

Truthmaker Explanations

Barry Smith (IFOMIS/Buffalo) and Jonathan Simon (NYU)

Abstract

This paper is a fresh attempt to articulate the role of a theory of truthmakers. We argue that truthmaker theory constitutes a cornerstone of good methodology in metaphysics, but that a conflation of truthmaker theory with the theory of truth has been responsible for certain excesses associated with truthmaker-based approaches in the recent literature. We show that truthmaker theory retains its appeal as an instrument of metaphysical inquiry even when we agree with (or at least remain neutral about) the sorts of deflationist doctrines put forward by Ayer, Quine, Field and Horwich, and we argue further that its underlying intuitions become clearer when we separate them from a theory of truth, and above all from the attempt to provide a definition of truth.

1. Truth as Property

The debate over the nature and definition of truth has been prominent in recent literature. Unfortunately, it has not been entirely clear what the subject matter of this debate is, since its participants share too little common theoretical ground. For this reason, two questions have been run together, one concerning the real definition of the property of truth, the other concerning nominal definitions of the meaning of 'is true'.

The first question, in particular, suffers from an almost terminal unclarity, not least because many participants in the debate (as in the related realist/anti-realist debate) shy away from metaphysics and consequently from any serious attempt to understand what properties might be. Moreover even for those, like Armstrong, who have worked-out theories of properties, the issue remains problematic, given that a property like truth will likely not be one of the basic properties which correspond to genuine universals. And even for those with more liberal theories of properties, problems will still arise. Necessarily, an entity is equiangular if and only if it is equilateral. Each of these properties is instantiated precisely where the other is. But this does not indicate that either must feature in any real definition of the other; and this tells us that, even if a truthmaker principle of the general form:

(M) Necessarily, 'P' is true iff 'P' has a truthmaker

were correct, this need still not give us reason to believe that *having a truthmaker* is definitive of the property of truth, any more than *being equilateral* is definitive of the property of *being equiangular*.

Even if these concerns were somehow addressed, there would still remain a major objection to the view that truth is to be given a real definition in truthmaker terms. As Lewis, Horwich and others have pointed out, the

general validity of the disquotational truth schema (formulated to taste in terms of propositions or sentences):

(T) P iff ‘ P ’ is true.

implies that any interesting truthmaker principles along the lines of (M) can be reformulated in such a way as to avoid any mention of the property of truth. (M) together with (T) thus together yield:

(M*) P iff ‘ P ’ has a truthmaker.

And there seems to be no good reason for taking (M) as prior to (M*).¹

2. The Meaning of ‘Is True’

Our second question – concerning the meaning of ‘is true’ – is, in contrast, relatively easy to formulate. At the same time it is quite clear that truthmaker theory can play no part in providing it with a satisfactory answer. For an account of the meaning of each given predicate answers ultimately to those who competently use that predicate in thought or speech. This means, presumably, that such an account should present itself as something to which competent users would spontaneously assent, or at least that it should shed light on the principles underlying the linguistic and mental practices of such users. But it is hard to see how a truthmaker theory could do either of these things. This is because, as additions to the disquotational schema (T), truthmaker principles like (M), however interesting, neither call forth spontaneous agreement from ordinary competent users of ‘is true’, nor do they shed light on the principles underlying the competency of those speakers. Thus, even if some principle along the lines of the universal generalization of the schema (M) were true, it is not clear why it would have any role in a theory of the meaning of ‘is true’.

3. Truthmaker Maximalism

Yet in spite of the considerations presented above, many advocates of truthmaker theory accept the premise that a theory of truthmakers is necessary precisely to provide a definition (real or nominal) of truth. Among other things, it is this premise which provides the most straightforward motive for Armstrong’s maximalism, the view that every truth must have a truthmaker, and his factualism, the view that these truthmakers are, in general, proposition-shaped entities called ‘facts’ or ‘states of affairs’. Below, we discuss how rejecting this premise should lead us to reject maximalism and Armstrong’s factualism, and thereby help us on the road towards a better account of truthmaker theory as an instrument of metaphysical inquiry.

Our most immediate target is truthmaker maximalism, the view that every truth has a truthmaker, or in other words:

¹ For instance see Aking”, *Nous* 35:4, 2001, 602-615; David Lewis, “Forget about the ‘Correspondence Theory of Truth’”, *Analysis* 61:4, 2001 275-280

(MAX) $\forall P$ (P is true iff $\exists x$ (x is a truthmaker for P)),

where the variable P now ranges over actual or possible bearers of truths (however these latter might be conceived). (MAX) has intuitive appeal because it appears to be an encapsulation of the eminently acceptable claim that every truth is true because of *something in the world*, or because of *something about the world*, or because of *some way the world is*. However, this platitude is acceptably regimented via (MAX) only to the extent that, for example, ‘There is something they are fighting for’ is acceptably regimented by: $\exists x$ (Are_fighting_for (they, x)).

We do not wish to discredit the commonsensical idea that truths are true because of some way the world is. But we also do not think that it can be taken in the *literal* way that maximalists require. (Reiterating P is sometimes the best way of spelling out the way the world is in virtue of which it is true that P.) In any case, *modus tollens* shows us that there is no simple argument from common sense to maximalism, since if there were, it would turn out to be equivalently an argument for the existence of *sakes we do things for*, *things we believe in*, *things whose non-existence we regret*, and so forth.

Respectable proponents of maximalism do not, of course, rely exclusively on the argument from common sense. It does seem, however, that Armstrong relies on the premise that truthmaker theory is essential to a satisfactory definition (real or nominal) of truth. And if the goal is providing such a definition, then (MAX) clearly provides the most elegant conceivable solution.

It is elegant, not least, because its rejection seem to force a certain dualism in characterizing truths: on the one hand are those true in virtue of truthmakers, on the other hand are all the rest.

In the absence of (MAX), then, we will be forced to split a nominal definition into clauses, so that ‘is true’ means ‘has a truthmaker’ in some cases but something else in others – with no evident means of specifying what it is in virtue of which both cases would deserve the name of ‘truth’. Similarly, a real definition would, in the absence of (MAX), appear to have to construe truth as an essentially disjunctive property – a consequence which would undermine the very purpose of providing an ontologically robust definition of the property of truth. Moreover, since it is not clear how truths are to be parceled out into the two classes, and also not clear what to do in the way of providing a definition for elements of the second class, the rejection of (MAX) threatens to stop the definitional project in its tracks.

Yet (MAX) itself seems (unfortunately for its defenders) to face an obvious and devastating objection in light of the heavy ontological price it brings in terms of special entities needed to perform the truthmaker role for difficult kinds of truths. This becomes clearer when we couple it with another independently established constraint on the truthmaker relation, namely that it should satisfy the necessitation or entailment principle:

(NEC) If entity x makes P true, then necessarily (if x exists then P is true),

a principle accepted in almost all the truthmaker literature thus far. For what entity is such that the proposition asserting its existence could entail the truth of a proposition such as ‘There is no phlogiston’? Nothing, to be sure, in the reality we know from common sense or science. Maximalists, therefore, must resort to the positing of special entities – negative facts in the case of Russell, totalizer facts in the case of Armstrong – which face the problem that they are supported by no arguments independent of maximalist versions of truthmaker theory.

If, however, we are right that the friends of truthmakers have no business providing a definition of truth, then maximalism can be abandoned and therewith also those special entities which leave it vulnerable to an argument along the lines just presented. In other words, if a given ontological claim presents itself as intrinsically bizarre, and is motivated only by its satisfaction of some general principle dictating which truths should have which sorts of truthmakers, where this principle in turn is motivated only by the desire for a truthmaker definition of truth, then a *modus tollens* emerges against the principle in question as soon as we reject its ontological offspring as bizarre.

4. Factualism

A position that tends to run hand in hand with maximalism is what Armstrong has dubbed ‘factualism’, the tripartite view according to which:

1. the world is populated with special entities called ‘facts’ or ‘states of affairs’,
2. truths correspond to many or all such entities,
3. many or all judgments are true if and only if there exist facts to which they correspond.

The most extreme version of factualism is a variant of maximalism. It posits the existence, for every true judgment p , of a special proposition-shaped entity, *the fact that p* , precisely tailored to make p true. The factualist is then in the happy position that he can provide a definition of truth according to which a judgment p is true if and only if there is an x such that x is *the fact that p* .

More moderate versions of maximalist factualism, such as Armstrong’s own, privilege a certain subclass of truths (for example those of atomic logical form) and hold that only these come equipped with corresponding facts, while remaining truths are *entailed* by the truths belonging to this subclass. The *Tractatus*, with its two-sorted truthmaker theory of *Sachverhalte* and *Tatsachen*, is also of this variety.

Distinct conceptions of factualism arise depending on how ontological priority is assigned to facts. On the one hand there is the view that facts are second-class denizens of reality – the plebeians of the ontological realm. Under this conception, facts *supervene* on, or are *dependent* on, a reality which in and of itself consists of more garden variety entities such as objects, qualities, processes, etc. We might also refer to this conception of facts as

deflationary, since it suggests again that facts do not play any fundamental explanatory role in our metaphysics, and that our reference to them is primarily a matter of linguistic convenience.

Pfänder² and Mulligan³ are plebeian factualists who are also maximalists. On the non-maximalist factualisms defended by Daubert⁴ and by Smith⁵, in contrast, facts are the results of different sorts of carvings up of the material of reality, creating boundaries in reality which are analogous to the boundaries we create, for instance, when we carve out voting districts or portions of real estate. One implication of this demarcatory view is that there is a fact only where there is some positive material to be carved. There is a fact that John is kissing Mary because there is material to be carved that comprehends, in addition to John and Mary, some event or events involving certain movements of John's lips. Such carvings are reflections of the judgments we make; hence (to echo Strawson⁶) if there were no judgments, there would be no facts. Facts are special sorts of fiat entities. They are gerrymandered portions of reality dependent for their demarcations on our acts of judgment.

On the other hand is the view that facts are true patricians in the order of reality – entities that exist independently of our cognitive acts and do genuine ontological work. Under this conception, facts do not supervene on non-factual reality. Rather, they are full-fledged ingredients of reality at its base level. So for example the fact *that this apple is red* does not exist simply because the apple and redness do. Rather, this fact is the nexus or tie that connects this particular apple to the universal *redness*, or rather (as on the view defended by Armstrong) the apple, the redness and the tie are themselves properly viewed as abstractions from the fact.⁷

Let us call the two views *plebeian* and *patrician factualism*, respectively. The former draws in part upon linguistic usage – stemming from the fact that we say things like ‘stemming from the fact that’, a turn of phrase which suggests that there are facts from which things stem. It draws its motivation also from the way it seems to facilitate a correspondence-style theory of truth and an associated maximalist definition of truth in terms of truthmaking at very little ontological price. With enough plebeian facts at our disposal we have, for every truth *p* (or for every ‘positive’ or ‘atomic’ truth *p*), a corresponding fact that can serve as that to which it corresponds.

We hold, however, that those who countenance as valid the goal of providing a truthmaker-driven definition of truth should reject a plebeian factualism, since it is unable to provide the truthmakers required for such an enterprise. The entire purpose of a truthmaker-driven definition of truth is,

² Alexander Pfänder, *Logik*, Halle: Niemeyer, 1929.

³ Kevin Mulligan, “Two Dogmas of Truthmaking,” in this volume.

⁴ Karl Schuhmann and Barry Smith, “Questions: An Essay in Daubertian Phenomenology”, *Philosophy and Phenomenological Research*, 47 (1987), 353-84.

⁵ Barry Smith, “Fiat Objects”, *Topoi*, 20: 2, 2001, 131–148.

⁶ Peter F. Strawson, “Truth”, *Proceedings of the Aristotelian Society, Supplementary volume*, 1950, as repr. in *Logico-Linguistic Papers*, London: Methuen, 1971, p. 197.

⁷ David M. Armstrong, *A World of States of Affairs*. Cambridge: Cambridge University Press, 1997.

after all, to highlight the way in which truth claims turn out to be in some sense equivalent to ontological claims. Yet plebeian accounts of facts are intended precisely to be ontologically modest, or ‘neutral’. Their talk of facts is supposed to be reducible to some non-fact-involving talk. This means, however, that any definition given in terms of plebeian facts should be no more than shorthand for some definition formulated in other terms. Even, therefore, if there were good reasons to look for an ontologically flavored definition of truth, it is doubtful that a plebeian conception of facts could play any prominent role therein.⁸

Our principal objective here is not to argue with the plebeian factualist. Rather, it is to explore what happens when we wean ourselves away from the urge to define truth in truthmaker terms. If there are any good reasons to believe in plebeian facts, these will presumably survive even after this urge is quelled. At the same time, a truly deflationary conception will not carry with it any ontological excesses, and as such will not be vulnerable to the sort of *modus tollens* arguments which can be applied to more robust versions of maximalism and factualism.

Patrician factualism draws its justification from deeper philosophical considerations, and we have no general brief against a well-modulated ontology of facts. Our argument is rather directed only against those forms of factualism which are motivated by maximalism to postulate factoid entities which, in spite of their metaphysically questionable nature, are yet held to play a fundamental role in the structure of reality. The most well-articulated formulation of the patrician factualist doctrine is Armstrong’s theory of states of affairs,⁹ which rests on the intuition that, since both the particular (the apple) and the universal (redness) can exist without the apple being red, something further must exist in order to explain how the two are tied together. Armstrong holds that it is the fact *that the apple is red* which must do this work. For Armstrong the fact is not, so to speak, a fancy way of framing the situation of interest: rather the fact *is* the situation of interest. Following Reinach,¹⁰ he sees facts as being essential also in accounting for the metaphysics of laws of nature, of possibility, of mathematics – in each of which some addition is required, on top of objects, properties, qualities, to explain the phenomenon in question. Thus, for example, if it is a law that Fs bring about Gs, then there is a requirement for some necessitation state of affairs to exist, over and above F, G and their various separate instances, to serve as truthmaker for the proposition that this law obtains.

We hold the intuition behind such arguments to have some force, but we think the best response is to invest some toil in searching for solutions more heterogeneous and more finely-tuned to each of the problems at hand.

⁸ See, again, Paul Horwich, *Truth. op. cit.*, 105-106

⁹ *A World of States of Affairs (op. cit.)*.

¹⁰ Adolf Reinach, “On the Theory of the Negative Judgment”, in Barry Smith (ed.), *Parts and Moments. Studies in Logic and Formal Ontology*, Munich: Philosophia, 1982, 315–77.

Thus for example, following in the tradition of trope-based theories,¹¹ we hold that appeal to some version of the theory of what Aristotle called individual accidents (headaches, kisses, the redness of this apple) yields a less heavy-handed and more finely-tuned solution to the problem of explaining instantiation.¹²

It is not however problems such as this, but rather the need to postulate extra entities to serve as truthmakers for truths like ‘There is no phlogiston’ which leads Armstrong to make bizarre ontological posits, the so-called *totalizer facts*. Each such fact is essentially associated with a certain (possibly empty) collection of individuals and with a certain condition (for example *being white* or *being a portion of phlogiston*), in such a way that the totalizer fact exists if and only if the collection of individuals with which it is associated constitutes all and only the entities satisfying the given condition.¹³ Totalizer facts not only constitute a sizeable bullet for Armstrong’s theory to swallow, they also do not lead to any analysis of some puzzling issue (such as instantiation or the nature of laws) independent of their ability to save the principle of truthmaker maximalism. Since, to recap our arguments above, totalizers must be patrician facts if they are to serve Armstrong’s purposes (since on the plebeian view talk of totalizers would be in any case nothing more than a *façon de parler* about something else), they are just the sort of entities whose intrinsic bizarreness serves to actively discredit the principle of truthmaker maximalism when that principle is shorn of independent motivation.

5. Truthmaker Arguments

Even for Armstrong, truthmakers were not originally intended to figure in the definition of truth. Rather, the question ‘where are the truthmakers?’ was first wielded (by C. B. Martin) in the battle against various reductionist theories which made complex and ambiguous claims seemingly in need of metaphysical analysis while simultaneously denying the very possibility of such analysis. Thus phenomenalism and behaviorism depended essentially on counterfactual claims to account for truths about unperceived objects and unmanifested behaviors, but in such a way that the counterfactuals in question (involving what objects would have been seen, or what behaviors would have been manifested) were left as primitive. In this context, the truthmaker question was interpreted as the demand for some way of showing how the counterfactual claims in question might be understood as tethered to or grounded in reality.

The core truthmaker commitment is in this respect what we might call *the demand for ontological explanation*, that is, for ontological posits that would serve to explain (account in a non-epistemic way for the truth of)

¹¹ Kevin Mulligan, Peter M. Simons and Barry Smith, “Truth-Makers”, *Philosophy and Phenomenological Research*, 44 (1984), 287–321.

⁹ *Op. cit.*...

¹³ David M. Armstrong, *Truth and Truthmakers*, Cambridge: Cambridge University Press, 2004.

propositions of given types. In many cases this demand for explanation will be trivially satisfied, as for instance when the truth ‘George exists’ is ontologically explained by George. It need not follow that every truth has even a partial ontological explanation, however advantageous this would be. Thus there is no ontological explanation of ‘there is no phlogiston’, given that the best answer to the question: ‘how must a possible world be, ontologically, if there is no phlogiston there?’ is simply: ‘there is no phlogiston there’.

We hold that there are some sorts of truths that can clearly be explained ontologically and others that clearly cannot be so explained, but also that there is a large pool of unclear problem cases in between. We hold further that it is a methodological error to tether oneself in advance to any general principle about which truths have such explanations and which do not. The search for one – maximally all-embracing – principle along these lines is of course understandable in the context of a desire for a truthmaker definition of truth, but otherwise we cannot see what justification it might have.

What purpose, then, do ontological explanations serve? Our answer is that they test metaphysical theories. Just as a scientific theory is proven by its ability to provide *scientific* explanations of seemingly extraneous phenomena (phenomena hitherto unanticipated by proponents of the theory in question), so an ontological theory will be vindicated by its ability to provide enlightening *ontological* explanations for seemingly extraneous truths. Our methodology below will be to present some instances of ontological explanation at work. We hold that, for truths of any given type, the demand for an ontological explanation is like the demand for a microphysical explanation given a particular type of simple or complex physical phenomenon – a demand whose fulfillment is realizable only in light of a delicate set of constraints on overall theoretical harmony.¹⁴

On the methodology advocated here, therefore, the search for truthmakers provides at best defeasible or negotiable arguments for selected ontological posits, which must in every case be balanced against a variety of considerations of other types. The success of the methodology will thus involve weighing the quality of the ontological explanations which it provides against the cost of integrating the corresponding posits into our overall ontology.

6. Truthmakers and Ontological Commitment

Our defeasible (and thus) non-apodictic approach to truthmakers can be used to throw light also on the notion of ontological commitment. Armstrong alleges that the approach to these matters favored by Quine, with his ‘to be is to be the value of a bound variable’, stacks the deck against a metaphysics of properties, since in the case of ordinary predications (‘the apple is red’) it

¹⁴ Related notions, with names like ‘metaphysical explanation’ and ‘grounding’ have been discussed in the literature. See Kit Fine, “The Question of Realism”, *Philosophers’ Imprint*, vol. 1 no. 1, 2001; Michael Gorman, “The Essential and the Accidental”, forthcoming in *Ratio* 18, 2005.

demands only that we commit to the existence of apples.¹⁵ Armstrong's substitute criterion, in contrast, asserts that we are ontologically committed to those entities which we construe as truthmakers for given sorts of truths. In this way universals like redness will turn out to be among the ontological commitments induced by truths like 'the apple is red'.

Quine might respond to Armstrong that *his* criterion of ontological commitment is the biased one, because it stacks the deck in favor of universals (among other things) by unduly broadening the range of possible arguments that can be used in support of them. At this point the dialectic might be thought to have reached an impasse, where a criterion of ontological commitment can be chosen only on partisan grounds, with friends of universals tending toward Armstrong's account and nominalists tending toward Quine's. It turns out, however, that a neutral criterion can be specified, one which has the chance of being accepted as satisfactory by all parties because it is a generalization of the criteria they have respectively proposed.

This neutral criterion might be articulated as follows:

A theory ontologically commits us to those entities whose existence is required to *ontologically explain* its constituent assertions.

Alternatively:

A person is ontologically committed to those entities whose existence is required to ontologically explain those assertions he countenances as true.

The respective criteria suggested by Quine and Armstrong can both be seen as the results of adding to the criterion proposed above a specific thesis as to what sorts of ontological explanation are in general required.

7. Truthmakers

In speaking of ontological explanation we deliberately employ a terminology more general than that of truthmaker theory in order to weaken the hold of the assumption that there is some single autonomous concept of truthmaking whose analysis can lead to substantive new factual discoveries (in analogy with concepts like *knowledge* or *justice*). Rather, for those who find it important that some rigorous sense be made of the notion, we offer a purely stipulative definition of truthmaking (a simplification of that defended in Smith's "Truthmaker Realism"¹⁶):

$$(TM) a \text{ TM } p := p \wedge \Box(E!(a) \leftrightarrow p),$$

¹⁵ David Armstrong, *Truth and Truthmaking*, pp. 23 f.; "Against Ostrich Nominalism: A Reply to Michael Devitt", *Pacific Philosophical Quarterly*, 61 (1980), 440-449. The Quinean criterion does not rule out a theory countenancing such entities as universals, though it does restrict the range of arguments that may be used in support of such a theory since it admits only arguments in terms of best syntactic regimentation. (See Barry Smith, "Against Fantology", forthcoming in Johann C. Marek and Maria E. Reicher (eds.), *Experience and Analysis*, Vienna: HPT&ÖBV, 2005.)

¹⁶ *Australasian Journal of Philosophy*, 77 (3), 1999, 274-291.

where 'E!(a)' symbolizes: 'a exists' and '↔' symbolizes co-entailment. Thus, *a* makes *p* true whenever: 1) *p* is true, and 2) the existence of *a* is (necessarily) both necessary and sufficient for the truth of *p*. In the language of possible worlds, we might say that *a* makes *p* true on our world whenever: 1) *p* is true on our world, and 2) *p* is true on all and only those worlds on which *a* exists.

This definition singles out a certain group of propositions as those which have truthmakers, or which would have truthmakers if true.. They may be identified, roughly speaking, as those propositions whose sole demand on reality (all that they need the world to be like in order that they come out true) is that some entity exists. 'Superman is real', 'I exist', 'This redness exists' are obvious examples of judgments of this sort. There are less obvious examples. Thus the judgment, 'Socrates is mortal' seems at first glance to require something like the presence of a virtue of Socrates – namely: his being mortal – in order to be true. But Socrates is *necessarily* mortal. That is, he could not exist and yet fail to be a mortal. This means that it strictly suffices, for the given judgment to be true, that Socrates exists. Moreover, the entailment holds in the opposite direction: if Socrates succeeds in being mortal, then he thereby also succeeds in existing. 'Socrates is mortal' is thus a judgment which necessarily both implies and is implied by the judgment that Socrates exists.

This definition captures the Armstrongian idea that truthmaking is necessitation, and also the idea that a proposition requires a truthmaker only if there is some entity whose existence is required to explain its truth.¹⁷ The definition avoids many of the challenges raised against the naïve Armstrongian characterization of truthmaking as necessitation (for example Restall's argument to the effect that your refrigerator necessitates the truth of '2 + 2 = 4',¹⁸), by requiring the necessity to run in both directions. (Armstrong, in contrast, contents himself with an appeal to some unspecified relevance logic to save the day.)

Part Two: Some Ontological Explanations

We shall now see how the demand for ontological explanation can be used as a means of putting to the test one specific ontology, an ontology which accepts both independent substances and tropes. We will show that this ontology allows us to provide ontological explanations for a broad range of difficult kinds of truths, in a way which involves appeal only to entities in whose existence we may be independently motivated to believe. In this way we throw new light on the original use of truthmaker considerations against phenomenologists and behaviorists by Martin and Armstrong. The methodology employed there is to show that some view is inadequate because it fails to specify appropriate truthmakers for some of its claims. We have argued that this methodology is weakened – or even crippled – to the degree that it is

¹⁷ It does not, however, provide us with everything we need to characterize the notion of ontological explanation. For the latter, intuitively, admits of degrees. (Thus Socrates affords a higher degree of explanation to the proposition 'Socrates exists' than to the proposition 'Socrates is mortal', even though Socrates is a truthmaker for both of these.

¹⁸ Greg Restall, "Truthmakers, Entailment and Necessity", *Australasian Journal of Philosophy*, 72, 1996, 331-340.

associated *a priori* with a particular theory of truthmakers (that is, a set of non-negotiable principles dictating what propositions must have truthmakers, and what characteristics these truthmakers must have). Our examples are designed to point at the way in which a truthmaker-based methodology for doing metaphysics may be fruitfully employed when it is not so weakened.

1. Singular Existentials, Essential Predications

Examples: ‘John exists’, ‘Socrates is mortal’, ‘That event is a kissing’.

Judgments in this group are true if and only if the entity to which existence is attributed, or of which something essential is predicated, does in fact exist. The existence of that entity yields an ontological explanation of the corresponding truth. Our trope ontology allows us to deal with indexical judgments referring to events under the same heading. Thus, ‘That event is a kissing’ will be true if and only if that event itself exists, since that event could not have been other than a kissing event.

2. Standard Existential Assertions

Examples: ‘There are rabbits’, ‘There is a man’.

The judgment ‘There are rabbits’ is true at a world if and only if there is some rabbit there. Which of all possibly existing rabbits it must be changes from world to world, and there is no particular entity whose existence is necessary and sufficient for the truth of the judgment. Thus it is not the case that Harvey, your favorite pet rabbit, makes it true that there is a rabbit (recall the definition of truthmaker provided above).¹⁹ Yet we may still say that Harvey’s existence is ontologically explanatory *to some degree* of the truth of ‘there are rabbits’, among other things since this truth is entailed by a truth that Harvey makes true (namely, ‘Harvey is a rabbit’).

3. Standard Predications in the Category of Accident

Examples: ‘John is hungry’, ‘John is running’.

The first case involves the existence of a quality (or trope) of being hungry, the second of a process of running. In both cases the entities in question are existentially dependent on a certain substantial bearer, namely John. The judgments here are ontologically complex (as Ramsey and Davidson saw): they are in effect existentially quantified and assert the existence of some state, quality or process satisfying a certain description.

4. Standard External Relational Judgments

¹⁹ This points to a divergence of the present account of *truthmaker* with that in Smith’s “Truthmaker Realism”. There, erroneously, Harvey was considered a truthmaker for “There are rabbits”.

Example: 'John is kissing Mary', 'Mary is slapping John'.

These cases, too, involve an event (a kiss, a slap) whose existence necessitates the truth of the relevant judgment. As in the previous section, what is entailed by the truth of judgments in this class is only that an event *of the given sort* exists. Thus a partial ontological explanation of the corresponding judgments is provided if we say that a John-kissing-Mary event exists, a Mary-slapping-John event exists, etc.

5. Standard Contingent Negations

Examples: 'John is not hungry', 'John is not kissing Mary', 'There is no phlogiston'.

One of the principles underlying our position is that special entities are not required to account for how the world is when something fails to be the case. If there is no golden mountain, then there does not need to be some other entity whose existence (demotically) entails that this is true.²⁰ Rather, all that is needed is that there be no golden mountain. We therefore claim that such standard negative claims are not the beneficiaries of any ontological explanation.

6. Totalizer Judgments

Example: 'Everyone is hungry', 'No one is kissing'.

It is notoriously difficult to find entities that necessitate judgments like these. This is not surprising, given that there is no intuitive reason why the existence of some entity would be either necessary or sufficient for the truth of such a judgment. This is because like standard negations, these judgments do not admit of ontological explanation.

7. Logical Truths

Examples: 'Every thing either is a human or is not a human', 'It is not the case that some thing is a human and is not a human'.

Logical truths are true no matter what. We might say that they need no explanation of any kind: they entail no ontological posits whatsoever, as there is no condition that the world must satisfy when they are true. This is in agreement with Wittgenstein: 'A tautology has no truth-conditions, since it is unconditionally true.' (*Tractatus*, 4.461) Some hold that such truths are true in virtue of their meaning; in particular in virtue of the meaning of logical terms like 'every', 'or', 'is', 'not'. If you hold that truth is a property of particular judgments rather than abstract propositions, then you will in a sense agree, since if the utterance in question had meant something else, then it might not

²⁰ Raphael Demos, „A Discussion of a Certain Type of Negative Proposition“, *Mind* n.s. 26, 1917, 188-196

have been true. But this holds of all judgments. We might single out the logical (or, more broadly, the analytical) judgments as special in that in their case it is exclusively meanings which determine truth: once the meaning is fixed, then there is no further way that the world must be in order that the judgment be true. However, ontological explanation, and talk of how the world must be if a certain judgment is true, come after meaning is fixed. Otherwise it would be necessary to mention the meaning component of every truth in giving its ontological explanation. Moreover, there are necessary truths which are not logical truths, such as the truth that Socrates is mortal if he exists, and the in-virtue-of-meaning approach would seem to cover such cases as well. Thus, we hold to the claim that logical truths are simply true no matter what, or true without entailing any ontological posits whatsoever. In this way, questions of meaning and sense may be avoided while attending to the project of ontological analysis. Our stance does not necessarily lead to the conclusion that logical truths lack a sense, as Wittgenstein thought. But that is more properly a question for a theory of meaning.

There are logical truths which do bear specific existential presuppositions, such as ‘John is hungry or it is not the case that John is hungry.’ This proposition is a logical consequence of something which is a logical truth in the above sense (namely, ‘Everything is either hungry or not hungry’) as long as we allow that logical consequences of general judgments may involve proper names. We might call these judgments ‘impure’ logical truths: identity statements bearing rigidly designating names (e.g. ‘Hesperus is Hesperus’) are among their number – these follow from the logical truth that everything is self-identical. These truths are made true (in the strict sense of [TM]) by the existence of the entities named. Judgments predicating necessary intrinsic properties, like ‘Socrates is human’ also require only that the named entities (here: Socrates) exist in order to be true. Yet judgments such as this are not impure logical truths, since they are not logical consequences of any pure logical truth.

8. Contingent Intrinsic Predications (Judgments of Internal Relations)

Examples: ‘John is two meters tall’, ‘Jones is in Thailand today’, ‘Mary’s arm is a part of Mary’s body’, ‘John is taller than Mary’.

These judgments express contingent, temporary, localized matters of fact, and seem to be akin to the predications of accidental and external relations considered under 3. and 4. above. Yet where, for ‘John is hungry’, there is a hungering (a growling of the stomach, a transmission of neurotransmitters to the brain), and for ‘John is kissing Mary’ a kiss (a congress of lips), what could motivate us to hold that there are token *parthood*-processes, or *tallness*-processes?

Processes have very many of their properties essentially – they could not have been much otherwise than they actually are. If the Titanic had sunk an hour later than it did, the process that would then be referred to by the description ‘the sinking of the Titanic’ would have been a different entity from the process that is in fact referred to by that description, and likewise if a

different iceberg had been involved, or if events had occurred in a different region of the Atlantic. This particularity of essence is unique to processes. Objects like people and oceanliners are such that their lives could have been filled with different events than those which actually did occur. John had oranges for lunch, but he could have had bananas instead. The Titanic could have made it to America. We might thus be tempted to say that it is a contingent matter that a certain process is a part of a life. But what is contingent is not that this process was a part of that life (the latter being itself an extended process of a certain sort). Rather, what is contingent is that this particular extended process, having yesterday's eating-of-oranges incident as a part, *was* that life. It is contingent that this particular collision and tragedy was the (conclusion of the) history of the Titanic.

Lives are processes occupying regions of spacetime. They correspond to what are called the 'spatiotemporal worms' whose instantaneous temporal parts exactly coincide with those substances whose lives they are at each corresponding instant. John's life is, roughly, the maximal event in which John is the exclusive or principal participant (and we may similarly speak of the lives of other sorts of things, including for example ships, arms, and countries). John's life is existentially dependent on John – John's life could not have been if John had not been. Crucially, again, the converse is not true. John could have lived differently. His life would then have been different (a different entity), though John would still have been himself.

Lives are useful components of ontological explanations for the propositions with which we are presently concerned: among the essential properties of John's life are its spatial location and material composition at every instant during which it is occurring. John's life is therefore precisely the entity we need to bear ontological witness to the truth of the predications of formal measurement properties, contingent parthood relations, and the like.

A partial ontological explanation of 'John is two meters tall' is then: There is an entity which is the now-slice of John's life, and its maximal spatial span is two meters.

A proposition similarly helping to explain ontologically 'Jones is in Thailand today' is: There are entities which are the today-slice of Jones' life and the today-slice of Thailand's life, and the today slice of Jones' life is located in a spatial region which is a part of the spatial region in which the today-slice of Thailand's life is located.

And similarly helping to explain ontologically 'Mary's arm is a part of Mary's body' is: There are entities which are the now-slice of Mary's arm's life, and the now-slice of Mary's life, and the former is a part of the latter.

And similarly helping to explain ontologically 'John is taller than Mary' is: There are entities which are the now-slices of John and Mary's lives, and the maximal spatial span of the former is greater than that of the latter.

Conclusion

The project of defining truth in truthmaker terms is to be abandoned (and it is in any case unrealizable). But this does not undermine the foundations of truthmaker theory in its truly productive aspects. Indeed the effects of the rejection of this project are liberating. They draw attention to the true force of

the truthmaker idea – the idea of ontological explanation – as a valuable type of accessory tool for metaphysical theorizing, rather than as a mere component of the enterprise of defining some single concept or property, however central it might be.

An ontological explanation is in effect an account of what there must be in reality for a given judgment to be true. The work, for each of us, lies in establishing how to find ways to formulate such accounts each within the framework of his preferred ontological theory.

We have provided one ontological theory – involving both substances and tropes of various kinds – which yields what we believe is the maximally satisfactory set of ontological explanations for a large group of cases. In this way we have illustrated how truthmaker considerations can serve as one important means of putting metaphysical theories to the test.