

Truthmaking is not necessitation

Philipp Keller*

3rd October 2005

Comments and criticism very welcome

Abstract

I argue against truthmaker necessitarianism, the view that truthmaking is necessitation. I argue first that David Armstrong's argument for it is ill-motivated and establishes only a weaker thesis – truthmaker internalism –, that truthmaking is an internal relation in David Lewis' sense. I then argue that necessitation is not sufficient for truthmaking. The argument for its non-necessity examines first Armstrong's particular version of necessitarianism, truthmaking by states of affairs. Some of the relevant considerations are then generalised in order to make the broader claim plausible.

How is it that by fixing our gaze on “there are no arctic penguins” we may learn something about the animal life of some distant geographical region? A popular answer has it that the question divides into two subquestions: how do we understand the truth expressed by these marks? and: what makes this truth true? While these two questions are obviously related, I will concentrate on the second in the following.

The truthmaker question has of course much wider application than to penguins. In particular, it may be asked to determine the entities and categories of entities in the existence of which someone believes. This is of particular use in metaphysics, and I therefore agree with Armstrong that asking the truthmaker question is a promising way to regiment metaphysical enquiry (Armstrong 2004a: 4). In particular, I agree with him that “continually to raise the truthmaker question about properties makes for ontological honesty” (Armstrong 2004a: 43). I also think that answering the truthmaker question commits us to an ontology of sparse properties, “in terms of which the world's work is done” (Armstrong 2004a: 17), and that this is motivated by the fact that, intuitively speaking, we do not need the whole of the particular to make non-relational predications true (Armstrong 2004a: 41). I also agree with Armstrong that we should start off as truthmaker maximalists, i.e. only give up on our search for truthmakers once its futility in some particular case has been demonstrated. My argument against necessitarianism presupposes that we are after a uniform account of truth as being made true.

The regimentation metaphysical enquiry will receive from asking and answering truthmaking questions will of course depend on what the truthmaking relation is taken to be. It is commonly assumed that truthmaking is necessitation and this is the thesis I will criticize in the following:

1 (Truthmaker Necessitarianism). *The determining of a truth by a truthmaker is an absolute necessitation.*

Truthmaker necessitarianism is one of Armstrong's reasons for believing in states of affairs. Because the truthmaker for the contingently true predication “*Fa*” must necessitate its truth, it cannot be *F*

*University of Geneva, Switzerland, philipp.keller@lettres.unige.ch.

or a alone, nor their fusion, for all the three of them could exist without “ Fa ”’s being true. Hence it is the state of affairs a ’s being F (cf. Armstrong (1989b: 88) and also Armstrong (1997: 115)):

“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.” (Armstrong 1997: 116)

While there are other arguments for truthmaker necessitarianism, it is this ‘sufficiency argument’ that provides the strongest motivation for believing that truthmaking is necessitation.

The sufficiency argument, as Armstrong (1997: 115) says, establishes that the truthmaking relation is internal. This brings out a viable intuition: the truthmaking relation cannot depend on facts about things outside the items it relates. If T makes it true that p , nothing else than T and p have a bearing on whether or not the truthmaking relation holds between them. If the truthmaking would depend on something outside T and p , this additional circumstance would have to be brought into T , as Armstrong says.

Another, equally good reason to take the truthmaking relation to be internal is the following: external, but not internal relations are ontological additions to their terms. If truthmaking was an external relation, it would be an addition to the “ontology of the situation” (Armstrong 2004a: 9) – it itself would have to be brought into the truthmaker, creating an infinite regress.

So the sufficiency argument establishes the following:

2 (Truthmaker internalism). *Truthmaking is an internal relation.*

Whether we get truthmaker necessitarianism out of truthmaker internalism, of course, depends on what we mean by “internal”.

“Internal relation”, however, is a notoriously ambiguous term.¹ Bradley (1893: 392) used it to characterise relations that “essentially penetrate [...] the being of [their] terms”, Moore (1919–1920) for relations that supervene on monadic foundations which are “critical to the identity of the terms to which they belong” and Wittgenstein in the *Tractatus* for relations the relata of which are inconceivable without them (Wittgenstein 1921: §4.123). What does Armstrong mean by an “internal relation”? Armstrong (1978b: 85) defined an internal relation as follows: Two or more particulars are internally related if and only if there exist properties of the particulars which logically necessitate that the relation holds. They are externally related if and only if there are no properties which necessitate the relation or a part of it. The properties in question here must be understood as intrinsic properties. So we get the following account:

Definition 3 (Internal relations). *A relation is internal iff it supervenes on the intrinsic properties of its relata.*²

Armstrong, however, also characterises internal relations in some, at least *prima facie*, different way:

“I mean by calling a relation internal that, given just the terms of the relation, the relation between them is necessitated.” (Armstrong 2004a: 9)

¹Ewing (1934) identifies ten senses of “internal relation”.

²Lewis (1986: 62) calls an internal relation “intrinsic to its relata” (cf. also Lewis 1983: 26, n. 16).

This turns truthmaker internalism into truthmaker necessitarianism. How is such a transition to be justified? Armstrong (1997: 12, 87, 115) says that a relation is internal if and only if it is impossible that its terms should exist and the relation not exist, where the joint existence of the terms is possible. He then adds that “to fall under our definition of internal relations, the particulars involved must be taken as having their non-relational properties” (Armstrong 1997: 88). This means that the terms necessitating the internal relations are to be thought of as the “thick particulars”, the particulars ‘taken together’ with their intrinsic properties.³

The thesis that truthmaking is internal in the sense of supervening on intrinsic properties of truthmaker and truthbearer is *prima facie* different from truthmaker necessitarianism because it can be reasonably questioned whether all intrinsic properties are “given just the terms of the relation”. It may well be that some intrinsic properties of some truthmaker are not essential to it, i.e. such that the truthmaker could exist without exemplifying them. This, I think, is reason enough to distinguish truthmaker internalism from truthmaker necessitarianism.

Truthmaker internalism (2) brings out the sense of sufficiency we are after in our quest for truthmakers, for it means that it is a matter of how a thing is itself what truthbearers it makes true. We only have chosen our truthmaker inclusive enough if its truthmaking ties do not depend on anything ‘outside’ of it, i.e. if they cannot be made to vary by variation in the intrinsic properties of things disjoint of our truthmaker in question. Such a relation, however, can still be contingent. It is one thing to say that the truthmakers for the obtaining of an internal relation are just the terms of the relation (Armstrong 2004a: 92,98,104,139) and that internal relations are ontologically innocent (Armstrong 2004a: 104). It is another thing to take this to entail necessitarianism.

Even though the sufficiency argument does not privilege truthmaker necessitarianism over truthmaker internalism, the former may be held to be independently plausible. How could something, it may simply be asked, be sufficient for the truth that p even if it could exist without p being true? I think, however, that necessitation is neither necessary nor sufficient for truthmaking.

I Necessitation is not sufficient for truthmaking

Let me start with the non-sufficiency claim. This is the easier part of the argument, as many of the relevant points have already been made. I will call, following Smith (1999), entities that necessitate truths they do not make true ‘malignant necessitators’. There are at least three areas where malignant necessitators may be found: truthmakers for necessary truths, extrinsic essential properties and necessary but accidental properties.

With respect to logical truths, Restall (1996) pointed out that if T makes it true that p and if the truthmaker of a disjunction makes at least one disjunct true, then T makes every proposition true, which “gives logic a certain grandeur” (Restall 1996: 333, n. 3). He proposed to spell out the entailment from the existence of a truthmaker to the truth of the proposition as a kind of relevant implication that does not support disjunction introduction. In order not to trivialise truthmaking, we also have to restrict transmission of truthmaking over entailments to those that involve only contingent truths. Such a restriction, even if combined with a relevantist account of necessitation, does not solve the problems in this area. For it is independently plausible to think of necessary truths in general as necessitated vacuously, and at the same time hold that some, but not all of them share their truthmakers. If

³This is confirmed by Armstrong (1989a: 105), where he uses his later terminology of ‘thick’ particulars: particulars having certain properties are internally related by relation R iff in each possible world which contains them and where they have these properties, they are related by R . Similarly, Armstrong (2004a: 116) says: “Where a pair stands in a fixed relation, one that is fixed, that is, necessitated, by the nature of the pair, there we have an internal relation.”

we want to distinguish the truthmakers of, for example, Fermat's Last Theorem and of the truth that triangles have three sides, respectively, then no difference in what necessitates them seems able to do this. This holds quite generally for necessarily equivalent truths. In many such cases, we may still want to distinguish between their truthmakers. To do this, we need to impose a further condition, making just necessitation insufficient for truthmaking.

Within the second category of malignant necessitators fall the truths allegedly decreed by God. According to Smith (1999) a Malebranchian God could will, and thereby necessitate, that John kiss Mary now. According to Forrest and Khlentzos (2000: 9), God's knowledge that p entails that p but is no truthmaker for it. Other examples in this category are extrinsic essential properties. Smith (1999), e.g., argues that it is an essential and extrinsic property of John's funeral to occur after John's death. If John's funeral takes place, his death must have happened. We do not want to say, however, that the funeral makes it true that he is dead. Truthmaking theory itself can afford other examples. By necessitarianism, every truthmaker necessarily makes a truthbearer true. Hence it necessitates the existence of at least one truthbearer.

Let us call 'free-riders' properties that a has necessarily if it exists, but not in virtue of its essence. In his critique of the modal account of essence, Kit Fine has argued that while every thing necessarily exists iff its singleton does (or indeed any set containing it), the singleton is essentially the singleton of its member but the member not essentially a member of its singleton. While a therefore necessitates the truth that it is a member of $\{a\}$, it does not make it true.

2 Necessitation is not necessary for truthmaking

This half of the argument is harder. I will proceed in a somehow piecemeal fashion and draw only a tentative conclusion. I first examine Armstrong's account of truthmaking by states of affairs, then try to generalise my criticism to other maximalist accounts and end with some considerations that speak against the necessitation requirement for truthmaking in general, maximalist or not.

Let us first consider Armstrong's factualist theory of truthmaking. Let us suppose then that the world is a world only of states of affairs and that states of affairs are the only truthmakers there are.

Will this give us truthmakers for all the truths? It does not, says Armstrong: to make it true that it is a law of nature that all F s are G s, for example, we need a further, non-supervenient and higher-order truthmaker, i.e. the state of affairs that F ness necessitates G ness (Armstrong 1983: ch. 6). If it is a contingent fact that a certain number of states of affairs are all the states of affairs there are, then we need also another type of higher-order state of affairs:

"If it is true that a certain conjunction of states of affairs is all the states of affairs, then this is only true because there are no more of them. [...] That there are no more of them must then somehow be brought into the truthmaker. [...] The truthmaker must be the fact or state of affairs that the great conjunction *is* all the states of affairs." (Armstrong 1997: 198)

Before pointing out the several intricate problems presented by totality states of affairs, let us first note that the argument contained in the quotation above is not quite compelling: it is not in general true that any necessary condition for a truth must be somehow "brought into" its truthmaker. It is, e.g., a necessary condition for it's being true that $2+2=4$ that at least one truthbearer exists, but no truthbearer has to be brought into the truthmaker of this arithmetical fact.⁴

⁴The argument is easily generalised: every necessary truth is a necessary condition for everything else, but not every

Armstrong's real motivation for totality states of affairs, I presume, is not that truthmakers must include all necessary conditions for some truthbearer's being true, but his construal of truthmaking as an internal relation – it is because it is an *extrinsic* property of the big conjunction that it is all there is that there must be something else to make it true, something that *intrinsically* is all there is. This is some totality state of affairs: every fusion of states of affairs which are of the same 'sort' *F* is an object which may stand in a contingent and external relation *T* to some 'unit-property' *G* that Armstrong calls "alling" or "totalling" and which he takes to be a universal.⁵ The sort of the states of affairs *F* and the 'unit-property' *G* normally are non-basic, 'second-' or even 'third-degree' properties. The mereological fusion of the black swans on the lake now (the thick swans, including their properties), for example, totals the "distinctively second-rate property" *black swan on the lake now* (Armstrong 2004a: 72).

Totality states of affairs are paradoxical, however, and hence do not exist.⁶ Here is why: If there were any totality states of affairs, some truthbearer of the form "These are all the totality states of affairs there are" would be true. If it were true, it would be made true by some totality state of affairs. This totality state of affairs, however, cannot be one of the totality states of affairs in the totalled fusion. So it would have to be some other totality state of affairs. But then the truthmaker of "These are all the totality states of affairs" would not total *all* the totality states of affairs, hence it would not total any.

Assume, again, for *reductio* that there are totality states of affairs and that totalling is a universal (Armstrong 2004a: 73), which occurs as predicative component in each and every totality state of affairs. If there are totality states of affairs, there is a totality of them: "The Tot relation is to be found even where there is just one object of a certain sort." (Armstrong 2004a: 73). Call it the 'limit totality'. In the limit totality, the totalling relation holds between the fusion of all totality states of affairs and the (second-grade) property *being a totality state of affairs*. But this is impossible: if it holds, then the fusion has to be the fusion of *all* states of affairs. The fusion, however, cannot contain the limit totality itself, because it is a proper part of this limit totality (Armstrong 2004a: 56, 71).⁷ Could some other property than *being a totality state of affair* be totalled in the limit totality? No, it seems, if the limit totality is the totality of all totality states of affairs. Could the totalling relation fail to hold? The only way it could fail to hold is if the fusion were not the totality of all totality states of affairs. But then there would be some other totality state of affairs not contained in it, and the limit totality would not be the totality of totality states of affairs, contrary to what we assumed. .

There are other paradoxes in the vicinity.⁸ We have seen that a totality state of affairs is the obtaining of the totalling relation between some fusion of states of affairs and some 'unit-property'. There is an important distinction between two types of totality states of affairs. In cases like the one of the black swans on the lake, the property, though second-rate, occurs as a 'predicative component' in the

truthmaker of any necessary truth makes all truths true.

⁵Cf. Armstrong (1989a: 93), Armstrong (1997: 199) and Armstrong (1997: 73).

⁶The paradox to be discussed is not the one raised by Cox (1997: 56) and anticipated by Armstrong (1997: 198-199) concerning a regress of higher- and higher-order states of affairs. Cox's paradox can, but I think mine cannot, be met by turning the tables on the regress and suggesting that the very fact that higher-order state of affairs are necessitated by their immediate predecessors in the regress means that all we have is a regress of truths sharing as their truthmaker the totality state of affairs of the lowest order (cf. Armstrong (1989a: 94), Armstrong (1997: 198) and Armstrong (2004a: 78)). This answer needs some fine-tuning: there are, Armstrong (2004a: 74) says, at least two most inclusive second-order states of affairs, one the totalling of *being a state of affairs* (or rather: *being a first-order state of affairs*), the other one totalling *being any existent at all*. If naturalism is true, then there is also a third one, the totalling of *being in space and time*. Naturalism, defined in Armstrong (1997: 35) and Armstrong (2004a: 112) as the doctrine that the world of space and time is all there is, is a contingent thesis (Armstrong 2004a: 112). So the state of affairs that there are three most-inclusive second-order states of affairs is itself contingent. So it is not necessitated by any one or the fusion of the second-order states of affairs. So the regress stops on the second stage at the earliest.

⁷That totality states of affairs are ampliative follows from, but does not imply, Armstrong's earlier assertion that the totalling relation is external (Armstrong 1997: 199).

⁸The following Russell-type paradox has been independently been discovered by Greg O'Hair.

states of affairs (thick particulars) fused into the aggregate totalling it. In some other cases, however, this is not the case: the property of being a first-order state of affairs, for example, is not itself a component of the first-order states of affairs (all states of affairs of which it is a component are at least second-order). It is a state-of-affairs type that cannot be obtained by abstraction from the states of affairs of which it is the type.⁹ Some such states of affairs exist, for example the totalling of *being a property of Theatetus* by Theatetus' positive properties. This means that there is a totality X of all the totality states of affairs of which the property totalled does not also occur as a component in the fusion totalling the property (call these 'non-self-predicative' states of affairs). Now, with respect to this totality state of affairs X , we may ask whether the property that is totalled, the property of being a non-self-predicative state of affairs, is a component of any of the states of affairs fused together. We may ask, in other words, of X whether it is self-predicative. If it is self-predicative, then the property of being a non-self-predicative state of affairs occurs in some state of affairs in the fusion that is totalled by X . So it is the property totalled by at least one of the state of affairs in this fusion. But what fusion is totalling it? It cannot be the fusion of all the non-self-predicative states of affairs, for otherwise X would contain itself as a proper part. So we have a contradiction: some fusion is totalling the property of being a non-self-predicative state of affairs that is not the fusion of all the non-self-predicative states of affairs. If X is not self-predicative, however, then this state of affairs X belongs to the fusion totalling the property, so the property of being a non-self-predicative state of affairs is a component of a state of affairs in the fusion. So it is self-predicative after all.

Faced with these paradoxes, none of the familiar options seems plausible. We cannot deny that there is a fusion of all totality states of affairs, of all states of affairs or of all states of affairs in which the totalled property does not occur as a component. We could, perhaps, replace the totalling universal with an infinite family of totalling relations, each indexed to one order in the hierarchy. But this would not only rid us of truthmakers for truths such as "These are all and only the first- and second-order states of affairs" but also leave us with no index for the relation totalling the fusion of all totality states of affairs. We could adopt a limitation of size principle, but this would break the connection between generality and negation. If we were to deny, for example, that all the totality states of affairs or all the non-self-predicative totality states of affairs form totalities, it would still be true that there is some definitive (perhaps infinite) number of them. But if there are, say, κ totality states of affairs, it is true that there are not $\kappa + 1$. This negative truthmaker needs a truthmaker, and only the totality state of affairs of these κ totality states of affairs being all there are seems suited to do this job. Moreover, any totality state of any order has countless negative properties (for example, *not being a black swan*), and to account for these, we need another totality state of affairs one order higher up. So even if there is no totality of totality states of affairs, something must make *this* truth true. What else than the totality of totality states of affairs could it make true that there are no other ones?

Could we say that the totality of all totality states of affairs supervenes on them or is necessitated by them? Suppose, for simplicity, that there is just one totality state of affairs. Would it not necessitate the state of affairs of its being the only one? The problem with this line of reply is that it undermines the very motivation Armstrong gave to introduce totality states of affairs in the first place:¹⁰

"...David Lewis has raised with me the question whether the fact of totality is in fact, as Russell claims, non-supervenient. [...] How, asks Lewis, could two worlds be exactly alike in all lower-order states of affairs, yet differ in this higher-order state of affairs? The answer, of course, is that the two worlds could not differ. But I claim that this is so only because a totality state of affairs has already been written into the description of the

⁹This is the real difference between the totalling relation and the (many!) numbering relations: in the latter case, the property with respect to which a fusion is numbered is always exemplified within this fusion (cf. Armstrong 2004a: 116), but in the former it is not.

¹⁰Thanks to Frank Jackson for making me aware of this quote.

case. Suppose we had a list of the states of affairs in the two worlds, but with no totality condition given. It would not be the case that every world that contained those states of affairs was the same world. You get that result only if you add that the worlds contain *just* those states of affairs, that is, those states of affairs *and nothing more*. The ‘nothing more’ must have a truth-maker. I claim that that truth-maker is a totality fact or state of affairs, having the form I have tried to describe.” (Armstrong 1989a: 94)

What holds for states of affairs in general holds a fortiori for totality states of affairs. Suppose there is just one state of affairs, *a*'s being *F*. Why add the totality state of affairs of *a*'s totalling *F*? No world, after all, can differ *just* with respect to it. The reason it is necessary, Armstrong says, is to distinguish the first world not from another, ‘complete’ world (whose completeness is ‘written into the description of the case’) but from a ‘sub-world’ of one where *a* is *F* and *b* is *F*. An exactly parallel argument shows the non-supervenience of higher-order totality states of affairs: Suppose there is a world with just one totality state of affairs (this would have to be a perfectly uniform world, where everything shares all properties). How can a world differ from it just with respect to this totality of one totality state of affairs? This does not seem to be possible, but only if we forget about sub-worlds, e.g. the sub-world of *a*'s being *F*, *a*'s totalling *F*, and *a*'s being *G*. The only difference between the two is that without *a*'s being *G*, there is just one totality fact, with it, there are three. To suppose otherwise is to ‘write [completeness] into the description of the case’.¹¹

Armstrong’s only option at this point, I think, is to retract the claim that totalling is a universal and can be a component of states of affairs. What makes it true that some totality is all there is just this totality itself – all there is. But this means that necessitarianism goes overboard.

Are these difficulties peculiar to totality states of affairs? I do not think so: the essential difficulty, it seems to me, is that truthmaker internalists have to provide intrinsic truthmakers for extrinsic predications. To solve this problem, necessitarianism has to be sacrificed.

If *F* is an extrinsic property of *a* and *a* makes it true that *a* is *F*, then the truthmaking relation between *a* and the proposition that *a* is *F* is not internal – it does not supervene on intrinsic properties of its relata. For *a* could be intrinsically just as it is and fail to be *F*, hence fail to make it true that *a* is *F*. So if *a* is extrinsically *F*, the truthmaker for this truth is *b*, where *b* is not identical with *a*. Now *b* is either in some, not necessarily mereological, sense composed out of *a* or it is not. If it is then *a* is a proper part of *b*, hence $b = a + c$. Let *w* be some possible world where *a'* is an intrinsic duplicate of *a* but lacks *F*. If $a = a'$, then $b = a' + c$ makes it true that *a* is *F* in *w* even if *a* is not *F*. Hence $a \neq a'$. Consider $b' = a' + c$. It does not make it true that *a'* is *F*. If it were an intrinsic duplicate of *b*, however, it would have to make it true that *a* is *F*. How could this be explained? If *c* was what we had to add to ground the truth that *a* has some extrinsic property, why does it matter whether we add it to *a* or an intrinsic duplicate of it? But if *b'* does not make it true that *a* is *F*, then we may ask what makes *this* true? This brings us on an infinite regress: what makes it true that *b'* does not make it true that *a* is *F* is something that distinguishes it from an intrinsic duplicate, hence an extrinsic property of *b'*. By truthmaker internalism, it has to be brought into the truthmaker. If *b* is not composed out of *a*, the same problems arise. For then $c = a + b$ is different from *b* and also a truthmaker for “*a* is *F*”. Let *a'* be an intrinsic duplicate of *a* lacking *F*. Then $c' = a' + b$ makes it true that *a* is *F*, but does not make it true that *a'* is *F*. If *c'* is an intrinsic duplicate of *c*, then we again get a regress. And it is hard to see how *c'* could fail to be an intrinsic duplicate.

¹¹Could all there is be just one totality state of affairs? This is not possible, for it cannot contain itself as a proper part. Another argument for the same conclusion does not rely on (totality) states of affairs being ‘ampliative’: If there is a totality state of affairs, some property is totalled ‘in’ it. This property must be exemplified, and it must be exemplified by something else than the totality state of affairs in question; for it to be ‘available’ as a constituent of the totality state of affairs, it must exist prior to and independently of the latter’s existence. If the property is *being something positive*, as Armstrong (2004b) proposes, it clearly cannot be exemplified by the limit totality state of affairs.

But this is indeed the price of internalism: internalists must allow for an extrinsic mode of composition, i.e. a mode of composition such that the composition of intrinsic duplicates does not yield compounds that are intrinsic duplicates.

While this is already hard to swallow, necessitarianism makes it much worse. Necessitarianism have to claim that composition of intrinsic duplicates does not even make for counterparthood. If a is extrinsically F , b is the truthmaker of this truth and a' is an intrinsic duplicate lacking F , then $a + b$ and $a' + b$ can not even be counterparts. The extrinsic difference between a and a' must rule out the existence of b . This is problematic because b 's intrinsic nature, by the preceding argument, is independent of the intrinsic nature of a .

To illustrate this difficulty, let us consider maximal properties. The property of being a table, for example, is maximal if no proper part of a table can be a table. Maximal properties are extrinsic, but often essential. Suppose a is essentially a statue and *being a statue* is a maximal property. Let α be what makes it true that a is a statue. By internalism, there can be intrinsic variation in α even though there is none in a . This seems mysterious enough. Necessitarianists, however, have to claim much more: that α can cease to exist even though there is no intrinsic change in a .

Another example are the truthmakers of negative existentials. Following Lewis (2001: 610), I will call such truthmakers 'unicorn replacements' in the following. Unicorn replacements have their truthmaking properties not only extrinsically, but also essentially. Unicorn replacements not only have extrinsic identity conditions, but even "maximally extrinsic" ones, as it were. They give us another reason not to think that necessitation is sufficient for truthmaking. Let α be the unicorn replacement and β be the centaur replacement and W the rest of what there is. If α and β were different things, then our world would be heavily overpopulated with strange entities. Thus suppose $\alpha = \beta$. Because lacking centaurs is an extrinsic property of our world, it is possible that an intrinsic duplicate of W exists plus some centaurs. In such a world, however, α cannot exist – even though it also lacks unicorns, α would also exclude the centaurs if it existed. This means that unicorn replacements are maximally specific: they can only exist in the world where they actually do. They necessitate everything that is the case. If truthmaking is necessitation, they not only replace unicorns, but also make true everything else.

It therefore seems that extrinsic truthmaking is problematic for necessitarians. But I think there are also considerations that speak against necessitarianism with respect to intrinsic truthmaking.

Consider Max Black's two indiscernible spheres. Do they make true the same truths? This is the question whether the truthmaking relation is haecceistic in the sense of distinguishing between non-identical indiscernibles. I will try to show that neither answer is available to the necessitarian.

Let us call one of the spheres a and the other b . Because there are two of them, either one could exist without the other. The truth that a exists must therefore be different from the truth that b exists. It is also true that they have the same size, and that there are two things of exactly the same size in that world. Hence the truth that a is of size m is different from the truth that b is of size m . But do they have the same truthmaker?

Suppose, first, that they have, i.e. that the truthmaking relation is not haecceistic. If the truthmaker of " a is of size m " also makes it true that b is of size m and if it does so necessarily, it must cease to exist if b becomes slightly smaller than a . But we can suppose that a would still be of the same size. If truthmaking is internal, nothing except than an intrinsic change in the truthmaker or the proposition may affect their truthmaking link. So the truthmaker must involve both a and b . But this means that neither a nor b could be of size m in the absence of the other, which is clearly absurd.

Suppose a makes it true that p . If there could be another entity, a' , indiscernible from a , but coexisting

with it, and if the truthmaking relation is not haecceitistic, then they would make the same truths true. But one truth made true by a' is that a' exists. If both a and a' existed, then, a would make it true that a' exists. By necessitarianism, however, this possibility is actual: because a exists, it actually makes it true that a' exists as well. And this is not just actual, but necessary as well: a could not exist without making true what it can make true at all. So if the truthmaking relation does not distinguish indiscernibles, if two indiscernibles can exist *with* each other, they could not exist *without* each other. But we clearly do not want to say that just because I could have an indiscernible twin, this twin actually exists (and that I make it true that he exists)!

This not only concerns existence statements, but all truths that imply the existence of their truthmaker. If indiscernible truthmakers make the same truths true, then they cannot exist in isolation. But they clearly can. So necessitarianism, together with weak and plausible assumptions about modality, commits us to haecceitistic truthmaking. Haecceitistic truthmaking, however, is incompatible with truthmaker internalism: if truthmaking does not distinguish between intrinsic duplicates, then *a fortiori* it does not distinguish indiscernibles. So truthmaker internalism excludes necessitarianism.

But even apart from the considerations in favour of truthmaker internalism, it seems very hard to defend the view that the truthmaking relation is haecceitistic. How could two indiscernible objects differ in what they make true? If a makes it true that p , it seems, it does so in virtue of having the properties it has and standing in the relations it stands in. If something sharing all these qualitative aspects with a can fail to make it true that p , it seems, this must be in virtue of another feature of the ontology of the situation? But what could that be? Take the case of the two spheres again. There are two different truthmakers, α and β , for the truths that a and b have all and only their properties. What, however, makes it true that they are indiscernible? Nothing more than α and β is required. But are really both needed? It seems hard to believe that there is some intrinsic property that α has and β lacks.

To see why this problem is particularly vivid for necessitarians, recall that on their account, truthmaking of p by a does not involve a 's contingent properties. It is possible that a lacks all its contingent properties (or some subset thereof) and still makes true the same truths. Necessitarians therefore have to count the purely haecceitistic respects that make for differences in truthmaking as necessary properties: not only make indiscernible objects different truths true, but they also do so by necessity.

This is an unwelcome result. If a contingently has the intrinsic property F , then a is numerically distinct from the merely possible a' that lacks F . But we would still like to say that what makes it true that a has some other property, say G , is the same thing than what makes it true that a' has that property. If truthmaking is haecceitistic, however, and a and a' differ in bare numerical identity, then we cannot do this. Each and every truthmaker, by necessity, can just be what it is. No wonder, then, that every truthmaker makes the same truths true in all worlds where it exists. It exists in only one world! If necessitarianism is thus trivialised, I think, we would better not take it.

References

- David Malet Armstrong, 1978a, *Nominalism & Realism: Universals and Scientific Realism, Volume I*, Cambridge: Cambridge University Press.
- David Malet Armstrong, 1978b, *A Theory of Universals: Universals and Scientific Realism, Volume II*, Cambridge: Cambridge University Press.
- David Malet Armstrong, 1980a, "Against 'Ostrich' Nominalism: A Reply to Michael Devitt", *Pacific Philosophical Quarterly* 61, pp. 440–449, reprinted in Mellor and Oliver (1997).
- David Malet Armstrong, 1980b, *The Nature of Mind, and other Essays*, St. Lucia, Queensland: Queens-

- land University Press.
- David Malet Armstrong, 1983, *What Is a Law of Nature*, (Cambridge Studies in Philosophy), Cambridge: Cambridge University Press.
- David Malet Armstrong, 1989a, *A Combinatorial Theory of Possibility*, Cambridge: Cambridge University Press.
- David Malet Armstrong, 1989b, *Universals: An Opiniated Introduction*, Boulder, Colorado: Westview Press.
- David Malet Armstrong, 1997, *A World of States of Affairs*, Cambridge: Cambridge University Press.
- David Malet Armstrong, 2002, "Truth and Truthmakers", in Richard Schantz (ed.) "What Is Truth?", pp. 27–37, Berlin: Walter de Gruyter.
- David Malet Armstrong, 2004a, *Truth and Truthmakers*, (Cambridge Studies in Philosophy), Cambridge: Cambridge University Press.
- David Malet Armstrong, 2004b, "Truthmakers for negative truths and truths of mere possibility", Talk presented at the Colloque International de Métaphysique – Vérités et Vérificateurs, 20 ans après – 9, 10 et 11 décembre 2004, Département de Philosophie, Aix-en-Provence.
- Donald L.M. Baxter, 2001, "Instantiation as Partial Identity", *Australasian Journal of Philosophy* 79(4), pp. 449–464.
- F.H. Bradley, 1893, *Appearance and Reality – A Metaphysical Essay*, Oxford: Clarendon Press, 2nd edition: Bradley (1930).
- F.H. Bradley, 1930, *Appearance and Reality – A Metaphysical Essay*, Oxford: Clarendon Press, 2nd edition.
- Keith Campbell, 1990, *Abstract Particulars*, Oxford: Basil Blackwell Publishers.
- Damian Cox, 1997, "The Trouble with Truth-Makers", *Pacific Philosophical Quarterly* 78(1), pp. 45–62.
- Michael Devitt, 1980, "'Ostrich Nominalism' or 'Mirage Realism'", *Pacific Philosophical Quarterly* 61, pp. 433–439, reprinted in Mellor and Oliver (1997).
- A.C. Ewing, 1934, *Idealism, A Critical Survey*, London: Methuen & Co.
- Peter Forrest and Drew Khlentzos, 2000, "Introduction: Truth Maker and Its Variants", *Logique et Analyse* 43(169–170), pp. 3–15.
- Herbert Hochberg, 1999, *Complexes and Consciousness*, Stockholm: Thales.
- David K. Lewis, 1983, "New Work for a Theory of Universals", *Australasian Journal of Philosophy* 61, pp. 343–377, reprinted in Lewis (1999: 8–55).
- David K. Lewis, 1986, *On the Plurality of Worlds*, Oxford: Basil Blackwell Publishers.
- David K. Lewis, 1999, *Papers in Metaphysics and Epistemology*, Cambridge: Cambridge University Press.
- David K. Lewis, 2001, "Truthmaking and Difference-Making", *Noûs* 35(4), pp. 602–615.
- Bernard Linsky, 1994, "Truth Makers for Modal Propositions", *The Monist* 77, pp. 192–206.
- David Hugh Mellor and Alex Oliver (eds.) 1997, *Properties*, Oxford: Oxford University Press.
- George Molnar, 2000, "Truthmakers for Negative Truths", *Australasian Journal of Philosophy* 78(1), pp. 72–86.
- George Edward Moore, 1919–1920, "External and Internal Relations", *Proceedings of the Aristotelian Society* 20, pp. 40–62, reprinted in Moore (1922: 253–275).
- George Edward Moore, 1922, *Philosophical Studies*, London: Routledge and Kegan Paul, Ltd.
- Kevin Mulligan, Peter M. Simons, and Barry Smith, 1984, "Truth-Makers", *Philosophy and Phenomenological Research* 44, pp. 287–321.
- Greg Restall, 1996, "Truthmakers, Entailment and Necessity", *Australasian Journal of Philosophy* 74(2),

pp. 331–340.

Barry Smith, 1999, “Truthmaker Realism”, *Australasian Journal of Philosophy* 77(3), pp. 274–291.

Donald Cary Williams, 1966, *Principles of Empirical Realism*, Springfield, Illinois: Charles C. Thomas.

Ludwig Wittgenstein, 1921, “Logisch-philosophische Abhandlung”, *Annalen der Natur- und Kunstphilosophie* 14, pp. 184–261, cited after Wittgenstein (1998).

Ludwig Wittgenstein, 1998, *Logisch-philosophische Abhandlung / Tractatus logico-philosophicus*, Frankfurt a.M.: Suhrkamp Verlag, critical ed. by Brian McGuinness and Joachim Schulte.