.

Let us add to this argument a final consideration. If sceptics are to propound the thesis that there is no getting outside of one's experience to a reality beyond – either because there *is* no reality beyond or because transcendence is impossible – they are, of

necessity, committed to the view that all there is or all that we can have access to is *inside*. Regarding ‘appearances’ themselves, however, there is no ‘inside’ or ‘outside’. That is to say, one might perceive this ball inside this box or this car outside this house; but is the *appearance* of the ball inside the *appearance* of the box or the *appearance* of the car outside the *appearance* of the house? By arguing this way we would be claiming that appearances can exist inside or outside of one another; but then one would not perceive the car outside the house if the appearance of the car existed *outside* the appearance of the house; and were the appearance of the box to be outside the appearance of the ball one would not perceive the ball *inside* the box. Thus every appearance, shall we say, or the objects represented by them, inhabits the same place, even though it is asserted that we ourselves inhabit nothing (or it is at least questioned whether we do). But where exactly is this place that the things we perceive inhabit? Well, if an object appeared, not to me but outside of me, then I would perceive nothing; I self-evidently do perceive things, however, therefore this ‘being appeared to’ must occur inside me. But what am I and where do I exist? If it is asserted that I too exist merely in these appearances *then I would exist inside that which is inside me*, an obvious absurdity. Hence I must, of necessity, exist outside of these appearances and the explanation as to why there is no ‘inside’ or ‘outside’ with respect to appearances themselves and the objects represented by them is that these objects are *all of them* outside me, this being the place they actually inhabit. So here we have discovered *external reality*. The I that exists in itself is no mere bundle of perceptions (or bundle of thoughts come to that, thoughts being ‘inside’ one too); the I that exists is transcendently real (as are also the objects perceived).

6. The World–Mind Relation

(i) The Emptiness of Concepts

If it is granted (as nowadays it generally is) that subjects do in fact inhabit a world, there remains plenty of room for ‘scandalous’ scepticism regarding such matters as our ‘awareness’ or conceptual ‘grasp’ of this world. And in this regard some may wish to assert the ‘sceptical’ solution of Wittgenstein as a third possibility opposed to the two presented above (i.e., the inside–out and outside–in theses), namely that all of this is just communally–sanctioned word–play – perhaps the ‘epistemological’ or ‘ontological’ language–game. Wittgenstein’s motto, indeed, might be suitably rendered: ‘Neither a realist nor idealist be’ since we neither *borrow* anything from the world (as in the realist case) nor *lend* it anything (as with transcendental idealism), although we can certainly ‘say’ whatever we like about it: ‘It is what human beings *say* that is true and false; and they agree in the *language* they use’ (2001, s.241; Wittgenstein’s emphasis). But in order that Wittgenstein’s words make sense ought there not be a ‘language–game’ language–game as that which accounts for the meaningfulness of the ‘language–game’ proposal itself (in the same way he would argue that there is a ‘Metaphysical language–game’ to which our ontological commitments internally relate)? And why stop here since surely this ‘language–game’ language–game, in acquiring its meaningfulness, must itself be expounded within a meta–language–game language–game which would in turn be (for it could be nothing else) another language–game? If ‘meaning and truth are internal to a language–game’ – from whence does *this* claim derive its meaningfulness and truth if not from yet another language–game to which it internally relates, namely the ‘language–game’ language–game? It is not clear that Wittgenstein’s words – or any account which attempts to ground anything at all solely within a logico–semantic context where *things are as we say they are* without our perhaps understanding what we mean by what we say here since what we mean by what we say depends on what else we say, which in turn depends, etc., etc. – can be justified by anything except an indefinitely deferred quest for meaning, which is as good as to say that he makes no sense at all.

Or perhaps Wittgenstein does recognize this predicament since he states that the justifications we appeal to in grounding our assertions ‘come to an end sometime’ and

for him what is left ‘is not an ungrounded presupposition: it is an ungrounded way of acting’ (1975, s.110) or ‘life–form’ as he elsewhere calls it (2001, s.23). So perhaps meaning and truth are not wholly internal to a language–game after all, unless ‘acting’ and ‘life’ are themselves grounded in a language–game rather than something ‘independently’ constituted (as perhaps a linguistic idealist would maintain, though the infinite regress would still pertain and, as a result, one would be tempted to say that this idealist is talking nonsense simply because he has not yet *reached* the point where he could begin to make sense). But even so the problem discussed in the preceding section did not concern our ‘just doing things’ in an ungrounded way but the fact that we just *couldn’t* do something, namely transcend whatever it is that we were ‘just doing’. Because it is perfectly reasonable to suggest that we *do* things as well as *say* things, which doing of things is not to be equated with *anything said* since, in saying something, one actually does something; that is to say, the *use* of a language (what human beings *do* with language – speaking, reading, writing, etc. – all of which, it should be emphasised, are *physical acts* in addition to cognitive) is not itself a language and it is this aspect of reality, where things are done or where things happen *independently* of what we *say* is done or happens, which grounds meaning and truth (so, at least, it will be argued here).¹ In respect of these ‘things’, of course, Wittgenstein counsels: ‘Whereof one cannot speak, thereof one must be silent’ (1922, 189); although since we find ourselves *reading* those words we ought, I would suggest, to loudly disagree.

Regarding the ‘linguistic turn’, therefore, the phenomenon of language has assumed the place once occupied by ‘appearances’ for the idealist philosophers of old since, nowadays, many similarly deny a distinction between the content of our assertions (what it is we say *of* things) and things as they are in themselves, included in the latter

¹ The expression ‘you’re just seeing things’ is instructive as regards the common–sense notion of truth. It is an ironic expression given that it pertains when someone fails to see anything real. But that’s the point – ‘seeming’ is not ‘being,’ just as ‘truth’ is not ‘saying’; that is, ‘you’re just *saying* things’ – hot air, waffle, nonsense, analogous to dreams, illusions or mirages – said to someone whose ramblings (another appropriate word) do not accord with anything found in the real world. For the committed idealist, of course, the expression ‘you’re just seeing things’ – as though *what* we see may *not* be the case – makes no sense at all; just as for the committed Wittgensteinian, the expression ‘you’re just saying things’ – as though what we say, as long as we agree with each other, may not be the case – makes no sense at all.

our capacity to ‘assert’ things in the first instance. Thus, whatever we say is the case *is the case*, just as whatever appeared to be the case was the case. For the modern realist, however (her contemporary opponent preferring the name ‘anti–realist’ or ‘pragmatist’ to idealist), what we say is one thing and what there is, something else entirely (*de dicto/de re*). Her perspective on things, like her name, remains a consistent one, just as her opponent’s remains incredibly baroque because all sorts of things can be *said* to exist.

Hence the mere attempt at a transcendental argument aimed at proving that the human mind is world–dependent – not the physical world mind–dependent – is met with resistance by many contemporary philosophers who have assumed (what they take to be at least) the Kantian mantle in disputing realism of the transcendental kind. A fundamental strand of this oppositional stance concerns the constitutive role ‘concepts’ are thought to play in framing our ‘picture’ of the world. Such commonality as exists between the argument presented in the preceding section and the neo–Kantian arguments presented here includes a denial that we can transcend our world–view in gaining direct access to things as they exist in themselves; the claim from the opposing camp, however, being that this is because we are confined, as already said, to a ‘conceptual scheme’ or ‘language–game’ – acquired through a process of acculturation perhaps – which it is impossible to transcend in determining whether the picture presented corresponds to anything at all let alone to things in themselves. The purpose of this section is to challenge the idea that *concepts in themselves* can play anything like the constitutive role claimed for them; it being argued, instead, that our conceptual awareness depends entirely on our sensible awareness which thereby anchors our thoughts to the world of experience (this in turn anchored to the world as it exists in itself); and this another sense, of course, in which our cognition conforms to objects.

In recalling, first of all, Kant’s take on the subject, a philosophical slogan as significant in its impact on the intellectual firmament as Descartes’ *Cogito ergo sum* is Kant’s ‘Thoughts without content are empty, intuitions without concepts are blind’ (A51=B75). It is the combination or synthesis of concepts and intuitions which, for Kant, permits the occurrence of empirical cognition (*viz.* ‘experience’) – his slogan the most concise formulation of this (it is to be assumed that the terms ‘thoughts’ and ‘concepts’

employed here are used synonymously). If the ‘content’ in question concerns empirical content (sensations or the ‘matter’ of cognition in Kantian terms) then for Kant, in the absence of such material, all our concepts are rendered ‘empty’.² The question addressed here is whether those language philosophers who take seriously at least one half of Kant’s claim that the sensible component of experience is insufficient for cognition (with the idea that our perceptions, to count as such, must be ‘theoretically–informed’, for instance) duly recognize the remaining half of his claim – that conceptualizations without empirical content are vacuous. Because it is the common practice of the conceptualist, it will be argued, to relegate the empirical to a mere auxiliary role – concerning, perhaps, the ‘causal’ grounds of our beliefs – while refusing such a *constitutive* or justificatory role, so that our conceptualizations alone become sufficient for empirical cognition. If we are to take Kant seriously in this regard, at least, then such claims are themselves vacuous, implying that we could ‘cull a real object out of logic’ (*Correspondence*, 12:370). This is impossible, he suggests, because by itself ‘logic cannot lead to any material knowledge’ (ibid.).

A paradigmatic case of this failure fully to acknowledge Kant’s dictum can be found in the works of Wilfrid Sellars and Robert Brandom who, while denying altogether the sufficiency of ‘empirical content’ for knowledge (i.e., our ‘sentience’), posit, in the case of Brandom, something called ‘conceptually articulated propositional contents’ instead (op.cit., 123), taking it for granted that the reader will understand precisely what constitute these alternative ‘contents’ in permitting us ‘sapience’ (ibid., 121). Such contents, it will be gathered, are in fact husks of knowledge, mere nullities in the absence of that sensible grounding which supplies them with the relevant substance and meaning (just as, analogously, the black ink that you can see here gives the written word

² John McDowell begins his inquiry in *Mind and World* with a consideration of Kant’s slogan also (op.cit., 3) although the conclusion he draws from it is different to that advocated here. For McDowell there is such a thing as ‘empirical content’ and such a thing as ‘conceptual content’, although the two are only separable in analysis, not in fact, because experience is, for him, something of a hybrid – comprised, shall we say, of ‘empirico–conceptual content’ – meaning that concepts bring as much to the union as our sensations. If we discount Kant’s ‘pure’ categories of the understanding and consider empirical concepts only (clouds, cats, warmth, etc.) it is argued here that a concept’s content is derived solely from the empirical or sensory data to which it applies, entailing an absolute emptiness which nothing but our experience can remedy.

its substance and the sounds you hear, the spoken word). Because Kant's is not merely an epistemological theory but a theory of meaning too, inasmuch as he deemed all thought meaningless – literally, 'without **sense**, i.e., without significance' – which made no reference to sensibility. Strawson labels this aspect of Kant's doctrine his 'principle of significance' which asserts that 'there can be no legitimate, or even meaningful, employment of ideas or concepts which does not relate them to empirical or experiential conditions of their application' (1966, 16). The empirical is, as it were, our 'food for thought' without which every concept would wither and die, assuming it even began to function in the first place.

It will be further argued that it is not a prior possession of concepts which enables us to *recognize* the particulars subsumed by them but, rather, a prior recognition of particulars which enables us to *employ* the concepts instantiated (and here we must part company with Kant too, adhering merely to his 'principle of significance', since we deny his assertion that concepts assist in *constructing* our experience – or what is the same for him: 'the world' – and therefore deny that there are such things as synthetic *a priori* judgments). Were the former to pertain, with respect to our recognitional capacities, this would presuppose that the concepts in question are already possessed of meaningful content in virtue of which we could pick out or map certain features of the world; a view propounded by Wilfrid Sellars who remarked that, rather than

...coming to have a concept of something because we have noticed that sort of thing, to have the ability to notice a sort of thing is already to have the concept of that sort of thing, and cannot account for it. (Op.cit., 87).

While this contradicts Kant's claim that concepts are *empty* in and of themselves since they require, in order to function at all, that material acquired *via* sensibility in enabling them to be meaningfully employed at all; the ability to 'recognize' objects is additionally a non-conceptual or non-verbal capacity upon which all our 'thoughts' about the world ultimately depend. But what precisely does this capacity consist in and what is it, indeed, that we recognize?

The fundamental distinction between ‘concepts’ and ‘intuitions’, between that which is properly ‘thought’ and that which alone can be termed ‘experience’, resides in that other philosophical distinction of note which contrasts the ‘general’ with the ‘particular’. While it cannot be doubted that there are particular concepts (‘dog’, ‘cat’, ‘planet’, etc.) it is questionable whether there exist any *concepts of the particular*. That is to say, one can possess every concept deemed applicable to a particular thing yet nothing will be asserted of, believed, known or thought about this thing until one has actually encountered it by means of one or other sense modality. Even then, however, one will not have won possession of a new ‘concept’ since all particulars are perceived in non-conceptual terms, concepts relating instead to types rather than tokens and ‘types’ are not things which can be ‘perceived’ at all. In illustration let us consider this dog here Fido. We possess, in advance of our meeting him, all the concepts deemed applicable to such a thing, from the most general to the most specific – the concepts ‘living organism’, ‘mammal’, ‘quadrupedal’, ‘carnivore’, ‘furry’, ‘bad-breathed’, ‘yappy’, ‘Jack Russell’; yet until we *perceive* this particular dog here Fido (or see his image in a photograph, hear his barking behind the fence, etc.) our concepts, and unlike our experience, assist not one iota in allowing us to *know* Fido. It is not as though, either, and having met Fido, we now possess the concept ‘Fido’, as if it were a *concept* we had just perceived and not the dog. We might now know Fido or have beliefs about him; what we do not have is the concept ‘Fido’, one to be placed at the end of that long list of concepts we had articulated prior to our meeting him.

There are two reasons for this: It is not simply that all concepts are, by definition, general (i.e., applicable to many cases or multiply-instantiated) and that the concept ‘Fido’ (relating to this particular dog here Fido) is only applicable in one case or is singly-instantiated; it is rather that there is no means to *differentiate* the perceptions of Fido’s bark or his build or the texture of his fur from the putative concepts themselves. And since it cannot be the conceptualist’s aim to assimilate sensory data to concepts – acknowledging, surely, that they belong to distinct classes of their own³ – it is questionable whether the concept ‘Fido’, if there is such a thing, possesses any differentiating characteristics which permit us to consider it a *concept* rather than, say, a

³ McDowell disputes this point; his argument to be considered in the following section.

perceptual image. In contrast we can consider ‘furriness’ to be a concept precisely because it does not depend, for its content, on any particular instantiation of furriness in relation to which we would have no means to differentiate the concept and the perception of this particular itself. But conversely, in differentiating one *particular* instantiation of furriness from another, the concept ‘furriness’ is of no help at all since each instantiation is equally subsumed by the concept. It is this factor which enables us to determine that we are *thinking* something rather than *perceiving*, *remembering* or *imagining* it. Because assume that we did now possess this singular concept ‘Fido’, is it the case that we could then summon him into our presence, as it were, simply by *thinking* about him, which occurrence would be indistinguishable from our actually *perceiving* him enter the room? If that god-like power is denied us (i.e., Kant’s ‘intellectual intuition’ possessed by ‘a divine understanding, which would not represent given objects, but through whose representations the objects would themselves... [be] produced’ (B145)) so that concepts and percepts are indeed held to be distinguishable, upon what, in that case, does this distinction rest if not that described here and how is one then to account for the possibility of our concepts being ‘applied’ to perceptions (problems which do not arise on the assumption that our empirical beliefs are *constituted* by the perceptions themselves)?

It seems, therefore, that generalizability is indeed essential for something’s being considered a concept and, concomitantly, essential for perceptions that they be both particular in themselves and *of* particulars (the two are essentially related since it is only because we ourselves exist as particulars that we can literally grasp the particulars around us, e.g., this particular hand can stroke, and thence perceive, the soft fur of this particular dog; something that would not be the case if we existed as some sort of ‘Idea’ or ‘*Nous*’, the intellectual functioning of which depended upon generalized ‘ideas’ or ‘concepts’). The question raised, among others, by Hume (1978, 17) whether our general concepts are truly abstract in the sense that ‘we abstract from every particular degree of quantity and quality’ in our thoughts about triangles for instance – an idea he opposed by arguing that nothing can be conceived without a determinate degree of both – is certainly of relevance to this debate. Whether wholesale abstraction in the manner Hume opposes is possible or not, however, does not affect the general claim made here that every concept (whether it is a particular thing we have in mind when we conceive it

or an amalgam of several particular things of the same kind), in order to be considered such, ought to be applicable in more than one case, thus indicating that we are *thinking* something rather than *perceiving* it. This explains, also, why every concept admits of being pluralised, e.g., ‘languages’, ‘words’, ‘concepts’, ‘abstractions’, ‘dogs’, etc.; although the suffix ‘s’ is not always essential in this regard, for example in the case of adjectives, e.g., ‘black dogs’. The concept ‘black’, however, is clearly multiply applicable still, something which obviously cannot be said of our friend here ‘Fido’.

The second reason is this: If all knowledge of particulars is essentially ‘a linguistic affair’ (Sellars, op.cit., 63) and if language use and acquisition is essentially a ‘social’ affair (Brandom, op.cit., 150), everything we take to be constitutive of ‘experience’ ought to be *communicable* (i.e., expressible in terms of ‘conceptually articulated propositional contents’). It seems clear, however, that empirical contents (sensations, perceptions and the like), though it is possible they can be *averted* to linguistically, are essentially non-conceptual in nature and are therefore inexpressible. This is why, for instance, and having been *told* that Fido’s breath is rancid, it is not until we smell it for ourselves that we can truthfully say: ‘*I see what you mean*’. We might have known what ‘rancid’ meant beforehand and believed his owner when she informed us of this, but we could know nothing of Fido’s particular stench until we experienced it for ourselves (at least it would be a brave philosopher who claimed to know precisely what Fido’s owner meant prior to his or her olfactory acquaintance with him – the dog, that is). This is not simply a matter of lacking the words to describe a specific sensation – merely, as it were, a communication problem – but an *ontological* problem on a par with that of ‘other minds’; only here the problem is not whether Fido’s owner indeed possesses a mind but the fact that the experiences she undergoes are essentially incommunicable *because* non-conceptual.

Let us assume, however, that a word is invented or an existing word appropriated to refer to the particular stench of Fido’s breath. Now, having both of us smelt it, Fido’s owner and I are able to communicate this fact, saying things like: ‘His breath hums again; you know, that boggy smell’; and this is all well and good. But what does the ‘you know’ locution imply here? – surely that one has undergone the same sensation as one’s interlocutor and thus grasped their meaning, not that one has grasped their meaning having never undergone the same sensation. If empirical contents are

communicable it is not because they are conceptual in nature but, rather, because the parties communicating have experienced the same thing. In doing so, however, they have not conceptualized the empirical but merely labelled it. The ‘socialization’ essential to mutual understanding does not derive from a shared possession of *concepts* but a shared undergoing of *experiences* (facilitated, in turn, by our equivalently constituted perceptual capacities); and the ‘agreement’ among language users concerns the words used to label these experiences (words labelled, in turn, ‘concepts’), not the concepts such experiences instantiate since these are, in fact, non-conceptual. And this applies to every empirical concept which are all of them empty (i.e., nothing) until substantiated by experience.

Sellars and Brandom, of course, reject the view that concept acquisition is a matter of our being *aware* of something and then labelling it with the correct term, having learnt which words or concepts apply to which things, since it is only once one has acquired the concept that one becomes ‘aware’ of anything (Sellars, op.cit., 66). Thus for each of them and in light of the preceding discussion, it is the tail that wags the dog. Unless we had *prior* possession of the concepts ‘mammal’, ‘quadrupedal’, ‘furry’, ‘tail’, and so on, we would never grasp or recognize what this ‘Fido’ thing before us is (although we may undergo those sensations that his barking, etc., causes in us).⁴ Although it can be argued that our acquiring or grasping of all of these concepts is facilitated in precisely the same way that we come to know Fido (i.e., through a process of our learning, experientially, the correct labels for things), we shall first examine two fundamental problems with the Sellarsian/Brandomesque approach: that concerning concept *acquisition* and that concerning the somewhat flimsy role ascribed to the *causes* of our empirical beliefs. Dealing with the latter first, Brandom’s commentary on Sellars’ *Empiricism and the Philosophy of Mind* deals in the most cursory manner with the topic, although he is not alone among language philosophers in dealing so cursorily with the subject as to be dismissive of it. Thus Rorty states: ‘We understand all there is to know about the relation of beliefs to the world when we understand their causal relations with the world’ (1986, 325) – which is about all he says on the matter. Similarly Davidson:

⁴ Whether the ‘priority’ here is temporal or logical is irrelevant to the argument when it can be demonstrated that a grasp of concepts is not necessary for us to recognize or become aware of – in an epistemologically robust sense – objects.

‘Sensations no doubt play their role, but that role is not that of providing evidence for the belief’ (2001, xvi; the role being, of course, ‘causal’). Thus Brandom declares in a similar vein:

[E]verything irrelevant to justification, either to knowing what would be a justification or to being entitled to produce one, is a noncognitive causal antecedent, perhaps a necessary condition of empirical knowledge, but not one that is constitutive of it. (Op.cit., 160).

Within the ambit of ‘noncognitive causal antecedent’, of course, Brandom must include the physical world in its entirety, ourselves as physical beings within it and the causal interactions adhering to both, all of which are ‘irrelevant to justification’ yet ‘perhaps a necessary condition of empirical knowledge’. The ‘necessity’ he posits here (along with the grudging ‘perhaps’) must be the most unnecessary necessity ever conceived; as though one claimed oxygen was necessary for respiration but had *nothing* to do with our survival. We know, of course, that oxygen plays a *constitutive* role in our survival but Brandom refuses to grant even this to our sentience and so is as guilty of the same ‘bland confidence’ McDowell accuses Davidson of, namely ‘that empirical content can be intelligibly in our picture even though we carefully stipulate that the world’s impacts on our senses have nothing to do with justification’ (op.cit., 15). On what, then, does Brandom base his confident dismissal of everything ‘causal’ to the question before us?

Referring here to our previous discussion, we must first clarify what is meant by *empirical* cause. The ‘causes’ in question are not colours, sounds, smells, and the like, since these are the *effects* of the world’s impacts on our organs of sense. By ‘empirical cause’ one means, therefore, *physical* cause – the physical interactions of bodies in space which are registered by us as sentient beings with functioning central–nervous systems. Thus when we *see* something red it is not the *red colour* which *causes* our belief that we can now see something red since the causal antecedents have already occurred in producing this colour (*via* the selective absorption of light of the object’s surface structure, the ratio of cones and rods in our retinas, and so on). Sensations, therefore, of whatever sense modality, are not causes which are at one remove from our judgments or beliefs regarding them, rather they are at one remove from the interacting ‘objects’ which causally produce them, e.g., a dog’s fur coat and our hand, the interaction of which causes the tactile sensation of smoothness, which *sensation*,

however, since it is an epiphenomenon, does not *cause* anything, with the *metaphenomena* being responsible for that.

Now before we consider the implications of this causal account for our ‘epistemological awareness’, let us consider the opposing side’s take on the subject. The idea that it is ‘thought’ which grants us objective awareness certainly derives from Kant and an excellent summary of this (quoted at length since it epitomises everything so far discussed) appears in Kemp Smith’s *Commentary* (op.cit., 275):

[W]e can account only for the existence of our sensations and for the order in which they make their appearance in or to consciousness, not for our awareness of them. To state the point by means of an illustration. The impinging of one billiard ball upon another accounts causally for the motion which then appears in the second ball. But no one would dream of asserting that by itself it accounts for our consciousness of that second motion. We may contend that in an exactly similar manner... the action of an object upon the brain accounts only for the occurrence of a visual sensation as an event in the empirical time sequence. A sensation just as little as a motion can carry its own consciousness with it.

But can a concept, just as little as a sensation (or even in co-operation with sensation), ‘carry its own consciousness with it’? At least with sensations something *happens* (i.e., objects in the world impact our perceptual faculties) but does anything ‘happen’ in the case of a concept? Does an object impact our perceptual faculties thus generating a sensation, with the sensation then impacting a concept which subsequently brings the sensation to life, perhaps through a rebounding force, in a flash of awareness (as though, metaphorically, there were three billiard balls here – the object, the sensation and the concept)? It seems misplaced to speak of concepts as things that can be ‘impacted’ (or of sensations as things which do the ‘impacting’) but still the question remains: How does thought confer the light of awareness upon our visual sensations?

This talk of sensations impacting concepts may seem absurd but the language Kant uses to describe the ‘process’ implies it:

[I]t could well be that even our experiential cognition is a composite of that which we receive through impressions and that which our own cognitive faculty (merely *prompted* by sensible impressions) provides out of itself (B1–2; my emphasis).

Both Kant and, for instance, McDowell, acknowledge that our ‘minds’ cannot foresee the contingent experiences we have ‘in the empirical time sequence’, which is why Kant himself states that ‘All our cognition *starts* from the senses’ as opposed to its being determined in advance by the ‘understanding’. But if visual sensations are not causally efficacious (because they constitute ‘effects’ rather causes), on what grounds are we to suppose that they nevertheless give our understanding a ‘nudge in the right direction’, as it were, in allowing it, in McDowell’s words, to ‘tak[e] hold of the world’ (op.cit., 58)?

Our ‘awareness’ or ‘knowledge’ here is of a specific kind, namely the ‘awareness of something as something’ (Brandom, op.cit., 150); this expressible in terms of ‘conceptually articulated propositional contents’; an example being: ‘The yappy, rancid smelling and smooth-coated thing I see before me *is a dog*’. It is asserted that we are only ‘aware’ of the auditory, olfactory and tactile sensations in this case (the occurrences of which are accepted in terms of their *causing* this belief as thus propositionally expressed, although it is unclear just how *that* occurs) because we possess the concepts ‘yappy’, ‘rancid smelling’, ‘smooth-coated’ and ‘dog’; the latter, which encompasses all three, allowing us to *conceive* of this thing as a unity or ‘object’.

The problem remains, however: How is it that we come to have this belief? Leaving aside the problem of causation (which, it is maintained, remains deeply problematic on this account), let us consider these propositional contents themselves. In what way are the concepts involved *informative*? Someone may inform us, for instance, that there is a dog in the room next door. Assume, however, that we are somewhat unwise in the ways of the world inasmuch as we have never encountered a dog before (or indeed any animal) so that we are compelled to ask for additional information. ‘Dogs’, we are told, ‘are quadrupeds.’ Not knowing what that means we ask for more. ‘They are four-legged and furry.’ Not knowing what ‘furry’ means we ask again. ‘They have smooth coats and they stink.’ ‘They wear coats?’ ‘No, they malt and bark.’ ‘Like this whiskey and trees?’ Our informant yanks the door open out of sheer frustration at this point so that we can finally see what she’s been talking about and in the room is an oak table with an empty bottle of whiskey on it and, stood wagging its tail next to that, a dog. We then exclaim: ‘What were you talking about? This ‘dog’ is nothing like this table; look, can’t you see

the difference? It's obviously alive for starters. Tut, tut, tut... You're right, though, it does stink.' The moral being, of course, that 'words' make us none the wiser.

Obviously some fun was had here with the use of homonyms but the illustration remains pertinent. That a 'quadruped' is something 'four-legged' is in analytical truth the informativeness of which is purely definitional. The terms by themselves, however, account neither for my ability to *apply* them to *this thing here and now* as though their 'contents' can indeed assist me in grasping these things in as definite a manner as my hand can; nor can they account for their *empirical* significance when combined with other concepts in a proposition, which significance is instead supplied for them by our experiences themselves. In synthetic judgements, therefore, for example: 'This thing I can see before me is a dog' – what enables me to *know* that this thing I can see *is* a dog is, certainly, the fact that I know, because having *learnt*, what this thing comprising my experience is *called* (which further allows me to avert to what it is I can see communicatively; this being all that 'words' and 'concepts' are in the final analysis, i.e., *communication tools*); but primarily the experience, instead of *causing* my belief that I can see a dog before me, is *constitutive* of it (Brandom's 'antecedents' having caused my experience, not my belief; experience being constitutive of my belief, not the cause of it).

How, then, are we able to 'look beyond' the raw feel of these sensations to the objects themselves when the effects they have on our awareness (in the sense of 'sentience' and not 'sapience') are comprised of these raw feels alone? What is it that allows us, in other words, to see an *object* here as opposed to our merely undergoing a subjective sensation? Because we seem to possess the ability to by-pass these effects comprising our sentience to grasp the very causes themselves – *objects* in the world, our own bodies among them. How does an expanse of white and black, for example, become something we *recognize* as being a **sheet** of **white paper** with **typed words** composed in **black ink** (concepts emphasised)? Is it this conceptualization itself, not taken in isolation but supported by one's 'background understanding' consisting of such things as the 'suitable conditions for telling what something's colour is by looking at it' (McDowell, op.cit., 30)? And at what point in developing one's *cognisance* of such things does one move from being an organism whose empirical consciousness is comprised solely of raw feels to one capable of perceiving objects? Because it is at this juncture that the

questions of concept acquisition and the role played by the causal grounds of our beliefs merge. It cannot simply be the case, as McDowell contends, that one is trained by one's parents, say, to grasp things in a conceptually robust way or that one's 'upbringing initiates one into' a community of language users wherein such capacities are already robustly exercised (op.cit., 91) – because this would presuppose a prior recognitional capacity, namely that we recognize our parents (not merely that we undergo visual sensations), that they are talking to us (not merely that we undergo auditory sensations) and conveying information as to the names of objects we incessantly point to in tandem with the utterance 'What's that?!'. Here, therefore, and at a very young age, we already possess a capacity to perceive objectively, long before we've acquired a vocabulary or the concepts our language community applies to specific objects (obviously, since we inquire after such). This implies either that we are born with an innate recognitional capacity (as we are born with the capacity to sense) or that we have only the one capacity (sensitivity) which in itself permits us, not merely to undergo sensations, but to *perceive* objects. If this latter were to pertain then it would be the case that sapience simply *is* sentience, something we could ascribe to animals and infants alike. And it is perhaps just an anthropocentric prejudice on our part which prevents our doing so, as animals were once thought to lack even sentience. The difference between our advanced understanding of 'objective reality' in contrast to animals and infants would then be one of degree, not of kind; or if there is a difference in kind it is that we can *theorise* about the world (by employing generic concepts), not that we can *perceive* it any more objectively.⁵

In substantiating this claim, therefore, there are certain tests paediatricians perform on the developing infant to gauge their sensory functioning. With regard to the visual sense this can be something as simple as holding a finger up in front of the child and moving it from side to side. In Brandom's language the movement of the child's eyes, should they indeed move in tandem with the finger, would be a mere 'responsive disposition' (op.cit., 161), as though the infant were no better than a non-conscious automaton (in

⁵ Although, even in this regard, many studies have been carried out examining the reasoning abilities of animals (including rats and crows), concluding that a capacity to reason is indeed present, not a mere capacity to respond differentially to events or objects in their environment; indicating, again, a difference in degree and not in kind between the human animal and all others.

the same way Descartes once conceived of animals) with the difference that she undergoes sensations, not *knowing*, however, at all what a ‘sensation’ is or what it may possibly represent but merely *having* one. The claim here is that she may not know what it is *called* but she can certainly perceive an object (a moving finger) as robustly as one who possesses the concept ‘finger’. What is more, the person who possesses the concept ‘finger’ makes meaningful use of it only because she was once an infant herself who perceived this appendage in as objective a fashion as possible, merely learning, later on, that this word ‘finger’ applies to it and all those other particulars which resemble it.

It is our very abstraction, arriving late in the day and only then to an unhealthy degree in philosophers, which makes us misrepresent the essential nature of perception. Thus we form the concept ‘colour’ and consider it a ‘visual sensation’ and then we wonder how exactly this paltry material can constitute an ‘objective perception’ when there is so much more to an object than that (as all our other concepts we have subsequently acquired in relation to it testify). So we then argue that it is the *concept* ‘colour’ (in combination with all of this background knowledge) that we must add to this sensation in enabling us to grasp exactly what colours are in an ‘objective’, ‘knowledgeable’ sense, forgetting that it was our simple concept ‘colour’ which made us fret about the insubstantiality of experience in the first instance. If we depart from this abstractionist mode of considering the matter and think about what it is an infant actually *sees*, we might acknowledge that what she sees are coloured *objects* (not simply ‘colours’), what she hears are noisy *objects* (not simply ‘sounds’), what she smells are pungent *objects* (not simply ‘odours’), what she savours are sweet *objects* (not simply ‘tastes’) and what she feels are smooth *objects*.⁶ To divorce a sensation from the object it adheres to is something possible in thought only, never in perception; and it will not take a genius to work out where this practice of attempting to ‘separate out’ the material and formal elements of our perceptions derives from.

⁶ There are aspects of objective phenomena, for instance dimensionality, which require a combination of sense modalities to be utilized in order that the developing mind can grasp them. Thus visual perceptions alone are not sufficient for this purpose because, visually, it will not be clear to the infant where one object ends and another begins. The boundaries of objects are therefore perceived by means of the sense of touch, with many researchers now maintaining that the primary reason toddlers place objects into their mouths is to gauge their dimensions through their tactile sense rather than to taste them. When visual perceptions are then associated with this they alone become sufficient for recognizing an object’s spatial magnitude.

The infant being tested, therefore, does not undergo the colour sensations ‘pink’ or ‘brown’ but actually perceives a pink or brown *finger* (i.e., a coloured object). That is to say, it is due to the fact that colours are determined by an object’s surface structure that it is the *coloured surfaces of objects* we perceive, not simply ‘colours’. And it is because we *spatially intuit things* (as argued for previously) that our perceptions are comprised of extensive and not merely intensive magnitude. There remains the question, however, whether our spatial ‘awareness’ of objects is also conceptually grounded, a subject we shall return to further on. As an initial opening on this topic, however, must we possess certain ‘spatial concepts’ relating to the particular *configurations* these objects it is claimed we grasp in conceptual terms possess? If this is *not* to be accounted for in terms of our spatially intuiting things (which ability allows us to *perceive conjointly* the material and formal properties of objects), by what reasoning do we instead link the concept ‘oblong’, for instance, to the concept ‘white’ in granting us the awareness of a sheet of paper? The one concept does not ‘imply’ the other after all when the paper here could be a combination of any colour and shape. And how is it that these concepts *are* conjoined? Does the one concept become ‘blended’ or ‘enmeshed’ with the other as it were? Because while ‘appearances’ do not exist inside or outside of one another but are instead presented to us all of a piece, our concepts certainly possess a discrete status in the manner we *think* them, making it entirely mysterious how our concepts of form and colour are to merge.

So, for example, is the phrase ‘white sphere’ comprised of a single concept or two? This phrase could have been formulated, that is to say, in response to two different requests, i.e., a request to name a colour and a shape or to describe a snowball. There is nothing in the concepts themselves, in other words, which accounts for their being conjoined and when that does appear the case (as with a snowball) this is because we have in mind something *already* conjoined, namely the *image* of a snowball, the two concepts used to describe it picking out – *separately* and not *conjointly* – its formal and material properties (as does the word ‘snowball’ itself and we might add here the words ‘rainbow’, ‘raindrop’, ‘snowman’, ‘snowflake’, etc.). This is another reason for supposing that we *perceive* objects (i.e., ‘material forms’) rather than *think* them since it is impossible for us to *conceive conjointly* the material and formal properties of objects, although perceive this we can. This also illustrates what is meant by a ‘synthetic’ judgment, the synthesis of the formal and material concepts (which would otherwise

remain wholly disconnected) effected by experience alone. It is not our 'propositions', in other words, which make for 'objective knowledge' but, rather, our perceptions.

Sellars, Brandom and many others besides, however, have considered our experience to be as good as nothing in the absence of that 'grasp of concepts' which sapience requires in constituting our propositionally contentful grasp of objects. But if the argument stated here is correct, it is rather the dog that wags the tail. It is our perceptual awareness of objects which assists also in our acquiring those words and concepts which are, by social convention, applied to them; all of which would be as good as nothing were they not imbued with that specific empirical meaning our experiences provide for them. A final question to consider, however, as alluded to previously, concerns Sellars' claim that a generic concept is required in enabling us to grasp the *resemblances* between particular things, without which we could never become aware of 'types', however many 'tokens' of that type we perceive. How, then, do we know that this thing we perceive here (for instance, one's index finger) is of the same kind or resembles this other thing we perceive (one's forefinger)? By virtue, so he contends, of our possessing the general concept 'finger' or 'digit' under which each token perception is subsumed. Thus:

[A]ll awareness of *sorts, resemblances, facts*, etc., in short, all awareness of abstract entities – indeed, all awareness even of particulars – is a linguistic affair. (Op.cit., 63).

Sellars' contention rests on his analysis of the concept 'resemblance'. For us to be aware that two things resemble one another the association we make between them 'involves not only the occurrence of resembling particulars, but also the occurrence of the awareness *that they are resembling particulars*' (ibid.). The opposing view is that we perceive several determinate things, all of which we take to resemble one another, then form the general 'determinable' concept which stands as the abstract term applied to many different things of the same kind ('sort', in Sellars' words). For Sellars, of course, it is because we already possess the generic concept that we are able to recognize the resemblances between things and not *vice versa*. He mocks the idea that we can become aware of such resemblances '*simply by virtue of having sensations and images*' (ibid., 62); 'having sensations' and 'being aware' being polar opposites.

Let us first consider what Sellars means by ‘awareness’. It is not, so Brandom interprets him, simply a matter of being ‘awake’ (op.cit., 150); at best a neurophysiological status we confer on all sentient beings but not one constitutive of awareness regarded as ‘sapience’ – the ‘awareness of something as something’. Again, being awake might be a necessary condition for knowledge but it is not sufficient; something else is required and that is a grasp of concepts. Thus: ‘This thing I see before me is a dog’ – the ‘thing’ in question is the determinate animal seen; the concept ‘dog’ that which permits one literally to see this something *as* something; and one is now fully aware in both senses of the phrase – awake and cognisant.

Returning, in relation to this debate, to the issue of concept acquisition: one is a wide-awake toddler but one’s sapience has yet to be awakened to the same degree as one’s sentience. If recognizing something *as* something requires that one possess the relevant concept, how is one to grasp the relevant concept? How does one grasp, in other words, that this particular concept applies to this particular thing, or rather to *these* particular things? By what process has one assembled or associated these things in allowing one to talk of ‘these’ if it is not the case that one already recognizes the resembling particulars which are the group of things to which this concept applies? If one were not already aware of the resemblance it does not seem possible that a correct *application* of the concept could be made in the process of learning which generic concepts apply to what. Because there is nothing in a generic concept which implies it *is* a generic concept as opposed, say, to a name used solely for this particular here. In the same way, therefore, that one is fully aware of Fido before his owner tells us his name, one is fully aware of the resemblances between things before we are taught the generic concept. The alternative is to ‘explain’ the process of concept acquisition in the same way Brandom does, namely with an unattributed quotation he takes from Wittgenstein: ‘The light dawns slowly over the whole’ (in Brandom: op.cit., 162; in Wittgenstein: 1975, s.141), which seems more a wistful declaration than a serious argument.

When one’s perceptions are of objects (as argued for above) and not comprised of mere ‘sensations’ (a philosophical abstraction), the objective resemblances between things are no less available to one than the individual objects themselves. In summary, therefore, it cannot be denied that the grasping of concepts or the acquisition of a language involves our epistemic capacities, namely that we come to know which words apply to what.

This ability to learn a language, however, is not a necessary condition for us to recognize objects or to become cognisant of our environment; an ability all sentient beings possess simply in virtue of their sentience. It is this latter ability, rather, which enables us to acquire and make meaningful use of the spoken or written word; a use which therefore supervenes on what surely must be considered the foundational apparatus of our perceptual capacities.

(ii) 'The Space of Reasons' and The Space of Events.

Focusing, now, on the issue of what it is that *justifies* us in holding our beliefs about the world (with 'experience' held to be insufficient in this regard also), John McDowell's *Mind and World* concerns the specific problem of how it is that our 'empirical beliefs' acquire rational warrant. That one already deems such beliefs 'empirical', however, as opposed, say, to 'religious' or 'metaphysical', makes it difficult to comprehend on what *other* basis such beliefs obtain warrant if not by means of experience (conceived here, in common with McDowell, as resulting from 'the world's direct impacts on possessors of perceptual capacities' (op.cit., xvii)). Is an 'empirical' belief, perhaps, warranted by *other* empirical beliefs, all of them linked by 'relations such as implication or probabilification' (ibid., 7)? But what is it in virtue of which these other beliefs are deemed 'empirical' as opposed to religious or metaphysical when these latter beliefs are also relatable in such ways? 'Empirical' beliefs, if nothing else, ought in some way to concern our perceptual capacities; that much may be granted. But as we have seen, the mere capacity for, or occurrence of, sensory perception is not thought sufficient to rationally justify one's empirical beliefs, even though, and just because they are 'empirical', such beliefs clearly concern our perceptual capacities. But if someone asks: 'What reason do you have for believing that the cat is on the mat?' and another replies: 'Because I can see it'; or if someone asks: 'What reason do you have for believing that the cat is not on the mat?' and another replies: 'Because I can't see it'; the respondent will be deemed mistaken in holding that their 'seeing' or 'not seeing' (if this visual capacity consists merely in 'brute impacts') has anything to do with their beliefs in respect of rationally justifying such. In other words, already 'seeing' that there is a cat on the mat (or noting its absence) is said to presuppose a *rational* (rather than sensible) discriminatory capacity and a battery of concepts (cat-concepts and the like) which permit one to determine *what it is* one sees.

For Sellars, therefore, it is as though we ‘already’ possess a picture of the world *before* we actually see anything. This is pre-conception in a literal sense; the theory it opposes that of post-conception whereby we come to have our beliefs as a result of seeing things (what Sellars refers to as the ‘Myth of the Given’ – that which is ‘Given’, the deliverances of sense; that which is ‘Mythical’, the notion that our beliefs are justified on such grounds or, indeed, that there is such a thing as ‘givenness’ at all (op.cit., 33)). But if the ‘coming to have’ an empirical belief does not derive from our perceptual capacities, where *do* these beliefs originate from? It is, of course, ‘the process of acquiring the use of a language’ which mediates our perceptual awareness of things. This further presupposes, however, that the process of acquiring the use of a language *itself* does not involve our perceptual capacities – that, from infancy onwards, we can hear people speak or see them gesticulate – all of which perceptual capacities might be thought necessary in our even coming to recognize the existence of ‘language-users’; a capacity, in other words, to sensibly *discriminate* our instructors in the use of a language which must be presupposed as something ‘already’ in place.

Regarding the topic of language acquisition, the only specific remark Sellars makes with respect to a child ‘learning his *first* language’ (ibid., 65) is that we are *not* to suppose that he or she occupies the same ‘logical space’ we ourselves do as instructors ‘already’ using a language. Unfortunately he says nothing more on the subject how it is the child moves from whatever space he or she does occupy to the logical space that we do. That, it could be argued, is to avoid the crux of the matter; an avoidance which is not remedied by the ‘story’ he tells of how a certain individual trains a tribe of primitives to speak meaningfully of ‘inner episodes and immediate experiences’ so as to *augment* the basic language of public objects they already possess (ibid., 91ff). But if the awareness of both ‘inner’ and ‘outer’ episodes presupposes the use of a language and if we possess no discriminatory capacities *independently* of this use, how is it even possible that we *begin* to learn a language when the source of this learning clearly originates from outside ourselves (in a *literal* and not linguistic sense)?

There seems to be a danger here that Sellars and others who adopt this line of thought have merely replaced one Myth with another – the ‘Myth of the Given’ with what we might appropriately name the ‘Myth of Pre-Conception’. If it is a ‘Myth’ to suppose that mere observations are ‘self-authenticating nonverbal episodes, the authority of

which is transmitted to verbal and quasi-verbal performances' (ibid., 77), why is it any less mythical to suppose that self-authenticating *verbal* episodes transmit their authority to nonverbal (perceptual) occurrences such that our merely possessing the concept 'cat' allows us to 'notice' one? If nonverbal episodes cannot inform their verbal counterparts there seems nothing that could justify one in assuming the opposite. Admittedly, for Sellars, perceptual episodes are *not* nonverbal if we take them to be cases of perceptual *awareness*, for example 'the *awareness of redness*' (ibid., 66); but they *are* nonverbal in the case of '*sensations of red*' which are 'not to be confused' with the former ('awareness', in general, being a verbal affair). If it is reasonable to assume, however, that there would be no awareness of red things were there no sensations of red (even if one accepts that it is the antecedent acquisition of the use of a language which permits us an *awareness* of these red things), this still presupposes that our capacity to use language involves our taking up, as it were, something nonverbal ('sensations') in the process of our becoming aware of things. And if it is mysterious, when the 'Given' is considered 'Mythical', how nonverbal episodes can transmit their self-authenticating authority to their verbal counterparts, it is equally mysterious how our mastery of a language permits the opposite to occur. This problem has parallels with Kant's attempt to argue the applicability of concepts to intuitions which he ultimately attributes to 'the mere effect of the imagination, of a blind though indispensable function of the soul... of which we are seldom even conscious' (A78=B103). If that strikes one as being as mysterious a proposition as Wittgenstein's 'Light dawns slowly over the whole', that is perhaps because both florid suggestions indicate the presence of a deep conceptual confusion; a problem which does not arise if one holds the reverse view that our experience is in fact *constitutive* of our conceptual grasp of the world.

The fundamental problem with the Sellarsian Myth is that it is grounded on a 'mind/world' dualism whereby the 'mind' is conceived as one thing – that which is constituted by 'the logical space of reasons, of justifying and being able to justify what one says' (Sellars, op.cit., 76) – and the 'world' as something altogether different – a place which exerts, at best, a *causal* influence but not *logical* (ibid., 64). The great gulf inherent in this dualism entails that the world has no rational influence on how our 'world-picture' is constituted, meaning that all our 'empirical knowledge, like its sophisticated extension, science, is rational, not because it has a *foundation* but because

it is a self-correcting enterprise which can put *any* claim in jeopardy' (ibid., 79). Sellars' influence on Quine here is obvious:

[I]t becomes folly to seek a boundary between synthetic statements, which hold contingently on experience, and analytic statements, which hold come what may. Any statement can be held true come what may, if we make drastic enough adjustments elsewhere in the system. (1980, 43).

If every claim science makes is 'in jeopardy' or if any claim science makes 'can be held true', it might be wondered just what constitutes the 'rationality' of science as an intellectual discipline when there are no grounds at all (aside from satisfying the minimum requirement of 'internal coherence') for determining which claims are to be abandoned and which held true (other than that founded on the *arbitrary* choice of a particular 'paradigm' in the absence of any algorithm for determining 'The Truth'). That, of course, for a pragmatist like Rorty anyway, is the point. But if that *is* the point one is certainly not entitled to have one's cake and eat it by describing what is ultimately an arbitrary pursuit 'rational' as Sellars does (though not Rorty who is happy to assert that all our various conceptions of the world are 'dream[t] up' (1982, 90)). As a free-floating enterprise, therefore, all our 'empirical' knowledge-claims possess a built-in immunity to the causal impacts of the world to the extent, even, that had we no perceptual capacities at all our world-picture would be none the worse for it.

This conception clearly undermines the classical idea of 'empirical knowledge' as that, to quote McDowell, which 'is answerable to the world' (op.cit., xii). To suggest, as Sellars does, that our 'empirical knowledge' can be 'corrected' is to imply, from a classical perspective, that such claims never amounted to 'knowledge' in the first instance but were mere 'false beliefs'. To suggest that such knowledge-claims can be 'self-corrected' is to conjure up a picture, again to quote McDowell, of a 'frictionless spinning in a void' (ibid., 11); a void in which, certainly and since there is nothing to stop us, *any* belief can be abandoned or adopted the moment it is decided (presumably on a whim) to change 'the rules of the game'. To label, as Sellars does, what is in fact a whimsical enterprise 'rational' seems just as outlandish as is his labelling of self-correcting empirical knowledge 'knowledge'.

One belief may ‘cohere’ with another and rationally so but the point is this: why should a belief’s cohering with another inspire one to hold *any* belief? To give an example: the belief that God is omnipotent coheres with the belief that He created me; still, that’s no ‘reason’ for me to believe in Him; a belief, should I choose to adopt it, based instead on the merely whimsical (or perhaps emotive or socially conditioned, but anyway ‘non-rational’) adoption of the ‘religion paradigm’. McDowell’s originality and appeal derives from his attempt ‘to reconcile reason and nature’ (ibid., 86) by giving due weight to both our perceptual and our rational capacities as they become operative in the process of our acquiring a view of the world. McDowell’s position thus involves both capacities acting in unison. Fundamentally, and instead of being ‘self-corrected’, it is ‘the world’ which determines whether our judgements are ‘correctly executed’ (ibid., xii). Furthermore, the ‘space’ in which our empirical propositions are advanced is not a ‘void’ but is possessed of ‘representational content’, which is to say ‘experiential intake’ (ibid., 4). Adopting the Kantian terminology of ‘receptivity’ and ‘spontaneity’ and quoting, favourably, Kant’s assertion that ‘Thoughts without content are empty, intuitions without concepts are blind’, McDowell accommodates both the freedom inherent in his notion of ‘rationality’ – ‘the freedom that empowers us to take charge of our active thinking’ (ibid., 70) – and the ‘constraint from outside’ (ibid., 15) provided for by ‘objective reality’ (ibid., 23). He thereby ‘exorcize[s]’ (ibid., xxi) the problem presented by the opposing Myths enunciated above: the problem how it is that our conception of the world has any bearing at all upon *the* world (or how it is that *the* world has any bearing at all upon our conception of it).

As innocuous as all of this sounds McDowell’s proposal actually requires ‘a radical rethinking of nature’ (ibid., 79). In rejecting what he calls ‘bald naturalism’ as that conception of rationality which denies its *sui generis* status by seeking to reconstruct ‘the logical space of reasons in terms that belong in the logical space of natural-scientific understanding’ (ibid., xxiii), McDowell instead proposes a ‘minimal empiricism’ (ibid., xii) and a ‘partially enchanted’ nature (ibid., 85) as a means to preserve the autonomous status of thought without divorcing it from a subject’s ‘perceptual sensitivity to features of the environment’ (ibid., 69). Although such a view has implications for ourselves as both embodied perceivers and moral agents (ibid., 111), it is only in our capacity as perceivers that his partial enchantment of nature is to be assessed.

McDowell's 'enchantment' of nature involves his attributing to receptivity (perceptual sensitivity to the environment) the reason-constituting power of our faculty of thought (spontaneity) to the extent that 'receptivity does not make an even notionally separable contribution to the co-operation' (ibid., 9). In doing so McDowell preserves the best of what he takes the opposing Myths to offer while avoiding the pitfalls of each – the rational warrant provided for by the logical space of reasons and the constraint afforded by the world. Rather than conceive ourselves as subject to 'an alien force, the causal impact of the world, operating outside the control of our spontaneity' (ibid., 8) or as 'confined' within the space of our own beliefs (ibid., 15), the result of McDowell's conception is to grant us 'openness to the layout of reality' (ibid., 26). Thus: 'In experience one takes in, for instance sees, *that things are thus and so*. That is the sort of thing one can also, for instance, judge' (ibid., 9). Since 'experience' is an amalgam resulting from our perceptual and rational capacities acting in unison, McDowell refutes the idea that one comes to have a concept of a thing *because* one sees it and the opposing idea that one sees a thing *because* one has a concept of it, proposing, instead, that the 'relevant conceptual capacities are drawn on *in* receptivity... [not] *on* an extra-conceptual deliverance of receptivity' (ibid.).

In developing his argument, however, it is not clear that McDowell succeeds in effecting his 'reconciliation'. Take, for instance, the following statement:

The fact that experience involves receptivity ensures the required constraint from outside thinking and judging. But since the deliverances of receptivity already draw on capacities that belong to spontaneity, we can coherently suppose that the constraint is rational (ibid., 41).

It is not clear how it can be 'coherently supposed' that the deliverances of receptivity are 'outside' thinking while yet the constraint supplied by receptivity is 'rational'. If thought is characterized by freedom and if receptivity draws on our capacity for thought, how can the deliverances of receptivity act as a 'constraint' on our thinking? McDowell's response seems to be to distinguish two forms of 'spontaneity' or thought: a 'passive' and an 'active' form. He insists that 'experience is passive' (ibid., 10) in the sense that 'one can decide where to place oneself, at what pitch to tune one's attention... but it is not up to one what, having done all that, one will experience' (ibid., note). Indeed McDowell must insist this if he is to supply the required 'constraint' on

spontaneity which would otherwise act, to use Rorty's metaphor this time, like 'a great wheel so out of touch with the rest of the mechanism as to be spinning idly' (1986, 340).⁷ Nevertheless, our 'conceptual capacities... are passively drawn into play in experience' (McDowell, op.cit., 12); capacities which can 'also be exercised in active thinking' (ibid., 11). So while we have no control over how 'one's experience represents things to be' (ibid.), *how* things are represented to be is as much due to our conceptual capacities as to our sensibility; our conceptual capacities being further exercised in an active sense in those cases, for example, when one decides 'whether one accepts the appearance or rejects it' (ibid.). When, therefore, McDowell speaks of 'outside thinking' he means outside *active* thinking (when we are free to decide whether to accept the appearances at face value) but not *passive* (when we have no say in the matter and are merely 'saddled' with experiential intake (ibid., 10)).

McDowell's conception of passive and active forms of thought poses many questions. Does passive thought, for instance, really cohere with the notion of 'spontaneity' as a faculty of 'freedom' when, however it is that receptivity draws this capacity into play, the result is not one whereby we freely determine *what it is* one sees? One might subsequently judge whether the appearances are genuine but no judgements are made in their 'construction' (in a loosely Kantian sense of that term). How can we be certain, therefore, that anything like 'judgement' or 'taking charge' occurs here at all? The 'passivity' of thought implies either that our 'conceptual capacities' are not involved in shaping our experience or, if they are, that our 'understanding' is not one characterised by freedom. If the latter the situation would be akin to that described by McDowell in the case of brute impacts of the world on our sensibility, inasmuch as we could not be 'blamed' for the beliefs we hold about external reality when we have no freedom to believe otherwise. Thus, even when it is assumed that spontaneity 'co-operates' with receptivity, if the former faculty is not free (which the ascription of 'passivity' implies) there would remain only 'exculpations where we wanted justifications' (ibid., 8).

⁷ All these metaphors in fact originate with Kant: 'The light dove, in free flight cutting through the air the resistance of which it feels, could get the idea that it could do even better in airless space' (A5=B8). It is at least implied in his work that the Logical Positivists of the Twentieth Century are to McDowell as the British Empiricists were to Kant (both of which prioritised the 'resistance' of air), with the 'language' philosophers adopting the role previously held by Rationalists (both of which occupy 'airless space'); McDowell himself assuming Kant's mantle in the debate.

An illustration of this, highlighted by McDowell himself (ibid., 11, note), is the Müller–Lyer illusion in which ‘one’s experience represents the two lines as being unequally long... [although] someone in the know will refrain from judging that that is how things are’. If it is ‘spontaneity’ which grants us the freedom to ‘refrain from judging that that is how things are’, what sort of spontaneity is it which co–operates with receptivity in ‘experience’ and which, in a passive sense, ‘represents the two lines as being unequally long’? This illustration suggests a faculty at odds with itself; one which is, as yet, an insufficient basis upon which to ground the distinction between exculpations and justifications. And if one considers, further, that even for those ‘in the know’ regarding the Müller–Lyer illusion, the illusion of unequal lengths remains, it follows that our ‘experience’ is not the least influenced by our ‘active thinking’ so that the faculties in play which generate our representations can be considered different, not only in degree (a ‘minimal’ involvement, McDowell maintains, in the case of passive thought (ibid., 30)), but in kind to that employed in active thinking.

Another concern is that of the ‘concepts’ McDowell claims are ‘drawn into play in experience’. Focusing in particular on ‘concepts of secondary qualities’ (ibid., 32), the concern relates to the ‘concepts’ themselves and to their supposed bearing on the distinct ‘qualities’ they encompass (colours, sounds, etc.). McDowell refers to the concepts involved in this case as those which constitute a subject’s ‘background understanding’ without which no one ‘could be recognized as having experiences [for example] of colour’ (ibid., 30). Hence, and as previously cited, a person ‘must be equipped with such things as the concept of visible surfaces of objects, and the concept of suitable conditions for telling what something’s colour is by looking at it’. As in the case of ‘passive experience’, however, it could be argued that, even when in possession of this background knowledge, none of these concepts enable one freely to influence *how* colours are represented to be nor do they provide one with any predictive insight as regards *which* colours will be represented. Because although one understands how the concept of spontaneity or rational freedom figures in the account of ourselves as ‘agents’ (without, at present, commenting either way on this idea), it is with regard to ourselves as ‘embodied perceivers’ that the involvement of spontaneity is challenged. If rational freedom does not figure in an account of our perceptual awareness then only exculpations remain, not justifications. If that is the case then either our beliefs about the world are *not* justified by our ‘experience’ or an alternative construal of

‘justification’ which relies upon something other than ‘rational freedom’ must be sought (the latter option advocated here).

Regarding ‘the concept of suitable conditions’, one might understand that a white object (for example a sheet of paper) will appear red under a red light and in this sense it might be thought that one’s background understanding equips one with a measure of predictive insight, in addition to granting us the ‘experience’ of a white sheet of paper which appears red. But what concept do we have regarding the conditions which enable us to experience the *red light* as red? One might suggest, perhaps, that red light is white light emitted from a bulb the glass of which has been coloured red or propose that red light, as with a sunset, instantiates the longer waves of the light spectrum; but still, what concept do we have for determining both that *that is the case* and that *that is the case before us now* (since, *mutatis mutandis*, blue light makes white things appear blue too and it is not clear why *that* background knowledge should not pertain in this case)? Obviously we would wish to avoid an infinite regress of ‘suitable conditions’ and perhaps a finite chain of background concepts is sufficient in granting us an experience; but nothing in this understanding determines, beforehand, what it is one will see. The claim here, therefore, is that our understanding of the ‘conditions’ which pertain is always *post hoc* determined, meaning that it is the experience of colours which fixes our judgement of the conditions, not our judgement of the conditions which fixes the experience. Our ‘understanding’ (and here McDowell very much adheres to the Kantian view) does not constitute the conditions of our experience, it is instead the conditions of our experience which determine our understanding. Thus: ‘This sheet of paper looks white but when I place it under a red light it looks red’. Very well, but whether that is the case in this instance or in general, *we* are not responsible for the fact that that is how things look, rather, the world is responsible (the term ‘responsible’ denuded of any moral or rational connotation – ‘bald naturalism’ in McDowell’s vernacular) and it is merely up to us whether we accept the appearance or not. But *having* the freedom to accept the appearance or not presupposes that we have *had* the experience of what it is we are free to accept or not; an experience we were certainly *not* free to have or not once we chose, for instance, to open our eyes.

An additional argument for denying the involvement of ‘spontaneity’ with receptivity concerns Gareth Evans’ point directly alluded to by McDowell, namely ‘that we have as

many colour concepts as there are shades of colour' (Evans, 1982, 229). Evans denies the assertion while McDowell supports it; but the issue here relates to McDowell's claim that such concepts are involved from the beginning – that receptivity 'already has conceptual content' (McDowell, op.cit., 9). We have already encountered the role played by the concept 'already' with the Sellarsian Myth of Pre-Conception and McDowell leans far closer to this Myth than to that of the Given to the extent that he does not even label it a 'Myth' (despite his claim to have 'dismounted the seesaw' (ibid.)); something equally apparent in his assertion that 'it is only because experience involves capacities belonging to spontaneity that we can understand experience as *awareness*' (ibid., 47; my emphasis). The example of colour concepts, however, would seem to demonstrate that, whatever awareness we have, it neither derives from a faculty of rational freedom nor is it structured by concepts we 'already' possess. Regarding the latter, McDowell admits this much himself: 'It is true that we do not have ready, in advance of the course our colour experience actually takes, as many colour concepts as there are shades of colour that we can sensibly discriminate' (ibid., 58); merely proposing, instead, that '*if* we have the concept of a shade, our conceptual powers are fully adequate to capture our colour experience in all its determinate detail' (ibid.; my emphasis). It is not that we do not have 'as many' colour concepts as those we eventually encounter in experience, it is that we do not have *any* colour concepts prior to our 'sensibly discriminating' them. And even when we acquire a 'colour concept' in consequence of our having sensibly discriminated one, it is difficult to comprehend, as stated previously, what the 'concept' has to distinguish it from the qualitative 'colour' itself (with concepts such as the 'visible surfaces of objects' or 'suitable conditions' all *theoretical* concepts relating to the physical environment and ourselves as physically constituted perceivers, not the phenomenal colour 'red').

If it is the case that we have no awareness without concepts McDowell and Sellars alike would have to maintain, despite our eyes being open, that we are 'blind' until such time as we acquire the relevant concepts.⁸ But as previously argued, the 'acquisition' of a

⁸ It is ironic that Kant should have used the adjective 'blind' in the context of 'intuitions' when it is intuitions (in the case of colours at least) which constitute our visual awareness. That it is 'thought' which grants us 'sight' is something Kant, Sellars and McDowell all propose; though what it is in a 'colour concept' which adds the missing ingredient to the intuition itself in granting us sight is never fully explained.

concept would seem to involve a pre-existing capacity to sensibly and consciously discriminate things (unless someone wishes seriously to maintain either that we are born with empirical concepts or that we can ‘acquire’ them in the perceptual vacuum inhabited, for instance, by a corpse); as well as the argument also implying, assuming we already possess at least some colour concepts, that our experience of the visual field would consist of blank expanses in those areas which exhibit colours or shades of colour we have yet to acquire the concept for. Clearly this does not happen, as everyone’s visual experience will testify; the ‘field’ here is gapless (as is our awareness). Indeed it is upon encountering colours for the first time (as when ‘luminous’ coloured clothing came into fashion some decades ago) that one is prompted to say, in shock at the sight of it, ‘What a terrible colour!’.

The problem of consciousness undoubtedly bears upon the problem how our empirical beliefs acquire warrant but the discussion will now turn specifically to the notion of ‘rational constraint’ as that which alone supplies us with ‘justifications’ in place of ‘exculpations’. Before proceeding, however, the point is merely emphasised that there seems to be nothing in a ‘language’ or a ‘concept’ that makes it more likely to grant us an awareness of things than ‘sensations’. If it is impossible to envisage how mere sensations activate our conceptual capacities one would have to hold the only available alternative, namely that they are *self*-activated; something the possibility of which seems no clearer than that of sensible activation. And concepts are even less likely to carry their own consciousness with them than sensations which, at least, really are elements in a ‘process’ which links the perceiving subject to the world; their ‘activation’ explicable in terms of ‘direct impacts’ between objects – a billiard ball, perhaps, and one’s hand. And it is our physiological sensitivity which distinguishes us from mere billiard balls in this case since, however hard a ball is hit, the only ‘effect’ will be motion and not also, as in our case, the *feeling* that one has been hit.

Regarding ‘rational warrant’, therefore, when the question is posed: What justifies you in holding that empirical belief? – McDowell insists:

[W]e cannot really understand the relations in virtue of which a judgement is warranted except as relations within the space of concepts: relations such as implication or probabilification, which hold between potential exercises of conceptual capacities. (Ibid., 7).

In order for an experience to play its required constraining role in the justification of our beliefs, of course, McDowell proposes that our receptivity already incorporates the space of concepts at the ground level (the level of the world's impingements on our sensibility). Let us consider as an example, in conformity with the general declarative form: 'Things are thus and so', the empirical belief: 'The cat is sitting on the mat'. This, it is alternatively maintained, is a *stand-alone judgement*, by which is meant that the grounds for its justification do *not* consist in 'relations within the space of concepts'. On the contrary, if one construed the justification for this belief merely in terms of these 'relations' (i.e., implication or probabilification) one could find no 'grounds' for it at all. For what 'implies' that the cat is sitting on the mat? The beliefs that one has a cat for a pet and a mat at one's door? Still, none of this implies that the cat *is* sitting on the mat (at the time one holds this belief) when Tiddles herself might just as easily be lounging on the sofa instead. Regarding 'probabilification', there is a degree of probability, of course, given one owns a cat and a mat, that, at some point, she'll be sitting on it but no greater probability, given all the other furniture one has, that, at this point in time, she is in fact sitting on something else (or not sitting at all); a 'degree of probability', therefore, which in no way *justifies* one in holding the belief 'the cat is sitting on the mat' at the expense of all the other probable places she may be seated. Given, also, the unqualified use of the verb 'is' in the expression of one's belief, any talk of 'probability' is misplaced when the circumstance, one at least believes, has been determined (in contrast to the belief: 'There is a *chance* the cat is sitting on the mat'). If the justification for one's belief, therefore, does not consist in relations within the space of concepts (and besides the two cited by McDowell there seem to be no other relevant relations), what does it consist in?

That one deems this belief (and in fact all 'empirical' beliefs) stand-alone judgements implies only that, as judgements, they do not rely on *other* judgements for their warrant. It does not entail that they cannot figure in inferential relations between beliefs (in this example, the beliefs that one has a cat, that it can sit, and so on) or that they do not rely on *something else* for their warrant which, it is suggested, they do, namely *experience* (from whence derives their 'empirical' status). It is a mere stipulation on McDowell's behalf that a 'justification', in the absence of 'rational freedom', amounts to nothing more than 'exculpation', for why must it be considered that we 'take charge' or be responsible for the fact that 'things are thus and so' or responsible for the grounds we

cite in believing such to be the case? One can make a distinction here, in arguing against the involvement of ‘rational freedom’ with empirical warrant, between *reasons* and *rationality*. That one *infers*, from one’s knowledge of the properties of fire and the epidermis of human beings, that contact between them will result both in pain and significant damage to the skin, can be considered an exercise in rational thought, the movement from premises to conclusions, etc.. But this power to infer does not constitute the *reason* why one avoids contact with fire; rather it is the pain and potential damage to one’s skin which constitutes *that*; things which our power of thought has no bearing on at all (as though we could simply infer something else and our skin would be spared the trauma). The reasons (warrants, justifications, etc.) for our empirical beliefs, in other words, are constituted by these *non*–rational constraints; ‘brute impacts’ of the world, a ‘brutality’ which is perfectly expressed, in linguistic or conceptual terms, in the formulation: Things *are* thus and so. As irrational as that sounds – a non–rationally *constituted* reason – the grounds for supposing it can be argued for, although it requires that certain other concepts (for example ‘rational freedom’) be abandoned in the process (a subject, again, to be expanded on in the final chapter).

A final reason for disputing Sellars’ notion of the ‘space of reasons’ is that it is a place where nothing can possibly *happen*, and this in contrast to the world of our experience which is one of constant happenings and in which our *thinking*, no less than our physical selves, is in constant motion. With regard to our physical selves, it seems evident that we inhabit this space of events with an ‘experience’ perhaps best described, indeed, as an eventful occurrence. Nothing happens, by contrast, in the so–called ‘space of reasons’ (a domain which is, as it were, uneventful). That 4 is the sum of $2 + 2$ does not make ‘4’ into an event which follows the preceding event ‘ $2 + 2$ ’. Similarly the syllogism: Socrates is a man, all men are mortal, therefore Socrates is mortal – did not necessitate the event that was the death of Socrates (an event instead necessitated by the deleterious effects of hemlock on his vital organs). Socrates died because he was mortal, not because his mortality concluded a syllogism. In short, if all of existence consisted of mere *equations* and *inferences* then *nothing would happen*. Our *equating* and *inferring*, however, *do* constitute events – shall we say ‘cognitive’ events – and that they *occur* at all presupposes some spatiotemporal ground of possibility which permits their occurrence (unless we are to suppose that the movement from premises to conclusions in our *inferring* of things does not require time and does not *happen* anywhere, for

example, in our heads; added to this the impossibility of our conjointly conceiving things as argued for above, that our thinking is conducted in a *sequential* manner presupposes its temporal conditioning also). The point shall not be laboured here but returned to in Chapter 7; suffice to say that our thinking is no less bound up with this world we inhabit than our sensations are with the bodies we inhabit. Thus, and on the assumption that we *can* be reasonably justified in our beliefs (as opposed to ‘dreaming things up’ in a vacuum), the world itself can constitute the grounds of this reasonableness; not because it incorporates ‘thought’ but because it supplies us with what we can poetically consider ‘food for thought’, the ‘menu’, however, being not *carte blanche* but fixed.

(iii) Being in a Position to Know

While McDowell regards ‘intuitions’ to be ‘bits of experiential intake’, for Kant intuition comprises the fundamental conditions of space and time without which no ‘experiential intake’ would be possible. In appropriating the Kantian slogan ‘Thoughts without content are empty, intuitions without concepts are blind’, therefore, and in drawing his primary conclusion that sensibility ‘does not make an even notionally separable contribution to the co-operation’, McDowell discounts that other Kantian notion which, if indeed disregarded, prevents one grasping correctly the nature of empirical cognition, namely that ‘The understanding is not capable of intuiting anything’ (A51=B75). This implies that the spatiotemporal conditioning of empirical cognition is *not* conceptually articulable, something McDowell’s primary conclusion demands. It is additionally argued here that the individuation of objects, far from being concept-dependent, relies too on the spatiotemporal conditioning of empirical cognition, meaning that the ‘understanding’ is not even required in enabling us to distinguish one object from another; rather that it is our ability to do so which enables us successfully to *apply* learned concepts to objects individuated in advance. This is not to perform a volte-face with respect to Kant’s transcendental idealism but it is to adopt what seems correct in his position, namely his denial that we can ‘cull’ objects from logic.

It is perhaps indicative of the soundness of these claims that no one has yet been asked the question, face-to-face as it were, ‘*When are you?*’. By this is not meant that one’s

interlocutor seeks to know the present time or date (regarding which one may be entirely ignorant) but, instead, whether one resides in the moment or not. But why is it that this question could never (sensibly at least) be proposed to anyone? Surely because in asking the question at all it must be presupposed that interrogator and interrogated exist contemporaneously, in which case that one resides in the moment simultaneously with one's questioner (as opposed to replying: 'I exist yesterday' or 'tomorrow') must constitute a forgone conclusion. Similarly the un-thought-of question: 'Are you somewhere?'; by which is not meant that we are to provide our geographical location by name (regarding which, again, we may be entirely ignorant) but whether it is the case that we occupy a place or not. The question remains: Can one, as Brandom *denies* in tandem with McDowell (op.cit., 122), 'be aware in that sense independent of and antecedently to grasping or mastering the use of any concepts' of the 'where' and 'when' of our experience, inasmuch as our spatiotemporal location is the *given* background of every experience in the absence of which a 'mastery' of concepts would count for nothing? Because what are the 'concepts' which enable one to determine the awareness of one's existing 'here and now'? The concepts 'here' and 'now' perhaps? Given these concepts are irremediably indexical, a McDowellian response to the problem might resemble the argument he gives regarding the 'fineness of grain' of colour experience, namely that by means of demonstratives and the presence of a sample one is able – 'possibly to oneself' – to 'give linguistic expression to a concept that is exactly as fine-grained as the experience, by uttering a phrase like 'that shade'' (op.cit., 57).⁹ McDowell cautions against our merely 'taking our own word for it', so to

⁹ Although a digression from the main argument of this section, we must question here, in light of our discussion in the preceding, just how 'exact' McDowell's 'concept' is in allowing him to spell-out his 'experience'. The 'colour' in this case, it cannot be doubted, would be comprised of extensive and intensive magnitude; so how exact, in this regard, is the concept '*that shade*' with respect both to its material and formal aspects? He would be unable, after all, to 'linguistically express' this as 'that shaped shade' or 'that shaded shape' because 'shades' (in this instance) do not relate to 'shapes', just as 'shapes' do not relate to 'shades'. The material and formal aspects of his experience, in other words, can only be spelt-out separately, not conjointly, meaning that he has not 'grasped' this material form in all its fine detail at all and nor could he possibly do so in *conceptual* terms. With all these examples I refer the reader to the title page illustration of the present work as a test-case for this assertion. Is the experience of it, for example, gapless (should the image be seen here for the first time)? And are both the material and formal aspects of the rainbows as represented therein *conjointly conceived*? *Quod erat demonstrandum* should the answer be 'yes' to the first and 'no' to the second.

speak, that the shade experienced is authenticated by the demonstrative expression, in the same way Wittgenstein cautioned against the man who measured his height by placing his hand atop his head. In acquiring the necessary distance from the claim so as to determine its truth which, ‘for it to be recognizable as a thought at all’, one ought endeavour to do, McDowell suggests that ‘the associated capacity can persist into the future, if only for a short time, and that, having persisted, it can be used also in thoughts about what is by then the past’ (ibid.).

Why might this methodology fail in the case of determining *when* one exists by means, perhaps, of the conceptually-articulable and thus ‘thought’ demonstrative expression: ‘I exist now, at *this* time’? If this is indeed something thought and to avoid Wittgenstein’s problem of self-authentication, some distance must be gained from the ‘occasion of utterance’ (ibid.) in determining its truth-value. But McDowell proposes a *temporal* distancing in the case of colour concepts as perhaps the only one possible for indexical utterances generally; which distancing, in the case of ‘now’, clearly prevents the utterance ever being authenticated since ‘now’ will become ‘then’ the moment one attempts to authenticate. It is not a case, either, of *remembering* that one existed *then* and having the utterance ‘I exist now, at this time’ authenticated this way since it becomes a question, then, of determining the grounds upon which one authenticates the memory; not in terms of its reliability but regarding the time at which one remembers. Since the act of ‘remembering’ occurs in the present moment, the authentication of ‘now’ in the utterance is determined relative to the ‘now’ which is the present time of one’s remembering. This present time must therefore itself be authenticated as that which fixes the temporal ordering of one’s experience; but then one is confronted by the same problem of ‘thinking the moment’, as it were. By extension, in the case of temporal indexicality, the past and future are both determined relative to the present moment; a moment which – *itself* and as the ground for such determination – must remain conceptually indeterminable and thus ‘un-thought’, though not for that reason ‘experientially’ indeterminate.

This inability to determine, conceptually, one’s temporal location and consequent inability to determine the truth-value of our temporal utterances (which ‘truth’ is to be determined independently of the utterer or, if by the utterer herself, at least at some temporal distance from the occasion of utterance) ought not lead one to abandon

bivalence by arguing that we exist *neither* now *nor* then (surely a self-defeating argument since it must itself be proposed in the moment) but rather to regard the temporal grounding of our experience as the *given* basis of every temporal judgment, in the same way Kant insists that our cognitions relate ‘immediately’ to intuitions (A19=B33) (as opposed to the latter possessing a derivative status; derived, that is, from our conceptualized judgments). The question remains whether the ‘I’ in ‘I exist now’ is conceptually derivative, a question limited space prevents one considering. Suffice to say that the givenness of the temporality *in which one exists* would presumably pertain in this case too. And nor are these judgments made *relative* to a temporal index as John Perry argues (as in ‘I believe it is *now* noon’ (1979, 5)) or such as to incorporate a temporal metric (as in ‘I believe an hour has *now* passed since I last saw you’), both of which are indeed things one could be mistaken about. This is a matter about which it is impossible to be mistaken or about which, as with our questioner above, one cannot even sensibly enquire since the occurrence of ‘now’ in both propositions is not determined relative to any index or metric but is instead that which grounds such judgments. For how else is the time to be determined numerically relative to oneself or its passing measured except with regard to the given moment in which one resides – the fulcrum about which all our temporal judgments are fixed?

A significant critique of temporal determination, however, specifically with regard to the tensed notions of past, present and future (in contrast to the detensed notions of earlier, later and simultaneity) can be found in John McTaggart’s ‘The Unreality of Time’. This constitutes a potential threat to the forgoing since it effectively denies, as Mellor similarly does (1988, 79), that there are any ‘subjective facts or selves, internal representations of oneself or the present’ upon which may be grounded, in a given sense, our temporal judgments. Focusing, in particular, on McTaggart’s claim that arguing for the reality of time by utilizing the concept of ‘succession’ involves one in a vicious circle (1908, 468), he proposes that the adherent of tensed propositions must either accept that past, present and future are predicable of every event, in which case the proponent’s position is contradictory, or else argue that these predicates apply *successively* to the same event, not simultaneously, in which case the contradiction is avoided but at the cost of vicious circularity since ‘succession’ is itself a temporal notion and it is unintelligible, so McTaggart asserts, that ‘time is in time’ (ibid., 469). If the predicates which signify tense are therefore essential to time, the denial of its reality

is the only intelligible position to adopt; or, at the very least (something akin to Mellor's position), any judgments made which incorporate tensed notions must be dropped in favour of their detensed counterparts so that the proposition: 'K faces food now' is to be replaced by: 'K faces food at T' (op.cit., 79) where 'T' in this latter proposition constitutes an objective temporal determination un-vouched-for by the subject's given representation that they 'live in the now'.

McTaggart offers an interesting explanation as to why, given that 'whenever we perceive anything as existing in time... we are perceiving it more or less as it really is not' (op.cit., 470), we nevertheless fervently believe that the temporality we experience is constitutive of reality. His explanation is that we equate the phenomenologically distinct aspects of *anticipating* an event M, *experiencing* an event M and *remembering* an event M with the qualitatively distinct notions of future, present and past respectively (ibid., 469). He also, significantly, countenances the idea that if 'we reduce time and change to appearance' in this way, 'must it not be to an appearance which changes and which is in time, and is not time, then, shown to be real after all?' (ibid., 474); a question he unfortunately only touts for future resolution. We can pursue this line of thought, however, and offer the results of its exploration as a counter-argument to the claims advanced by Mellor for a purely 'objective' time-determination.

It can be proposed that there are two distinct senses regarding the concept 'when' something occurs, only one of which is epistemologically significant. Let us call them the 'objective' and the 'subjective' sense. The objective sense is constituted by such things as times and dates (e.g., 10.40pm on 16th March 2012; notationally denominated by 'T') and to the detensed notions of temporal ordering, including 'earlier', 'later' and 'simultaneous'. Every detensed temporal notion is clearly relational since it is only with regard to at least two terms that one can intelligibly utilize these concepts (i.e., one event occurs earlier than another, later than another, and so on). The subjective sense of 'when' is determined by one's temporal location relative to that objectively stated time or order of events such that the events concerned are either past, present or future. These notions are relational, of course, but one of the two terms involved is always the same,

namely the subject to whom events appear as past, present or future.¹⁰ But why is it necessary to include tensed notions here rather than simply the objective determinations outlined previously? Simply because all the objective temporal determinations, though they be as ontologically exact as one likes, are wholly indeterminate in respect of our epistemological concerns. For instance, that one event occurs earlier than another event in the time-series informs us of precisely nothing regarding our wish to *know* when these events *will* occur (or *are* occurring or *have* occurred). Only by locating oneself in that same time-series (in other words, only by attaining a *subjective* determination of one's temporal location – the very thing Mellor deems irrelevant) can knowledge of such things be achieved. But why, it might be opposed, is it necessary to know such things when the objective determinations are sufficient for all practical purposes? Precisely because, for all 'practical' purposes, they are wholly insufficient. To be instructed, for instance, that: 'Your train time is 11pm on the 12th, just before the last train to Brighton' and then to be told, upon arrival at the station, 'The 12th was yesterday', is hardly to keep one practically well-informed if one does not already know, *relative to oneself*, exactly when these events occur in the time-series. So how to be informed? – Only by deploying those subjective temporal concepts the relevance of which Mellor denies: That it is *now* 10pm and you have an hour *until* your train arrives.

It is for this reason if one enquires 'when' something occurs that, even if given a specific time and date, one can coherently ask the further question (if one does not already *know* one's temporal location relative to that time and date): 'And when is that?!', to which one's respondent can only reply by using temporally-subjective or tensed terms, i.e., 'now', 'back then' or 'soon'. The question 'when' (objective) something occurs, therefore, can only be known relative to the time 'when' (subjective) one exists. Furthermore, in adhering to this subjective sense of 'when' one avoids the contradiction that each event is past, present and future in an ontological sense since these are subjective determinations and do not apply to the events themselves (merely a

¹⁰ I say 'events appear as' rather than 'are experienced as...' because, as McTaggart rightfully contends (ibid., 470, footnote), it is only of the present that we can have direct *experience* while 'appear' can also be applied to the memories and anticipations we have. Even in the latter two cases, however, and regarding our cognitive life in general, it is only ever in the present that we actively remember or anticipate – as well as experience – things. It really is the case, in other words, that we 'live in the now'.

temporal order applying to the latter, i.e., earlier, later or simultaneous; the latter applying to ourselves as physical beings also, existing relative to those events, although such is equally insufficient as regards our epistemological concerns). So, and far from ‘overrat[ing] the present subject’ as Mellor accuses Nagel and others of doing (op.cit., 79), regarding our practical knowledge, Mellor seriously underestimates the same. And to repeat the essential point made earlier, the ‘knowledge’ here is not imparted or acquired conceptually but is a *given* on the basis of which all subsequent temporal determinations are cognized.

But does the same hold for our spatial intuitions? If it is a case of having to ‘distance’ oneself from one’s indexical utterances regarding physical location (as in ‘I exist here, at *this* place’) thus avoiding the problem of self-authentication (in this instance, authenticating that one is ‘here’ by standing on that very spot, perhaps), how should one proceed? It would seem insufficient simply to give the name of one’s location (e.g., Cardiff) when there is nothing in a place name which indicates its location or one’s position relative to it. Even in the case of ‘the North Pole’ or providing co-ordinates of longitude and latitude, if one is to rely merely on one’s *experience* of location (so that one has perhaps been blindfolded and guided to one’s location before being asked to authenticate, conceptually, the utterance ‘I exist here, at this place’ when the blindfold is removed), what then? Clearly it is not a case of authenticating this demonstrative expression by gaining *spatial* distance from the place at which one stands so that one moves *over there* in authenticating that *one is here*. That again leaves a temporal distancing. But whether it is a case of remembering that one was over there or realizing that one is still here (a realization also dependent on memory), the *grounds* for judging as we do must still be considered. Since ‘here’ could be anywhere prior to its being determined where ‘here’ – as the place one occupies – in fact is and if the determination of where one exists must constitute a genuine ‘thought’, i.e., one that is subject to truth-conditions, it must be determined what could possibly falsify the assertion ‘I exist here, at this place’. Regarding one’s spatial location, this could only be that one is not situated *here* at all but *somewhere else*. But how is it to be determined precisely where this ‘somewhere else’ is? Only on the basis, surely, of knowing where ‘here’ is. All of which demonstrates that ‘here’ has the same function in determining spatial location as ‘now’ does in determining temporal location. It constitutes the *given ground* of one’s locational judgments, not something *derived* consequent to one’s judging location.

But what is the equivalent of “tense” for spatial determinations? Because it might be further opposed, in a manner directly analogous to McTaggart’s critique of time, that concepts of *orientation* (as the equivalent notion for “tense”, perhaps) are entirely unintelligible, just as the various tensed notions supposedly are, thus making ‘space’ something ‘unreal’ as well. Hence, in determining one’s spatial location, any reference to orientational terms such as “to the left of”, “above”, “behind”, etc., must be avoided since they either involve one in a contradiction so that these opposing notions are predicable of every object (e.g., if A is above B but below C, is A both ‘above’ and ‘below’ in an ontological sense?) or involve one in circular definitions (i.e., Object A occupies a place to the left of B; but what place does B occupy? - One that is to the right of A). As with time also, however, it is possible to distinguish between an ‘objective’ and ‘subjective’ sense of ‘where’, the subjective sense requiring that we make no ontological judgments regarding the absolute orientations of things, the determination as to ‘where’ we are placed being made in terms relative to ourselves only.

Hence our given spatiotemporal location is presupposed by our locational judgments, not derived from them; and although, in the case of tensed expressions such as ‘I *can* see this’, ‘I *did* see that’, ‘I *will* see them’, it could be argued that ‘did’, for example, entails the occurrence of something past, this is merely a semantic entailment which has no bearing on the epistemological question. In *knowing* whether something is past it is required that one literally be in a position to know so that all these judgments are onto-epistemic in their status. It might here be opposed, however, that, in determining the spatiotemporal location of *objects* (our physical selves included) one must first be aware of objects – the by now familiar ‘awareness’ facilitated by our conceptual and not merely sensible capacities – as Sellars, McDowell and Brandom forcefully contend. In considering how it is that we gain awareness of particulars the renowned *principium individuationis* will constitute the focal point of the remaining discussion and in this case, it will be argued, our capacity to individuate objects is again founded upon ‘immediate experience’; hence not, as Strawson and others have sought, indirectly *via* reference to a ‘spatio-temporal *network*’ (1959, 30; my emphasis), nor *via* a detour through our linguistically-expressible concepts, but *directly* in our capacity to discriminate spatiotemporal *objects*.

Thus, and returning to Kant once more (although parting company with him on this occasion): he cites as the three determinations of space ‘place, extension, and figure’ (*Metaphysical Foundations*, 4:523). How, then, is one to account for the possibility of motion *through* space? An extra determination is required here, that of *traversability*. That something is extended, has a shape and occupies a place does not entail that its space, either that which it occupies or the enfigured space of its shape, is traversable, since these spaces can be expressed geometrically without any recourse to the concepts of traversability or motion (this applying to the ‘transversal’ too). It is not that geometrical space is absolutely solid or absolutely empty because solidity and emptiness are physical, not geometrical, determinations, with geometrical space neither permitting nor preventing motion. It is simply that movement *through* space is not a geometrical concept at all (as regards both Euclidean and non-Euclidean geometries). Expressed another way, that things do or do not, can or cannot traverse geometrical space makes the least difference to the geometer’s calculations. It is not as though, for instance, one must move this circle to one side before constructing this right-angle triangle one has in mind; or that ten seconds are required in connecting the vertical and horizontal lines because it takes that time for the hypotenuse to traverse the space between them (one is not, to be clear, considering one’s drawing of geometrical shapes on a sheet of graph paper since the possibility of this already presupposes the physical extension of the paper). Only things in physical space can obstruct each other or must be moved aside in making room for others and only in physical space is time required in order that things can move from one place to the next.

To illustrate the distinction further: parabolas do not traverse geometrical space in an *arcing motion* about the cone, though *projectiles* may describe this arc on their journey through physical space. With this latter example it is not a case of our minds having first laid down the space in which projectiles move so that afterwards the geometrical principles constitutive of this space can be applied ‘with the greatest precision’ (*Prolegomena*, 4:288) since the possibility of motion requires that the space through which things move be traversable, a factor that is not at all derived from geometry. A traversable space must therefore be presupposed before a thing can move through it and only *then* might its motion be described in geometrical terms. Thus it is not the movements of things which ‘fit’ our geometrical concepts but our geometrical concepts which fit the movements of things.

No miracle or pre-established harmony needs to be postulated in accounting for this application of our concepts to things (on the basis that, unless we ourselves ‘make’ objects, the possibility of our applying mathematical concepts to objects and events remains wholly inexplicable), any more than a pre-established *disharmony* must be postulated in accounting for our failures in application, as Kant in fact misapplied Euclidean geometry to physical space. It was not ordained by some *deus ex machina* that he should fail in this endeavour any more than it was ordained that Einstein should succeed. That things either do or do not harmonise with one another concerns the *things themselves* and not a third thing such as a *deus ex machina*. That a square peg does not fit a round hole though it fits very well a square one is sufficiently explained by the things themselves without recourse to a third thing. The alternative would be to suppose that the possibility of harmonisation has everything to do with this latter and nothing at all to do with the relations of things. But in respect of this *deus ex machina*, the things it must harmonise presumably relate to *it* (as a square peg does its square hole), in which case these things must already harmonise with it to the extent that *they admit of being harmonised*, which harmonisation between the things to be harmonised and God cannot again be accounted for in terms of a *deus ex machina* without generating an infinite number of them.

Regarding ‘harmonisation’ in general, therefore, it is always a question of two things at least standing in harmony with one another since *one* thing necessarily harmonises with itself (i.e., the idea that a thing should not harmonise with itself is contradictory since it would then be something *other* than what it is). In this example it is a case of our geometrical concepts harmonising with the movements of things. Harmonisation, in this instance, does not imply action or interaction since the movement of a thing does not interact with our geometrical concepts describing its path through space, nor our geometrical concepts with its movement. There is no relation of dependency or interdependency either since, aside from the distinction between physical and geometrical space argued here, a projectile does not plummet to the earth at a calculable rate of declination in virtue of our capacity to calculate things this way, and neither does our capacity to do so derive from the projectile having first plummeted to the earth. The harmony, in this instance, derives from a relation of world/concept *affinity* since, as any diagrammatic representation of a parabola illustrates, there is a relation of likeness between the arcs rendered here and those described by the objects themselves. That one

thing is ‘like’ another, however, implies neither that these things should be alike in every respect nor that the like things originate from the same source (e.g., our ‘minds’); the possibility of comparing like with like, indeed, presupposing the opposite because were these things alike in every respect and were they held to be derived from the same source, how could one assert that one thing is indeed *like* another as opposed to one’s merely considering the same thing? – it being nonsensical to suggest that a thing is like itself.

Nothing, therefore, either does or must *travel* through geometrical space and it is not necessary, either for shapes or for the geometrical space they occupy, that they should be traversable in order that they be spaces and shapes at all. Extension is therefore a necessary condition for traversability but only of a *physical* extension can one say that a motion *through* it is possible. Dimensionality, to express all of this in simpler terms, does not imply traversability. This perhaps accounts for Kant’s distinguishing the geometrical and material occupation of space, the latter presupposing motion to the extent that a matter must ‘fill’ a space, a presupposition which does not apply to lines, planes or solids *simpliciter* since these can occupy a space without having first to fill it (*Metaphysical Foundations*, 4:497). It perhaps accounts, too, for his oft-repeated claim that ‘Motion of an **object** in space does not belong in a pure science, thus also not in geometry; for that something is movable cannot be cognized *a priori* but only through experience’ (B155, note). A question it seems natural to ask, therefore, is: Why did Kant seek to ground the physical – what we have learnt he terms ‘empirical’ – space of nature upon the geometrical space in our minds (pure intuition)? Since a vital, indeed, fundamental aspect of physical space which distinguishes it from geometrical (its traversability) is left entirely unaccounted for. This lack cannot be made up for empirically because nothing empirical is given to us ‘preformed’ in spatial terms (and traversability is certainly a spatial concept). Kant suggests, in the note just quoted, that ‘motion, as **description** of a space, is a pure act of the successive synthesis of the manifold in outer intuition in general’ (ibid.). He thus describes this motion as an ‘action of the subject (not as determination of an object)’ (B155). But how is it possible for a space to be originally generated or ‘described’ by some kind of mental motile act when *motion itself* in fact presupposes space and physical space as well? If our thoughts or, better, our *thinking* is physically conditioned (grounded, perhaps, in the neural networks of the brain which are themselves physically extended and thus able to

conduct electrical impulses, the dispersed effects of which being revealed through MRI scans, effects which are then tallied with the subject's report that they are indeed 'thinking' something) the idea that our describing of geometrical space presupposes motion on the part of the subject may perhaps make sense. It is not clear, however, that Kant conceived of the subject's 'action' in these terms; which 'mobile' thought, anyway, presupposes the physical extension of the brain's neural networks, with this extension *allowing* us to think as opposed to its having been *produced* by our thinking.

Thus, and although our world consists of but one universal space, a distinction can be made here between the *traversable* space through which an object moves and the *enfigured* space which constitutes its shape.¹¹ At issue here is not the question how it is objects acquire shape (*via* the forces of elemental cohesion perhaps), nor the geometrical determination of space (which, as regards its traversability, counts for nothing), but how it is that we are able to *distinguish* objects on the basis of mere 'immediate experience' and thus pre-conceptually. Because it appears that we can on this basis, despite Rorty's denial, 'cut[] reality at the joints' (1991, 80); the principle of individuation which allows us to do so stated thus:

The enfigured space of an object is, for the object itself, non-traversable.

To elucidate this principle further: because an extended object is divisible, the enfigured space which constitutes its shape is capable of being traversed (e.g., a knife passing through a slab of butter). The enfigured space of an object, however (for instance the knife) – though it can traverse space and can itself be traversed – *cannot traverse the enfigured space which constitutes its traversing shape*. No object, in other words, can

¹¹ To prevent confusion (since I have declared there to be but 'one universal space' while nevertheless distinguishing 'enfigured' and 'traversable' space) the following is an example of what is meant. Bearing in mind Kant's tripartite definition of space as comprising place, extension and figure – this tennis ball I have in my hand: *in my hand* is where it is 'placed'; its 'extension' is simply its dimensionality and its 'enfigured' space, its spherical shape. When I throw the ball in the air to serve, it is the *traversability* of universal space which allows me to do this. The reason Kant is not able or is not entitled to posit this latter determination of space is because he considers 'space' itself to be some kind of mind 'project[ion]' (A328=B384) and not something transcendently real which the experiencing subject *inhabits* and thence *revolves through* (i.e., 'traverses'); which capacity further accounts, in a consequential sense, for the parallax and parallel effects as constitutive elements of the subject's experience.

traverse itself. One *part* of an object may traverse another part, e.g., a hinged knife which can be manipulated to cut its handle; but in this instance the *traversing parts* cannot traverse themselves, ‘parts’ individuated (i.e., the handle and the blade) in precisely the same way that the combinatory object is. An object, individual or particular, therefore, is that which can traverse anything except itself. There may indeed be self-traversing objects, something Superstring Theory (from what one grasps of it) posits; although multiple dimensions must be presupposed in that case and it is only the three dimensions of our mundane space (and perceptual awareness) which concern us here.

This discussion, however, may seem radically incomplete until one has first defined, not the principle upon which we individuate objects, but what an ‘object’ – let us say ‘physical’ object – actually is. There is a thesis, for instance, known as ‘Universalism’ which declares that ‘any non-overlapping, physical objects whatsoever compose a single physical object’ (see Markosian, 2000, 382). This thesis implies that the pen I can perceive placed next to this book on top of this table can constitute, *together with the book and table*, ‘a single physical object’. If this thesis is to be accepted then there is potentially only one object in existence we could individuate, namely the world in its entirety as we perceive it. This would additionally make any talk of individual *objects* (plural) nonsensical, together with any notion that we can *distinguish* objects one from another (i.e., individuate them). Indeed Markosian, who proposes the Spatial Location Account of Physical Objects, believes his thesis is neutral with regard to that of Universalism which perhaps indicates the difficulty of the challenge it presents since he nevertheless considers it to be a ‘controversial’ doctrine (ibid.). It is certainly one which, despite his neutrality towards it, he ought perhaps to have challenged since he speaks of physical *objects* himself and he cannot deem the world in its entirety to constitute a single physical object because he defines a physical object in terms of spatial location which, regarding the world in its entirety, would mean that *it* occupies a spatial location, entailing further that space occupies space, itself a nonsensical idea. This deficit in his argument could have been made good, I suggest, had he considered the question, not only what defines a physical object but how it is that we individuate them since the former problem would seem to imply the latter (if one is to speak of ‘objects’ at least).

How are we to resolve this problem then, assuming we must, so that a counter-thesis can be proposed bearing the fitting name of ‘Particularism’? Kant is surely correct to insist that one cannot determine *a priori* what objects there are to be individuated (one cannot, in other words, ‘cull’ objects from logic). This seems true in a numerical sense (i.e., whether there is only a single object in existence or an infinite number of them) and in a constitutive sense (whether objects are aggregative or simple things – a tree in the former case, for example; a point-like quark entity in the latter). The question, therefore, due to the contingency of the things concerned, can only be determined empirically. Adopting Markosian’s definition of a physical object as that which occupies a spatial location (so embracing quarks which, though they lack extension, are nevertheless spatially located, if indeterminately so), the problem of individuation remains since the ‘spatial location’ in question could constitute a single point or the entire expanse of the visible universe (such that everything in it occupies the *same* location, thereby constituting a single object). Leaving aside the issue of sub-atomic particles (which, as already stated, are more theoretical than perceivable things) and focusing on the macro-realm of our perceptual awareness and thus spatially extended as well as spatially located things, what is it that grants us the capacity to individuate objects, which capacity presupposes that there are many of them in existence and not just one? Recalling that the solution here is to be determined empirically: an object is that which can traverse anything except itself. On the basis of this principle alone, therefore, one that is applicable *a posteriori*, our capacity to individuate objects is assured. Objects indeed occupy a spatial location but, more than this, the enfigured space which constitutes their shape is non-traversable for the object itself. The pen, therefore, placed next to the book on top of the table can be distinguished from these other objects on empirically determinable grounds – it can penetrate the book and the table (and can thus traverse them) though it cannot traverse itself. It therefore ranks as a particular object, which is not to say that it constitutes a ‘simple’ entity rather than an aggregate since the term ‘particular’ is used here in a relative sense – relative, that is, to the aggregative form it possesses, one that is in turn contingently determined. Once this form is assumed, however, it can be individuated as a particular (just as when *disaggregated* the parts comprising it can be individuated). But why might the ‘aggregate’ here not include the book and table as well? Simply because the pen can traverse the book and the table which, given the aforesaid principle of individuation

(that an object cannot traverse itself), would render the book, pen and table distinguishable particulars.

One might argue that the world in its entirety cannot traverse itself but that is because it is a *non-traversing thing* and does not occupy a space but is *comprised* of space. For this reason the world in its entirety could never be considered an object on the grounds advanced above so that one must either reject Universalism or hold that it denies the existence of any objects; the former seeming the more acceptable position to adopt. It is this principle of individuation, therefore, founded solely on their spatiotemporal attributes, which renders our ability to distinguish objects a perceptual given. But why the conviction that objects are *perceptually given* in this way as opposed to their having to pass, first, through the conceptual filter of our understanding? – It is certainly correct of McDowell to argue that a purely coherentist explanation of our mind's relation to the world equates to a 'frictionless spinning in a void', leading one to question how it is that we could 'think' anything at all in the absence of that 'external constraint' the world provides for us. But a 'constraint' on thinking is no constraint at all if we have the freedom to move – 'twixt the bounds of tautology and contradiction perhaps – wherever we will in our thought. On the other hand, that our intuitions are themselves conceptualized in their very being, as is McDowell's proposed solution, seems reminiscent of that 'intellectual intuition' Kant claims God alone possesses, entailing that we could produce our object simply by thinking about it. Regarding the relation of *our* minds to the world, the utilization of a concept in thought is not restricted to the presence of its object, implying that some ground or condition of application is required in determining whether or not it is. No concept carries with it, in other words, an inherent capacity to become self-objectified; our experience would be a lot less mundane, at least, and a lot more fantastical if they could. The requisite condition which *fixes* this application, absolutely and in every instance, is instead the presence of those individuated objects (our physical selves included) comprising both the world and our experience of it; objects individuated *as* objects in as indisputable a manner as is the moment in time or the location in space one inhabits while perceiving. It is this spatiotemporality of particulars, indeed, and to quote Kant, which 'determines [the subject's] existence in relation to *given* objects' (ibid.; emphasis added).

There remains, finally, the issue of 'awareness'. In truth, following the Sellarsian mode of explanation, there ought only be one concept of any significance and that is the concept of 'awareness' itself (as that which every other concept is said to grant to us). But does this not imply that we must possess the concept 'awareness' before becoming aware of anything? Further, that we must possess the concept 'awareness' before utilizing any other concept and the inherent awareness of things they are said to grant us? Not being aware of anything prior to our acquiring the concept 'awareness', one wonders how the Sellarsian 'process' of acquiring the use of a language is to begin. If it is not to be a self-authenticating concept then perhaps 'awareness' too is a given.

7. Making Room for Faith

Who will dare to place the authority of Copernicus above that of the Holy Spirit?

John Calvin (cited in Tarnas, *op.cit.*, 252)

(i) The ‘Ought’ Concept

Kant made many significant and lasting contributions to the natural science of his day (all pre-critical endeavours it has to be said) and nowhere in this work is it suggested that his was not a genius-level intellect which fully grasped both the Copernican hypothesis and the subsequent advances in cosmology it permitted.¹ It is simply that, for reasons soon to be discussed, Kant was more or less forced by his own critical principles – which were in turn forced on him by a desire to secure legitimacy for the idea of a ‘Supersensible’ realm – to discount the basic elements of Copernicus’ system when developing his own because, had he only recognized it, Copernicus would have represented the chief stumbling block to the critical enterprise as a whole. Given the title ‘Copernican revolution in philosophy’ which is almost universally applied to Kant’s achievements, this seems a very strange assertion to make. Nevertheless the arguments which have been presented here would seem to warrant a thorough rejection of this centuries-old association and, from both a philosophical and scientific point of view (not that there has been a reciprocal ‘Kantian revolution in natural science’), a rejection of the Kantian system itself.

This final chapter, therefore, argues that Kant’s critical project was developed with a single goal in mind – that of justifying, and thereby securing, religious faith. The ‘danger[s]’ (A383) wrought by the scientific method for traditional beliefs are well known and it required a man of genius no less enamoured of this method than the tradition itself to attempt to shore up the latter while simultaneously honouring the former. But everything distinguishing Kant’s position from that of scientific realism (the ‘subjectivity’ of space and time, the ‘objectivity’ of experience) can be directly attributed to this desire to treat the human being (in their capacity as ‘rational’ beings) as a species apart, rather than as simply an ape among apes, an object among objects; one with complex abilities, certainly, but abilities which are not, for that reason, exempt

¹ See Palmer (2004, 174) for an extensive list of Kant’s contributions to natural science.

from the prying eye of scientific inquiry. Take, for instance, something which must be a unique occurrence in the annals of philosophical discourse, namely that someone should have thought to describe space and extension as ‘irksome’ conditions. This is how Kant describes them (*Judgment*, 6:483), prompting one to ask: Why? The answer is not too difficult to find if one considers that his comment appears in a discussion of ‘theology’, a discussion which itself begins with a question:

Why are we concerned to have a theology at all? Obviously we do not need it in order to expand or correct our knowledge of nature, or in fact any theory whatever. We need it solely for a subjective aim: for religion, i.e., for the practical – specifically, the moral – use of reason. (*Judgment*, 6:482).

Working on the premise that man cannot live on speculation alone, it was Kant’s concern to argue the legitimacy of those religious or Supersensible interests of reason which were fatally undermined following his critical assaults on the rationalistic props that had formerly sustained them. But it is maintained here that Kant’s concern in this matter did not follow the discovery and implementation of his critical method – arrived at *via* an independent route perhaps – but instead preceded his discovery and contributed, from the beginning, to its ‘idealistic’ character. No direct textual evidence for this supposition can be offered, of course, because no such confession as to the deeper springs driving the development of the critical philosophy exists. In examining his ethical theory and the relation this bears to his theory of nature the account illustrates how someone with an otherwise exemplary grasp of scientific methods and concepts became so corrupted by religious faith as to lapse into obvious contradiction and absurdity (an already cited example: his claim that the earth ‘persists in space’). The lack of direct textual evidence, however, does not prevent Kant’s manner of expressing himself from occasionally betraying these deeper springs, the most obvious example being the following:

I cannot even **assume God, freedom and immortality** for the sake of the necessary practical use of my reason unless I simultaneously **deprive** speculative reason of its pretension to extravagant insights; because in order to attain to such insights, speculative reason would have to help itself to principles that in fact reach only to objects of possible experience, and which, if they were to be applied to what cannot be an object of experience, then they would always actually transform it into an appearance, and thus declare all **practical extension** of pure reason to be impossible. Thus I had to deny **knowledge** in order to make room for **faith**. (Bxxix–Bxxx).

The betrayal resides in the words ‘in order to...’; that is, in order to make room for faith it is necessary to deny that certain conditions pertaining to the objective world of nature admit of universal extent because, if one does assume this, any chance we have of asserting our interests in the Supersensible realm is squeezed out and no room will remain for the ‘practical data’ of religion (Bxxii). Kant did not have to express himself in this way. He could simply have said: Having denied knowledge, I am left with faith. But he chose the words: I *had to* deny knowledge *in order to* make room for faith. Kant’s driving imperative in this regard, therefore, was not so much a moral imperative as an *imperative to legitimize morality*; it being anathema to him that one should seek to establish morality on ‘empirical’ grounds. A further indication that this was not in itself a moral quest was that he was guided by a hypothetical imperative, which is to say: If you want to make room for faith, then deny knowledge. Kant thus found it necessary to formulate a metaphysics by means of which he was free to assert, without fear of contradiction, claims of an ‘ethico–theolog[ical]’ kind (*Judgment*, 6:485). And as the rather dubious saying goes: ‘If God did not exist it would be necessary to invent Him’. In Kant’s case a metaphysics did not exist that legitimized the claims of both natural science and religion, so he found it necessary to invent one.

In making room for faith it is necessary that *we* should make objects or that objects ‘conform to our cognition’ because if it is our cognition that conforms to objects and if this cognition of ours presupposes a transcendental realm of absolute physical reality, no dwelling place would remain for those pneumatological beings of thought the existence of which presupposes a non–spatiotemporal and non–causal–material realm. But not every condition pertaining to the objective world of nature is expelled from the practically–determined noumenal sphere, with Kant casting out the annoying sensible conditions only – sensation itself and the forms of sensibility, space and time. There remain the conditions of thought which are utilized in constructing objects of a religious nature arrived at by means of a ‘rational faith’ which will vouchsafe the moral interests of reason in place of the threatened ‘soulless materialism’ (B421) to which an unrestricted ‘**physiocracy**’ inevitably leads (A449=B477). But the question now is: What happens to a metaphysics of morality when everything sensible is removed? The answer would appear to be that whatever interest we have in morality is fatally undermined since our ‘interest’ in these matters is ineluctably based in sense (even, paradoxically, Kant’s so–called ‘Supersensible’ interests). This becomes evident when

we examine the foundational premise of Kant's moral reasoning, namely that which concerns the 'Ought' concept.

Kant makes much of the notion that 'ought' implies 'can' (*Practical Reason*, 5:30). But it is also the case, as it is commonly said, that 'Just because one can, doesn't mean one ought'. In other words, 'can' does not imply 'ought' (just as 'ought not' does not imply 'cannot') and regarding what one *can* do, nothing is thereby determined in respect of what ought or ought not to be done or whether, indeed, one ought or ought not do anything. That one does not command what ought to be done to someone who cannot do it is a point well taken but the same applies to hypothetical as well as categorical commands and the special sphere of the 'moral' ought is not established by considerations such as these. So from whence do the moral 'ought' and 'ought not' derive their force to determine action if not through an individual's capacity to do things? And what is it in us that *is* determined to action? Let us assume that it is an individual's 'will' that is so determined. Moving from what one can or cannot do to what one wills or wills not to do, however, holds out even less prospect for the moral ought in respect of its determinative power. Because 'ought' does not imply '*will*', just as 'ought not' does not imply '*will not*'. This is held to be the glory of a *free* will, of course, although it undermines Kant's insistence that 'one ought absolutely to proceed in a certain way' as commanded by 'a categorical practical proposition by which the will is objectively determined *absolutely* and immediately' (op.cit., 5:31) since it does not at all follow that the 'will is objectively determined' by what one 'ought absolutely' to do.

What is true, however, is that although 'can' does not imply 'will', 'will' implies 'can'. One must distinguish, in this latter instance, between 'willing' something and 'wishing' it since it might be thought possible that one can will to do a thing even though one cannot do it; for example, one might will to do astrophysics though one cannot do higher mathematics (a personal 'will' of the author). In cases such as these, however, one is wishing something rather than willing it since it is only when one's abilities have reached a certain level, through natural or tutored development, that it might be possible to will something in accordance with those abilities. Until such time, however, one merely wishes to do things without willing to do them. It is one's capacity to do things, therefore, that determines whether one's state is one of willing or wishing although the

two may appear, phenomenologically speaking, the same. No lack of ability prevents our trying things, of course, although we must be willing to try things in the first instance and this, again, is determined by what we can do (e.g., that we can muster enough enthusiasm to try it). And it is indeed the case that we've no knowledge of what we're able to do until we've tried to do it. Humility, however, consists in *knowing* what we cannot do (having perhaps tried on many occasions) and, at this point, we cease willing what we know cannot be done (unless we keep trying till the end like those, as we say, who 'fail to recognize their own limitations', at which point the decision is made for them). Kant's characterization of a 'good will' (*Groundwork*, 4:394) that wills away its time though, by accident of nature, it cannot *do* anything is an impossible concept simply because 'willing' itself presupposes a corresponding intellectual, emotional, psychological or physiological capacity on behalf of the willing subject (the 'wishing' or 'praying' for things presupposing none of this, however).

Kant asserts, contrary to this, that the incapacitated good will here is *not* left 'as a mere wish but as the summoning of all means insofar as they are in our control' (ibid.). But our being in 'control' is precisely what constitutes our *capacity* to do something and in the absence of such capacity it is indeed a mere wish we are left with. Kant (as we often find) is elsewhere accepting of this, as when he states that the will requires, in choosing to do something, 'consciousness of the ability to bring about its object by one's action... [since] if it is not joined with this consciousness its act is called a *wish*' (*Morals*, 6:213).

That no special capacity is required in order to will something 'good' (or that an 'intelligible' or 'noumenal', as opposed to psychological or physiological, capacity is required) is a question that can only be decided once the 'good' to be willed and the 'will' that wills it are defined. 'Cannot', it is assumed here however, implies 'will not' and one's commands as to what ought or ought not be done have no bearing at all on what will or will not be done (this applying to the command: 'You ought to do as you please' as much as to the command: 'You ought to do what displeases you', to prevent misunderstanding). This is implied by the modality of the 'ought' concept itself which is non-determinate or non-necessitating with respect to the will. So here it is claimed that nothing is done on the basis of what ought or ought not to be done but only on the basis of what one wills or wills not to do. But we only ever do what we will to do (even in the case of coercion in which case, if we acquiesce, we do so because we will to

avoid the consequences of non-compliance) and we only will to do what we can do. Thus, if it is not that which ought or ought not to be done that determines the will and if it is not what can be done that determines it (since being able to do something does not entail that one will do it), what does? For Kant, of course, the will determines itself ('autonomy'). But *can* the will determine itself or is this just wishful thinking? The idea that the will can determine itself to will seems paradoxical, presupposing a will that is both active and passive in the same instant since it is both determining and determinable. Admittedly, 'in the same instant' presupposes a will that is subject to the temporal condition, something denied by Kant who places the will in an unknown realm outside empirical reality and 'no one can decide about an unknown object what it can or cannot do' (A392).

The 'ought' concept only applies to beings who 'can' do otherwise, their capacity to do so determined by their 'sensible' rather than 'rational' natures, the will of these beings subject to the heteronomous influence of inclination which constantly threatens the will's autonomy. But whether one is free to act from the moral law (as 'rational' beings) or free to act from inclination (as 'sensible' beings), in both cases one is 'free to act' so what is it that determines the choice of one course rather than the other? Is the one will 'good' and the other 'evil'? – In which case it is the goodness or evilness that determines the choice and the will is not free to do otherwise than its nature dictates. Or is the choice wholly arbitrary? – In which case the will is not 'rational' since nothing determines it to choose one course rather the other. Kant referred to this latter as 'mad freedom' (*Perpetual Peace*, 8:354) although he says nothing in respect of an 'evil will' since this ought not be possible for those who are, in themselves, 'intelligible' and thus 'rational' beings, if goodness indeed entails consistency in action (nor, for the same reason, ought 'mad freedom' be possible).

That one can make 'progress' in moral matters despite the worldly temptations we are subjected to is acknowledged by Kant, going so far as to postulate the immortality of the soul because sensible beings, being subject to inclination, will never attain moral perfection in this life, requiring that an '*endless progress*' toward perfection be commenced upon death (*Practical Reason*, 5:122). But this, as with freedom of the will, is a paradoxical notion because, once dead, we are no longer subject to inclination, the latter the only thing preventing our becoming 'holy', which holiness ought to be

attained, therefore, the moment we die, in which case an ‘endless progress’ or ‘continuation’ of the soul ought not to be required. The most this argues for is an *afterlife* not ‘eternal’ life (ibid., 5:124) since no further progress in moral matters needs to be made upon dissolution of the empirical self and, upon acquiring holiness, there is no ‘practical’ reason why one should not then just as quickly disappear in a puff of noumenal smoke. On the contrary, it would only be if we lived forever as *sensible* beings that an endless progress would be required, in which case Kant has helped himself to ‘principles that in fact reach only to objects of possible experience’ to characterize the noumenal realm, precisely what he vowed not to do.

That the existence of God must also be postulated as that Being who apportions happiness to His creatures according to their worthiness to be happy (as determined by their moral progress made as sensible beings (ibid., 5:130)) is valid only on the assumption that these beings possess autonomy of will since no one ‘deserves’ either happiness or misery, to be rewarded or punished, if their progress was not freely determined. Kant’s tripartite definition of metaphysical concerns, therefore – namely God, freedom and immortality – ultimately rests on the concept of autonomy, the possibility of which all his ‘practical’ postulates are founded on. How this relates to our Copernican view of things² concerns the ‘necessity’ inherent in our interactions with the world; a necessity which is not only apparent in terms of our empirical representations (i.e., the manner in which appearances follow *in consequence* of these interactions), but also in terms of our *thinking* which, it can be argued, is no less consequentially determined.

(ii) ‘Freedom’ of Thought

Despite Kant frequently insisting – because the non-empirical capacity to act ‘freely’ is impossible for us to cognize – that this may simply be a ‘high-flown fantasy’ (*Groundwork*, 4:394), he nevertheless feels assured that ‘a human being really finds in himself a capacity by which he distinguishes himself from all other things, even from himself insofar as he is affected by objects, and that is *reason*’ (ibid., 4:452). This

² Copernicus himself was a member of the priesthood, of course, but his name is used here in invoking the spirit of his scientific endeavours and not his worldly profession.

faculty allows for ‘pure self-activity’ and places its possessor (at least in thought) in ‘the intelligible world’ wherein ‘the human being can never think of the causality of his own will otherwise than under the idea of freedom’ (ibid.). The ‘freedom’ here entails both ‘freedom from’ and ‘freedom to’: freedom ‘from the determining causes of the world of sense’ (ibid.) and ‘a (positive) capacity as well... a capacity so to act that the principle of actions conforms with... the condition of universal validity of a maxim’ (ibid., 4:458). Now, that we are able to will things or to choose things, that we have the capacity to deliberate and to decide things, is not in doubt; our concern is what it is that *determines* us so to choose or so to decide. And in this respect is ‘pure’ self-determination at work here or is the self instead determined by factors beyond its control? In addition we ought not to consider the act itself but rather the willing that produces it because in deciding to do a particular thing it is clearly with respect to the ‘deciding’ and not the ‘doing’ that we make our moral assessments when it is possible to do a thing having not decided anything (as in the case of somnambulism for instance).

Bearing in mind our previous discussion, therefore, let us assume that we have the *ability* to do or not to do a particular thing and thus that we can potentially *will* or *will not* to do it. And let us assume, further, that it is not a ‘blind’ will at work here (as in the case of those suffering from an illness such as rabies) but a will guided by ‘reason’ and hence one capable of *thinking things through* in the process of deciding what it is we should do. Granting all of this, it would appear that every moral or immoral action derives from this capacity we have to *think*. But if it is our thoughts that determine our actions, what is it that determines our thoughts? Is it the ‘the condition of universal validity’ of the maxim upon which we are to act and is this something we ‘think’ or analogous to something we perceive, as though the categorical imperative were to be carved on a stone tablet and held aloft above our heads? If Kant were to claim that *it is in the very nature of our rationality to think, and so act, in universalized terms*, then we would not be free to be anything other than *good*. And this, it transpires, is precisely what he thinks, having asserted that ‘if I were only this [i.e., ‘a member of an intelligible world’], all my actions *would* always be in conformity’ with the condition of universality, whereas it is ‘as a member of the world of sense’ that I ‘*ought*’ to conform (ibid., 4:454). What stops our conforming in ‘this life’, of course, is our propensity, as

‘sensibly affected rational being[s]’ (ibid., 4:460), to ‘indulge[]’ our ‘inclinations and impulses... to the detriment of the rational laws’ of our will (ibid., 4:457–8).

In assessing the implications of this claim let us briefly remind ourselves of the grounds upon which Kant asserted both the existence of a Supreme Being and the promise of eternal life. He declares ‘God’ to be the guarantor of ‘*the highest good*’, which highest good is ‘the *happiness* of the rational beings’ who exist in the world, which happiness is acquired on the condition of their ‘being worthy of happiness’, which worthiness is determined by ‘the *morality* of these same rational beings’ (*Practical Reason*, 5:130), which morality consists in acting in conformity with the universal validity of our maxims, which conformity requires ‘a duration befitting the complete fulfilment of the moral law’ (ibid., 5:132), which duration equates to forever and a day. But if Kant is also to insist that we *would* act in perfect conformity with the moral law were we released from this irksome empirical bondage of ours, the most, it seems, that can be hoped for is a quick pat on the back from God before we shuffle off for good. Only by this juncture we wouldn’t in fact ‘deserve’ this pat on the back because, as ‘purely’ rational beings, we would necessarily act morally, in which case we wouldn’t deserve happiness either and so God, as guarantor of that happiness, is also rendered surplus to requirements; and thus the whole shimmering edifice comes tumbling down.

Hence the claim in the introduction here that Kant’s ‘Supersensible’ interests were entirely bound up with his sensible ones. Paradoxically, it is only as living, sensibly affected rational beings that we posit an eternally enduring life which would permit us to fulfil the moral law (and thence achieve happiness), a prospect impossible to achieve in this life due to our indulgence of sensible desires. If we remove that sensible limitation, however, nothing would prevent our conforming to law, in which case the grounds for positing an eternal life and a deserved happiness (as dispensed by ‘the hands of a *wise* author’ (ibid., 5:130)) are also removed. Added to this, although Kant states that the will is capable of determining its actions through its own causality and thus independently of our inclinations, he admits that the ‘actions’ produced by this willing ‘must [concern]... actions of the will in the sensible world, since otherwise practical reason could not actually produce any deed’ (ibid., 5:50). What he means by this, of course, is that cause and *effect* (and, concomitantly, matter, space and time) admit of empirical significance only, not intelligible, entailing that in a purely

intelligible world the will would be incapable of ‘effecting’ any deeds despite our attributing a ‘causality’ to it. But as well as indicating how Kant’s reasoning is still bound up with sensibility in this case, it further renders the concept of an afterlife, wherein we perfect our conformity to the moral law, nonsensical when no actions could be ‘produced’ here at all, whether in conformity with or against the law.

But let us consider again this concept of ‘rational freedom’ *per se*. Recalling that it is our thoughts that determine our deeds, the question was: What is it that determines our thoughts? If we desist from attributing a specific *nature* to this rational faculty so that it is ‘free’ in the truest sense of that word (i.e., neither moral nor immoral *in itself* although capable of being both), we must consider whether this rationally governed will is able to determine itself to act, which ought certainly be the case if we are to attribute ‘autonomy’ to it. And here we are confronted by yet another paradox because if it is our thoughts that determine our deeds, in order that our thoughts determine themselves so as subsequently to determine our deeds, *we would have to think about what it is we should think about* in deciding what it is we should do. But this ‘thinking about what it is we should think about’ would make these thoughts we have decided to think into the thing we actually *do*; but *thoughts are not deeds*, they are instead what determine our deeds. It is impossible, that is to say, to determine for ourselves *what* to think as though, in the same way we exclaim ‘I have decided to *do* this!’ before enacting a specific deed, we pronounce ‘I have decided to *think* this!’, the ‘thought’ decided upon being the decision to do. But this *decision* as to what we should *think* is itself a thought in respect of which we can enquire after *its* determining ground and thus is generated an infinite regress.

Now we can certainly, and do frequently, tell ourselves to stop thinking negative thoughts, for example, or to adopt a more positive outlook on things but, again, it is this ‘telling ourselves what to think’ which, if deemed *self*-determined, would lead to an infinite regress because can it really be the case that we tell ourselves to tell ourselves what to think? Our thoughts, therefore, *occur* to us in much the same way that objects *appear* to us, which is to say that they are unbidden occurrences the origins of which cannot at all be traced back to an act of rational willing (just as we do not trace back to something ‘empirical’ the cause of appearances). What we have instead and in both cases are therefore *natural* occurrences. But if we are to grant the impossibility of a self-determining and hence ‘free’ rational faculty, there remain two opposing

possibilities: either nothing at all determines us to think (the ‘mad freedom’ referred to by Kant) or we are determined to think heteronomously; a question to be pursued in the following.

(iii) Sensible Morality

A doctrine’s ability to withstand *ridicule* is not a bad touchstone of its truth.

Immanuel Kant (*The Metaphysics of Morals*, 6:209)

Kant has been called (what is perhaps the least one can say of him in this context) a ‘rigorist’ in moral matters (Acton, 1970, 64) as evinced by his steadfast refusal to allow our ‘inclinations’ any say in how we ought to act. Most notoriously this can be seen in his *On a Supposed Right to Lie From Philanthropy* where Kant argues that our ‘duty of truthfulness’ requires that we answer ‘yes’ to a murderer’s question as to whether his potential victim, who may be a friend of ours, is residing in our home (8:427). That our lying here, were we tempted to do so, would ‘contradict’ the duty of truthfulness by the way it would make ‘uncertain and useless’ all promises to be ‘honest’ (ibid.) is what constitutes ‘evil’ for Kant (*Groundwork*, 4:437); the ‘*absolutely good*’, conversely, constituted by the ‘validity’ of our maxim always to be honest under every circumstance; a maxim which, therefore, since it preserves our honest practices, does not ‘conflict with itself’ (ibid.).

As ‘rational being[s]’ (ibid., 4:438) it is in our nature to act consistently, by which consistency is meant that our action, to ‘be in complete accord with logical form’, must ‘not contradict itself’ (A59=B84). As a ‘natural being[]’, however (*Groundwork*, 4:438), a person is ‘subject to the natural law of his needs’ (ibid., 4:439), although this latter circumstance is not ‘evil’ since rationality does not pertain here, merely natural necessity. What *is* evil is for sensibly affected yet *rational* beings to contradict the universalized commands of their will by making of themselves an exception (as dictated by their needs) to the universal rule regarding consistency in action; an example of inconsistency in action being lying to avoid a difficult situation, this being an act which ‘contradicts’ itself because any trust potentially afforded us in our future declarations is now destroyed. Kant, therefore, seems to be saying here that lies beget mistrust, which I imagine no one would disagree with; whether the vaults of rational heaven are also torn

asunder upon the utterance of a lie is a different matter of course and here we must consider exactly what constitutes this ‘rationality’ of ours as it relates to the subject of moral action.

What violence, to begin with, does Kant’s example in *Philanthropy* do to our moral intuitions, on the one hand, and our reasoned deliberations on the other? Thus: My friend of longstanding has, in fear of his life, taken refuge in my home and his enemy (an exceptionally polite and honest fiend) knocks at my door and enquires: ‘Is Jürgen hiding here because I would like to kill him?’; ‘Yes’ I reply, ‘here he is’; ‘Much obliged good sir’; ‘I consider it my duty so not at all’; (unfortunately Jürgen’s replies in this case were very soon lost to posterity). Now we ought to acknowledge here Kant’s claim that ‘our well-being and woe count for a *very great deal* in the appraisal of our practical reason’ (*Practical Reason*, 5:61) but he nevertheless remains adamant that, regarding our duty to be truthful, ‘not the least exception to it’ can be admitted for mere ‘convenience[]’ sake (*Philanthropy*, 8:427) because in that case we harm not just ourselves but ‘humanity generally’ by bringing it about ‘that statements (declarations) in general are not believed’ (ibid., 8:426). ‘[T]ruthfulness’, that is to say and according to Kant, ‘must be regarded as the basis of all duties to be grounded on contract’ and thus it stands as a ‘sacred command of reason’ (ibid.).

All ridicule aside, regarding our intuitive response to this example, the sense of unfeeling detachment exhibited therein is palpable, as is the inversion of our loyalties in our granting the murderer his request while abandoning our friend to his fate. But what of the soundness of Kant’s moral reasoning in general? In truth what legitimacy it has is grounded, not in ‘duty for its own sake’ (*Morals*, 6:393) but, as with his postulates of practical reason, in our natures as sensible beings. And here (to explain first) what is ‘good’ in itself and ‘bad’ in itself is pleasure and pain respectively (physical, psychological; of whatever naturally occurring kind). Whether wealth, prestige or community harmony: we seek out each end for no other reason than for the pleasure of it; just as, because of the pain of it, we look to escape poverty, ignominy or conflict.³

³ It should hardly need stating but this is no selfish hedonism expressed here since, first, we must sometimes undergo pain in acquiring the good things in life and, secondly, reason dictates that the surest way to preserve our well-being is in cooperation with others.

Our rational faculty is the means by which we both acquire and avoid these natural ends ('the ends of inclination' (Kant, *Groundwork*, 4:396)); 'morality' our means to preserve or curtail them. The principle underlying our social bond is enlightened self-interest, a reciprocal relation whereby each is the means in enabling the other to achieve their end. Kant allows for this reciprocal relation in the context of marriage, an institution which, in revealing his more romantic side, he describes as 'the reciprocal use that one human being makes of the sexual organs and capacities of another' (*Morals*, 6:277). That both parties make of themselves the means for gratifying the other's desire is permissible because 'the one who is acquired acquires the other in turn; for in this way each reclaims itself and restores its personality' (ibid., 6:278). It is suggested here, however, that on this basis *all* human commerce is morally founded with wrongful acts consisting in a breach of reciprocity such that, for example, in lying to someone who deserves to know the truth having themselves been honest with us, we remove, to our selfish advantage, that which is their due. Hence in breaching this trust the 'contract' is broken and we are entitled to nothing of that which we were owed before. There can be no 'duty', in other words, towards those who have abandoned theirs and while this does not mean that we then accrue to ourselves the *right* to do as we please, it certainly means we are not obliged to help *them* do as they please. Hence our potential murderer, in breach of his reciprocal duty to harm no other so that he is spared harm in return, is entitled to know nothing of the whereabouts of our friend in helping him facilitate this act.

It is the condition of reciprocity which makes this doctrine 'universally' applicable although it is the subjective desire of each, as dictated by their reason, to submit to this condition as the one which best serves their needs (hence 'enlightened self-interest'). Now Kant's moral formula, in contrast to this, is an entirely empty one. That it is the case, if everyone lied or if everyone broke their promises, all trust would break down, is plain.⁴ What is also plain is that society still functions regardless of the errant behaviour of certain of its members since it is not necessary that this practice be absolute or conformed to in all cases for it to function at all. The question is: what is it that motivates Kant, on the basis of his moral formula alone, to subject the 'lying' maxim to

⁴ Although if *everyone* told lies in cases where one must answer 'yes' or 'no' (*Philanthropy*, 8:426) one could obtain the truth as assuredly as if everyone were being honest, simply by inverting these answers.

the test of universalizability? To remind ourselves, this moral formula states: 'I ought never to act except in such a way that I could also will that my maxim should become a universal law' (ibid., 4:402). Now I take it as my maxim always to wear odd socks on a Wednesday or to eat chicken on a Friday or to lie to students of philosophy on a Sunday. What is it about this latter maxim which distinguishes it from the first two in, first, having the formula applied to it? Perhaps nothing distinguishes it since the first two or any other conceivable maxim can be submitted to the test. One can assume, in this case, that these former would constitute morally permissible maxims since they do not contradict themselves when universalized.

Now, I am a sado-masochist and adopt as my maxim: I wish always to receive a sound thrashing on a Thursday. Universalized? If everyone were to receive this the 'sadist' in me would be gratified all the more (on Thursdays especially). There is something very specific about the maxim to lie or to make false promises, in other words, and it is this: it brings *disadvantage* to the one who makes it their maxim when it is subsequently universalized. But the specificity of this concerns the maxim itself and not the formula of universal law since the latter, as we have seen, can sanction maxims which are of no moral consequence at all, maxims which actually bring an *advantage* to the one who proposes it but to the detriment of others and, in the case of lying, a maxim which creates a disadvantage. It is for this reason that Kant's supreme principle of morality is, *in itself*, an empty one as regards determining an answer to the question: 'What ought I to do?' (O'Neill, 1989, 128).

The thing that motivated Kant to subject the lying maxim to his test, therefore, was clearly the result it produced in this specific case, which was the disadvantage it brought the proposer. Yes, the maxim, when universalized, is a 'contradictory' one and therefore it is irrational in this sense, but the 'irrationality', in truth, does not concern the contradiction generated but the *harm* we subsequently bring on ourselves (i.e., a breakdown in trust towards us which prevents our obtaining the thing we desire). Because consider a final case. I make it my maxim to give all my money away so that others in need may have it. When universalized so that *everyone* gives their money away in order that others in need may have it, the consequence of this would be that no one would *have* anything (or they would very soon lose it once they did have it). Here is a maxim which would generally be considered 'moral' but the consequence of which,

when universalized, actually results in a ‘contradiction’. By rights this should therefore be considered an irrational and thus an immoral act too so why is it considered, by ‘[c]ommon human reason’ (*Groundwork*, 4:402), to be a moral one instead? It would seem from this example that our ‘rationality’ or reason is not the moral *end in itself* which Kant takes it to be and if it is not an end in itself it must be the means for our achieving some other end and if that end is not consistency for consistency’s own sake it can only be the ‘well-being and woe’ we are all subject to as ‘sensibly affected rational beings’.

Conclusion

In the main this treatise has not followed the usual polite conventions of philosophical commentary and criticism: acknowledging the subject's insight here, pointing out inadequacies there, offering an alternative perspective on one question, sharing assumptions on others. It was no mere niggardliness which dictated this but the object of study itself. Kant's principle that 'Objects conform to our cognition' is, absolutely and in every respect, false; its absolute falseness derived from its opposing, diametrically, the Copernican insight. There is no tinkering with that which is absolutely false; instead, one must reverse it completely. His critical, though not *pre-critical*, work is also to be held, and in the highest degree, culpable, for turning philosophy as a discipline and subject matter during the period succeeding him into what is perhaps best described as a comedy of errors; a period culminating (one at least hopes) in the 'language philosophy' of Ludwig Wittgenstein. It is no higher wisdom which delivers these verdicts but a very ordinary one indeed; one certainly open to criticism in turn but, and despite this, one which simply cannot be moved on the fundamental question. One is, of course, forbidden to deliver such arrogant and damning verdicts as this since, and politeness aside, there is every possibility that I am wrong. But I admit this absolutely since, in that case, at least one of us would be right given it cannot be the case that objects both do and do not conform to our cognition. Accepting that one might be wrong about these things presupposes that there is an *absolute fact of the matter*. Or does it? This is where Wittgenstein's ideas assert themselves because, alternatively, it could be that both of us are 'right' as dictated, at least, by the 'language-game' we are playing – that of 'transcendental idealism' or 'transcendental realism'. The truth, in other words, depends on our manner of cognizing these things, in which statement Kant's culpability is revealed to its full extent.

The comedy that philosophy has become is thrown into sharpest relief by comparing it to that which science *is*: the most powerful tool for understanding and manipulating the world that has yet existed. Philosophy, by contrast, possesses as high a standing as pushpin, considered no better than a 'game' (and this by many of the philosophers themselves). But if that is what philosophy is, it is a game one refuses to play. The death knell for philosophy and the reason science is now called 'science' rather than the disavowed 'natural philosophy' (to avoid being shamed through association perhaps)

was sounded by Kant's transcendental criticism; the only means to renew the subject, a criticism in turn of his *Critique*. That science has attained the success it has, that its influence in intellectual, technological and cultural terms has been so immense and far-reaching, is due largely to the insight of Copernicus who simultaneously defied the received tradition and the 'received' of his senses so that neither the planet earth nor the human being any longer assumed centre stage in the world. This caused such trauma to the culture of his times that, even now, the implications of his reversal have yet to be fully grasped.

Kant's *Critique* is the *Al Majest* of philosophy and, to that extent, his was a *counter-revolution* since it emphatically opposed everything Copernicus stood for; and what better way to disguise this fact than to appropriate his name as the one most clearly indicative of 'scientific' progress. But it was because Kant chose a reverse course for philosophy just when cosmology itself had embarked upon 'the secure path of a science' that a genius of our own time, Stephen Hawking, can convincingly declare that 'philosophy is dead', its moribund status attributable to its not having 'kept up with developments in science, particularly physics' (2010, 5). Hawking is referring to developments in quantum physics in this instance but philosophy has been lost in its own world since long before this and continues to be so, at least if one is to judge by the number of anti-realists and language obsessives among its ranks.

All of that aside, however, Kant's name is rightly associated with a level of genius most of us could only dream of attaining, perhaps leaving one with the unnerving feeling that something has been missed in this wholesale criticism of his work, the rejection of which having seemingly been achieved all too easily. But despite his genius Kant was doubtless human still and thus, like all of us, vulnerable to that natural human tendency we have to overlook that which is always and everywhere apparent at the same time as we fall prey to the allied if counter-tendency to convince ourselves that absolutely anything is the case even when all grounds for conviction are missing (since, in that instance, we can simply invent them). The things that are 'always and everywhere apparent', of course, are the parallax and parallel effects, the ontological presuppositions of which include the existence of a spatiotemporal realm of absolute physical reality which we, as embodied beings capable of experiencing things, inhabit. The thing which has been 'invented' – 'space' of a different kind: the 'intelligible'

space which Kant, through his denial of absolute physical reality, was able to make room for in securing our autonomous status as moral beings.

But in substituting the noumenal for the physical Kant simultaneously misconstrued the nature of the world and our own natures as beings dwelling in it so that his ideas, in the diluted form they have managed to permeate society as a whole and as represented by ‘post-modernist’ and ‘cultural relativist’ thinking in particular, have become the true ‘danger’ to our material, intellectual and moral progress. I will offer no arguments to substantiate this claim other than to say that it reveals much when, 500 years after Copernicus instructed that his work be published posthumously for fear of what he might suffer at the hands of the religious authoritarians who then held power, in this 21st Century of ours and as inheritors of the enlightenment his views helped usher in, we are hamstrung in our response to a similar threat to our liberties because of this mistaken assumption that all the world’s belief-systems are equally ‘true’; going so far, indeed, as to appease the anti-enlightenment factions within our midst with the establishment of ‘faith’ schools and the like. In his alternative incarnation as a champion of *the* Enlightenment Kant would have been appalled by this circumstance, having declared:

Reason... cannot restrict the freedom of critique through any prohibition without damaging itself... Now there is nothing so important because of its utility, nothing so holy, that it may be exempted from this searching review and inspection, which knows no respect for persons. The very existence of reason depends upon this freedom, which has no dictatorial authority, but whose claim is never anything more than the agreement of free citizens, each of whom must be able to express his reservations, indeed even his *veto*, without holding back. (A738–9=B766–7).

When the ‘incommensurability of paradigms’ is combined with the ‘impossibility of transcendence’ to indeed *prohibit* the making of trans-cultural criticisms of what some may consider ‘holy’, the danger to ourselves as free citizens becomes all too apparent. Bringing things back to the *real* world, therefore (which, after all, has been the sole aim of this work throughout and indeed with this conclusion specifically in mind): that our centres of learning should be the chief promulgators and exemplars of this deeply questionable mode of thinking (for instance in their allowing theological ‘fanatic[s]’ (A819=B847) to denigrate these freedoms of ours while nevertheless granting them the freedom to do such things as segregate attendees of their meetings by gender) is the most sorrowful thing of all. Hence there is only one thing that ought legitimately to be

prohibited and that is, as Kant rightly states, any restrictions on our rational freedom itself. This is not to contradict my earlier assertions but wholeheartedly to affirm them since it is our well-being reason dictates we protect here and this against those who bring us nothing but woe. A pity, however, that Kant should have been at odds with himself in this instance, having provided the impetus for the very thing which now threatens us.

But while we are addressing the subject, *reverence* in philosophy (engendered, perhaps, by a sense of guilt at having killed God, bestowing one's reverence on mortal thinkers instead; or, if still acknowledging His existence, guilt at possessing an intellect akin to His which allows one to see deeper into the nature of things, so humbling oneself in a compensatory manner by revering others) is a curious phenomenon given that it is not love of God one practices but love of wisdom; not hagiography but criticism. But just as *ad hominem* polemics are frowned on in philosophy so too ought *pro hominem* praise be scorned. Now there is no philosopher in the history of the subject who garners as much reverence as the saintly Kant. His miracle is to have convinced the philosophical community that the world is of our own making; even more miraculous, convincing all and sundry that this reversal is, in its nature, 'Copernican'. But let us once try whether we do not get farther with the problems of philosophy (and at the same time restore to the subject its former dignity) by assuming that our cognition conforms to objects, which really would be just like the first thoughts of Copernicus.¹

¹ Clearly, I only used the 'philosophy is dead' quotation for rhetorical effect because a Kantian who has read this tome of Hawking's could profitably refer to the following statement he makes in it: 'There is no way to remove the observer – us – from our perception of the world, which is created through our sensory processing and through the way we think and reason' (ibid., 46); all of which sounds distinctly familiar. Hawking refers to this view of his as 'Model-dependent realism' (ibid., 49) which holds that no 'model can be said to be more real than [any] other' (ibid., 51), the very thing disputed here. Now, as stated in the beginning and on purely analytical grounds, one cannot of course 'remove the *observer*' from their *observations* of the world; the question was whether one must suppose there to be an objective realm which subsists *independently* of the observer and which must be presupposed in accounting for the observations we have (and for those it is impossible for us to have too). As a potential objection to this, therefore, according to Hawking current scientific thinking takes it 'that the universe itself has no single history, nor even an independent existence' (ibid., 6) and that 'the laws of nature determine the *probabilities* of various futures and pasts rather than determining the future and past with certainty' (ibid., 72). Furthermore, it is '*our observations* of [the universe's] current state [which] affect its past and determine

[its] different histories' (ibid., 83; my emphasis); all of which seemingly ascribes to the 'observing subject' a power to 'construct' a world that is fully comparable to Kant's. We must return in this regard, however, to the question how it is that 'we think and reason' and whether we can possibly do so 'freely'. Because just as in the case of '*our own motion*', to suppose that we are somehow *responsible* for *our observations* as though our observing things in the way we do, even if this results in a change in physical history, is not *itself* determined (even if probabilistically) by this quantum world we *inhabit* and which in turn produced us (and even if this – our being here – is to be accounted for in terms of *someone else's* observations, since in that case their existence too can be considered no more 'self-determined' than ours but must also have been observationally determined) is to ascribe to the observing subject a power to *personally* make a world which simply cannot be upheld. The disenchantment of Copernican theory remains, therefore, as does the notion of an *independent world* (however probabilistically we construe it) since it is only *in* this world that we are able to 'observe' at all, which observations obviously do not account for the nature of this quantum world itself, however, because that would require that they consist of 'all the possible histories' (ibid., 80) of it *at once* (since the universe, *in itself* and according to quantum theory, 'is indefinite and exists only as a spectrum of possibilities' (ibid., 82)); something which, quite evidently, is not the case. On the contrary, the fact that our observations are *definite* in their representations of things suggests that whatever it is that has caused one of these possibilities to be realised in the form of these definite observations of ours has *already* occurred in producing this definiteness as opposed to its having been realised *through* it. The alternative, after all, would be to suppose that our definite observations of the world are themselves produced *observationally* (if it is indeed an 'observation' which makes for a 'definite' occurrence), this latter in turn having been produced in precisely the same way and so on to infinity. The generation of 'infinity' in their mathematical equations is considered problematic by theoretical physicists; I would suggest we consider it equally so in our philosophical assessments of those same theories. Thus it seems that our Copernican analysis is in the same way applicable to the quantum model as it is to Kant's in establishing an *observer-independent reality*.

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