

PROPERTIES AS TRUTHMAKERS

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1. *Introduction*

The Truthmaker Principle says that every truth has a truthmaker. More fully, it says that for every truth T , there exists some entity E , such that, necessarily, T if E exists — or that there exists some entities E, F, \dots , such that, necessarily, T if those entities jointly exist.¹ The Principle was originally used to argue against both behaviourism and phenomenalism. Some philosophers have also thought that it provides an argument for the existence of properties. Where they disagree is in what they take properties to be. Some (such as Armstrong² and Mellor³) take truthmakers to be states of affairs (or facts), whose constituents include properties or relations understood as universals. Others (such as Fox,⁴ and Mulligan, Simons, and Smith⁵) take truthmakers to be properties understood as particulars. I will be concerned with the area of common agreement.⁶ Opponents of this agreement may reject the Truthmaker Principle, deny that the Principle provides an argument

¹This statement of the Truthmaker Principle is taken from John F. Fox (1987) “Truthmaker” *Australasian Journal of Philosophy* 65 at p. 189. For some clarifications, see Greg Restall (1996) “Truthmakers, Entailment and Necessity” *Australasian Journal of Philosophy* 74 at pp. 331–332.

²D.M. Armstrong (1997) *A World of States of Affairs* (Cambridge: Cambridge University Press) chapter 8 §8.12.

³D.H. Mellor (1995) *The Facts of Causation* (London and New York: Routledge) p. 162.

⁴Fox (1987) loc. cit.

⁵Kevin Mulligan, Peter Simons, and Barry Smith (1984) “Truth-Makers” *Philosophy and Phenomenological Research* 44 pp. 287–321.

⁶For simplicity, I will explicitly talk only of properties, not of properties and relations. What I have to say about properties applies equally to relations.

for properties, or both. David Lewis takes the first option.⁷ Josh Parsons takes the second.⁸

The structure of this paper is as follows. §2 assesses Lewis scepticism. §3 assesses Parson's scepticism. §§4 and 5 re-assess the arguments from the Truthmaker Principle against, respectively, phenomenalism and behaviourism.

2. *David Lewis scepticism*

Lewis discusses the Truthmaker Principle in the context of considering Armstrong's argument from the Truthmaker Principle for the existence of states of affairs, and *a fortiori*, for the existence of properties. Now there may be good reasons for positing properties, but, if Lewis is right, we won't find them in Armstrong's argument.

Lewis presents two difficulties for the Principle. He thinks that both difficulties are instances of the conflict between combinatorialism and the demand for truthmakers.⁹ Combinatorialism is a thesis about modality. It says that any number of entities can exist together, and that alone or together they can have any intrinsic natures.

The first difficulty Lewis poses is that the Truthmaker Principle posits necessary connections between distinct things.¹⁰ I take Lewis to understand x and y to be distinct things if and only if x and y are non-identical and share no mereological parts. Suppose that the state of affairs of a 's having F is such that, necessarily, the statement that a is F is true if the state of affairs of a 's having F exists. Then that state of affairs is such that, necessarily, a is F if that state of affairs exists. Whatever relation a and F stand in to that state of affairs, they are not mereological parts of it, nor it of them. So that state of affairs is distinct from a , is distinct from F , and distinct from both together. (Remember: a and F might both exist, and yet a not have F). So, Lewis concludes, the Truthmaker Principle requires necessary connections between distinct things.

⁷ David Lewis (1999a) "Armstrong on Combinatorial Possibility" and (1999b) "A World of Truthmakers?" in his *Papers in Metaphysics and Epistemology* (Cambridge: Cambridge University Press) pp. 196–214 and 215–220 respectively.

⁸ Josh Parsons (1999) "There is no Truthmaker Argument against Nominalism" *Australasian Journal of Philosophy* 77 pp. 325–334.

⁹ Lewis (1999b) p. 219.

¹⁰ Lewis (1999b) p. 219.

Two comments. First, this conclusion does not follow from the Truthmaker Principle alone, but from the Principle in conjunction with a certain account of what truthmakers are, namely states of affairs. The conclusion does not follow if the Principle is combined with certain other accounts of what truthmakers are. For instance, suppose that the truthmaker for the statement that a is F is taken to be the trope of a 's being F . That trope is such that, necessarily, a is F if that trope exists. Suppose also that the trope theorist is a bundle theorist; that he takes particulars like a to be bundles of tropes, where tropes are bundled together if and only if they are spatio-temporally compresent.¹¹ Then there is no question of the trope of a 's being F being distinct from a , from F , or from both together. The trope theorist needs only the trope which is a 's being F . Another account takes truthmakers to be instantiations of n -adic properties by n particulars, and does not posit states of affairs, a further category of distinct things. On this account, the truthmaker of the statement that a is F is the particular a having the property F . But the latter is not distinct from a 's having F .

Lewis anticipates the latter account. He writes:¹²

If I were committed to universals myself, I would be an *Ostrich Realist*: I would think it was just true, without benefit of truth-makers, that a particular instantiates a universal.

Here Lewis rejects not only states of affairs — one candidate kind of truthmaker — but truthmakers of any kind. Yet he does not show why this further step should be taken. The Ostrich Realist has his candidates for truthmakers — namely, particulars instantiating universals — but for some unstated reason eschews granting them that status.

To sum up, the conflict between the Truthmaker Principle and combinatorialism arises only if states of affairs are taken to be truthmakers, and a property theorist need not assume that any truthmakers are states of affairs.

My second comment concerns the conflict between the principle of combinatorialism and Armstrong's states-of-affairs reading of the Truthmaker Principle. Lewis thinks that one principle or the other must be compromised.¹³ I think there is independent reason to compromise combinatorialism. Take the claim that there are no necessary connections between distinct

¹¹For example, Keith Campbell (1990) *Abstract Particulars* (Oxford: Blackwell) chapter 1 §1.6.

¹²Lewis (1999a) p. 203 (his italics).

¹³Lewis (1999b) p. 220.

things. Here are counter-examples: distinct determinates of the same determinable necessarily stand in similarity relations, and certain numbers necessarily stand in ratios to each other.¹⁴ If these counter-examples provide independent reason to compromise combinatorialism, they diminish the force of the criticism that Armstrong's states-of-affairs reading of the Truthmaker Principle also compromises it.

The second difficulty Lewis poses is the case of negative existential truths (and predications equivalent to negative existentials).¹⁵ To take Lewis's example, there are no arctic penguins. What is the truthmaker of that truth? To meet this, and like difficulties, Armstrong posits totality states of affairs,¹⁶ and C.B. Martin posits absences.¹⁷ Take all the wildlife at the arctic. The resulting aggregate (or set) bears a relation of totality to the property of *being an arctic creature*. Consequently, nothing else is an arctic creature. That aggregate standing in that relation to that property is a totality state of affairs. It is Armstrong's truthmaker for there are no arctic penguins. Take all the entities which exist at the arctic. One of these entities is an *absence*; specifically, it is the absence of arctic penguins. It is Martin's truthmaker for there are no arctic penguins.

Lewis replies to Armstrong that:¹⁸

Totality facts break the rules of combinatorialism. The idea was that anything can coexist with anything, yet these totality facts have as their *raison d'être* to refuse to coexist with other facts.

Agreed, but this is to repeat the objection that an ontology of states of affairs conflicts with combinatorialism. There the objection was levelled against states of affairs in general; here the objection is levelled specifically against totality states of affairs. What does repeating the objection achieve? I don't see that Armstrong's admission of totality states of affairs makes the objection any more pressing. It's the same objection at work, only working against a narrower target — a proper sub-class of the states of affairs.

¹⁴ Lewis reports the case of determinates when discussing Armstrong: Lewis (1999a) p. 197. Since he finds fault with Armstrong's own account of determinates, but nowhere offers his own account, it is not clear what he makes of this case.

¹⁵ Lewis (1999a) p. 204. See also Lewis (1999b) pp. 219–220.

¹⁶ Armstrong (1997) pp. 134–135.

¹⁷ C.B. Martin (1996) "How It Is: Entities, Absences, and Voids" *Australasian Journal of Philosophy* 74 pp. 57–65.

¹⁸ Lewis (1999a) p. 205.

Lewis writes as though the original problem is *compounded* by admitting totality states of affairs. He says that it is plain to see *how much* damage Armstrong's demand for truth-makers has done to his combinatorialism.¹⁹ But it is not obvious that the relation between combinatorialism and a states of affairs ontology is one of a conflict which can vary in degree depending on which states of affairs are posited, as opposed to a relation of all-or-nothing incompatibility. Moreover, suppose that the conflict were one which admits of degree. Each first-order states of affairs violates combinatorialism, and so, presumably, each one notches the conflict up a further degree. There are, presumably, infinitely many first-order states of affairs. This pitches the conflict at an infinitely high degree. So unless positing totality states of affairs introduces a new order of infinity — which is not obviously so — positing them does not intensify the conflict.

In short, it is not clear whether Lewis's criticism of totality states of affairs is anything more than an illustration of the incompatibility of combinatorialism and a states of affairs ontology. In particular, it is not clear that he shows that admitting totality states of affairs (or absences, for that matter) is an added cost to a states of affairs ontology.²⁰

3. Josh Parsons's scepticism

Parsons assumes a nominalist ontology containing only spatio-temporally located, concrete objects.²¹ His scepticism about the Truthmaker Principle's role in arguing for properties has two stages. First stage: what makes it true that F applies to an individual a is exactly that a exists. a is the truthmaker of a is F .²² End of story. Second stage: granted it is possible that a changes (across times or worlds), and that F does not apply to a in those changed circumstances. So although a is the truthmaker of a is F , it is not *essentially* its truthmaker.²³ Parsons calls truthmaker essentialism the view that if an entity E is a truthmaker of a truth T , then E is essentially a truthmaker for

¹⁹ Lewis (1999a) p. 206 (my emphasis).

²⁰ Fox (1987) pp. 196–197 anticipates Lewis's discussion of the conflict between the Truthmaker Principle and combinatorialism. Unlike Lewis, Fox accepts the Principle and rejects combinatorialism.

²¹ Parsons (1999) p. 325.

²² Parsons (1999) §III.

²³ Parsons (1999) §IV.

T. He then tries to show that truthmaker essentialism renders the Truthmaker Principle redundant.

First comment. I'm not fully clear what Parsons takes the Truthmaker Principle to be. Because of this, I'm unsure whether he's shown that *a* alone is the truthmaker of the truth *a* is *F*. In some places he states the Principle as that every truth has a truthmaker, in virtue of which that truth is true.²⁴ Call this reading (A). In other places, he states the Principle as that the truth of a sentence supervenes on the qualitative nature of its truthmaker.²⁵ How is the notion of something's qualitative nature to be understood? Parsons glosses this in terms which he admits are not obviously compatible with nominalism. He glosses an object's qualitative nature as the conjunction of all the intrinsic properties of that object.²⁶ Call this reading (B).

One worry with (A) is that it is hard to assess, on this reading, whether the nominalist succeeds or fails. It is hard to say whether, on this reading, the truthmaker for '*a* is *F*' is exactly the object *a*. (A) seems too minimal to tell us what it takes for an entity to be the truthmaker — to be the sufficient truthmaker, as Parsons aptly puts it²⁷ — for a given truth.²⁸ One worry with (B) is the following. Suppose talk of something's qualitative nature cannot be construed nominalistically. Then the nominalist is committed to denying that anything has a qualitative nature. So then it is trivially true that the truth of a sentence — of *any* true sentence — supervenes on the qualitative nature of its truthmaker. Further, any concrete object will do as its truthmaker, since for whichever object you pick, you'll get the above trivialisation.

To sum up, whether on reading (A) or (B), it is not clear that the nominalist non-trivially provides truthmakers for truths.

Second comment. Parsons discusses only cases involving true predications to individuals. (The sentence 'the rose is red' is his paper's sole example). He doesn't discuss cases involving true predications to entities referred to by abstract singular terms or noun phrases. For example: red is a color

²⁴ Parsons (1999) p. 328.

²⁵ Parsons (1999) p. 331.

²⁶ Parsons (1999) p. 326.

²⁷ Parsons (1999) p. 330.

²⁸ Bigelow, for one, would disagree with Parsons here: see John Bigelow (1988) *The Reality of Numbers: A Physicalist's Philosophy of Mathematics* (Oxford: Oxford University Press) p. 129.

and redness resembles orangeness more than it resembles blueness.²⁹ Take the first example. Consider all the red objects. Each of these objects is also coloured. Perhaps any such object makes true 'red is a color'. This, however, faces a variant of an objection due to Frank Jackson.³⁰ Each red object is also extended. But it does not follow that any such object makes true 'red(ness) is an extension'. Since the mentioned sentence is not true, *a fortiori* nothing makes it true. The nominalist needs to provide some account of this asymmetry between colour and extension. Don't just say 'red is a colour' is true and red(ness) is extended is false. Since Parsons's nominalist accepts the Truthmaker Principle, that is just the asymmetry which needs to be explained in terms of his ontology of concrete objects. The problem is to see how it can be done.

Positing properties provides more resources to account for the asymmetry. Some philosophers, however, think that by positing properties to account for the above cases either we have to admit such properties as *being red*, *being orange*, *being blue*, and the like, or — in company with the nominalist — must paraphrase away apparent reference to these putative properties.³¹

Not so. Another option is that the property theorist does not paraphrase the sentences in question, but provides truthmakers for them, where these truthmakers need not include as a constituent the property *being red* although they have other properties as constituents. For instance, suppose that, as in Mellor's own theory of properties,³² there is no property of *being red*, but there is a disjunction of properties *F*, *G*, *H*, ... the possession of any of which by an object is sufficient for the predicate is red to apply to that object. Suppose too that there is no property of *being a colour*, but there is a disjunction of second-order properties (properties of properties) *M*, *P*, *Q*, ... such that the possession of any of which by a (first-order) property is sufficient to make the predicate is a colour apply to that property. Given

²⁹ D.M. Armstrong (1978) *Universals and Scientific Realism volume 1: Nominalism and Realism* (Cambridge: Cambridge University Press) chapter 6, and (1980) "Against 'Ostrich Nominalism': A Reply to Michael Devitt" *Pacific Philosophical Quarterly* 61 at §2.

³⁰ Frank Jackson (1977) "Statements about Universals" *Mind* 86 pp. 427–429.

³¹ See Laurence Goldstein (1983) "Scientific Scotism — The Emperor's New Trousers or Has Armstrong Made Some Real Strides?" *Australasian Journal of Philosophy* 61 pp. 40–57 at p. 46, and David Lewis (1999c) "New Work for a Theory of Universals" in his *Papers in Metaphysics and Epistemology* (Cambridge: Cambridge University Press) pp. 8–55 at pp. 16–17. Note, however, that Goldstein and Lewis were writing before the notion of a truthmaker was introduced into the philosophical marketplace.

³² D.H. Mellor (1997) "Properties and Predicates" in Mellor and Oliver (1997) pp. 255–267. Mellor's denial that there is a property of *being red* is found at pp. 265–266.

these suppositions, 'red is a color' would be made true by (for instance) *F*'s having *M*, although there are no properties *being red* or *being a colour*. The device of paraphrase never features in this account.

To sum up: even if both stages of Parsons's argument are successful, there remains untouched a truthmaker argument for properties: namely, an argument from true subject-predicate sentences, whose subject terms are abstract singular terms. Further, the property theorist can supply properties as truthmakers for such sentences, without taking each of their component abstract singular terms to refer to a property.

4. Truthmakers and Phenomenalism

If we admit properties, there is then the question of which ones we admit. In this section I consider how admitting dispositional properties would meet a truthmaker argument against phenomenalism.

Phenomenalists seek to analyse statements about physical objects in terms both of categorical and counterfactual statements about sense-impressions. As reported by Armstrong, C.B. Martin complained that phenomenalists failed to provide truthmakers for these counterfactuals.³³ Now the phenomenalist claims that sense-impressions are truthmakers for true categorical statements about sense-impressions. Likewise, to meet Martin's requirement, the truthmakers for true counterfactuals about sense-impressions could be taken to be dispositions to produce sense-impressions.

Armstrong thinks a solution of this sort is somewhat *ad hoc*.³⁴ I say: *tu quoque*. It is no more *ad hoc* than positing totality states of affairs (or absences) to provide truthmakers for negative existential truths. Further, Armstrong is ill-advised to make this charge. Commonsense freely posits dispositions as (constituents of) truthmakers, and Armstrong and Martin agree on the legitimacy of this practice. Moreover, they would surely agree that objects have dispositions to produce sense-impressions (in suitable observers under suitable conditions). It is just that they presumably also think that these dispositions are dispositions of objects whose physical natures cannot be analysed in phenomenalist terms. But, of course, that further claim is the point at issue. Armstrong and Martin take the Truthmaker Principle to

³³ D.M. Armstrong (1989); C.B. Martin, "Counterfactuals, Causality, and Conditionals" in John Heil (ed.) *Mind, Cause, and Reality* (Dordrecht: Kluwer Academic Publishers) at pp. 8–9.

³⁴ Armstrong (1989) p. 10.

be an argument for that claim. So they cannot use that claim here as a reason to reject the suggested phenomenalist account of the truthmakers of the requisite counterfactuals.

Again, it might be objected that the phenomenalist cannot characterise the notions of a suitable observer or of suitable conditions in phenomenalist terms. Fine! But that is a special case of the well-known general objection that phenomenalist analyses of physical object sentences either fail material adequacy or are illicitly circular because they import unanalysed physical object concepts. The Truthmaker Principle, however, plays no essential role in that objection, and so the Principle goes by the board.

Returning to the phenomenalist's suggested account, it might be argued that dispositions require categorical bases,³⁵ and that the account does not meet this requirement. Now the original objection to phenomenism relied solely on the Truthmaker Principle, and claimed that phenomenists fail to provide truthmakers for the relevant counterfactuals. So this reply has to concede that the phenomenist can provide truthmakers for the relevant counterfactuals — which was the issue at hand — even if it objects that he doesn't provide truthmakers of a certain prescribed type. Whether or not that objection is correct is an issue on which the Truthmaker Principle is silent. (And, as some have argued, the claim that dispositions require categorical bases is itself highly disputable).³⁶

Is the phenomenist's suggested account guilty of trivialisation? For Lewis, the Truthmaker Principle would be trivialised if just any old condition that things satisfy would do as a truthmaker.³⁷ To avoid trivialisation, Lewis favours ontologies with an elite class of perfectly natural properties and relations. The phenomenist could happily oblige, only his perfectly natural properties and relations would all be phenomenal ones. For him, no worlds match in their distribution of sense-impressions and dispositions to have sense-impressions, but differ with respect to the truth-value of any statement. Those are truthmakers enough: no need for ontologically fundamental physical properties. To conclude: there is no truthmaker argument against phenomenism.

³⁵D.M. Armstrong (1968) *A Materialist Theory of the Mind* (Cambridge: Cambridge University Press) chapter 6 §6, and *Belief, Truth, and Knowledge* (London: Routledge and Kegan Paul) chapter 2 §2.

³⁶Michael Tooley (1972) "Armstrong's Proof of the Realist Account of Dispositional Properties" *Australasian Journal of Philosophy* 50 pp. 283–287, and D.H. Mellor (1974) "In Defence of Dispositions" *The Philosophical Review* 83 pp. 157–187.

³⁷Lewis (1999a) pp. 206–207.

5. *Truthmakers and Behaviourism*

John Bigelow distinguishes between what he calls the Strong and Weak Truthmaker Principles. The Strong Truthmaker Principle — the one as more fully formulated in §1 — says that, for every truth, there is a truthmaker. The Weak Truthmaker Principle says that there could be no difference in what is true unless there were a difference in what exists.³⁸ The Strong Principle entails the Weak Principle, but not conversely. Bigelow — followed by David Lewis — rejects the Strong but accepts the Weak Truthmaker Principle.³⁹

In §2 I argued that Lewis's reasons for rejecting the Strong Truthmaker Principle were bad ones. But there may be other reasons to reject it in favour of the Weak Principle. Let's leave the choice between the Weak and Strong Truthmaker Principles unmade. In this section, first, I will re-assess whether the Truthmaker Principle — Weak or Strong — provides an objection to behaviourism.⁴⁰ Second, I will argue that the Weak Truthmaker Principle should be strengthened in a certain respect.

Armstrong reports that Martin also used the Truthmaker Principle against Ryle's (alleged) behaviourism.⁴¹ Martin took Ryle to be analysing sentences about people's mental states in terms of sentences about those people's behaviour and about their dispositions to behave. People's dispositions to behave were expressed by Ryle in counterfactual sentences. Martin protested that Ryle did not say what the truthmakers for these counterfactuals were.

In Ryle's defence, this charge is either false or rests on a misunderstanding. False because Ryle can be read as admitting truthmakers as when he writes that:⁴²

Dispositional statements ... [have] jobs [which] are intimately connected with narratives of incidents, for, if they are true, they are

³⁸ Bigelow (1988) pp. 132–133, 158–159. The Weak Truthmaker Principle resembles Frank Jackson's thesis of the supervenience of predication: that if A and B are non-identical individuals, and a predicate F is true of A but not B, then A and B must differ in some further way. See Frank Jackson (1981) "On Property Identity" *Philosophia* 11 at p. 294.

³⁹ Lewis (1999a) pp. 206–208.

⁴⁰ Parsons (1999) p. 325 honours this objection as the canonical use of the truthmaker argument.

⁴¹ D.M. Armstrong (1993) "Reply to Martin" in John Bacon, Keith Campbell, and Lloyd Reinhardt (eds.) *Ontology, Causality, and Mind: Essays in Honour of D.M. Armstrong* (Cambridge: Cambridge University Press) at pp. 186–187.

⁴² Gilbert Ryle (1949) *The Concept of Mind* (London: Hutchinson Press) at p. 120.

satisfied by narrative incidents.

If these incidents do not suffice, then, like the phenomenalist of the previous section, the behaviourist could introduce dispositional properties as truthmakers for the requisite counterfactuals. I speculate that Ryle’s nominalist scruples prevented him from taking this route. Nevertheless, behaviourism and nominalism are logically independent theses, and behaviourism itself is consistent with the admission of dispositional properties.⁴³

The other line of defence is to say that Martin’s charge rests on a misunderstanding. Central to Ryle’s account of counterfactuals is that they are what he calls inference tickets: if you accept a given counterfactual, then, accepting the counterfactual’s antecedent entitles you to go on and accept its consequent.⁴⁴ It is then open for Ryle to claim — as others certainly have — that counterfactuals do not have truth-values.⁴⁵ Consequently, the question of what the truthmakers are of true counterfactuals would not arise. There are no such counterfactuals.

Now it seems that a defender of the Truthmaker Principle, whether in its strong or weak form, should not have to enter into this controversy and take sides against the view that counterfactuals lack truth-values. After all, it is consistent to believe the Truthmaker Principle, whether in its strong or weak form, and believe that counterfactual sentences lack truth-values.

⁴³ Parsons (1999) p. 326 charges Ryle with failing to honour the thesis that dispositional properties supervene on purely qualitative ones. He continues by saying that ‘Qualitative’ is here used by contrast with ‘dispositional’, but it is equally intended to cover something of what is meant by ‘intrinsic’. This is puzzling. The dispositional/non-dispositional distinction is orthogonal to the qualitative/non-qualitative distinction. For instance, *being-disposed-to-break-when-(suitably)-struck* is a purely qualitative disposition. Arguably, the former distinction is also orthogonal to the intrinsic/extrinsic: for reasons, see Paul Teller (1987) “Space-Time as a Physical Quantity” in Robert Kargon and Peter Achinstein (eds.) *Kelvin’s Baltimore Lectures and Modern Theoretical Physics: Historical and Philosophical Perspectives* (Cambridge, Mass.; London, England: The MIT Press) pp. 425–448 at pp. 439–441.

⁴⁴ Ryle (1949) chapter 5. “Dispositional statements about particular things and persons ... are inference-tickets, which license us to predict, retrodict, explain, and modify these actions, reactions, and states” (p. 119); “To say that something can be the case [entails] only that there is no license to infer from something else, specified or unspecified, to its not being the case.” (p. 122).

⁴⁵ See, for instance, J.L. Mackie (1973) *Truth, Probability, and Paradox* (Oxford: Oxford University) chapter 3 §7, and Dorothy Edgington (1993) “Do Conditionals Have Truth-Conditions?” in R.I.G. Hughes (ed.) *A Philosophical Companion to First-Order Logic* (Indianapolis, Indiana: Hackett Press) pp. 28–49.

Suppose that Ryle took the view that counterfactuals lacked truth-values. Then Martin could not fairly charge him with failing to say what the truthmakers of counterfactuals are. But perhaps he could fairly charge Ryle with a more general failure to say what the ontological grounds of counterfactuals are: a failure to say what it is about the world that makes a counterfactual either true, if it can be true, or warrantably assentable to, if it is warrantably assentable to.

In general, consider a class C of sentences none of which are true or false, but each of which is either warrantably assentable or not warrantably assentable. Although we cannot ask for the truthmakers of any of these sentences, it seems in the spirit of the Truthmaker Principle to ask what it is about the world that makes the warrantably assentable sentences in C warrantably assentable. Accordingly, I suggest strengthening the Weak Truthmaker Principle as follows: truth and warranted assent supervene on being: there could be no difference in what is true or in what is warrantably assentable unless there were a difference in what exists. More fully, there could not be two worlds, w_1 and w_2 , such that a sentence S was warrantably assentable at w_1 but not at w_2 , unless there were a difference in what exists as between w_1 and w_2 .

Three points. First, we can extend the scope of the Principle beyond the cases of truth and warranted assent to other cases, if there are any.⁴⁶ For instance, suppose that there are Kantian imperatives or Harean prescriptions which objectively govern our behaviour. Imperatives and prescriptions neither have truth-values nor mandate degrees of warranted assent (or so Kant and Hare thought). Yet, on the present supposition, certain imperatives and prescriptions are objectively binding. It is in the spirit of the Truthmaker Principle to say that these imperatives have an ontological ground: there could not be a difference in what is objectively binding on us without a difference in what exists. So, under the present supposition, we might modify the Principle as follows: there could not be a difference in what is true or can be warrantably assented to or is objectively binding unless there were a difference in what exists.

Second, by extending the scope of the Principle to classes of sentences other than the class of true sentences, perhaps the Principle is better called the Grounding Principle. The suggested modification not only enables a defender of the Principle to remain neutral on the correct interpretation of any disputed class of sentences — any class whose interpretation is disputed by an anti-realist or quasi-realist. Whatever the (correct or merely apparent) interpretation of any of these classes, the Grounding Principle articulates the

⁴⁶ But maybe the only cases are those involving truth: I have in mind David Lewis's view that all meaningful sentences express truth-apt propositions. See David Lewis (1970) *General Semantics Synthese* 22 pp. 18–67.

view that if there could not be a difference in the distribution of some semantic property (truth, warranted assent, ...), among the sentences in this class unless there were a difference in what exists. Bigelow’s Weak Truthmaker Principle is then a special case of the Grounding Principle.

Third, the Principle’s talk of a difference in what exists is to be understood in terms of which individuals and which properties exist, and which individuals have which properties. A difference in what exists is a difference in one or both of these respects. For example, just which properties we would have to have (or lack) depending on which the Kantian imperatives govern our behaviour is not an issue on which the Grounding Principle can — or need — pronounce. Certainly, under the supposition that there are objectively binding Kantian imperatives, the Grounding Principle is committed to there being such grounding properties. But the Principle cannot say which ones they are. The answer can come only from a substantive metaphysics of morality. The example is illustrative. The working out of which properties are needed, and which individuals need have them, for sentences of a certain class to have a semantic property has to be done case-by-case, under whatever philosophical constraints (e.g. actualism about possible worlds) we might have independent reason to accept.

6. *Summary*

§2 tried to meet David Lewis’s criticisms of the (strong) Truthmaker Principle, and §3 tried to meet Josh Parsons’s criticisms of the truthmaker argument for the existence of properties. §§4 and 5 questioned received wisdom that there are good truthmaker arguments against phenomenalism or behaviourism. §5 also extended the Truthmaker Principle to sentences other than true ones. As a consequence, even if a philosopher holds that counterfactuals about (say) behaviour lack truth-values, he can still be required to state what is the ontological ground for distinguishing between those counterfactuals he assents to and those which he does not.⁴⁷

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