

Metaphysics as the Science of Essence

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What is metaphysics? And how is it to be pursued? That is, by what method of inquiry can we hope to acquire metaphysical knowledge, if indeed there is any distinctive kind of knowledge that deserves to go by that name? Elsewhere, I have defended the view that the central task of metaphysics is to chart the *possibilities of being*, with a view to articulating the structure of reality as a whole, at its most fundamental level.¹ A key thought here is that knowledge of what is *actual* presupposes and rests upon knowledge of what is *possible* — that is, of what is *really* or *metaphysically* possible — and hence that every empirical science requires some sort of metaphysical foundation. Moreover, this foundation had better be, at bottom, the same for all such sciences, since each empirical science has the pursuit of truth as its objective and truth itself is unitary and indivisible. According to this conception of the aim and content of metaphysical theory, metaphysics is above all concerned with identifying, as perspicuously as it can, the fundamental *ontological categories* to which all entities, actual and possible, belong. This it does by articulating the *existence and identity conditions* distinctive of the members of each category and the relations of *ontological dependency* in which the members of any given category characteristically stand to other entities, either of the same or of different categories. The proper conduct of this task, as I conceive of it, is a purely *a priori* exercise of the rational intellect, so that pure metaphysics should be thought of as a science whose epistemic basis and status are entirely akin to those of mathematics and logic, differing from both of the latter primarily in having formal ontological questions at its heart. But if metaphysics is, for the foregoing reason, centrally concerned with charting the domain of the possible, it is incumbent upon metaphysicians to explain what it is that *grounds* metaphysical possibility — and to do so in a way that allows our

¹ See, especially, my *The Possibility of Metaphysics: Substance, Identity, and Time* (Oxford: Clarendon

knowledge of metaphysical possibility to be something that is itself *possible*, given a metaphysically defensible account of our own nature as rationally cognisant beings occupying a distinctive place in the fundamental structure of reality as a whole. My own belief — which I shall endeavour in this paper to explain and justify — is that the only coherent account of the ground of metaphysical possibility and of our capacity for modal knowledge is to be found in a version of *essentialism*: a version that I call *serious* essentialism, to distinguish it from certain other views which may superficially appear very similar to it but which, in fact, differ from it fundamentally in certain crucial respects. Above all, my preferred version of essentialism eschews any appeal whatever to the notion of *possible worlds* in its account of the nature and ground of metaphysical possibility, for reasons that I shall try to make clear in due course. I am at most prepared to allow that the language of possible worlds may *sometimes* function as a useful *façon de parler*, albeit one that carries with it the constant danger of misleading those who indulge in it.

1. Serious essentialism

As I have just indicated, it is vital for my purposes in this paper that the doctrine of *essentialism* be suitably understood. I say this because many possible-worlds theorists do, of course, happily describe themselves as essentialists and propose and defend what *they* call essentialist claims, formulated in terms of the language of possible worlds. They will say, for instance, that an essential property of an object is one that that object possesses in every possible world in which it exists, or, alternatively, that is possessed by the ‘counterpart(s)’ of that object in every possible world in which that object has a ‘counterpart’. And they will typically claim that some, but not all, of an object’s actual properties are essential to it in this sense. But a doctrine of this sort is not serious essentialism in my sense, because it attempts to characterize essence in terms of antecedently assumed notions of possibility and necessity and thus — in my view — puts the cart before the horse. It is at best *ersatz* essentialism. So what is *serious* essentialism?

Press, 1998), ch. 1.

To begin to answer this question, we need to ask *what essences are*. However, this question is potentially misleading, for it invites the reply that essences are *entities* of some special sort. And, as we shall see, it is simply incoherent to suppose that essences are entities. According to serious essentialism, as I understand it, all entities *have* essences, but their essences are certainly not further entities related to them in some special way.

So, what do we or, rather, what *should* we mean by the ‘essence’ of a thing — where by ‘thing’, in this context, I just mean any sort of entity whatever? We can, I suggest, do no better than to begin with John Locke’s perceptive words on this matter, which go right to its heart. Essence, Locke said, in the ‘proper original signification’ of the word, is ‘the very being of any thing, whereby it is, what it is’.² In short, the essence of something, *X*, is *what X is*, or *what it is to be X*.³ In another locution, *X*’s essence is the very *identity* of *X* — a locution that I am happy to adopt, provided that it is clearly understood that to speak of something’s ‘identity’ in this sense is quite different from speaking of the identity *relation* in which it necessarily stands to itself and to no other thing. However, in order to avoid potential confusion about the meaning of locutions such as these, I think that it is important to draw, from the very start, a distinction between *general* and *individual* essence.⁴ The key point to be emphasized in this connection is that any individual thing, *X*, must be a thing *of some general kind* — because, at the very least, it must belong to some *ontological category*. Remember that by ‘thing’ here I just mean ‘entity’. So, for example, *X* might be a material object, or a person, or a property, or a set, or a number, or a proposition, or whatnot — the list goes on, in a manner that depends on what one takes to be a full enumeration of the ontological categories to be included in it.⁵ This point being accepted, if *X* is something of kind *K*, then we may say that *X*’s *general*

² See John Locke, *An Essay Concerning Human Understanding*, ed. P. H. Nidditch (Oxford: Clarendon Press, 1975), III, III, 15.

³ The historical source of this view lies, of course, with Aristotle, whose phrase $\tau\omicron\ \tau\iota\ \eta\nu\ \epsilon\iota\nu\alpha\iota$ is standardly translated as ‘essence’: see Aristotle, *Metaphysics* Z, 4. Its more literal meaning is ‘the what it is to be’ or ‘the what it would be to be’.

⁴ I do not attempt to offer here a *semantic analysis* of expressions such as ‘what *X* is’, ‘what it is to be *X*’ or ‘the identity of *X*’, though that is no doubt an exercise that should be undertaken at some stage in a full account of what I am calling *serious essentialism*. I assume that our practical grasp of the meaning of such expressions is adequate for a preliminary presentation of the approach of the sort that I am now engaged in.

⁵ For my own account of what ontological categories we should recognize and which we should regard as fundamental, see my *The Four-Category Ontology*, especially Part I.

essence is *what it is to be a K*, while *X*'s *individual* essence is *what it is to be the individual of kind K that X is*, as opposed to any other individual of that kind.

Before I proceed, however, an important complication must be dealt with. It should be evident that we cannot simply assume that there is only ever a *single* appropriate answer to the question 'What kind of thing is *X*?'. For instance, if 'a cat' is an appropriate answer to this question, then so will be the answers 'an animal' and 'a living organism'. So too, of course, might be the answer 'a Siamese cat'. It is important to recognize, however, that some, but not all, of these answers plausibly announce the fact that *X* belongs to a certain ontological category. In my own view, '*X* is a living organism', *does* announce such a fact, but '*X* is a cat' does not. I take it that the substantive noun 'cat' denotes a certain *natural kind* and consider that such kinds are a species of *universal*. Thus, as I see it, natural kinds, such as the kind *cat*, are themselves things belonging to a certain ontological category — the category of universals — but such a kind is not *itself* an ontological category, because ontological categories are not *things* at all, to be included in a complete inventory of what there is.⁶ One upshot of all this is that I want to maintain that a certain sort of ambiguity may attach to questions concerning a thing's general essence, as I shall now try to explain.

An implication of what I have said so far is that if 'a cat' is an appropriate answer to the question 'What *kind* of thing is *X*?', then we may say that *X*'s general essence is *what it is to be a cat*. But, while I don't want to retreat from this claim, I do want to qualify it. I should like to say that if *X* is a cat, then *X*'s *fundamental* general essence is *what it is to be a living organism*, because that — in my view — is the most narrow (or 'lowest') ontological category to which *X* may be assigned. The reason for this is that it is part of the *individual* essence of the natural kind *cat* — of which *X* is *ex hypothesi* a member — that it is a kind of living organisms. Now, there are, I believe, certain essential truths concerning *X* which do not issue from its fundamental general essence but only from the fact that it belongs to this particular natural kind. These are essential truths concerning *X* which are determined solely by the individual essence of that natural kind.⁷ Accordingly,

⁶ See further my *The Possibility of Metaphysics*, ch. 8, and my *The Four-Category Ontology*, ch. 2.

⁷ I want to maintain that *X*'s fundamental general essence determines what is *absolutely* metaphysically necessary for *X*, whereas the individual essence of the natural kind *cat* determines only what is

I want to say that *what it is to be a cat*, while it is not *X*'s fundamental general essence, is nonetheless what we might appropriately call *X*'s *specific* general essence, on the grounds that the kind *cat* is the most specific (or 'lowest') natural kind to which *X* may be assigned.⁸ However, I readily acknowledge that the distinction that I am now trying to draw between 'fundamental' and 'specific' general essence in the case of individual members of natural kinds is a controversial one that needs much fuller justification than I am able to give it here. Hence, in what follows, I shall try as far as possible to prescind from this distinction, hoping that the simplification involved in doing so will cause no damage to the overall thrust of my arguments.⁹

2. Why are essences needed?

I have just urged that all individual things — all entities — have both general and individual essences, a thing's general essence being *what it is to be a thing of its kind* and its individual essence being *what it is to be the individual of that kind that it is*, as opposed to any other individual of that kind. But why suppose that things must *have* 'essences' in this sense and that we can, at least in some cases, know those essences? First of all, because otherwise it makes no sense — or so I believe — to say that we can talk or think comprehendingly about things at all. For if we do not at least know *what a thing is*, how can we talk or think comprehendingly about it?¹⁰ How, for instance, can I

metaphysically necessary for *X qua* member of that kind. Thus, in my view, *being a cat* is not an absolute metaphysical necessity for any individual living organism that is, in fact, a cat. To put it another way: I believe that it is *metaphysically* possible — even if not *biologically* or *physically* possible — for any individual cat to survive 'radical' metamorphosis, by becoming a member of *another* natural kind of living organism. See further my *The Possibility of Metaphysics*, pp. 54–6.

⁸ I take it here, at least for the sake of argument, that there are 'higher' natural kinds to which *X* may be assigned, such as the kinds *mammal* and *vertebrate*, but that Siamese cats — for example — do not constitute a distinct natural kind of their own.

⁹ One consequence of this simplification is that I shall often continue to speak of 'the' kind to which a thing belongs, without discriminating between 'kind' in the sense of *ontological category* and 'kind' in the sense of *natural kind*, and without explicit acknowledgement of the fact that the question 'What kind of thing is *X*?' may be capable of receiving more than one appropriate answer.

¹⁰ Note that I ask only how we can *talk* or *think* comprehendingly about a thing if we do not know what it is — not how we can *perceive* a thing if we do not know what it is. I am happy to allow that a subject *S* may, for example, *see* an object *O* even though *S* does not know what *O* is. Seeing, however, is not a purely intellectual act. Indeed, of course, even lower animals that cannot at all plausibly be said to

talk or think comprehendingly about *Tom*, a particular cat, if I simply don't know what cats are and which cat, in particular, Tom is? Of course, I'm not saying that I must know *everything* about cats or about Tom in order to be able to talk or think comprehendingly about that particular animal.¹¹ But I must surely know enough to distinguish the kind of thing that Tom is from other kinds of thing, and enough to distinguish Tom in particular from other individual things of Tom's kind. Otherwise, it seems that my talk and thought cannot really fasten upon *Tom*, as opposed to something else.¹²

However, denying the reality of essences doesn't only create an epistemological problem: it also creates an ontological problem. Unless Tom has an 'identity' — whether or not anyone is acquainted with it — there is nothing to make Tom the particular thing that he is, as opposed to any other thing. Anti-essentialism commits us to anti-realism, and indeed to an anti-realism so global that it is surely incoherent. It will not do, for instance, to try to restrict one's anti-essentialism to 'the external world', somehow privileging us and our language and thought. How could it be that there is a fact of the matter as to *our* identities, and the identities of *our words and thoughts*, but not as to the identities of the mind-independent entities that we try to capture in language and thought? On the other hand, how could there *not* be any fact of the matter as to our identities and the identities of our words and thoughts? Everything is, in Joseph Butler's

understand *what* objects exist in their environment, may nonetheless be said to *see* or *feel* or *smell* some of those objects.

¹¹ Perhaps, indeed, all I need to know about cats is that they are *animals* or *living organisms* and perhaps, likewise, all I need to know about Tom is which animal or living organism he is.

¹² Of course, it is fashionable at present to suppose that our talk and thought have, in general, their *referents* in the 'external' world secured through the existence of appropriate *causal* links between certain constituents of our talk and thought — certain of our linguistic and mental 'representations' — and various extra-linguistic and extra-mental entities belonging to that world: links that can, and mostly do, obtain without our needing to have any knowledge of them. On this sort of view, it may be supposed, my talk and thought can fasten upon Tom because there is an appropriate causal link between the name 'Tom', as I have learnt to use it, and *Tom* — and an analogous causal link between a certain 'mental representation' of mine (perhaps a certain 'symbol' in the putative 'language of thought' supposedly utilized by my brain) and *Tom*. I will only say here that I cannot begin to understand how it might seriously be supposed that a linkage of this sort could genuinely suffice to enable me to *talk and think comprehendingly about Tom*, even if it is conceded that there is a (relatively anodyne) notion of 'reference' that could perhaps be satisfactorily accounted for by a causal theory of the foregoing sort. I should emphasize, then, that I am not presently concerned to challenge the so-called causal theory of reference, much less to defend in opposition to it some sort of neo-Fregean theory of reference as being mediated by 'sense'. Rather, I am simply not interested, at present, in semantic questions or rival semantic theories, but rather in the purely metaphysical question of *how it is possible to be acquainted with an object of thought*: my answer being that it is so through, and only through, a grasp of that object's *essence* — that is, through knowing *what it is*.

memorable phrase, *what it is and not another thing*. That has sounded to many philosophers like a mere truism without significant content, as though it were just an affirmation of the reflexivity of the identity relation. But, in fact, Butler's dictum does not merely concern the identity relation but also identity in the sense of *essence*. It implies that there is a fact of the matter as what any particular thing is, its 'very being', in Locke's phrase. Its very being — its identity — is what makes it the thing that it is and thereby distinct from any other thing.

Essences are apt to seem very elusive and mysterious, especially if talked about in a highly generalized fashion, as I have been doing so far. Really, I suggest, they are quite familiar to us. First, we need to appreciate that in very many cases a thing's essence involves *other things*, to which it stands in relations of *essential dependence*. Consider the following thing, for instance: the set of planets whose orbits lie within that of Jupiter. What kind of thing is that? Well, of course, it is a *set*, and as such an abstract entity that depends essentially for its existence and identity on the things that are its members — namely, Mercury, Venus, Earth, and Mars. Part of *what it is to be a set* is to be something that depends in these ways upon certain other things — the things that are its members. Someone who did not grasp that fact would not understand *what a set is*. Furthermore, someone who did not know *which things* are this set's members, or at least what determined which things are its members, would not know *which particular set* this set is. So, someone who knew that its members are the planets just mentioned would know which set it is, as would someone who knew what it is to be a planet whose orbit lies within that of Jupiter.¹³ This is a simple example, but it serves to illustrate a general point. In many cases, we know what a thing is — both what kind of thing it is and which particular thing of that kind it is — only by knowing that it is related in certain ways to other things. In such cases, the thing in question depends essentially on these other things for its existence or its identity. To say that *X* depends essentially on *Y* for its existence and identity is just to say that it is *part of the essence* of *X* that *X* exists only if *Y* exists

¹³ There are, broadly speaking, two different views of what a set is: one which takes a set simply to be the result of — as David Lewis puts it — 'collecting many into one', and another which takes a set to be the extension of a property or of a concept. For Lewis's remark, see his *Parts of Classes* (Oxford: Blackwell, 1991), p. vii. I see no compelling reason why, in principle, our ontology should not accommodate sets in *both* of these understandings of what they are. But since I am using the example of sets only for illustrative

and *part of the essence* of X that X stands in some unique relation to Y .¹⁴ Knowing a thing's essence, in many cases, is accordingly simply a matter of understanding the relations of essential dependence in which it stands to other things whose essences we in turn know.

3. Essences are not entities

I said earlier that it is wrong to think of essences as themselves being *entities* of any kind to which the things having them stand in some special kind of relation. Locke himself unfortunately made this mistake, holding as he did that the 'real essence' of a material substance just *is* its 'particular internal constitution' — or, as we would now describe it, its atomic or molecular structure.¹⁵ This is a mistake that has been perpetuated in the modern doctrine, made popular by the work of Saul Kripke and Hilary Putnam, that the essence of water *consists* in its molecular make-up, H_2O , and that the essence of a living organism *consists* in its DNA — the suggestion being that we *discover* these 'essences' simply by careful scientific investigation of the things in question.¹⁶ Now, as we saw earlier, it may well be part of the essence of a thing *that it stands in a certain relation to some other thing*, or kind of things. But *the essence itself* — the very being of a thing, whereby it is, what it is — is not and could not be some further entity. So, for instance, it might perhaps be acceptable to say that it is part of the essence of water *that it is composed of H_2O molecules* (an issue that I shall return to shortly). But the essence of water could not simply *be* H_2O — *molecules* of that very kind — nor yet the *property* of being composed of H_2O molecules. For one thing, if the essence of an entity *were* just some further entity, then *it in turn* would have to have an essence of its own and we

purposes, this is a matter on which I can afford to remain agnostic here.

¹⁴ See further my *The Possibility of Metaphysics*, ch. 6, or alternatively my 'Ontological Dependence', *The Stanford Encyclopedia of Philosophy* (2005), ed. E. N. Zalta, <http://plato.stanford.edu>.

¹⁵ Thus, at one point Locke remarks: '[W]e come to have the *Ideas of particular sorts of Substances*, by collecting such Combinations of simple *Ideas*, as are by Experience ... taken notice of to exist together, and are therefore supposed to flow from the particular internal Constitution, or unknown Essence of that Substance' (*Essay*, II, XXIII, 3).

¹⁶ See, especially, Saul A. Kripke, *Naming and Necessity* (Oxford: Blackwell, 1980) and Hilary Putnam, 'The Meaning of "Meaning"', in his *Mind, Language and Reality: Philosophical Papers Volume 2*

would be faced with an infinite regress that, at worst, would be vicious and, at best, would appear to make all knowledge of essence impossible for finite minds like ours. To know something's essence is not to be acquainted with some *further thing* of a special kind, but simply to understand *what exactly that thing is*. This, indeed, is why knowledge of essence is possible, for it is a product simply of *understanding* — not of empirical observation, much less of some mysterious kind of quasi-perceptual acquaintance with esoteric entities of any sort. And, on pain of incoherence, we cannot deny that we understand what at least some things are, and thereby know their essences.

Here it may be objected that it is inconsistent of me to deny that essences are entities and yet go on, as I apparently do, to *refer to* and even *quantify over* essences. Someone who voices this objection probably has in mind W. V. Quine's notorious *criterion of ontological commitment*, encapsulated in his slogan 'to be is to be the value of a variable'.¹⁷ I reply, in the first place, that I could probably say all that I want to about my version of essentialism while avoiding all locutions involving the appearance of reference to and quantification over essences, by paraphrasing them in terms of locutions involving only sentential operators of the form 'it is part of the essence of *X* that' — where 'the essence of *X*' is not taken to make an independent contribution to the meaning of the operator, which might be represented symbolically by, say, ' E_X ' in a sentential formula of the form ' $E_X(p)$ '. The latter is a kind of locution that I certainly do want to use and find very useful. However, I think that effort spent on working out such paraphrases in all cases would be effort wasted. If a paraphrase *means the same* as what it is supposed to paraphrase — as it had better do, if it is to be any good — then it carries the same 'ontological commitments' as whatever it is supposed to paraphrase, so that constructing paraphrases cannot be a way of relieving ourselves of ontological commitments. We cannot discover those commitments simply by examining the syntax and semantics of our language, for syntax and semantics are very uncertain guides to ontology. In other words, I see no reason to place any confidence in Quine's famous criterion.

(Cambridge: Cambridge University Press, 1975).

¹⁷ See, for example, W. V. Quine, 'Existence and Quantification', in his *Ontological Relativity and Other Essays* (New York: Columbia University Press, 1969).

4. Essence precedes existence

Another crucial point about essence is this: in general, *essence precedes existence*. And by this I mean that the former precedes the latter both *ontologically* and *epistemically*. That is to say, on the one hand, I mean that it is a precondition of something's existing that its essence — along with the essences of other existing things — does not preclude its existence. And, on the other hand — and this is what I want to concentrate on now — I mean that we can in general *know* the essence of something *X* antecedently to knowing whether or not *X* exists. Otherwise, it seems to me, we could never find out *that* something exists. For how could we find out *that* something, *X*, exists before knowing *what X is* — before knowing, that is, *what it is* whose existence we have supposedly discovered?¹⁸ Consequently, we know the essences of many things which, as it turns out, *do not* exist. For we know what these things *would be*, if they existed, and we retain this knowledge when we discover that, in fact, they do not exist. Conceivably, there are exceptions. Perhaps it really is true in the case of God, for instance, that essence does not precede existence. But this could not quite generally be the case. However, saying this is perfectly consistent with acknowledging that, sometimes, we may only come to know the essence of something after we have discovered the existence of certain *other* kinds of things. This is what goes on in many fields of theoretical science. Scientists trying to discover the transuranic elements knew before they found them *what it was* that they were trying to find, but only because they knew that what they were trying to find were elements whose atomic nuclei were composed of protons and neutrons in certain hitherto

¹⁸ Notoriously, Descartes is supposed to have claimed, in the *Second Meditation*, to know *that* he existed before he knew *what* he was — that is, before he grasped his own essence. But it seems to me that any such claim must be construed as being either disingenuous or else intended non-literally, if it is not to be dismissed as being simply incomprehensible. In might, for instance, be taken to imply merely that Descartes was certain that the word 'I' *had a reference*, before knowing what that reference was. To be accurate, though, what Descartes actually says is 'But I do not yet have a sufficient understanding of what this "I" is, that now necessarily exists': see René Descartes, *Meditations on First Philosophy*, trans. J. Cottingham (Cambridge: Cambridge University Press, 1986), p. 17. That is consistent with saying that Descartes *does* already grasp his own essence, but needs to clear his mind of confused thoughts concerning it. Query: might we not come to know what *X* is *neither before nor after* discovering that *X* exists, but *simultaneously* with that discovery? Well, I see no reason to deny this possibility in some cases. But that concession need not be taken to undermine the claim that, in general, we *can* know the essence of

undiscovered combinations. They could hardly have known what they were trying to find, however, prior to the discovery of the existence of protons and neutrons — for only after these sub-atomic particles were discovered and investigated did the structure of atomic nuclei become sufficiently well-understood for scientists to be able to anticipate which combinations of nucleons would give rise to reasonably stable nuclei.

Here it may be objected that Kripke and Putnam have taught us that the essences of many familiar natural kinds — such as the kind *cat* and the kind *water* — have been revealed to us only *a posteriori* and consequently that in cases such as these, at least, it cannot be true to say that ‘essence precedes existence’, whatever may be said in the case of the transuranic elements.¹⁹ The presupposition here, of course, is that Kripke and Putnam are *correct* in identifying the essence of water, for example, with its molecular make-up, H₂O. Now, I have already explained why I think that such identifications are mistaken, to the extent that they can be supposed to involve the illicit *reification* of essences. But it may still be urged against me that even if, more cautiously, we say only that it is part of the essence of water *that it is composed of H₂O molecules*, it still follows that the essence of water has only been revealed to us — or, at least, has only been *fully* revealed to us — *a posteriori*.

something *X* before knowing whether or not *X* exists.

¹⁹ The extent to which the Kripke–Putnam doctrine has become a commonplace of contemporary analytic philosophy is illustrated by the following remark of Frank Jackson’s, which he makes simply in passing and without acknowledging any need to justify it: ‘[W]e rarely know the essence of the things our words denote (indeed, if Kripke is right about the necessity of origin, we do not know our own essences)’: see his *From Metaphysics to Ethics: A Defence of Conceptual Analysis* (Oxford: Clarendon Press, 1998), p. 50. Yet, I would urge, it should strike one as being odd to the point of paradoxicality to maintain that we can talk or think comprehendingly about things without knowing *what it is* that we are talking or thinking about — that is, without grasping their essences. The charitable conclusion to draw would be that philosophers like Jackson do not use the term ‘essence’ in what Locke called its ‘proper original signification’. Now, of course, Locke himself says that the ‘real’ essences of material substances are *unknown* to us — and the Kripke–Putnam doctrine is recognizably a descendent of Locke’s view, to the extent that it identifies the ‘real essences’ of material substances with their ‘internal constitutions’, many of which are certainly still unknown to us and may forever continue to be so. But Locke, at least, concluded — unlike modern adherents of the Kripke–Putnam doctrine — that ‘the *supposition of Essences, that cannot be known*; and the making them nevertheless to be that, which distinguishes the Species of Things, *is so wholly useless ... [as] to make us lay it by*’ (*Essay*, III, III, 17) and he accordingly appeals instead to what he calls *nominal* essences. The correct position, I suggest, is neither Locke’s nor that of the Kripke–Putnam doctrine, but rather (what I take to be) Aristotle’s: that the real essences of material substances *are* known to those who talk or think comprehendingly about such substances — and consequently that such essences are not to be identified with anything that is *not* generally known to such speakers and thinkers, such as the ‘particular internal constitution’ of a material substance, or a human being’s (or other living creature’s) ‘origin’ in the Kripkean sense.

In point of fact, however, the Kripke–Putnam doctrine is even more obscure and questionable than I have so far represented it as being. Very often, it is characterized in terms of the supposed modal and epistemic status of identity-statements involving natural kind terms, such as ‘Water is H₂O’, which are said to express truths that are at once necessary and *a posteriori*. In such a statement, however, the term ‘H₂O’ is plainly not functioning in exactly the same way as it does in the expression ‘H₂O molecule’. The latter expression, it seems clear, means ‘molecule composed of two hydrogen ions and one oxygen ion’. But in ‘Water is H₂O’, understood as an identity-statement concerning kinds, we must either take ‘H₂O’ to be elliptical for the *definite description* ‘the stuff composed of H₂O molecules’ or else simply as being a *proper name* of a kind of stuff, in which case we cannot read into it any significant semantic structure. On the latter interpretation, ‘Water is H₂O’ is exactly analogous to ‘Hesperus is Phosphorus’ and its necessary truth reveals nothing of substance to us concerning the composition of water. If we are inclined to think otherwise, this is because we slide illicitly from construing ‘H₂O’ as a proper name to construing it as elliptical for the definite description ‘the stuff composed of H₂O molecules’. Now, when ‘Water is H₂O’ is understood on the model of ‘Hesperus is Phosphorus’, its necessary *a posteriori* truth may in principle be established in a like manner — namely, by appeal to the familiar logical proof of the necessity of identity,²⁰ together with the *a posteriori* discovery of the co-reference of the proper names involved — but not so when it is construed as meaning ‘Water is the stuff composed of H₂O molecules’, for the latter involves a definite description and the logical proof in question notoriously fails to apply where identity-statements involving definite descriptions are concerned. Thus far, then, we have been given no reason to suppose that ‘Water is H₂O’ expresses an *a posteriori* necessary truth that reveals to us something concerning the essence of water. The appearance that we have been given such a reason is the result of mere sleight of hand.²¹

²⁰ See Saul A. Kripke, ‘Identity and Necessity’, in M. K. Munitz (ed.), *Identity and Individuation* (New York: New York University Press, 1971). I express doubts about the cogency of this proof in my ‘Identity, Vagueness, and Modality’, in J. L. Bermúdez (ed.), *Thought, Reference, and Experience: Themes from the Philosophy of Gareth Evans* (Oxford: Oxford University Press, 2005). However, for present purposes I set aside these doubts.

²¹ Here I note that it might be thought that ‘Water is the stuff composed of H₂O molecules’ follows unproblematically from the supposed empirical truth ‘Water is H₂O’ (construed as an identity-statement

There is, in any case, another important consideration that we should bear in mind when reflecting on the frequently-invoked analogy between ‘Water is H₂O’ and ‘Hesperus is Phosphorus’. It is all very well to point out that the discovery that Hesperus is Phosphorus was an empirical one. But it was not *purely* empirical, for the following reason. The identity was established because astronomers discovered that Hesperus and Phosphorus *coincide in their orbits*: wherever Hesperus is located at any given time, there too is Phosphorus located. However, spatiotemporal coincidence only implies identity for things of appropriate kinds. It is only because Hesperus and Phosphorus are taken to be *planets* and thereby *material objects of the same kind* that their spatiotemporal coincidence can be taken to imply their identity. But the principle that distinct material objects of the same kind cannot coincide spatiotemporally is not an empirical one: it is an *a priori* one implied by *what it is* to be a material object of any kind — in other words, it is a truth grounded in *essence*. It is only because we know that it is *part of the essence* of a planet not to coincide spatiotemporally with another planet, that we can infer the identity of Hesperus with Phosphorus from the fact that they coincide in their orbits. Thus, one must already know *what a planet is* — know its essence — in order to be able to establish by *a posteriori* means that one planet is identical with another.²² By the same token, then, one must already know *what a kind of*

involving two proper names) and the seemingly trivial, because analytic, truth ‘H₂O is the stuff composed of H₂O molecules’. But the latter, when the first occurrence of ‘H₂O’ in it is interpreted as a proper name, is no more trivial than ‘Water is the stuff composed of H₂O molecules’ — and this is how it must be interpreted for the inference to go through.

²² Here it may be asked: did astronomers know *which* planet Hesperus is — that is, know its *individual* essence — before knowing that it is identical with Phosphorus? It might seem that the answer must be ‘No’: for if they did, it may be wondered, how could they have been in any doubt as to its identity with Phosphorus? However, here we need to bear in mind that it is clearly not part of the essence of any planet that it has the particular orbit that it does: a planet can certainly change its orbit, and indeed could have had a quite different one. But what led to the discovery that Hesperus is the same planet as Phosphorus was simply that their orbits were plotted and found to coincide. And since one can know which planet a planet is without knowing what its orbit is, it is therefore perfectly explicable that astronomers should — and did — know which planet Hesperus is and which planet Phosphorus is without knowing that Hesperus is the same planet as Phosphorus. So how, in general, *does* one know which material object of kind *K* a certain material object, *O*, is? Well, one way in which one can know this, it seems clear, is through *perceptual acquaintance* with *O* that is informed by knowledge of the *general* essence of objects of kind *K*. (Recall, here, that perception of an object *O* does not *in itself* presuppose knowledge of what *O* is, so that the foregoing claim does not beg the very question at issue.) That is to say, it very often happens that one perceives an object *O* in circumstances that enable one to know that *what* one is perceiving, *O*, is a particular object of kind *K*. In such circumstances, one is thus in a position to know *which* object of this kind *O* is — namely, *that* one (the one that one is perceiving). And one can retain this knowledge by *remembering* which object it was that one perceived. I should emphasize, however, that this does not at all

stuff is — know its essence — in order to be able to establish by *a posteriori* means that one kind of stuff is identical with another. It can hardly be the case, then, that we can *discover* the essence of a kind of stuff simply by establishing *a posteriori* the truth of an identity-statement concerning kinds of stuff — any more than we can be supposed to have discovered the essence of a particular planet by establishing *a posteriori* the truth of an identity-statement concerning that planet. So, even granting that ‘Water is H₂O’ is a true identity-statement that is both necessarily true and known *a posteriori*, it does not at all follow that it can be taken to reveal to us the essence of the kind of stuff that we call ‘water’.

Be all this as it may, however, we still have to address the question of whether, in fact, we ought to say that it is part of the essence of water that it is composed of H₂O molecules. So far, we have at best seen only that the Kripke–Putnam semantics for natural kind terms have given us no reason to suppose that we ought to. I am inclined to answer as follows. If we are using the term ‘water’ to talk about a certain chemical compound whose nature is understood by theoretical chemists, then indeed we should say that it is part of the essence of this compound that it consists of H₂O molecules. But, at the same time, it should be acknowledged that the existence of this compound is a relatively recent discovery, which could not have been made before the nature of hydrogen and oxygen atoms and their ability to form molecules were understood. Consequently, when we use the term ‘water’ in everyday conversation and when our forebears used it before the advent of modern chemistry, we are and they were *not* using it to talk about a chemical compound whose nature is now understood by theoretical chemists. We are and they were using it to talk about a certain *kind of liquid*, distinguishable from other kinds of liquid by certain fairly easily detectable macroscopic features, such as its transparency, colourlessness, and tastelessness. We are right, I assume, in thinking that a liquid of this kind actually exists, but *not* that it is part of its essence that it is composed of H₂O molecules. At the same time, however, we should certainly acknowledge that empirical scientific inquiry reveals that, indeed, the chemical

imply that it is part of *O*’s individual essence that it is the object of kind *K* that one perceived on a particular occasion — for, of course, it will in general be an entirely contingent matter that one happened to perceive it then, or indeed at all.

compound H₂O is very largely what bodies of this liquid are made up of. In fact, the natural laws governing this and other chemical compounds make it overwhelmingly unlikely that this kind of liquid could have a different chemical composition in different parts of our universe. But the ‘could’ here is expressive of mere physical or natural possibility, not *metaphysical* possibility.²³ Only an illicit conflation of these two species of possibility could reinstate the claim that water is *essentially* composed of H₂O molecules.

But, it may be asked, what about our supposed ‘intuitions’ in so-called ‘Twin-Earth’ cases — for example, the supposed intuition that if, on a distant planet, a watery stuff was discovered that was not composed of H₂O molecules, then it would not be *water*? In answer to this question, I would remark only that these supposed intuitions need to be interpreted in the light of the fact, just mentioned, that the natural laws governing chemical compounds in our universe almost certainly render such scenarios physically impossible. The supposedly ‘watery’ stuff on Twin Earth would be like fool’s gold (copper pyrites): it would at best be *casually* mistakable for water and *that* is why it would not be water. The *chemical* explanation for this would be that fool’s water, as we could justly call it, is not composed of H₂O molecules. But we cannot turn this perfectly legitimate chemical explanation into a logico-cum-metaphysical argument that genuine water is of *metaphysical* necessity composed of H₂O molecules — unless, once again, we conflate physical with metaphysical necessity.

5. Essence is the ground of all modal truth

So far, I have urged that the following two principles must be endorsed by the serious essentialist: that *essences are not entities* and that, in general, *essence precedes existence*. But by far the most important principle to recognize concerning essences, for the purposes of the present paper, is that *essences are the ground of all metaphysical*

²³ For extended discussion of the need to distinguish between these two species of possibility, see my *The Four-Category Ontology*, ch. 9 and ch. 10.

necessity and possibility.²⁴ One reason, thus, why it can be the case that *X* is necessarily *F* is that it is part of the essence of *X* that *X* is *F*. For example, any material object is necessarily spatially extended because it is part of the essence of a material object that it is spatially extended — in other words, part of *what it is to be a material object* is to be something that is spatially extended. But this is not the only possible reason why something may be necessarily *F*. *X* may be necessarily *F* on account of the essence of *something else* to which *X* is suitably related. For example, Socrates is necessarily the subject of the following event — *the death of Socrates* — because it is part of the essence of that event that Socrates is its subject, even though it is not part of Socrates's essence that he is the subject of that event. It is not on account of *what Socrates is* that he is necessarily the subject of that event but, rather, on account of *what that event is*. This is not to say that Socrates could not have died a different death, only that no one but Socrates could have died the death that he in fact died. And what goes for necessity goes likewise, *mutatis mutandis*, for possibility. I venture to affirm that all facts about what is necessary or possible, in the metaphysical sense, are grounded in facts concerning the essences of things — not only of existing things, but also of non-existing things. But, I repeat, facts concerning the essences of things are not facts concerning *entities* of a special kind, they are just facts concerning *what things are* — their very beings or identities. And these are facts that we can therefore grasp simply in virtue of understanding what things are, which we must in at least some cases be able to do, on pain of being incapable of thought altogether. Consequently, all knowledge of metaphysical necessity and possibility is ultimately a product of the understanding, not of any sort of quasi-perceptual acquaintance, much less of ordinary empirical observation.

How, for example, do we know that two distinct things of suitably different kinds, such as a bronze statue and the lump of bronze composing it at any given time, can — unlike two *planets* — exist in the same place at the same time? Certainly not by *looking very hard* at what there is in that place at that time. Just by looking, we shall not see that two distinct things occupy that place. We know this, rather, because we know *what a bronze statue is* and *what a lump of bronze is*. We thereby know that these are *different*

²⁴ Compare Kit Fine, 'Essence and Modality', in James E. Tomberlin (ed.), *Philosophical Perspectives*, 8: *Logic and Language* (Atascadero, CA: Ridgeview, 1994).

things and that a thing of the first sort must, at any given time, be composed by a thing of the second sort, since it is part of the essence of a bronze statue to be composed of bronze. We know that they are different things because, in knowing what they are, we know their *identity conditions*, and thereby know that one of them can persist through changes through which the other cannot persist — that, for instance, a lump of bronze can persist through a radical change in its shape whereas a bronze statue cannot. These facts about their identity conditions are not matters that we can discover purely empirically, by examining bronze statues and lumps of bronze very closely, as we might in order to discover whether, say, they conduct electricity or dissolve in sulphuric acid.²⁵ Rather, they are facts about them that we must grasp *antecedently* to being able to embark upon any such empirical inquiry concerning them, for we can only inquire empirically into something's properties if we already know *what it is* that we are examining.

6. The errors of conceptualism

At this point I need to counter a rival view of essence that is attractive to many philosophers but is, I think, ultimately incoherent. I shall call this view *conceptualism*.²⁶ It is the view that what I have been calling facts about essences are really, in the end, just

²⁵ See further my 'Substantial Change and Spatiotemporal Coincidence', *Ratio* 16 (2003), pp. 140–60, and my 'Material Coincidence and the Cinematographic Fallacy: A Response to Olson', *The Philosophical Quarterly* 52 (2002), pp. 369–72, the latter being a reply to Eric T. Olson, 'Material Coincidence and the Indiscernibility Problem', *The Philosophical Quarterly* 51 (2001), pp. 337–55.

²⁶ Who, it might be asked, is really a conceptualist in the sense that I am about to articulate? That is difficult to say with any assurance, since most conceptualists are understandably rather coy about proclaiming their position too explicitly. However, amongst major analytic philosophers of the twentieth century, Michael Dummett very plausibly counts as one, in virtue of his apparent endorsement of the view that reality is an 'amorphous lump' that can be 'sliced up' in indefinitely many different but equally legitimate ways, depending on what conceptual scheme we or other thinkers happen to deploy: see his *Frege: Philosophy of Language*, 2nd edn (London: Duckworth, 1981), p. 563 and p. 577. So might David Wiggins, who calls his position 'conceptualist realism' and acknowledges, as the only admissible notion of individuation, a cognitive one which takes this to be a *singling out of objects by thinkers*: see his *Sameness and Substance Renewed* (Cambridge: Cambridge University Press, 2001), p. 6. And so, indeed, might Hilary Putnam, on the evidence of such papers as his 'Why There Isn't a Ready-Made World', in his *Realism and Reason: Philosophical Papers Volume 3* (Cambridge: Cambridge University Press, 1983),

facts about certain of *our concepts* — for example, *our concept* of a bronze statue and *our concept* of a lump of bronze. This would reduce all modal truths to conceptual truths or, if the old-fashioned term is preferred, *analytic* truths. Now, I have no objection to the notion of conceptual truth as such. Perhaps, as is often alleged, ‘Bachelors are unmarried’ indeed expresses such a truth. Let us concede that it is true in virtue of our concept of a bachelor, or in virtue of what we take the word ‘bachelor’ to mean. But notice that ‘Bachelors are unmarried’ has a quite different modal status from an *essential* truth such as ‘Statues are composed of matter’. In calling the former a ‘necessary’ truth, we cannot mean to imply that bachelors *cannot marry*, only that they cannot marry *and go on rightly being called ‘bachelors’*. The impossibility in question is only one concerning the proper application of a word. But in calling ‘Statues are composed of matter’ a necessary truth, we certainly can’t be taken to mean merely that statues cannot fail to be composed of matter *and go on rightly being called ‘statues’* — as though *the very same thing* that, when composed of matter, was properly called a ‘statue’ might exist as something immaterial. No, we must be taken to mean that statues cannot fail to be composed of matter *period*. Statues are things such that, *if they exist at all*, they must be composed of matter. That is because it is part of the essence of a statue to be so composed. In contrast, it is not part of the essence of any bachelor to be unmarried, for a bachelor is just an adult male human being who happens to be unmarried, and any such human being undoubtedly *can* marry. So, ‘Statues are composed of matter’ is certainly not a mere conceptual truth, and the same goes for other truths that are genuinely essential truths — truths concerning the essences of things. They have, in general, nothing to do with our concepts or our words, but with the nature of the things in question. Of course, since concepts and words are themselves things of certain sorts, there can be truths concerning *their* essences. Indeed, what we could say about ‘Bachelors are unmarried’ is that it is, or is grounded in, a truth concerning the essence of the concept bachelor, or of the word ‘bachelor’. We could say, thus, that it is part of the essence of the concept *bachelor* that only unmarried males fall under it, and part of the essence of the word ‘bachelor’ that it applies only to unmarried males.

But I said that conceptualism is ultimately *incoherent*. Indeed, I think it is. For one

whose flavour seems distinctly different from that of earlier work of his cited previously.

thing, as we have just seen, the proper thing to say about ‘conceptual’ truths is, very plausibly, that *they are grounded in the essences of concepts*. That being so, the conceptualist cannot maintain, as he does, that *all* putative facts about essence are really just facts concerning concepts. For this is to imply that putative facts about *the essences of concepts* are really just facts concerning *concepts of concepts* — and we have set out on a vicious infinite regress. But the conceptualist will object, no doubt, that this complaint is question-begging. However, even setting that complaint aside, we can surely see that conceptualism is untenable. For the conceptualist is at least committed to affirming that *concepts* — or, in another version, *words* — exist and indeed that concept-users do, to wit, *ourselves*. *These*, at least, are things that the conceptualist must acknowledge to have *identities*, independently of how we conceive of them, on pain of incoherence in his position. The conceptualist must at least purport to understand *what a concept or a word is*, and indeed *what he or she is*, and thus grasp the essences of at least some things. And if of *these* things, why not of *other* kinds of things? Once knowledge of essences is conceded, the game is up for the conceptualist. And it must be conceded, even by the conceptualist, on pain of denying that he or she knows what *anything* is, including the very concepts that lie at the heart of his account. For recall, all that I mean by the essence of something is *what it is*.

So, why is anyone ever tempted by conceptualism? I’m afraid that it is the legacy of scepticism, particularly scepticism concerning ‘the external world’. The sceptic feels at home with himself and with his words and concepts, but expresses doubt that we can ever really know whether those words and concepts properly or adequately characterize things in the external world. He thinks that we can know nothing about how or what those things are ‘in themselves’, or indeed even whether they are *many* or *one*. According to the sceptic, all that we can really know is how we *conceive* of the world, or *describe* it in language, not how *it is*. But by what special dispensation does the sceptic exclude *our concepts* and *our words* from the scope of his doubt? For are they not, too, things that exist? There is, in truth, no intelligible division that can be drawn between *the external world*, on the one hand, and *us and our concepts and our language* on the other. Here it may be protested: But how, then, *can* we advance to a knowledge of what and how things are ‘in themselves’, even granted that the sceptic is mistaken in claiming a special

dispensation with regard to the epistemic status of our concepts and our words? However, the fundamental mistake is to suppose, with the sceptic, that such an ‘advance’ would have to proceed *from* a basis in our knowledge of our concepts and words — that is, *from* a knowledge of how we conceive of and describe the world — *to* a knowledge of that world ‘as it is in itself’, independently of our conceptual schemes and languages. This ‘inside–out’ account of how knowledge of mind-independent reality is to be acquired already makes such knowledge impossible and must therefore be rejected as incoherent.

But what alternative is there, barring a retreat to some form of anti-realism? Again, *knowledge of essence* comes to the rescue. Because, in general, essence precedes existence, we can at least sometimes know *what it is* to be a *K* — for example, *what it is* to be a material object of a certain kind — and thereby know, at least in part, what is or is not *possible* with regard to *Ks*, in advance of knowing whether, or even having good reason to believe that, any such thing as a *K* actually *exists*. Knowing already, however, *what it is* whose existence is in question and that its existence is at least *possible*, we can intelligibly and justifiably appeal to empirical evidence to confirm or cast doubt upon existence claims concerning such things. By ‘empirical evidence’ here, be it noted, I emphatically do *not* mean evidence constituted purely by the contents of our own perceptual states at any given time, as though all that we had to go on is how the world in our vicinity *looks* or otherwise *appears* to be. That, certainly, is not the conception of ‘empirical evidence’ that is operative in scientific practice, which appeals rather to the results of controlled experiments and observations, all of which are reported in terms of properties and relations of mind-independent objects, such as scientific instruments and laboratory specimens. The growth of objective knowledge consists, then, in a constant interplay between an *a priori* element — knowledge of essence — and an *a posteriori* element, the empirical testing of existential hypotheses whose possibility has already been anticipated *a priori*. This process does not have a foundational ‘starting point’ and it is constantly subject to critical reappraisal, both with regard to its *a priori* ingredients and with regard to its empirical contributions. Here we do not have a hopeless ‘inside–out’ account of objective knowledge, since our own subjective states as objective inquirers — our perceptions and our conceptions — are accorded no special role in the genesis of such knowledge. Those subjective states are merely some amongst the many possible

objects of knowledge, rather than objects of a special kind of knowledge which supposedly grounds the knowledge of all other things. But, to repeat, it is crucial to this account that knowledge of *essences* is not itself knowledge of *objects or entities* of any kind, nor grounded in any such knowledge — such as knowledge of our own concepts.

7. The redundancy of possible worlds

I want to conclude, now, by looking at the language of possible worlds and its bearing upon the nature and ground of metaphysical modality. I have already made it clear that, in my opinion, all modal facts concerning what is metaphysically necessary or possible are ultimately grounded in the essences of things — and hence *not* in facts concerning entities of any sort, since *essences are not entities*. But — it may perhaps be urged — this in itself does not necessarily prevent the language of possible worlds from casting at least some light on the nature and ground of metaphysical modality. Well, let us see. First, let us consider non-fictionalist construals of the language of possible worlds, according to which possible-worlds variables in that language range over a domain of *existing entities* of some kind, such as Lewisian parallel universes or maximal consistent sets of propositions — the former conceived as being *concrete* and the latter as *abstract* entities of certain kinds.²⁷ According to possible-worlds theorists adopting this approach, any modal statement in which the modal terminology involved is expressive of metaphysical modality is *semantically equivalent* to one quantifying over existing entities of the favoured kind — as it might be, parallel universes or maximal consistent sets of propositions. Moreover, according to such an approach, the truth or falsehood of the modal statement in question is grounded in facts concerning those entities. For example, the truth or falsehood of the statement ‘Possibly, there are talking donkeys’ is, supposedly, grounded in facts concerning the inhabitants of certain parallel universes or

²⁷ For Lewis’s approach, see David Lewis, *On the Plurality of Worlds* (Oxford: Blackwell, 1986): the use of the expression ‘parallel universes’ to describe possible worlds as he conceives of them is, of course, mine rather than his. For the view that possible worlds are maximal consistent sets of propositions, see Robert Merrihew Adams, ‘Theories of Actuality’, *Noûs* 8 (1974), pp. 211–31, and for a similar view that takes them to be maximal possible states of affairs — again conceived as being abstract entities — see

facts concerning the membership of certain maximal consistent sets of propositions. But, I suggest, it should strike one as being obviously problematic to suppose that — where the metaphysical modalities are concerned — modal facts are grounded in facts concerning existing entities of *any* kind. The salient point, once again, is that *essence precedes existence*. An *existing* entity must at the very least be a *possible* entity — that is to say, something whose essence does not preclude its existence. And what is *true of* an entity will likewise depend at least in part on *what it is* — its essence. It can only be the case, for example, that some parallel universe *does* in fact contain amongst its inhabitants such a thing as a talking donkey if there *could be* such things as parallel universes and such things as talking donkeys inhabiting them. The very facts that are being proposed as the grounds of modal truths already *presuppose* modal truths, simply because they are, supposedly, facts concerning *existing entities* of certain putative kinds.

The upshot is this. Suppose we grant that there could be such things as Lewisian parallel universes or maximal consistent sets of propositions because, understanding *what these entities are* — knowing their essences — we know that their essences do not preclude their existence. Let us go further and suppose that such things *do in fact exist*. *Even so*, facts concerning such entities could not constitute *the ground of all modal truths*. Why not? Because, first and foremost, such facts could not constitute the ground of modal truths concerning *those entities themselves*. If these entities exist, then there must indeed be modal truths concerning them, since there are modal truths concerning *any* existing entity. So, for example, if parallel universes exist, it must either be true, concerning them, that infinitely many of them could exist, or else be true, concerning them, that only finitely many of them could exist. Similarly, it must either be true, concerning them, that two or more of them could be qualitatively indiscernible, or else be true, concerning them, that any two of them must be qualitatively distinct. And so on. Quite evidently, however, the *concretist* — as we may call the devotee of Lewis's approach — cannot contend that, for example, 'Possibly, there are infinitely many possible worlds' is true or false for the same sort of reason that he contends that 'Possibly, there are infinitely many electrons' is true or false. For the latter is true, he maintains, just in case there is a possible world — a parallel universe — in which there

Alvin Plantinga, *The Nature of Necessity* (Oxford: Clarendon Press, 1974).

are infinitely many electrons (or electron ‘counterparts’). But he cannot maintain that the former is true just in case there is a possible world in which there are infinitely many possible worlds. For, knowing what a ‘possible world’ is supposed to *be* according to the concretist — to wit, a ‘parallel universe’, akin to our cosmos — we know already that it is not the sort of thing that could have *another* such thing amongst its inhabitants, let alone infinitely many other such things. The implication is that, far from its being the case that facts concerning possible worlds — *whatever* these are conceived to be — are the ground of all modal facts, there must be modal facts which are not grounded in the existence of entities of *any* kind, including possible worlds. And if this must be so for *some* modal facts, why not for *all*, as serious essentialism contends?

However, the *abstractionist* — as we may call the devotee of possible worlds conceived as maximal consistent sets of propositions — might protest at this point that he, at least, never intended to suggest that modal truths could be reduced, without remainder, to *non-modal* truths concerning possible worlds and that this exempts him from the foregoing strictures. The abstractionist openly acknowledges, for example, that he appeals to an unreduced notion of *consistency* in explaining what he takes a ‘possible world’ to *be* — to wit, a maximal consistent set of propositions, or something like that. This might be an acceptable response if the *only* modal notion being relied upon by the abstractionist was that of consistency — the notion, that is, of the *possible joint truth* of two or more propositions. But my complaint does not focus on this well-known feature of abstractionism and its consequent repudiation of any aspiration to offer a reductive account of modality. Rather, my complaint focuses on the fact that abstractionism, just like concretism, appeals to *existing entities* of certain putative kinds in presenting its account of the semantics of modal statements. In this case, the entities in question are abstract objects such as *propositions* and *sets* thereof. But propositions and sets, if they exist, are just *further entities*, concerning which various modal truths must hold. For example, it must either be true, concerning sets, that they could have contained different members, or else it must be true, concerning sets, that they could not have contained different members. Suppose it is true. Suppose, that is, that the following modal statement is true, where *S* is any given set whose actual members are certain objects: ‘Possibly, *S* has members that are different from its actual members’. What is *this*

supposed to mean, according to the abstractionist? Clearly, something like this: ‘Some maximal consistent set of propositions contains the proposition that S has members that are different from its actual members’. But S was supposed to be *any set we like*. So what happens if we try to let S be the maximal consistent set of propositions whose actual members are all and only the propositions that are *actually* true — in other words, if we try to let S be the maximal consistent set of propositions that the abstractionist identifies as *the actual world*, W_α ? In that case, the abstractionist translates the putative modal truth ‘Possibly, W_α has members that are different from its actual members’ as meaning ‘Some maximal consistent set of propositions contains the proposition that W_α has members that are different from its actual members’ — or, in the language of possible worlds, ‘In some possible world, the actual world is different from how it actually is’. But it is very hard to see how the abstractionist could allow *this* to be true. The implication is that his semantics for modal statements compels him to deny, after all, that any set whatever could have contained different members. Now, I am not quarrelling with that verdict as such, since I consider that it is part of the essence of any set that it has the members that it does — that *their* identities determine *its* identity. However, it is plainly not a verdict that should be forced upon one merely by the machinery that one invokes to articulate the semantics of modal statements: rather, it is one that should emerge from an adequate understanding of what sets *are* — an understanding that carries modal implications and one which the abstractionist himself must possess *prior* to constructing his preferred machinery for modal semantics. That abstractionism runs into this and similar problems is just a symptom of the fact that abstractionism, like other possible-worlds accounts of metaphysical modality, has simply *mislocated* the meaning and grounds of modal truths, by trying to find them in facts concerning a special class of entities of an esoteric kind — in this case, maximal consistent sets of propositions.

What, finally, of *fictionalism*?²⁸ Well, that approach can be dismissed without more ado, I think, because in seeking to reap the advantages of theft over honest toil, it relies on the toil in question at least being *effective*. If the toil was wasted effort, no advantages can be got from it. But we have seen that both concretism and abstractionism fail on their

²⁸ See, notably, Gideon Rosen, ‘Modal Fictionalism’, *Mind* 99 (1990), pp. 327–54.

own terms, whence there is no profit to be had in a theory which rests on a *pretence* that either of them is true. This would be like stealing the harvest of a farmer whose crops had failed. I conclude that the language of possible worlds, whether or not it is interpreted in an ontologically serious manner and *whatever* possible worlds are taken to be, can throw no real light at all on the nature and ground of metaphysical modality. If possible worlds, whatever they are taken to be, exist at all, that is a fact which may hold some interest for the ontologist — who is, after all, concerned to provide as full and accurate an inventory of what there is as is humanly possible — but it is not one that can usefully be recruited for the purposes of modal metaphysics. For that, I suggest, we have no viable option but to turn to *serious essentialism*.²⁹

²⁹ I am grateful to audiences at the University of Liverpool and at Birkbeck College London and also, more particularly, to Daniel Hill and Frédéric Nef, for very helpful comments on earlier drafts of this paper.