Truthmakers and dependence

David Liggins, University of Manchester, UK
david.liggins@manchester.ac.uk

This paper discusses the significance of non-causal dependence for truthmaker theory. After introducing truthmaker theory (section 1), I discuss a challenge to it levelled by Benjamin Schnieder. I argue that Schnieder’s challenge can be met once we acknowledge the existence of non-causal dependence and of explanations which rely on it (sections 2 to 5). I then mount my own argument against truthmaker theory, based on the notion of non-causal dependence (sections 6 and 7).

1 Some truthmaker theory

It’s true that Mulligan exists; that is, <Mulligan exists> (the proposition Mulligan exists) is true. Is there anything in virtue of which it is true? It is very natural to think that the proposition is true in virtue of Mulligan. Let us define the term truthmaker as follows: o is a truthmaker for P just in case P is true in virtue of o. Then Mulligan is a truthmaker for <Mulligan exists>; the proposition is made true by Mulligan. ‘In virtue of’ is an explanatory locution: we can explain why the proposition is true by pointing to the existence of Mulligan. Indeed, quite generally, if o is a truthmaker for P then P is true because o exists (MacBride 2005: 133, Horwich 2006).

Many philosophers will agree that true existential propositions, such as this one, have a truthmaker. But truthmaker theorists go further. Some of them (e.g. Armstrong 2004: 5) claim that every true proposition has a truthmaker; more cautious truthmaker theorists specify a class of true propositions, going beyond the existential truths, and claim that each of these truths has a truthmaker. For instance, Rodriguez-Pereyra (2006a: 979) maintains that each synthetic truth has a truthmaker: for each synthetic truth, there is some entity in virtue of which it is true.

1 Or, more strictly, is made true by some things collectively. For instance, Restall (1996: 332) suggests that three performances collectively make <Pärt’s Magnificat has had three performances> true, though none of the performances is a truthmaker for the proposition. In common with most writers on truthmaker theory, I will ignore this complication.
which claim that some non-existential truths have truthmakers and accept Necessitarianism. It is these theories which Schnieder (2006: 21–22) sets out to challenge.²

2 Schnieder on explanation

Schnieder’s challenge to truthmaker theory is based on some doctrines concerning explanation. According to Schnieder, there are two basic types of explanation: causal and conceptual. The term ‘causal explanation’ is a familiar one, and it applies to explanations such as:

(1) The tree fell because de Selby hit it with an axe.

Conceptual explanations include:

(2) Thorsten is Benjamin’s brother-in-law, because he is married to Benjamin’s sister.

and

(3) Xanthippe became a widow, because Socrates died.

(All the examples in this section are from Schnieder 2006 – though, to avoid imposture, I have changed ‘my’ to ‘Benjamin’s’. I retain Schnieder’s numbering.) Schnieder (2006: 32) says that conceptual explanations ‘are based on certain conceptual relations’. For instance, the concept brother-in-law can be analyzed as follows: \( x \) is \( y \)’s brother-in-law iff \( x \) is a man who is married to a sibling of \( y \) or a brother of \( y \)’s spouse: (2) trades on this analysis. Similarly, (3) trades on the obvious analysis of widow as woman whose husband has died. But not all conceptual explanations are quite like this, Schnieder (2006: 33) tells us:

(4) This vase is coloured because it is red

is a conceptual explanation, but the concept being coloured cannot be analyzed in terms of individual colours. Nevertheless, (4) trades on a conceptual connection: that everything red is coloured.

² Rodriguez-Pereyra 2006b provides a more detailed overview of truthmaker theory.
According to Schnieder (2006: 35), these are conceptual explanations.³

Schnieder introduces the notion of the most direct explanation of a phenomenon: \( q \) is the most direct explanation of why \( r \) iff there is no proposition \( q' \) such that both (i) \( r \) because \( q \) and (ii) \( q' \) because \( p \). Informally, ‘\( r \) because \( p' \)’ is the most direct explanation of why \( r \) iff it is not a telescoped version of some longer chain of explanations, such as ‘\( r \) because \( q \); \( q \) because \( p' \)’, or ‘\( r \) because \( q \); \( q \) because \( t \); \( t \) because \( p' \)’. For instance, (6) does not give the most direct explanation of why Xanthippe became a widow, since it can be expanded into the chain of explanations ‘Xanthippe became a widow, because Socrates died; Socrates died because Socrates drank the cup of hemlock’. It is plausible that the most direct explanation of why Xanthippe became a widow is that Socrates died, since it is hard to think of a sentence which could fill both blanks in the following to yield a pair of correct explanations:

Xanthippe became a widow because ________; ________ because Socrates died.⁴

Schnieder (2006: 38) argues that (9) gives the most direct explanation of why it is true that Thorsten is his brother-in-law:

Statement (9) hooks on the operator which governs the whole statement – the sentential operator ‘It is true that’. Any other explanation with this explanandum will relate to something inside the scope of this operator; this will make such an explanation less direct than (9) (this is equally true for causal explanations as for conceptual ones).

Similarly, he argues that any instance of

\((T)\) It is true that \( p \) because \( p \).

gives the most direct explanation of its explanandum.

³ See Künne (2003: 154–5) and Dodd (2007: 399–400) for similar claims.

⁴ ‘Xanthippe’s husband died’ is perhaps a suitable substitution (see Ruben 1990: 218–220 on ‘identity explanations’). If so, then ‘Xanthippe’s husband died’ will be the most direct explanation of why Xanthippe became a widow.
Nothing hangs on the particular choice of example here: we may go through the same argument whenever a trope is claimed to be the truthmaker of the proposition expressed by a true subject-predicate sentence. Moreover, we can also apply a parallel argument to theories which posit facts, rather than tropes, as truthmakers. If the fact that Socrates is pale makes \(<\text{Socrates is pale}>\) true, then that proposition is true because the fact exists. But that cannot be the most direct explanation of why the proposition is true, since (S-T) is the most direct explanation. The question then arises: is Socrates pale because the fact exists – or does the fact exist because Socrates is pale? The concept of the fact that Socrates is pale seems to be more complex than the concepts required to understand ‘Socrates is pale’, so (Schnieder argues) it is the second of these explanations that is correct. That is bad news for theorists of facts-as-truthmakers, since their theory implies the correctness of the first, and presumably they can’t both be correct.

In short: expressions picking out tropes and facts

are understood on the basis of our understanding the components of the atomic statements. But because of that, they cannot be invoked for a conceptual explanation which would have to hold for them to be truth-makers. (Schnieder 2006: 41)

At one point, Schnieder (2006: 39) claims to have established that truthmaker theories stem from a ‘capital philosophical mistake’. But right at the end of his article, he concedes that his argument can be seen as a twofold challenge to truthmaker theory:

Given that my analysis of truth-making is correct, [truthmaker] theorists can be required to tell us firstly what explanatory relation could justify the truth of the explanations they need for their theory to work, explanations such as (S-1). And secondly they should either undermine the conceptual explanation I tried to establish with respect to (S-2), or explain how it can be that in this special case, we have an explanation running in both directions. (Schnieder 2006: 42)

One way to respond to these challenges would be to dispute their legitimacy. For instance, one might argue that the first challenge is illegitimate on the ground that one can be confident that something is an explanation without being able to classify it. (One can recognise a tree
These are clearly non-causal. Neither are they conceptual (pace Thomasson 2006): for instance, it is not analytic that if there are things arranged tablewise, they constitute a table (see Sider 2009: section 4). And it is hard to see them as hybrid: what could the intermediate explanations be? Thus there seem to be at least three explanations which escape Schnieder’s taxonomy.

It should come as no surprise that there are such explanations: their existence is implied by some plausible theses which I will now set out.

Kim (1994: 68) put forward the idea that explanations often track instances of dependence (see also Ruben 1990: chapter VII). For instance, when a causal explanation of the form ‘E occurred because F occurred’ is correct, that is because F stands in the causal relation to E. The causal explanation is underpinned by an instance of causal dependence.

It is plausible that there is also non-causal dependence. For instance, it is commonly supposed that many of the properties of wholes depend on the properties of their parts, that the values of things depend on their non-evaluative features, and that the possession of higher-level properties depends on the possession of lower-level properties which realize them.

Regarding (a), Mackie (1977: 41) asked: ‘[J]ust what in the world is signified by this “because”?’ This question led to a rich debate concerning supervenience. But Mackie’s question was about dependence – which is not the same thing as supervenience. To see this, note that necessities supervene upon everything, but they do not depend on everything. The existence of Socrates supervenes on the existence of his singleton set, but does not depend on it: plausibly, the dependence runs the other way (see Fine 1995: 271). Philosophers have discussed supervenience extensively in the last forty years or so, whereas non-causal forms of dependence are just beginning to receive thorough investigation.

The non-causal dependence connected with realization, constitution, and value underwrites explanations such as (a), (b), and (c). These explanations are clearly non-causal; it is no surprise that non-causal dependence does not underwrite causal explanation. But are they conceptual, in the sense of that term I introduced above? It is not plausible to think so. If these explanations were conceptual, then what depends on what would be mirrored in the complexity of the concepts we use to think about these things; sentences reporting dependent phenomena would involve more complex concepts than those reporting the things on which they depend. But there is no obvious reason to expect this. Indeed, there seem to be cases where this mirroring does not obtain: the concept arranged tablewise can be analyzed into table and other concepts (see van Inwagen 1990: 109).
Every woman whose husband has died is a widow. Therefore, Xanthippe became a widow.

We can explain why one might be tempted to mis-classify (2) and (3) as explanations by acknowledging that ‘because’ does often signal the presence of an explanation. And we can go further. Consider the following pair of arguments:

Thorsten is married to Benjamin’s sister. For all \(x\) and \(y\), if \(x\) is a man who is married to \(y\)’s sister, then ‘is the brother-in-law of’ applies to \(x\) and \(y\) (in that order). Therefore, ‘is the brother-in-law of’ applies to Thorsten and Benjamin (in that order).

Xanthippe was married to Socrates. Socrates died. ‘Is a widow’ applies to a woman just in case her husband has died. Therefore, ‘is a widow’ applies to Xanthippe.

I take it that the premises of these arguments explain their conclusions. Quite generally, we can explain why certain things satisfy a predicate by citing its application conditions; these two arguments are examples. They can be summarized as follows:

(2′) ‘Is the brother-in-law of’ applies to Thorsten and Benjamin (in that order) because Thorsten is married to Benjamin’s sister.

(3′) ‘Is a widow’ applies to Xanthippe because Socrates died.

We can explain why one might be tempted to class (2) and (3) as explanations by mentioning the danger of confusing them with genuine explanations which are closely similar, namely (2′) and (3′).

So far in this section, I have concentrated on two of Schnieder’s examples of conceptual explanations. I counsel truthmaker theorists to say corresponding things about (S-2): it seems
The root of the idea of truthmakers is the very plausible and compelling idea that the truth of a proposition is a function of, or is determined by, reality. ... In other words, truth is not primitive. If a certain proposition is true, then it owes its truth to something else: its truth is not a primitive, brute, ultimate fact. (2005: 21)

In order to capture this dependence, truthmaker theorists invoke the relation of grounding, a dependence relation which truthmakers bear to propositions (Armstrong 1997: 128–131; Rodriguez-Pereyra 2005: 26–27). This relation is non-causal (Armstrong 2004: 5). It is cross-categorial, in that it relates propositions to non-propositions. (It may sometimes relate a proposition to a proposition: for example, perhaps every proposition is a ground of <There is a proposition>.) According to Necessitarian versions of truthmaker theory, grounding is related to entailment as follows: if o grounds <p>, then <o exists> entails that <p> is true.

We saw in section 1 the following principle fails:

o is a truthmaker for a truth P if and only if the proposition that o exists entails that P is true.

Since truthmaking concerns the non-causal dependence of truth on reality, the failure of this principle should come as no surprise: it is just a special case of the thesis that non-causal dependence cannot be captured in modal terms (see Fine 1995: 270–2, Leuenberger 2008: 755–8).

According to truthmaker theorists who regard tropes as truthmakers,

(S) It is true that Socrates is pale because Socrates’ paleness exists.

Corresponding to this, these truthmaker theorists claim that the trope Socrates’ paleness grounds <Socrates is pale>. The explanation is underpinned by this instance of non-causal dependence. Likewise, truthmaker theorists who posit facts will claim:

<Socrates is pale> is true because the fact that Socrates is pale exists.

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Horwich (2008: 262) suggests that truthmaker theory is not about truth: truthmaker theorists use the truth-predicate merely to articulate generalizations which are not about truth. In the light of their motivation, the suggestion is implausible.
its being the case that Socrates exists’ and ‘The fact that Socrates exists makes it the case that [Socrates] exists.’ And these sentences, the theory maintains, require only fact–fact dependence. Apparent counter-examples to the theory are thus paraphrased away. The theory resembles accounts of causal dependence which claim that causal relata always belong to some particular category (such as the category event) and that sentences which apparently report causation of or by things outside that category are misleading and do not genuinely do so.

The fact–fact theory seems to have no problem accommodating the dependence of truth on reality. Take an instance of (T):

(S-T) It is true that Socrates is pale because Socrates is pale.

The fact theory accounts for the correctness of this explanation by positing two facts: the fact that <Socrates is pale> is true, and the fact that Socrates is pale. On this account, the former obtains in virtue of the latter; no dependence relation borne by a proposition is involved. Indeed, it is very natural to spell out the dependence of truth on reality by using fact-talk: see the quotation from Rodriguez-Pereyra above.

Let me bring onto the stage another general account of non-causal dependence: the operator theory. This account is suggested by some remarks of Kit Fine’s. In his 2001, Fine generally talks of dependence as a relation between true propositions. But he suggests (16) that we could use a sentential operator to express grounding claims. He claims that this ‘shows that there is no need to suppose that a ground is some fact or entity in the world’. I doubt that Fine regards the availability of this way of expressing dependence claims as establishing that dependence is not a relation, or group of relations: rather, the point is that the assumption that dependence should be accounted for in relational terms stands in need of justification. The operator theory asserts that dependence claims should be understood as involving sentential operators, and denies that there is any relation of non-causal dependence. It thus resembles the account of conjunctive sentences which says that they can often be true even though ‘and’ does not pick out any relation.7

The operator theory seems to be able to accommodate the dependence of truth on reality. Those who endorse it need not deny (S-T); and they will challenge their opponents to show that (S-T) requires for its truth the obtaining of any non-causal dependence relation.

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7 See Melia 2005 for a related account of truthmaking.
The problem with this account of non-causal dependence is that there are plenty of plausible cases it cannot accommodate. Consider

{Socrates} depends on Socrates.
There is a singleton set in virtue of the existence of Socrates.
Grass is not red, in virtue of grass being green.
Every particle that is among some particles arranged tablewise is part of a table, because every group of particles arranged tablewise constitutes a table.
Necessarily, water contains hydrogen, in virtue of the essence of water.
Kasparov and Karpov cannot both win, owing to the laws of chess.
Birds are able to fly, thanks to their having wings.
If this stone were to be dropped, it would fall, owing to the direction of the gravitational field.

It is most unlikely that all these cases can be stated using ‘x is made F by o’ — whereas the fact–fact theory and the operator theory have no problems in accommodating them. The moral is that there is more to non-causal dependence than making. Truthmaker theory is thus a poor model for accounts of non-causal dependence.

Moreover, there is a methodological error in beginning with truthmaker theory and then seeking to extrapolate an account of non-causal dependence from it. As we have seen, there are lots of plausible instances of non-causal dependence which do not involve the truth of a proposition depending on some entity. When investigating the metaphysics of non-causal dependence, we should bear all these phenomena in mind and hunt for an attractive theory which does justice to as many of them as possible. This is not to say that metaphysicians of non-causal dependence must consider all the putative examples (or types of examples) of the phenomenon from the outset of their inquiry. That approach threatens an unmanageable overload, so it may be preferable to start off with a case study and then proceed to a general theory of non-causal dependence. But then the case study may have to be rethought once further data is brought into consideration. Any results based on a subset of the available evidence must be regarded as provisional. (For a parallel, consider a philosopher of causation who began by arguing for a metaphysics of the causation of bodily movements and then sought to extend this account to other cases of causation. It would be reasonable to doubt that this procedure would
non-existence of the truthmaker theorist’s grounding relation, and thus that this predicate will not pick out that relation.

8 Conclusion
I have argued that Schnieder’s challenge to truthmaker theory can be met once we acknowledge the existence of non-causal dependence and of explanations which appeal to it. But non-causal dependence is at present only dimly understood. In particular, its metaphysics is unsettled. It remains to be seen whether truthmaker theorists’ claims about grounding can be integrated into an attractive general theory of the metaphysics of non-causal dependence. In the second half of this paper, I have argued that the prospects for such an integration are dim. We should acknowledge truth’s dependence on reality without claiming that any relation of dependence is borne to propositions.10

Works cited

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