

### Chapter 3: Metaphysical conceptions of analyticity

1. 'Philosophical questions are more conceptual in nature than those of other disciplines': that can easily pass for a statement of the obvious.<sup>1</sup> Many philosophers consciously seek conceptual connections, conceptual necessities, conceptual truths, conceptual analyses. In effect, they present themselves as seeking far more general and less obvious analogues of 'Vixens are female foxes'. The suggestion is that an armchair methodology is appropriate to their quest because it concerns truths in some sense less substantial, less world-involving than those of other disciplines: in Humean terms, relations of ideas rather than matters of fact. Our conceptual or linguistic competence, retained in the armchair, is to suffice for *a priori* knowledge of the relevant truths.

As already argued, philosophical truths are not generally truths *about* words or concepts. However, analytic truths are not supposed to be always about words or concepts, even if words or concepts are supposed to play a special role in explaining their truth. The sentence 'Vixens are female foxes' is in no useful sense about the word 'vixen' or any other words; it is about vixens, if anything. Its meaning is not to be confused with that of the metalinguistic sentence "'Vixens are female foxes" is true'. Similarly, the thought *vixens are female foxes* is not about the concept *vixen* or any other concepts; it too is about vixens, if anything. It is not to be confused with the metaconceptual thought *the thought VIXENS ARE FEMALE FOXES is true*.

How can a sentence which comes as close as 'Vixens are female foxes' does to being a definition of 'vixen' be about vixens rather than about the word 'vixen'? Uttering

it in response to the question ‘What does “vixen” mean?’ normally enables the questioner to work out the answer to the question, by pragmatic reasoning, even though the literal meaning of the sentence does not directly answer the question, just as does uttering ‘That is a gnu’ while pointing at one in answer to the question ‘What does “gnu” mean?’. If core philosophical truths are analytic, they may *exhibit* significant features of words or concepts without *describing* them.

Does the conception of philosophical truths as analytic or conceptual vindicate a form of the linguistic or conceptual turn without misrepresenting the subject matter of philosophy as itself linguistic or conceptual? The case study in the previous chapter gave no support to such a conjecture. Nevertheless, let us examine the matter more systematically.

Many philosophically relevant truths are clearly not conceptual truths in any useful sense. For instance, in arguing against subjective idealism, a defender of common sense metaphysics says that there was a solar system millions of years before there was sentient life. Similarly, a defender of common sense epistemology says that he knows that he has hands; that he knows that he has hands is no conceptual truth, for it is consistent with all conceptual truths that he lost them in a nasty accident. Some philosophers of time argue that not only the present exists by appeal to Special Relativity. Philosophers of mind and language dispute whether there is a language of thought; whatever the answer, it is no conceptual truth. Naturalists and anti-naturalists dispute whether there is only what there is in space and time; again, the answer is unlikely to be a conceptual truth. Moral and political philosophers and philosophers of art appeal to empirically discovered human cognitive limitations, and so on. Such philosophical

arguments cannot be dismissed on general methodological grounds. One must engage with them on their merits, in the normal way of philosophy.

Despite such examples, philosophy may be thought to have a central core of truths which are all conceptual; perhaps the rest of philosophy counts as such through its relation to the central core. Let us charitably read this restriction into the appeal to analyticity or conceptual truth in the epistemology of philosophy.

Notoriously, the idea of analyticity has been under a cloud ever since Quine argued in 'Two Dogmas of Empiricism' that 'a boundary between analytic and synthetic statements simply has not been drawn' (1953: 37). Nevertheless, the idea is still active in contemporary philosophy, often under the less provocative guise of 'conceptual truth'. The terms 'analytic' and 'conceptual' will henceforth be used interchangeably.

Quine's arguments are generally found much less compelling than they once were. Although he may succeed in showing that 'analytic' is caught in a circle with other semantic terms, such as 'synonymous', he does not adequately motivate his jump from that point to the conclusion that the terms in the circle all lack scientific respectability, as opposed to the contrary conclusion that they all have it. Given any science, someone may insist that it define its terms, and the terms used to define them, and so on until it is driven round in a circle. By itself, that hardly demonstrates the illegitimacy of the science. Every discipline must use undefined terms somewhere or other. 'Two Dogmas' does not explain why we should regard the undefined terms of semantics as worse off than the undefined terms of other disciplines, except by dogmatic charges of unclarity. After all, semantics is now a thriving branch of empirical linguistics. It is not to be trashed without very good reason.<sup>2</sup>

Some terms may be so unclear by pretheoretic standards that no circle of definitions will render them scientifically useful. But semantic terms are not like that. By pretheoretic standards, the word ‘synonymous’ is quite clear enough to be useful. Although it is not perfectly precise — surely it has borderline cases — its degree of vagueness seems no worse than that of undefined terms in many other sciences. When clarification is needed in some specific respect, it can be achieved by stipulation or otherwise, as elsewhere in science. Indeed, few contemporary philosophers feel special qualms in using the term ‘synonymous’. Thus any objection they have to ‘analytic’ can hardly be based on Quine’s arguments, since his only objection to defining ‘analytic’ in terms of ‘synonymous’ is to the use of ‘synonymous’ (1953: 24, 38).

The feeling remains that ‘analytic’, unlike ‘synonymous’, carries obsolescent philosophical baggage. For ‘analytic’, unlike ‘synonymous’, was once a central term in philosophical theorizing, notably in the work of logical positivists, such as Carnap, and of post-war linguistic philosophers, such as Strawson. The reason why it cannot recover that position lies not in Quine’s critique, which no longer seems compelling, but rather in Kripke’s widely accepted clarification of the differences between analyticity, apriority and necessity. Kripke did not deny that there is a boundary between the analytic and the synthetic; he merely distinguished it from other boundaries, such as the epistemological boundary between the *a priori* and the *a posteriori* and the metaphysical boundary between the necessary and the contingent (1980: 39). He stipulated that ‘analytic’ entails both ‘*a priori*’ and ‘necessary’. Since he argued that neither of ‘*a priori*’ and ‘necessary’ entails the other, he was committed to denying that either of them entails ‘analytic’ (by the transitivity of entailment).<sup>3</sup> Thus ‘analytic’ does neither the purely epistemological

work of '*a priori*' nor the purely metaphysical work of 'necessary'. Its current role inevitably looks marginal compared with that which it occupied when '*a priori*' and 'necessary' were treated as pretty much interchangeable and 'analytic' was taken to do the work of both. But that does not yet imply that no work remains for it to do.

If we try to sort sentences as 'analytic' or 'synthetic' in the manner of chicken-sexers, we can usually achieve a rough consensus. Of course borderline cases will occur, but so they do for virtually every distinction worth making: perfect precision is an unreasonable demand. The issue is what theoretical significance, if any, attaches to the rough boundary thus drawn. Even if 'analytic' is defined in terms of 'synonymous' and other expressions under better control than 'analytic', we should not assume without checking that it has any of the consequences sometimes associated with it. In particular, we should not assume that analytic truths are insubstantial in any further sense.

Nothing in this book challenges the legitimacy of familiar semantic terms such as 'synonymous'. They will be used without apology, and they permit various senses of 'analytic' to be defined. But none of them makes sense of the idea that analytic truths are less substantial than synthetic ones, or that core philosophical truths are less substantial than the truths of most other disciplines. There is something robust about 'Two Dogmas': insights remain even when its scepticism about meaning is stripped away.

On some conceptions, analytic sentences are true simply in virtue of their meaning, and analytic thoughts simply in virtue of their constituent concepts. They impose no constraint on the world, not even on that part of it which consists of words and concepts. That is why it is unnecessary to get up out of one's armchair to investigate whether such a constraint is met. Analytic truths are less substantial than synthetic ones

because the latter do impose constraints on the world, which it may or may not meet. This is another way of putting the idea that analytic truths are true in virtue of meaning alone while synthetic truths are true in virtue of a combination of meaning and fact, for if analytic truths did impose constraints on the world, they would be true partly in virtue of the fact that the world met those constraints, and so not true in virtue of meaning alone. Call such conceptions of analyticity *metaphysical*. Other conceptions dispense with the idea of truth in virtue of meaning, and treat analyticity as a privileged status in respect of knowledge or justification which a sentence or thought has in virtue of the conditions for understanding its constituent words or possessing its constituent concepts. Although the privileged truths impose constraints on the world, the task of checking that they are met is somehow less substantial than for other truths, for those who understand the relevant words or possess the relevant concepts. Call such conceptions of analyticity *epistemological*.<sup>4</sup>

This chapter examines a variety of attempts to develop a metaphysical account of analyticity. Some depend on misconceptions about meaning or truth. Others yield intelligible notions of analyticity, by watering down the traditional account to a point where it loses most of its usually supposed implications. They provide no reason to regard analytic truths as in any way insubstantial.<sup>5</sup> Even if core philosophical truths are analytic in such a sense, that does not explain how we can know or justifiably believe them.<sup>6</sup> At best it reduces the problem to the epistemology of another class of truths, such as necessary truths or logical truths. The next chapter will examine attempts to develop an epistemological account of analyticity, also with negative results. The overall upshot is that philosophical truths are analytic at most in senses too weak to be of much

explanatory value or to justify conceiving contemporary philosophy in terms of a linguistic or conceptual turn.

The conclusion is not best put by calling purportedly analytic truths ‘substantial’, because in this context the term ‘substantial’ is hopelessly vague. Rather, appeals in epistemology to a metaphysical conception of analyticity tend to rely on a *picture* of analytic truths as imposing no genuine constraint on the world, in order to explain the supposed fact that knowing them poses no serious cognitive challenge. If that account could be made good, it would provide a useful sense for ‘insubstantial’, which would refer to the pictured property, epistemological not in its nature but in its explanatory power. Substantial truths would be the ones that lacked this property. But the account cannot be made good. The metaphysical picture cannot be filled in so as to have the required explanatory power in epistemology. Thus ‘substantial’ and ‘insubstantial’ are not provided with useful senses. The negation of a picture is not itself a picture. That is a problem for appeals to metaphysical analyticity, not for the present critique.

2. The distinction between analytic truth and synthetic truth does not distinguish different *senses* of ‘true’: analytic and synthetic truths are true in the very same sense of ‘true’. That should be obvious. Nevertheless, it is hard to reconcile with what many logical positivists, Wittgensteinians and others have said about analytic truths. For they have described them as stipulations, implicit definitions (partial or complete), disguised rules of grammar and the like. On such a conception, enunciating an analytic truth is not stating a fact but something more like fixing or recalling a notation: even if talk of truth as correspondence to the facts is metaphorical, it is a bad metaphor for analytic truth in a

way in which it is not for synthetic truth. In the face of this conception, we should remind ourselves why ‘truth’ is quite unequivocal between ‘analytic truth’ and ‘synthetic truth’.

We can start by considering a standard disquotational principle for truth (where both occurrences of ‘P’ are to be replaced by a declarative sentence):

(T) ‘P’ is true if and only if P.

If ‘true’ is ambiguous between analytic truth and synthetic truth, (T) must itself be disambiguated. Nevertheless, the left-to-right direction holds for both notions:

(Talr) ‘P’ is analytically true only if P.

(Tslr) ‘P’ is synthetically true only if P.

Obviously, ‘Bachelors are unmarried’ is analytically true only if bachelors are unmarried, just as ‘Bachelors are untidy’ is synthetically true only if bachelors are untidy. The exact parallelism of (Talr) and (Tslr) already casts doubt on the supposed ambiguity. Indeed, they are jointly equivalent to a single principle about the disjunction of analytic truth and synthetic truth (‘simple truth’):

(Taslr) ‘P’ is analytically true or synthetically true only if P.

Worse, the right-to-left direction fails for both notions:



(Tar1) 'P' is analytically true if P.

(Tsrl) 'P' is synthetically true if P.

For (Tar1) has a false instance when a synthetic truth is substituted for 'P'; (Tsrl) has a false instance when an analytic truth is substituted for 'P'. There are no natural substitutes for the right-to-left direction of (T) in the form of separate principles for analytic truth and synthetic truth. Rather, the natural substitute for the right-to-left direction disjoins the two notions:

(Tasrl) 'P' is analytically true or synthetically true if P.

But (Tasrl) reinstates simple truth as the theoretically important characteristic.

One cannot avoid the problem by qualifying 'true' in (T) with 'analytic' for 'the relevant kind of sentence' and with 'synthetic' for the rest. For the sentences of the relevant kind are presumably just the analytic truths and analytic falsehoods. Thus the schemas for analytic and synthetic truth amount to these:

(Ta) If 'P' is analytically true or analytically false, then 'P' is analytically true if and only if P.

(Ts) If 'P' is neither analytically true nor analytically false, then 'P' is synthetically

true if and only if P.

But (Ta) and (Ts) follow from (Taslr), (Tasrl) and the analogue for falsity of (Taslr):<sup>7</sup>

(Faslr) 'P' is analytically false or synthetically false only if not P.

Thus the information in (Ta) and (Ts) is in effect just information about the disjunction of analytic truth and synthetic truth. The attempt to treat analytic truth and synthetic truth separately just confuses the theory of 'true'. The same happens for other theoretically important applications of 'true'.

Consider the standard two-valued truth-table for the material conditional:

<b>A</b>	<b>B</b>	<b>A <math>\supset</math> B</b>
T	T	T
T	F	F
F	T	T
F	F	T

If 'true' is ambiguous between analytic truth and synthetic truth, what does 'T' mean in that table? We might try subscripting it as  $T_{\text{analytic}}$  and  $T_{\text{synthetic}}$ , multiplying the possibilities in the first two columns accordingly and adding the appropriate subscript in the third column. 'F' will require corresponding subscripts too. Since the possibilities

$T_{\text{analytic}}$ ,  $T_{\text{synthetic}}$ ,  $F_{\text{analytic}}$  and  $F_{\text{synthetic}}$  arise for both **A** and **B**, the new truth-table will have sixteen lines. But consider this case:

<b>A</b>	<b>B</b>	<b>A <math>\supset</math> B</b>
$T_{\text{synthetic}}$	$T_{\text{synthetic}}$	$T_?$

What subscript is appropriate for the third column? Suppose that Barbara is a barrister, and therefore a lawyer. Of the following four sentences, (1), (2) and (4) are synthetic while (3) is analytic (with ‘if’ read as  $\supset$ ):

- (1) Barbara is a barrister
- (2) Barbara is a lawyer
- (3) If Barbara is a barrister, Barbara is a lawyer
- (4) If Barbara is a lawyer, Barbara is a barrister

Since Barbara could easily not have been a lawyer at all, (1) and (2) are synthetic. If there are analytic truths, (3) is one of them; ‘barrister’ simply means a lawyer with certain qualifications. Thus we cannot put ‘synthetic’ for the missing subscript in that line of the truth-table, for that gives the wrong result when we read **A** as (1) and **B** as (2). Since Barbara could easily have been a lawyer without being a barrister, by being a solicitor, (4)

is synthetic too. Thus we also cannot put ‘analytic’ for the missing subscript, since that gives the wrong result when we read **A** as (2) and **B** as (1). Therefore the truth-table cannot be completed. Whether a material conditional is analytically true and whether it is synthetically true are not a function of whether its antecedent is analytically true, whether its antecedent is synthetically true, whether its consequent is analytically true and whether its consequent is synthetically true.

The best we can do is to put the disjunction of  $T_{\text{analytic}}$  and  $T_{\text{synthetic}}$  in the third column. But then in order to apply the truth-table iteratively, when one occurrence of  $\supset$  is embedded inside another, we shall need further lines in which such disjunctions appear in the first two columns as well as the third. In effect, we have merely recovered a single sense of ‘true’, applicable to both analytic truths and synthetic truths, albeit awkwardly defined by a disjunction. The same conclusion can be reached by looking at combinations of other logical constants, such as conjunction and negation. What does the central work in the compositional semantics is that indiscriminate notion of truth, not the more specific notions of analytic truth and synthetic truth.

A corresponding result holds for the theory of logical consequence. Valid arguments preserve truth from premises to conclusion. What can we say if ‘truth’ must be disambiguated between analytic truth and synthetic truth? A valid argument whose premise is a synthetic truth may have either a synthetic truth or an analytic truth as its conclusion. For example, the conjunction of a synthetic truth with an analytic truth is itself a synthetic truth, and has each conjunct as a logical consequence. For logic, the significant generalizations concern the indiscriminate disjunction of analytic truth with synthetic truth, not either disjunct separately.<sup>8</sup>

Analytic truths and synthetic truths are true in exactly the same central sense of 'true'. That is compatible with their being true in very different ways, just as being a mother and being a father are two very different ways of being a parent; 'parent' is not ambiguous between mothers and fathers. But truth-conditional semantics undermines even that idea. For how are (3) and (4) true in very different ways? Each is a material conditional; the antecedent and consequent of each are true in relevantly the same way as the antecedent and consequent of the other respectively. Their compositional semantic evaluation proceeds in parallel. Yet (3) is analytic, (4) synthetic. From the perspective of compositional semantics, the analytic-synthetic distinction is no distinction between different ways of being true; it is just a distinction between some truths and others.

3. On the metaphysical conception, analytic truths differ from synthetic ones by being true 'in virtue of meaning'. The intended contrast seems to be this. A synthetic truth is true because it means what it does and things are as that meaning requires. For example, 'Barbara is a barrister' is true because it means that Barbara is a barrister, and Barbara *is* a barrister. For an analytic truth, the second conjunct drops out. 'Barristers are lawyers' is true simply because it means that barristers are lawyers. Nothing else is needed. But the contrast is unconvincing. For that explanation of the truth of 'Barristers are lawyers' works only when we take for granted that barristers *are* lawyers. It is no good to say "Never mind whether barristers *are* lawyers; 'Barristers are lawyers' is true simply because it means that barristers are lawyers". For any true sentence *s* whatsoever, a canonical explanation of the truth of *s* takes the overall form '*s* means that P, and P'.<sup>7</sup> To use the obscure locution 'in virtue of', every true sentence is true in virtue of both its

meaning and how things are. This is another way of making the point that analytic truths and synthetic truths are not true in radically different ways.<sup>10</sup>

We can ask ‘in virtue of’ questions about non-metalinguistic matters too. In virtue of what are vixens female foxes? To use another obscure locution, what makes it the case that vixens are female foxes? An appeal to semantic or other facts about the words ‘vixen’, ‘female’ and ‘fox’ in answer to those questions would confuse use and mention. Vixens would have been female foxes no matter how we had used words. Presumably, vixens are female foxes in virtue of whatever female foxes are female foxes in virtue of; what makes it the case that vixens are female foxes is whatever makes it the case that female foxes are female foxes. Some may argue that female foxes are not female foxes in virtue of anything; nothing makes it the case that female foxes are female foxes. The suggestion may be that analytic truths require no truthmaker, unlike synthetic truth. An alternative suggestion is that analytic truths require truthmakers of a different kind from those of synthetic truths. Such suggestions are too unconstrained to be tractable for assessment. Still, two points stand out. First, they seem to conflict with general principles of truthmaker theory (in the unlikely event that such a theory is needed). For instance, what makes a disjunction true is what makes one of its disjuncts true. Thus whatever makes (2) (‘Barbara is a lawyer’) true also makes both (5) and (6) true:

(5) Barbara is a lawyer or Barbara is not a lawyer.

(6) Barbara is a lawyer or Barbara is a doctor.

But (5) is a simple logical truth, while (6) is a straightforward synthetic truth. Second, no connection has been provided between truthmaker theory and epistemology. Knowing a truth need not involve knowing its truthmaker; one can know (6) without knowing which disjunct is true (Barbara works in a building where only lawyers and doctors work). No account has been given as to why it should be easy from an armchair to know a truth with no truthmaker, or a truthmaker only of the special sort supposedly appropriate to analytic truths.

Nevertheless, at least one clear difference between paradigms of ‘analytic’ and paradigms of ‘synthetic’ is in the vicinity. For meaning that barristers are lawyers is sufficient for being true, whereas meaning that Barbara is a barrister is not. More generally, call a meaning *sufficient for truth* just in case necessarily, in any context any sentence with that meaning is true.<sup>11</sup> Thus the meaning of ‘Barristers are lawyers’ is sufficient for truth; the meaning of ‘Barbara is a barrister’ is not. One proposal is to explicate ‘analytic truth’ as ‘truth whose meaning is sufficient for truth’. Call this ‘modal-analyticity’.<sup>12</sup> For non-sceptics about meaning and necessity, the notion of modal-analyticity is quite intelligible. But what are its consequences?

Consider any non-indexical sentence *s* that expresses a necessarily true proposition. Necessarily, in any context, any sentence with the actual meaning of *s* expresses that necessary truth and is therefore true. Thus *s* is a modal-analytic truth, because its meaning is sufficient for truth. In that sense, it is true in virtue of meaning. But how little has been achieved in so classifying it! Nothing has been done to rule out the hypothesis that it expresses a profound metaphysical necessity about the nature of the world, knowable if at all only through arduous *a posteriori* investigation, for instance. No

reason has been provided to regard *s* as ‘merely verbal’ or ‘insubstantial’ in a pretheoretic sense, unless one already had independent reason to regard all necessities as merely verbal or insubstantial. Similarly, mathematical truths count as modal-analytic; their so counting is by itself no reason to regard them as merely verbal or insubstantial. Indeed, for all that has been said, even ‘Water contains H<sub>2</sub>O’ is modal-analytic, given that ‘water’ has a different meaning as used on Twin Earth to refer to XYZ, a different substance with the same superficial appearance.

To make the point vivid, call a meaning *temporally sufficient for truth* just in case at all times, in any context any sentence with that meaning is true. Read the quantifiers ‘at all times’ and ‘in any context’ non-modally, so they do not range outside the actual world. Thus any sentence which expresses, in a time-independent way, an eternally true proposition, however contingent, has a meaning temporally sufficient for truth. For example, ‘No hotel ever has a billion rooms’ is presumably temporally sufficient for truth. We can call it ‘temporal-analytic’ if we like, but that in no way implies that it is somehow insubstantial, because there is no background connection between eternity and some sort of insubstantiality. Similarly, calling a sentence ‘analytic’ in the sense of modal-analyticity does not imply that it is somehow insubstantial, in the absence of a background connection between necessity and some sort of insubstantiality. Yet the account of analyticity was what was supposed to substantiate the claim of insubstantiality. If we already had a background connection between necessity and insubstantiality, there would be little to gain from invoking modal-analyticity in order to argue that core philosophical truths are insubstantial, since we could do it more simply just by arguing that true philosophical sentences in the core express necessarily true propositions.



Admittedly, not all modal-analytic true sentences express necessarily true propositions. Examples of the contingent *a priori* such as ‘It is raining if and only if it is actually raining’ are modal-analytic, since the truth of ‘It is raining’ as uttered in a given context is necessarily equivalent to the truth of ‘It is actually raining’ as uttered in that context, because ‘actually’ refers to the world of the context, but the biconditional does not express a necessary truth, since the weather could have been relevantly different, in which case it would have been not raining if and only if it is actually raining. Thus modal-analyticity violates Kripke’s constraint that analyticity implies necessity; in this respect it may diverge from the traditional conception. Conversely, not all sentences that express necessarily true propositions are modal-analytic: consider examples of the necessary *a posteriori* such as ‘I am not Tony Blair’. Nevertheless, such examples seem marginal to the envisaged conception of core philosophical truths, most of which will both express necessarily true propositions and be modal-analytic.

A core of philosophical truths may indeed be modal-analytic. Some philosophers seek to articulate necessary truths without essential reliance on indexicals; if they succeed, the sentences they produce are modal-analytic. Even if contextualists are right, and key philosophical terms such as ‘know’ shift their reference across contexts, the relevant sentences may still both express necessarily true propositions and be modal-analytic: consider ‘Whatever is known to be the case is the case’. The answers to philosophical questions of the forms ‘Is it possible that P?’ and ‘Is it necessary that P?’ will themselves express necessary truths, given the principle of the widely accepted modal logic S5 that the possible is non-contingently possible and the necessary non-contingently necessary; if the answers can be phrased in non-indexical terms, they will then be modal-analytic. But

outside the envisaged core many philosophically relevant truths will not be modal-analytic, as the examples near the start of the chapter show.

Unfortunately, even for modal-analytic philosophical truths, classifying them as modal-analytic does not unlock their epistemology, any more than classifying a truth as necessary explains how we can know it. Of course, if a sentence is modal-analytic, then one is safe from error in uttering it with its given meaning. In that sense, one's utterance is reliable. But such reliability falls well short of what knowledge requires, since otherwise any true mathematical assertion would count as an expression of knowledge, no matter how fallacious the 'proof' on which it was based. 'Vixens are female foxes' is utterly misleading as a paradigm for the epistemology of modal-analytic truths in general. To say that *s* is a modal-analytic truth whose constituent words and grammar we understand does very little way to explain how we can know or justifiably believe *s*.<sup>13</sup> In particular, it does not imply that the mere linguistic understanding of *s* which every competent speaker possesses provides any insight into the truth of *s*, or constitutes more than the minimal starting-point for inquiry it does for ordinary synthetic truths.

4. Issues related to those just raised for modal-analyticity arise for what is sometimes called 'Frege-analyticity'.<sup>14</sup> A sentence is Frege-analytic just in case it is synonymous with a logical truth. For example, 'All furze is furze' is a logical truth, roughly speaking because everything of the form 'All F is F' is true. 'All furze is gorse' is not a logical truth, because not everything of the form 'All F is G' is true ('All fungus is grease' is false). However, 'All furze is gorse' is Frege-analytic, because it is synonymous with the logical truth 'All furze is furze', since 'furze' is synonymous with

‘gorse’. In ‘Two Dogmas’, Quine admits the notion of logical truth, and therefore allows that if ‘synonymous’ were legitimate, so would be ‘analytic’ in the sense of Frege-analyticity. By present standards, the notion of Frege-analyticity is quite intelligible. But what are its consequences?

Trivially, every logical truth is Frege-analytic, because it is synonymous with itself. Clearly, this alone does nothing to show that logical truths are somehow insubstantial in any metaphysical, epistemologically explanatory sense (see the end of section 1). For instance, it is compatible with the hypothesis that there are truths of second-order logic which characterize the necessary structure of reality in profound ways and can never be known by any mind. *A fortiori*, nothing has been done to show that Frege-analytic truths are insubstantial.<sup>15</sup>

To make the point vivid, call a sentence ‘Einstein-analytic’ just in case it is synonymous with a truth once uttered by Einstein. Trivially, every truth once uttered by Einstein is Einstein-analytic. That does nothing to show that truths once uttered by Einstein are in any sense insubstantial; *a fortiori*, nothing has been done to show that Einstein-analytic truths are somehow insubstantial. Of course, if we had independent reason to regard all logical truths as somehow insubstantial, that would presumably give us reason to regard all Frege-analytic truths as insubstantial in some related way, but the mere definition of ‘Frege-analytic’ provides no such reason. Quine devoted some of his most powerful early work to arguing that logical truths are not analytic in a less trivial sense (Quine 1936).

To explain why ‘All furze is furze’ is a logical truth while ‘All furze is gorse’ is not, use was made of Tarski’s standard model-theoretic account of logical consequence

as truth-preservation under all interpretations which preserve logical form, and in particular of logical truth as truth under all such interpretations (Tarski 1983). It lends no support to any conception of logical truths as somehow insubstantial. The truth of a sentence under all interpretations which preserve its logical form in no way make its truth under its intended interpretation insubstantial.<sup>16</sup> To use a style of argument from section 2, consider this simple logical truth (with ‘if’ read as the material conditional):

(7) If Barbara is a barrister, Barbara is a barrister

Its compositional semantic evaluation proceeds in parallel to that for the non-logical analytic truth (3) and the synthetic truth (4); each is true because it is a material conditional with a true antecedent and a true consequent. All three are true in the same way. From the perspective of compositional semantics, logical truths are true in the same way as other truths.

In one good sense, sentences of the form ‘P if and only if actually P’ are logical truths, and therefore Frege-analytic, because true in every model (Davies and Humberstone 1980, Kaplan 1989). Nevertheless, they can express contingent truths on the same reading; it is not necessary for me to be my actual height. Although we could add a modal qualification to the definition of logical truth in order to exclude such examples, by requiring logical truths to be true at every world in every model, this mixing together of the modal dimension with the world dimension is bad taxonomy; perspicuous basic notions keep such different dimensions separate. Thus Frege-analyticity, like modal-analyticity, violates Kripke’s constraint that analyticity implies

necessity. In this respect Frege-analyticity too may diverge from the traditional conception.

The mathematical rigour, elegance and fertility of model-theoretic definitions of logical consequence depend on their freedom from modal and epistemological accretions. As a result, such definitions provide no automatic guarantee that logical truths express necessary or *a priori* propositions. This is no criticism. As a theoretical discipline, logic only recently attained maturity. Tarski's model-theoretic notion of logical consequence has turned out to be a key theoretical notion. To reject it on the basis of preconceived extraneous constraints would subvert the autonomy of logic as a discipline. Pretheoretic conceptions of logical consequence are in any case too confused to provide much guidance on subtle issues.<sup>17</sup> Still, those who do have a non-standard account of logical truth can feed it into the definition of 'Frege-analytic' if they like.

'All furze is furze', unlike many logical truths, is obvious. That does not justify the idea that it imposes *no* constraint on the world, rather than one which, by logic, we easily know to be met (Wittgenstein, *Tractatus Logico-Philosophicus*, 4.461 -4.4661 and 6.1-613). What case does the constraint exclude? That not all furze is furze, of course. To complain that 'Not all furze is furze' does not express a genuine case is to argue in a circle. For it is to assume that a genuine constraint must exclude some logically consistent case. Since substantiality was being understood to consist in imposing a genuine constraint, that is tantamount to assuming that no logical truth is substantial, the very point at issue. Concentration on obvious logical truths obscures this circularity.

We may hope, given an epistemology for logical truths, to extend it to an epistemology for Frege-analytic truths. That task will not be trivial, for cognitive

differences may arise between synonymous expressions, even for those who understand them. For example, Kripke (1979) has argued persuasively that a competent speaker of English can understand the synonymous expressions 'furze' and 'gorse' in the normal way without being in a position to know that they refer to the same thing. Such a speaker will assent to the logical truth 'All furze is furze' while refusing assent to the Frege-analytic truth 'All furze is gorse'. Similarly, on standard theories of direct reference, coreferential proper names such as 'Hesperus' and 'Phosphorus' are synonymous, so an astronomically ignorant competent speaker may assent to the logical truth 'If Hesperus is bright then Hesperus is bright' while refusing assent to the Frege-analytic truth 'If Hesperus is bright then Phosphorus is bright'.

The epistemological consequences of such examples are contested. According to some direct reference theorists, the proposition that if Hesperus is bright then Phosphorus is bright *is* the proposition that if Hesperus is bright then Hesperus is bright, so whoever knows that if Hesperus is bright then Hesperus is bright *ipso facto* knows that if Hesperus is bright then Phosphorus is bright.<sup>18</sup> However, even granted that view of propositional attitude ascriptions, that speaker is in no position to know that if Hesperus is bright then Phosphorus is bright under the guise of the sentence 'If Hesperus is bright then Phosphorus is bright', but only under the guise of the sentence 'If Hesperus is bright then Hesperus is bright'. In a sense the speaker cannot express their knowledge by using the merely Frege-analytic sentence, even though it expresses the content of that knowledge: if they do use the sentence, their utterance will not be causally connected to their knowledge state in the right way. In elliptical terms, the speaker knows 'If Hesperus is bright then Hesperus is bright' without being in a position to know 'If Hesperus is bright

then Phosphorus is bright'; they know the logically true sentence without being in a position to know the merely Frege-analytically true sentence.

If propositions are individuated in that coarse-grained direct reference way, what matters for progress in philosophy is less which propositions we know than which sentential guises we know them under. Suppose, just for the sake of argument, that some form of physicalism is true, and pain is in fact identical with  $\pi$ , where 'π' is a name whose reference is fixed by a neuroscientific description. According to a hard-line direct reference theory, 'pain' and 'π' are synonymous. The hypothesis 'Pain is π' becomes a focus of philosophical controversy. On some direct reference theories, everyone knew all along that pain is π, because they knew all along that pain is pain and the proposition that pain is π just is the proposition that pain is pain. If that view is correct, it just shows that such attitude ascriptions constitute the wrong level of description for understanding philosophical activity. What matters is that although everyone knew the proposition under the guise of the logical truth 'Pain is pain', they did not know or even believe it under the guise of the merely Frege-analytic truth 'Pain is π'. In elliptical terms, they knew 'Pain is pain' but not 'Pain is π'. Perhaps such physicalist theories are false, but we can hardly expect philosophy to be a discipline in which there are no informative identities; the moral of the example stands. The need for such finer-grained descriptions of propositional attitudes is even more urgent if propositions as the objects of knowledge and belief are identified with sets of possible worlds, for then all necessary truths are identical with the set of all possible worlds: anyone who knows one necessary truth knows them all (Lewis 1996, Stalnaker 1999: 241-73). Thus a coarse-grained account of

attitude ascriptions does not trivialize the problem of extending an epistemology for logical truths to an epistemology for Frege-analytic truths.

Opponents of direct reference theories usually hope to make synonymy a more cognitively accessible relation for competent speakers. However, the prospects for making it perfectly accessible are very dubious. Pairs such as ‘furze’ and ‘gorse’ are pre-theoretically plausible cases of synonymous expressions that speakers can understand in the ordinary way without being in a position to know them to be synonymous.<sup>19</sup> The extension of an epistemology for logical truths to an epistemology for Frege-analytic truths will probably have to allow for significant cognitive obstacles which cannot be overcome simply by speakers’ ordinary linguistic competence.

Even for sentential guises, identity and distinctness are not guaranteed to be transparent to speakers: someone may be confused as to whether ‘Paderewski’, the name of the politician, is the same name as ‘Paderewski’, the name of the pianist (Kripke 1979). A single speaker at a single time may associate different mental files with the same word of a natural language, or the same mental file with different words of the language. Speakers may also be confused as to whether they are calling on two mental files or one. What needs to be found is not the mythical level of description at which perfect transparency to the subject is guaranteed but rather a perspicuous level of description at which the relevant cognitive phenomena are individuated in a way that is neither so coarse-grained that the most relevant distinctions cannot be drawn nor so fine-grained that they are drowned out by a crowd of irrelevant ones. Since philosophical pursuit involves many interacting individuals, sentential guises usually provide an appropriate level of description.



We also need an epistemology for logical truths in the first place. To that, the notion of Frege-analyticity contributes nothing. In particular, that a sentence is Frege-analytic does not imply that mere linguistic competence provides any insight into its truth, or constitutes more than the minimal starting-point for inquiry it does for ordinary synthetic truths.

How many philosophical truths are Frege-analytic? As a simple example, take the true sentence 'Persons are not events' (if you think that persons are events, take 'Persons are events' instead). It is not itself a logical truth, on any standard conception of logic. In particular, 'person' and 'event' seem not to be logical constants, and the logical form '*Ps* are not *Es*' has false instances such as 'Parisians are not Europeans'. What logical truth could 'Persons are not events' be synonymous with? 'Persons who are not events are not events' is a logical truth, but not synonymous with the original. Granted, 'persons' and 'persons who are not events' have the same intension (function from circumstances of evaluation to extension) in every context of utterance.<sup>20</sup> Still, they are not literally synonymous, for whatever the semantic structure of 'persons', it is finite, and therefore a proper part of the semantic structure of 'persons who are not events'; thus the two expressions differ in semantic structure. One can try to construct non-circular analyses of 'person' and 'event' or both whose substitution into the sentence would yield a logical truth: 'To be a person is to be a *QRS*'. However, 'person' and '*QRS*' are unlikely to be literally synonymous. Almost certainly, someone will produce a purported counterexample to the analysis: 'Such-and-such would be a person but not a *QRS*' or 'So-and-so would be a *QRS* but not a person'. Direct reference theorists will tend to expect just such counterexamples to the claim that the apparently simple term 'person' and the

complex description 'QRS' have the same intension; direct reference theories partly originate from Kripke and Putnam's counterexamples to a host of similar descriptivist claims. Opponents of direct reference may be less pessimistic about the prospects for a complex description with the same intension as 'person'. However, on their finer-grained views of meaning, a purported counterexample need not be correct to defeat the claim of synonymy: what counts is that its proponent is neither linguistically incompetent nor fundamentally irrational. Contemporary proponents of a descriptivist view of meaning as a rival to direct reference theory usually envisage a loose semantic connection with a cluster of descriptions rather than strict synonymy with a single description. Whichever side of the debate one takes, there are good grounds for scepticism about the supposed synonymy of 'person' and 'QRS'. The best bet is that 'Persons are not events' is not Frege-analytic. The point does not depend on peculiarities of the example; it could be made just as well for most other philosophical claims.<sup>21</sup> In contemporary philosophy, few who propose complex analyses claim synonymy for them.<sup>22</sup>

One might react by loosening the relation of synonymy to some equivalence relation that would have a better chance of holding between the *analysandum* and the *analysans* in philosophically significant analyses. Call the looser equivalence relation 'metaphysical equivalence'. A wider class of philosophical truths might be transformable into logical truths by the substitution of metaphysically equivalent terms. Call the truths in the wider class 'quasi-Frege-analytic'. The poor track record of philosophical analysis does not suggest that the class of quasi-Frege-analytic truths will be very much wider than the class of Frege-analytic truths.<sup>23</sup> In any case, the looser metaphysical equivalence is, the more problematic it will be to extend an epistemology for logical truths to an

epistemology for quasi-Frege-analytic truths. The aim of the loosening is to permit some distance between the meaning of the *analysandum* and the meaning of the *analysans*; that will tend to make even the coextensiveness of the *analysandum* and *analysans* less cognitively accessible. There will be a corresponding tendency to make the material equivalence of the original quasi-Frege-analytic truth to the logical truth less cognitively accessible too.

For instance, one might define ‘metaphysical equivalence’ as sameness of intension in every context. The question is then how the sameness of intension in every context of the substituted terms could enable one to advance from knowing or justifiably believing the logical truth to knowing or justifiably believing the merely quasi-Frege-analytic truth. No guarantee has been provided that we can know or justifiably believe the universally quantified biconditional of the substituted terms. By hypothesis, that biconditional will in fact express a necessary truth in every context; the problem merely shifts to how such truths can be known, just as in the case of modal-analyticity. If that problem had already been solved, there would be little to gain from appealing to quasi-Frege-analyticity in order to explain how core philosophical truths can be known.

Even if many philosophical truths are quasi-Frege-analytic, it does not follow that we can gain cognitive access to them simply on the basis of our logical and linguistic competence.

Yet another proposal is to consider as (metaphysically) analytic just the logical consequences of true (or good) semantic theories. It is presumably in the spirit of this proposal to interpret semantic theories not as stating straightforwardly contingent, *a posteriori* facts about how people use words but as somehow articulating the essential

structure of semantically individuated languages; in this sense, the word ‘green’ could not have meant anything but *green* in English. Even so, the definition does nothing to trace any special cognitive access that speakers have to semantic facts about their own language to any special metaphysical status enjoyed by those facts. It also counts every logical truth as analytic, since a logical truth is a logical consequence of anything, without illuminating any special cognitive access we may have to logical truths. Of course, *if* someone knows the relevant semantic truths about their own language and is logically proficient, then they are also in a position to know the analytic truths as so defined. But, on this definition, we do nothing to explain how the semantics and logic are known in the first place by saying that they are analytic. As in previous cases, the account of analyticity merely shifts the burden from explaining knowledge of analytic truths to explaining knowledge of some base class of necessary or logical or semantic or other truths. Once the analyticity card has been played to effect this shift of the explanatory burden, it cannot be played again to explain knowledge of the base truths, by saying that they are analytic, for they count as analytic simply because they belong to the relevant base class, and the question remains how we know truths in the base class.

5. Unless one is a sceptic about meaning or modality, one can define several notions of analyticity in semantic and modal terms, but none of them provides any reason to regard the truths to which it applies as somehow insubstantial, or as posing no significant cognitive challenge. That upshot may seem puzzling. Surely we sometimes make a sentence true by stipulative definition. For example, I might introduce the term ‘zzz’ (pronounced as a buzz) by saying ‘A zzz is a short sleep’ and thereby make ‘A zzz is a

short sleep' true. What prevents us from using such cases as paradigms to fix a semantic notion of analyticity on which analytic truths are insubstantial?

We can see the problems for the proposal more clearly by distinguishing the semantic from the metasemantic. Semantic facts are facts of the kind we attempt to systematize in giving a systematic compositional semantic theory for a language, facts as to what its expressions mean. Metasemantic facts are the non-semantic facts on which the semantic facts supervene. The distinction is rough but clear enough to be workable. Thus the fact that 'horse' applies to horses is semantic, not metasemantic; the fact that utterances of 'horse' are often caused by horses is metasemantic, not semantic.<sup>24</sup> Similarly, the fact that 'zzz' means a short sleep is semantic, while the fact that it was introduced by someone saying 'A zzz is a short sleep' is metasemantic. The semantic theory takes no notice of the act of stipulation, only of its outcome — that a given expression has a given meaning. The act of stipulation makes the sentence true by making it have a meaning on which it is, in the quite ordinary way, true. My saying 'A zzz is a short sleep' did not make a zzz be a short sleep, because that would be to make a short sleep be a short sleep, and my saying 'A zzz is a short sleep' certainly did not make a short sleep be a short sleep. In particular, since there were many short sleeps before I was born, there were many zzzes before I was born, independently of my later actions. At best, my saying 'A zzz is a short sleep' made 'zzz' mean a short sleep, and therefore 'A zzz is a short sleep' mean that a short sleep is a short sleep. This is simply the standard semantic contribution of meaning to truth, just as for synthetic truths. The peculiarity of the case is all at the metasemantic level; the use of stipulative definitions as paradigms does not yield a *semantic* notion of analyticity. Making 'zzz' mean a short sleep helps

make 'A zzz is a short sleep' true only because a short sleep is a short sleep. 'A short sleep is a short sleep' is a logical truth, but we have been given no reason to regard logical truths as somehow insubstantial. The use of stipulative definitions as paradigms of analyticity does not justify the idea that analytic truths are in any way insubstantial.

My stipulation may smooth my path from knowing the logical truth 'A short sleep is a short sleep' to knowing the Frege-analytic truth 'A zzz is a short sleep', but of course that does not explain how I know 'A short sleep is a short sleep' in the first place.

The metaphysics and semantics of analytic truths are no substitute for their epistemology. If their epistemology is as distinctive as is often supposed, that is not the outcome of a corresponding distinctiveness in their metaphysics or semantics. It can only be captured by confronting their epistemology directly. We therefore turn to epistemological accounts of analyticity.

## Notes

1 To give just one example, even Jack Smart, whose work robustly engages the nature of the non-linguistic, non-conceptual world and who described metaphysics as ‘a search for the most plausible theory of the whole universe, as it is considered in the light of total science’ (1984: 138), could also write that philosophy is ‘in some sense a *conceptual* inquiry, and so a science can be thought of as bordering on philosophy to the extent to which it raises within itself problems of a conceptual nature’ (1987: 25), although he admits that he ‘cannot give a *clear* account of what I have meant when earlier in this essay I have said that some subjects are more concerned with “conceptual matters” than are others’ (1987: 32).

2 The overall criticism of Quine’s procedure goes back to Grice and Strawson 1956. Sober 2000 argues that Quine violates his own methodological naturalism in criticizing semantic notions on foundational grounds without considering their use in science.

3 Given Kripke’s arguments, defining ‘analytic’ as the conjunction of ‘*a priori*’ and ‘necessary’ does not yield a natural notion, since a disjunction of an *a priori* contingency with an unrelated *a posteriori* necessity will then count as analytic: it is *a priori* because its first disjunct is and necessary because its second disjunct is. One does somewhat better by defining ‘analytic’ as ‘*a priori* necessary’, which excludes that example, although the point of such a combination of epistemological and metaphysical elements remains to be explained. The arguments below apply to this notion too. Of course,

Kripke's main concern is the difference between the *a priori* / *a posteriori* and the necessary / contingent distinctions; he clarifies their differences from the analytic / synthetic distinction in passing. Nevertheless, the differentiation between the first two distinctions forces the demotion of the third from that of trying to play both the first role and the second.

4 See Tappenden 1993 and Boghossian 1997 for the distinction between metaphysical and epistemological accounts of analyticity.

5 Etchemendy 1990: 107-24 contrasts 'substantive' generalizations with logical ones. The idea is widespread. It occurs in different forms in Wittgenstein's *Tractatus Logico-Philosophicus* and in Locke's 'Of trifling propositions' (*An Essay Concerning Human Understanding*, Book IV, Chapter viii).

6 Since analytic truths are standardly taken to be sentences, the term 'true' will sometimes be applied to sentences, as well as to thoughts and propositions; where required, the context makes clear what kind of truth-bearer is intended. Talk of knowing or believing a sentence should be understood as elliptical for talk of having knowledge or belief which one can express with the sentence (on its standard meaning). Thus someone who knows 'Grass is green' knows that grass is green and can express that knowledge by saying 'Grass is green'; this is not to be confused with the metalinguistic knowledge that the sentence 'Grass is green' is true.



7 Proof: Assume (Taslr), (Faslr) and (Tasrl). To derive (Ta), note that it is equivalent to the conjunction of two claims: (i) if 'P' is analytically true, then 'P' is analytically true if and only if P; (ii) if 'P' is analytically false, then 'P' is analytically true if and only if P. Now (i) is logically equivalent to the claim that 'P' is analytically true only if P, which follows from (Taslr). Moreover, by (Faslr) 'P' is analytically false only if not P; as just seen 'P' is analytically true only if P, so 'P' is analytically false only if 'P' is not analytically true; thus if 'P' is analytically false then both sides of the biconditional in the consequent of (ii) fail, so (ii) holds. To derive (Ts), first note that 'P' is synthetically true only if P by (Taslr). Conversely, if P then 'P' is analytically true or synthetically true by (Tasrl); since by the antecedent of (Ts) it is not analytically true, it is synthetically true. Incidentally, by themselves (Ta) and (Ts) are weak in other ways too; in particular, they do not entail that nothing can be both analytically true and synthetically true.

8 For related arguments see Williamson 1994b: 141-42 and Tappolet 1997.

9 See Boghossian 1997: 335-36. Quine says that we can say that the logical truth 'Everything is self-identical' depends for its truth 'on an obvious trait, viz., self-identity, of its subject matter, viz., everything'. However, he claims that it makes no difference whether we say that or say that it depends for its truth 'on traits of the language (specifically on the usage of "="), and not on traits of its subject matter' (1966: 106).

10 Another problem for the supposed contrast is that it seems to equivocate on ‘means’. When we explain why ‘Barbara is a barrister’ is true by saying ‘It means that Barbara is a barrister, and Barbara *is* a barrister’, ‘means’ can be paraphrased as ‘expresses the proposition’; what proposition a sentence expresses may depend on the context in which it is uttered, if indexicals are present. By contrast, the appeal to meaning in the case of analytically true sentences is not to the proposition expressed on some particular occasion but to the linguistic meaning of the sentence, which is invariant across contexts, even if indexicals are present.

11 To handle ambiguity, treat it as homonymy: distinct sentences with the same superficial form. The reification of meanings in the definition can be eliminated at the cost of circumlocution. Note also that the utterance of a modal-analytic truth may be false if the context shifts during the utterance: consider ‘If it is now exactly noon then it is now exactly noon’. Similarly, an utterance of ‘If John is a bachelor then John is unmarried’ may express a falsehood if the wedding ceremony is completed between the utterance of the antecedent and the utterance of the consequent. Taking such complications into account would not help friends of analyticity.

12 The notion of modal-analyticity is similar to the notion of deep necessity in Evans 1979, where the truth of the sentence does not depend on any contingent feature of reality.

13 See n. 6 for this terminology.

14 The term ‘Frege-analytic’ is from Boghossian 1997, with reference to §3 of Frege 1950 (as Boghossian suggests, the interpretation of the passage is not entirely clear). He classifies the notion of Frege-analyticity as neither epistemological nor metaphysical but semantic (1997: 363); for convenience, it is treated here under the heading of metaphysical notions of analyticity.

15 Quine 1966: 111 notes that so-called truth by definitions (‘Every vixen is a female fox’) depend on prior logical truths (‘Every female fox is a female fox’).

16 Note that the issue is not how we can know that *s* is a logical truth; it is how, given that *s* is a logical truth, we can know the simple truth of *s*.

17 For more discussion and further references to the controversy over the nature of logical consequence see Williamson 2000b.

18 See Salmon 1986, especially 133-35.

19 See Kripke 1979. This contradicts Dummett’s claim that ‘It is an undeniable feature of the notion of meaning — obscure as that notion is — that meaning is *transparent* in the sense that, if someone attaches a meaning to each of two words, he must know whether these meanings are the same (1978: 131). For more general theoretical considerations against such claims see Williamson 2000a: 94-107. See also Horwich 1998: 100-1.

20 The contexts of utterance and circumstances of evaluation here are not restricted to the actual world. If the content of an expression has a structure which reflects the grammatical structure of the expression, then sameness of intension does not imply sameness of content, and sameness of intension in every context does not entail sameness of character, that is, sameness of content in every context. See Kaplan 1989 for relevant background.

21 Boghossian argues that many *a priori* truths are not Frege-analytic (1997: 338-39).

22 This point is related to the paradox of analysis: how can a conceptual analysis be both correct and informative? The paradox goes back to Langford 1942.

23 See Fodor 1998: 69-87 and Williamson 2000a: 31-33 for further discussion.

24 For helpful discussion see the essays in Part IV of Stalnaker 2003. He sometimes use the terminology of ‘descriptive semantics’ and ‘foundational semantics’ rather than ‘semantics’ and ‘metasemantics’ respectively.