Article:

Universities of Leeds, Sheffield and York
http://eprints.whiterose.ac.uk/

Truthmaker Necessitarianism and Maximalism
Ross P Cameron
forthcoming in *Logique et Analyse*

1 Introduction

A familiar thought amongst metaphysicians is that truth ought to be grounded in the world; that what is true is a matter of how the world is, and hence that when there is truth there must also be something in the world to account for this truth. We give that something a name; we call it a truthmaker. The truthmaker for a proposition p is just that whose existence accounts for the truth of p; p is true *in virtue of* the existence of its truthmaker.

Let us introduce a way of referring to truthmakers without prejudging, at this stage, what truthmakers are. Let the term 'TM(p)' refer (rigidly) to the truthmaker for some truth p if there is one. 'p' ranges over propositions, which I take to be the sole bearers of truth and thus the only things which are made true by truthmakers. I do not wish to make a stand on a particular view as to what propositions *are*; they may, for my purposes here, be sets of possible worlds, or they may be primitively representational entities. All that matters to me is that propositions are what we express with our utterances when we express something which is truth-apt.

The paradigmatic truthmaking relation is that which holds between a thing and the proposition that it exists. (See [2, p12]) Let us refer to the proposition that is expressed by a sentence S as [S], then we may write this constraint as
$\forall x (\text{TM}([x \text{ exists}]) = x)$

A note of caution before we go any further. I am speaking of *the* truthmaker for a proposition. This is misleading in two ways. First, it suggests that there is (at most) only one truthmaker for a true proposition. But I think that is false; the proposition that there are humans has many truthmakers — every human makes this proposition true. Also, it suggests that the truthmaking relation always holds between one thing and a proposition; but I want to leave it open that a proposition can be made true by a plurality of things. For example, the proposition that there are many galaxies in the universe is not made true by any one galaxy, and to say that it is made true by a mereological sum of some galaxies is to prejudge issues about composition; I prefer to say that the proposition is made true by a *plurality* of galaxies. Nevertheless, I will continue, for simplicity, to speak of *the* truthmaker for a proposition; but this should not be taken too literally.

2 Necessitarianism and Maximalism

This paper focusses on two principles. The principle of truthmaker necessitarianism: that the existence of a truthmaker necessitates the truth of the proposition it makes true. In symbols
$\Box((\text{TM}(p) \text{ exists}) \rightarrow p)$

And the principle of truthmaker maximalism: that every truth has a truthmaker. In symbols
$\forall p \exists y (y = TM(p))$, where p ranges over true propositions.

It is sometimes suggested that the relationship between a truthmaker and that which it makes true is entailment. John Fox for example says "[B]y a truthmaker for A, I mean something *whose very existence* entails A." [3, p189] But this can't be right. Entailment is a relation that holds, or fails to hold, between propositions. Entailment is necessary truth-preservation; p entails q if and only if p cannot be true and q false. Since only propositions are truth-apt, this only makes sense if p and q are propositions. Thus it makes no sense to speak of entailment holding or failing to hold between that which is not a proposition and something else; hence, since in general truthmakers are not propositions, the relation between a truthmaker and that which it makes true is not entailment. Propositions are *sometimes* truthmakers of course, if they exist at all; by the paradigmatic truthmaking relation the truthmaker for a claim that the proposition p exists is just the proposition p. But in general the truth-bearers are not the truthmakers.

The relationship between a truthmaker and that which it makes true is not entailment because it holds between the wrong kind of things. It is a cross-categorical link between something in the world and a proposition. (See [2, p12]) However, although the truthmaker does not entail the truth of the proposition it makes

true, if truthmaker necessitarianism is true then the proposition that the truthmaker exists does.
I.e. [TM(p) exists] ⊨ p

That that follows from truthmaker necessitarianism is easily seen. Suppose that it is necessary that if the truthmaker for p exists then p is true. It is necessary that if the proposition that the truthmaker for p exists is true then the truthmaker for p exists; hence (by the transitivity of strict implication) it is necessary that if the proposition that the truthmaker for p exists is true then p is true, which is just to say that the proposition that the truthmaker for p exists entails p.

Truthmaker necessitarianism is standard in the truthmaker literature, although it has its detractors.[1] I am going to join the detractors. I will argue that acceptance of truthmaker necessitarianism is bound up with acceptance of truthmaker maximalism. I will argue below that this latter doctrine should be abandonded, and with it truthmaker necessitarianism. But before I do, let us look at the consequences of retaining these two doctrines.

3   Negative and 'that's all' facts

Consider the truth that every cordate is a renate. What makes that true? If truthmaker necessitarianism is true then it cannot simply be the sum of each of the truthmakers for the claim of each particular cordate that it is a renate, for those things could exist even if there were something else which is a cordate but not a renate. The problem is that in general when there is a universal generalisation 'all Fs are G', it could be that every actual F is G and yet there be some other thing, not one of the actual Fs, which is F but not G. What then can play the role of the truthmaker for universal generalisations? How, if truthmaker necessitarianism is true, are we to account for the truth of [every cordate is a renate]? There seem to be two options.

1. We admit negative entities into our ontology: The truthmaker for [every cordate is a renate] is the negative fact that there is no cordate which is not a renate, or the state of affairs that there are no cordates which are not renates, etc.

2. We admit higher-order entities: [Every cordate is a renate] is made true by the truthmaker for each particular cordate that it is a renate and the second-order fact that *that's all the cordates there are*, or the state of affairs that has as its component the state of affairs of each actual cordate being a renate, and says of that state of affairs that it leaves no cordate out.

I am discounting a possible third option, and that is to claim that the world itself is the truthmaker for universal generalisations. This is not an option for someone who thinks that every maximal de dicto possibility is a de re way the actual world might be, since it is a de dicto possibility that there is an F which is not a G, for some true universal generalistaion 'all Fs are G'. But it is open to one to deny that the de re modal properties of the world match the de dicto possibilitites in that way. It is open to one to think that the world is essentially as it is; that is to say, every proposition that is true of the world is de re necessary of the world. In counterpart theoretic terms, the only counterpart of the actual world is itself. This does not entail that every truth is necessary. There are still other worlds at which some actual falsehoods are true; but they are not counterparts of the actual world. In that case the world is a satisfactory truthmaker for 'all Fs are G', since the world cannot exist and that be false. Indeed, the world would be a satisfactory truthmaker (but not, in most cases, a minimal truthmaker) for any truth, since on this theory the world is essentially such that P, for all true propositions P. But that would be rather gratuitous essentialism; so while I think it is a coherent theory I will assume its falsity for our purposes here.

It is the latter of the above two options, the appeal to higher-order ontology, that Armstrong, a defender of truthmaker necessitarianism, opts for; his reason being that he thinks one needs higher-order states of affairs even if one has negative states of affairs. His argument does not, I think, depend on his belief that truthmakers are states of affairs and will, if sound, generalise. The argument goes as follows. (C.f. [1, p135])

Consider a world W in which there are two individuals a and b, such that a is F and b is G. F and G may be thought of here either as universals which a and b instantiate respectively, or as tropes which a and b have respectively; the decision will not matter for the purposes of this argument. In addition to the two truths in W [a is F] and [b is G] there are the two further truths [a is not G] and [b is not F]. What are the truthmakers for these two latter truths? No sum of the truthmakers for the former two if truthmaker necessitarianism is true.

---

[1]See [7, p213-214], [4] and [5], [8].

No matter whether the truthmaker for [a is F] is the state of affairs of a being F, or the mereological sum of a and the trope of a's F-ness or whatever, the existence of that thing is compatible with a being G. As before, we have two options then; we can opt for negative or higher-order truthmakers. On the former strategy the truthmaker for [a is not G] is the state of affairs of a not being G (or the mereological sum of a and the trope of a's non-G-ness, or whatever), on the latter strategy the truthmaker for [a is not G] and [b is not F] will be the higher-order state of affairs that says that the first-order states of affairs that a is F and that b is G are all the first-order states of affairs there are (or a higher-order trope — the property of being all the first-order tropes there are — that belongs to the sum of a's F-ness and b's G-ness, or whatever). That second-order state of affairs necessitates the truths [a is not G] and [b is not F] because in every world in which it exists neither the state of affairs that a is G nor the state of affairs that b is F exists; but those states of affairs exist in every world in which a is G or that b is F respectively. Now suppose we opt for the former strategy and make appeal to negative ontology to ground the negative facts [a is not G] and [b is not F]; still we must make appeal to higher-order ontology to account for the truth that those four states of affairs *are all the first-order things there are.*

The thrust of the argument is basically that we need higher-order ontology to account for truths of the form [there are only n first-order things]. It is no good to add a negative thing to our ontology which necessitates that there are no first-order things which are not among the n first-order things listed, for that negative thing would itself be a first-order thing and we would simply have shifted the problem to account for the truth [there are only n+1 first-order things]. To put the point perhaps more clearly: a negative fact could suffice for the truth of [all Fs are G] because it is not itself one of the Fs. The negative fact has as its constituents all the positive facts of the form 'this F is G', and says that there are no other such facts. But a negative fact cannot suffice for the truth of something of the form 'these are all the first-order things there are' since it itself is a first-order thing. A state of affairs cannot have itself as a constituent, so there cannot be a negative fact that says of itself and all the other first-order things that there are no others.

So there needs to be some higher-order thing to account for the truth that all the first-order things there are are all the first-order things there are. Since we need higher-order entities no matter what, we might as well get rid of negative entities and let the higher-order entities do the work of accounting for the truths [a is not G] and [b is not F].

There appears to be a risk of regress here: once we admit second-order things we look to be on the first step down the road of admitting third-order things, fourth-order things, and so on ad infinitum. Because there needs to be a truthmaker for a truth of the form 'such and such are all the second-order things there are', 'such and such are all the third-order things there are' etc. That regress wouldn't be vicious in the sense that it leads to the theory being incoherent; but it is certainly a vice on the grounds of (both qualitative and quantitative) parsimony.

But Armstrong does not think such a regress is opened up. He says of the world described above that "the third-order truth that these are all the first- and second-order truths [supervene on the first- and second-order states of affairs], thus dealing with the apparent regress of higher-order truths." [ibid. p134] So Armstrong thinks that given the first- and second-order things in a world, those things couldn't exist in a world in which some actual truth was false (or some actual falsehood true). Is he right? Call the set of all the first- and second-order things in a world w, S. Certainly in all the worlds in which the members of S exist there can be no difference in the first-order facts between that world and w. For if there was a difference in first-order facts then either one of the first-order states of affairs in S wouldn't exist, in which case not all the things in S exist, or some other first-order state of affairs, one that is not in S, would exist, in which case the second-order state of affairs in S wouldn't exist, since it necessarily exists only if all the first-order states of affairs in S are all the first-order states of affairs there are. Either way then, something in S wouldn't exist, contrary to our initial assumption. So all the first-order facts must be same when all of S exist. What of the second-order facts? Could all the members of S exist in a world v and there be a difference in second-order facts between v and w? No; because all the second-order facts are facts concerning the first-order things, and they are all entailed by the actual first-order things being all and only the first-order things. First-order states of affairs are not the type of thing that instantiate properties; they are not red, or round, and they have no smell. The only facts concerning them are what ones exist, and what is entailed by that, such as that they are constituted a certain way. (The constitution of a state of affairs is essential to it; so that the state of affairs of As being red exists entails that there is a state of affairs constituted from A and redness.)

There is only ever one second-order thing then; and it suffices for all the second-order facts. (Indeed, it suffices for all the first-order facts since its existence necessitates the existence of the first-order things which are the truthmakers for the first-order facts.) Since there is only ever one second-order thing we do not need a

truthmaker for the fact that such and such a second-order state of affairs is the only second-order thing there is; that second-order thing couldn't exist and that be false. So there only ever need be one second-order state of affairs to suffice for the truth of all second-order facts; and there cannot be a difference in what second-order facts are true and this second-order thing still exist. So Armstrong is right that there is no regress; we need go no higher than second-level ontology.

Still, higher-order entities are too much for some to stomach. Armstrong admits that their admission into our ontology is "objectionable . . . a major sin against economy." [ibid.] Armstrong accepts higher-order things because without them the principles of truthmaker theory do not come out true. What options remain for those who find the postulation of a higher-order ontology too objectionable to make their benefit in truthmaking worth it?

4   Abandoning Maximalism and Necessitarianism

How did we get into the problem of requiring higher-order ontology? It was because we were seeking a truthmaker for a truth of the form 'such and such are all the (first-order) things there are'. But that argument, of course, presupposes that there needs to be a truthmaker for a truth of that form. Armstrong requires there to be a truthmaker for such truths because he is a truthmaker maximalist; he believes that *every* truth has a truthmaker. That is what I want to deny. Armstrong says that to abandon truthmaker maximalism would be "to abandon ontological seriousness." [1, p135] His worry, I take it, is that once we admit that some truths don't require truthmakers then we are in no better a position that Ryle was with his brute counterfactuals. That worry is a serious one, but not, I think, a damning one. It poses a challenge to the theorist who wants to deny truthmaker maximalism: they must give us non ad-hoc reasons for why certain truths don't require truthmakers if they are to avoid the objection that they have abandoned ontological seriousness.

Why might some truths not require truthmakers? A natural thought is that a proposition does not require a truthmaker if it is a truth-functional construction out of atomic propositions. This is the position advocated by Hugh Mellor [7, p213]. He says

> Some . . . truths need no truthmakers, notably true truth-functions, whose truth follows from the truth values of their constituents. We may *say* of course that 'P&Q' and 'P∨Q' are 'made true' by the truth of 'P' and 'Q'; but this is just the entailment of one proposition by others, not the 'cross-categorical' link between propositions and other entities that concerns us here. That is what true truth-functions do not need and therefore, I claim, do not have. . . In particular, negative propositions do not need them, since if 'P' is made true by S, all it takes to make 'P' false and hence '¬P' true is that S *not* exist.

I think Mellor is right about this. There is no need to look for the truthmaker for a true conjunctive proposition; it is true in virtue of there being a truthmaker for each conjunct. If there is a truthmaker for Q then there is no need to look for a truthmaker for P → Q; the truthmaker for Q suffices. And, most importantly, there is no need to look for the truthmakers for negative truths — a negative proposition is true just in case the corresponding positive proposition lacks a truthmaker.[2]

This is not ad-hoc, and so I think it avoids Armstrong's worry. We are not abandoning the search for truthmakers for these truths because it has become too hard to find them; it is perfectly reasonable to hold that true truth-functional propositions require no truthmakers; all that it takes to fix the truth-value of truth-functional constructions of atomic propositions is to fix the truth-value of its constituents.

Once we thus abandon truthmaker maximalism there is no need to make appeal to negative or higher-order ontology. The truth in W above that a is not G is not made true by the state of affairs of a's not being G nor is it made true by the higher-order state of affairs that says that the states of affairs of a's being F and of b's being G are all the first-order states of affairs there are; it is not made true by anything. It is true not in virtue of the existence of anything but in virtue of the non-existence of a truthmaker for [a is G].

Giving up truthmaker maximalism results in our abandoning truthmaker necessitarianism.[3] Consider a world W containing two individuals a and b, which are both F, and nothing else other than what is entailed by this. What makes it true in W that everything is F? Only this: the truthmakers for [a is F] and for [b is F].

---

[2]It is important to note, as Mellor points out [loc cit.], that no claim is being made to the effect that we can always tell which, if either, of 'P' or '¬P' are negative propositions.

[3]C.f. Mellor [op cit. p214]

Those truthmakers do not *necessitate* the truth that everything is F of course; whatever they are, they could coexist with some thing which is not F, but the fact that there is nothing in W which is not F is a negative fact which does not itself require a truthmaker. a and b are the only things in W[4], hence [everthing is F] is true solely in virtue of that which makes a F and that which makes b F; there is no need to make appeal to anything else. If God were to make W actual He would make a, make b, make them both F, and then stop; that would be all He had to do to make it true that everything is F; He would not need to add to W a negative or higher-order thing.

Consider another example. In the 2004 game of the annual Logic and Metaphysics versus Moral Philosophy football match in St Andrews, MP beat L&M by 5 goals to 4. The truthmaker for [MP won] is just the truthmaker for [9 goals were scored], since *all that had to happen* for MP to win the match is that the goals which were actually scored were scored; MP's victory was not a consequence of their learning how to create the 'and that's all the goals that were scored' entity; MP's victory was brought about just by the respective teams scoring the goals they did. The truthmaker for [9 goals were scored] is the truthmaker for [MP won], but while the existence of that truthmaker necessitates the truth of the former proposition it fails to necessitate the truth of the latter, since it could exist in a world in which L&M scored 2 more goals than they actually did. So truthmaker necessitarianism has to go; but this departure should not, I think, worry us. We can still hold on to a restricted form of truthmaker necessitarianism; for it is still true that the proposition that A exists entails the truth of p where p is an *atomic* proposition and A its truthmaker. We are only abandoning the claim that the existence of TM(p) necessitates the truth of p when p is a non-atomic proposition; and the failure of necessitation is not through any insufficiency of the truthmaker, but due to how the truth of non-atomic propositions depends on its component parts.

Some truthmaker theorists abandon truthmaker necessitarianism even for atomic propositions. Josh Parsons [8] for example says that the truthmaker for p is that which is intrinsically such that p. So the truthmaker for (the atomic proposition) [A is red] is just A. But A does not have its intrinsic properties essentially, so the existence of A fails to necessitate the truth of that which it makes true. Parsons likes this theory because it is a theory of truthmakers which is satisfactory to the nominalist (or better: what Armstrong calls the extreme nominalist; not just someone who doesn't believe in universals but who doesn't believe in properties at all). The truthmakers, for Parsons, are ordinary individuals. The reason I don't like this, the reason I want to insist that truthmakers for atomic propositions necessitate the truth of that which they make true, is partly methodological: it concerns my views on how we should proceed in identifying truthmakers. It seems to me that we should look to what *kinds* of thing perform the truthmaking role in the simple cases and then see whether or not there are things of the same kind that can perform the role in the harder cases (such as, e.g., modal facts).

Suppose we want to know what the truthmakers for modal truths are. We should first identify the truthmakers for atomic propositions and see whether there is anything of a kind to those things that are adequate truthmakers for modal truths. Now we will need some guiding principles to work out what the truthmakers for atomic propositions are, and one of these, I think, is necessitarianism. Because we need some way to get a grip on the truthmaker relation; we need some way of making sense of the 'true in virtue of' relation; and we get a grip on this relation only by considering the relation of necessitation between a thing and the truth of a proposition. Now one might take this as evidence that in all cases the existence of a truthmaker necessitates the truth of that which it makes true, but I think that is unnecessary. Consideration of the relation of necessitation lets us identify the truthmakers for atomic propositions; and then, given this new data (i.e. what kinds of thing truthmakers are), we can figure out, hopefully, what the truthmakers are in the more difficult case of non-atomic propositions. And if necessitation fails in these more difficult cases then so be it. We have not lost our grip on the truthmaking relation because now we have evidence that the truthmaking relation is that which holds between things of a certain kind, perhaps states of affairs, and propositions. This is why, although I abandon truthmaker necessitarianism in general, I hold it with respect to atomic propositions, and why I cannot accept Parsons' theory. Parsons has given us no reason to think that the relation that holds between that which is intrinsically such that p, and p, is the truthmaking relation; so we have no reason to think that Parsons is not simply using the term 'truthmaker' in a way different to us. But that the relation of necessitation holds between things of a kind K and true atomic propositions is good evidence that the relation between the things of kind K and true propositions is the truthmaker relation. That is to say that the truthmaker relation is that relation which holds in general between things of kind K and true propositions, atomic or otherwise; and there is no problem if the relation sometimes fails to be one of necessitation.

---

[4]Well, there are the truthmakers as well, of course, and any necessary existents, but suppose our quantifier is appropriately restricted.

Furthermore, when there is a departure from truthmaker necessitarianism I can explain it, whereas Parsons can't (although he presumably would deny that there is anything to explain). When the existence of TM[p] fails to necessitate p that is because the truth of p supervenes not just on TM[p]'s existence but also on the falsity of releasing factors — atomic propositions whose truth is incompatible with the truth of p. Call one such releasing factor R. TM[p] can exist in a world in which R is true, and in such a world p is false. But this is explainable; TM[p] does not necessitate the truth of ¬R. There exists no thing that necessitates the truth of ¬R. Nor need we demand such a thing, because ¬R is a negative fact — it requires no truthmaker.

But no such story can ever be told about why the existence of the truthmaker for an atomic fact would fail to necessitate the truth of that fact. The truth of an atomic fact does not supervene on the falsity of releasing factors. There are no releasing factors for atomic facts. In general the reason the existence of a truthmaker can fail to necessitate the truth of that which it makes true is that the truth of the proposition in question requires that certain atomic facts not be true; and that these atomic facts are not true is not something which needs to be made true. But an atomic proposition does not require for its truth that some other atomic propositon is not true. That's what it is to be an atomic proposition; their truth or falsity is independent of the truth or falsity of distinct atomic propositions.

There are other intuitive examples of non-atomic propositions being made true by things that fail to necessitate their truth. Counterfactuals are among them. Here is an example from John Heil [4, p232-233]

> Take the assertion
> (P) If you drank this cyanide-laced tea, you would die.
> Suppose (P) is true in virtue of some object or fact, a . . . Could we imagine a world that included a, but in which (P) was false?
>
> Think of a world that included the cyanide-laced cup of tea but included, in addition, your having in hand an antidote. In that case, (P) could be false despite the presence of a. . . More generally, an assertion, A, might fail to hold, not because [the truthmaker for A] is absent, but because [the truthmaker for A] is accompanied by a defeater.

It should come as no surprise, given the above, that the truthmaker for a counterfactual should fail to necessitate the truth of that which it makes true. Counterfactuals are a kind of universal generalisation: in *every* selected world in which p is the case, q is the case. (P) amounts to the statement that in every selected world in which you drink the tea, you die. It is true because of the absence of a selected world in which you drink the tea and live. But that there is no such selected world is a negative fact and not something that requires a truthmaker; it is sufficient that there is no truthmaker for the fact that there is a selected world at which you drink the tea and live.

Or if talk of worlds makes you queasy we can put the same point differently. The truth of (P) supervenes not only on facts concerning your disposition to die if you ingest cyanide, but also on the falsity of any propositions which would entail the might counterfactual: if you drink the tea you might live. R_1: [You have to hand a cyanide antidote] is one such proposition, since the presence of the antidote means that if you drink the tea you might then take the antidote, and hence might live. So the truth of (P) supervenes on both your dispositions and the falsity of R_1. And also, of course, on the falsity of R_2: [There is close by a very skilled doctor], and R_3: [There is a God who will miraculously save you from dying of cyanide poisoning] etc. But $¬R_1$, $¬R_2$, $¬R_3$ etc are all negative facts. They have no truthmaker. A fortiori, a, the truthmaker for (P), is not their truthmaker, and hence there is no problem at all that a can exist in worlds in which $¬R_1$, $¬R_2$, $¬R_3$ etc are false, i.e. worlds in which R_1, R_2, R_3 etc are true, i.e. worlds in which (P) is false.

So consider a world in which you have the antidote in hand. In that world there exists a truthmaker for the fact that there is a selected world at which you drink the tea and live, or if you prefer: a truthmaker for the might counterfactual 'if you drink the tea you might live'. It is therefore false that if you drink it you will die. So (P) is false; nevertheless, the truthmaker for (P), a, exists at this world: if you drink the tea in this world it is just as true as in the actual world that you will be disposed to die. But since the existence of a only suffices for the truth of (P) given that there is no truthmaker for the fact that there is a selected world at which you drink the tea and live, no truthmaker for the might counterfactual, the existence of a does not suffice for the truth of (P) in this world.

In general a counterfactual $p \Box\!\!\rightarrow q$, unless the corresponding strict conditional is also true, is only true in the absence of defeaters (releasing factors). There will be some contingently false r such that $¬((p \land r) \Box\!\!\rightarrow q)$. But that each such r is false is not something which requires a truthmaker, so there need be nothing whose existence necessitates that r is false. A fortiori, the truthmaker for the counterfactual need not necessitate that

r is false; hence its existence is compatible with a truthmaker for r. Hence its existence is compatible with the counterfactual being false. Likewise, just because the truth of the would counterfactual $p \square\!\!\rightarrow q$ is incomptible with the truth of the might counterfactual $p \diamond\!\!\rightarrow \neg q$, it does not follow that the existence of the truthmaker for the would counterfactual must necessitate that the might counterfactual is false. *Nothing* need necessitate that the might counterfactual is false, since that is a negative fact that does not require a truthmaker.

The situation in general with regard to universal generalisations is this. What makes a universal generalisation true is just those things which makes each of the instances true, if there are such things.[5] But the existence of the truthmaker for the universal generalisation is not sufficient for the truth of the universal generalisation; it only brings about the truth of the universal generalisation in worlds in which there is no truthmaker for the incompatible existential generalisation.

So the existence of the truthmaker for (P) is compatible with the existence of truthmakers for defeaters of (P), and thus with the falsehood of (P). Armstrong, of course, would use this as an argument that a cannot have been the truthmaker for (P). He says [1, p116]

> If it is said that the truthmaker for a truth could have failed to make the truth true, then we will surely think that the alleged truthmaker was insufficient by itself and requires to be supplemented in some way. A contingently sufficient truthmaker will be true only *in circumstances that obtain in this world.* But then these circumstances, whatever they are, must be added to give the full truthmaker.

So for Armstrong the truthmaker for (P) must be a *and* the negative or second-order thing whose existence necessitates the non-existence of the antidote (and any other defeater).

Armstrong says that the extra circumstances which are required for the truth of p in addition to the existence of some thing A must be added to A to give the full truthmaker for p. But this will not be accepted by the denier of truthmaker maximalism, because they will resist the reification of such circumstances that this comment implies. So Armstrong's argument establishes only that *if one is a truthmaker maximalist* then one should be a truthmaker necessitarian. In Mellor's world W, TM([a is F]) and TM([b is F]) do not necessitate the truth of [everything is F]; TM([a is F]) and TM([b is F]) only lead to the truth of [everything is F] in the circumstances that there is nothing which is not F. But to demand that those circumstances must be added to TM([a is F]) and TM([b is F]) to give the full truthmaker for [everything is F] is to reify those circumstances in a way the truthmaker maximalist will not accept. The circumstances can only be added to the truthmaker *if they exist*, but to deny the existence of higher-order or negative ontology — as the denier of truthmaker maximalism does — is precisely to deny that there *are* any circumstances answering to the description 'there is nothing which is not F'. That's not to say that we can't truly describe a situation thus, of course, merely to deny that there is any ontology in the world which corresponds to the description. To make this denial is not to go against the correspondence theory of truth; merely to go against the view that what our true propositions correspond to can simply be read off from the sentences which we use to express them. Ontology is hard; it is not to be done simply by observing how we speak.[6]

Arché, AHRB Centre for the Philosophy of Logic, Language, Mathematics and Mind
School of Philosophical and Anthropological Studies
University of St. Andrews
Fife
Scotland
KY16 9AL
rpc2@st-andrews.ac.uk

References

[1] D.M. Armstrong, A World Of States of Affairs, Cambridge: Cambridge University Press, 1997

---

[5] If each of the instances is a negative fact which requires no truthmaker then, on my view, the universal generalisation requires no truthmaker. This implies that negative existentials sometimes require truthmakers and sometimes do not. The negative existential $\neg\exists x(Fx)$ requires a truthmaker iff the corresponding universal generalisation $\forall x \neg(Fx)$ requires a truthmaker. So [there are no chimeras] does not require a truthmaker because [everything is not a chimera] does not require one, since no instance of 'a is not a chimera' requires a truthmaker. But [there is no cordate who is not a renate] does require a truthmaker; and it is made true by that (or those things) which make(s) true for every cordate that it is a renate.

[6] Thanks to an audience at the University of St Andrews; especially to Elizabeth Barnes, Stephen Read, Robert Williams and Crispin Wright.

[2] D.M. Armstrong, *Truth Makers for Modal Truths*, in Hallvard and Lillehammer 2003

[3] John Fox, *Truthmaker*, Australasian Journal of Philosophy 65, p188-207, 1987

[4] John Heil, *Truth Making and Entailment*, Logique et Analyse 43, p231-242, 2000

[5] John Heil, From an Ontological Point of View, Oxford: Oxford University Press, 2003

[6] Harvard Lillehammer and Gonzalo Rodriguez-Pereyra (eds), Real Metaphysics, London: Routledge, 2003

[7] D.H. Mellor, *Real Metaphysics: Replies*, in Lillehammer and Rodriguez-Pereyra (eds)(2003), p212-238

[8] Josh Parsons, *There is no Truthmaker Argument Against Nominalism*, Australasian Journal of Philosophy 77(3), p325-334, 1999