Truth-Making *without* Truth-Makers

Benjamin Schnieder

Synthese **152** (2006), 21–47.

(9.576 words, including notes & bibliography)

Abstract:

The article is primarily concerned with the notion of a *truth-maker*. An explication for this notion is offered, which relates it to other notions of making something *such-and-such*. In particular, it is shown that the notion of a truth-maker is a close relative of a concept employed by van Inwagen in the formulation of his *Consequence Argument*. This circumstance helps understanding the general mechanisms of the concepts involved. Thus, a schematic explication of a whole battery of related notions is offered. It is based on an explanatory notion, introduced by the sentential "because", whose function is examined in some detail.
Finally, on the basis of the explication proposed, an argument is developed to the effect that the objects usually regarded as truth-makers are not apt to play this role.

Structure:

Introduction

The primary topic of this article are theories of truth-maker (for short: TM-theories). My main contention is that their central notion, i.e. in the notion of a truth-maker, is still in need of clarification, and that once we understand the notion properly, we shall see that the entities usually regarded as truth-makers cannot fulfil the intended job.

My argument to this latter claim will be proposed in the final section 5 of the paper. Before that, I set out to put the notion of a truth-maker in perspective, by locating its place in a conceptual network of related notions (section 1 and 2) that demand for a uniform account; I present such an account in section 3. My account involves an explanatory notion introduced by the sentential connective "because". I examine the relevant usage of this connective in section 4.

1. Three Related Notions

a. *Truth-makers*

There is, some philosophers tell us, a certain important relation which can hold between objects of various sorts (facts, individual moments, sometimes substances) and truths. To be what they are, i.e. to be true, these philosophers urge, truths need the assistance of *truth-makers*. Truth-makers do truths the favour of *making* them *true*. The objects which are usually taken to play the role of truth-makers fall in either of two categories: that of individual moments (comprising particularised properties like Socrates' paleness, and events, like Little Voice's singing), or that of facts.[1] There could also be truth-makers of a different category; in particular, TM-theories may employ a categorically inhomogeneous stock of truth-makers, because certain essential predications about objects might be made true by the objects themselves (thus, for example, by substances) rather than by certain aspects of them.[2] Nevertheless, individual moments or facts are essential ingredients of almost every TM-theory, without

[1] Individual moments have been called a variety of names; nowadays the title "trope" may be most widespread. For a short survey of alternative titles (and those who use them) see Mulligan *et al.* (1984: 292f.).
[2] Cp. Mulligan *et al*. (1984: 300f.).

which the theory would collapse (losing them as truth-makers would deprive most contingent atomic statements of their truth-makers).

For sake of simplicity, I shall most of the time concentrate on the first of these potential classes of truth-makers, though what I have to say applies to the second class as well.

b. *An Idiom of Ordinary Language*

TM-theorists usually endorse the transition from statements involving the technical noun "truth-maker" to those that involve an inflection of the verbal phrase "to make something true". Now, undoubtedly, many statements that TM-theorists are willing to formulate (and assert) in this latter jargon sound rather bizarre to laymen's ears. That Jean's singing makes it true that she is singing, that the apple's redness makes it true that the apple is red, or that Jean makes it true that she is human are linguistic oddities by any ordinary standards.

But nevertheless there are similar statements which sound rather familiar if uttered in ordinary contexts. We sometimes say that this or that *made* our dreams, hopes, predictions, or deepest fears *come true*. This is perfect idiomatic English, which Joseph Conrad exemplified in his *Lord Jim*:

> "And do you know how many opportunities I let escape; how many dreams I had lost that had come in my way?" He shook his head regretfully. "It seems to me that some would have been very fine – if I had made them come true."

And it is admissible to omit the "come" in the idiom. Oscar Wilde, for instance, let his character Dorian Gray ask himself:

> Was there some subtle affinity between the chemical atoms that shaped themselves into form and colour on the canvas and the soul that was within him? Could it be that what that soul thought, they realized? -- that what it dreamed, they made true? (*The Picture of Dorian Gray*)

From both literary examples we see that the objects to which we commonly ascribe the (enacted) power of making something true may well be substances, and in particular *agents*. They can, however, also be of the sort that TM-theorists favour as truth-makers, they can be events or particularised qualities. To wit, a wedding may make a dream come true, and a particular smile on the beloved's face could equally do the job.

c. *The Ability to Render Something True*

Interestingly, a close relative of both aforementioned notions has been pivotal to a different philosophical debate of recent interest: for the precise formulation of his *Consequence Argument*, van Inwagen introduced the notion of *an agent's being able to render something false*.[3] It has some intuitive content to grasp; translating usual talk about abilities into this idiom is fairly easy (if, for example, Jean has the ability to sing, she can render it false that she is not singing).

On the face of it, van Inwagen's notion resembles both the notion of a truth-maker and the ordinary idiom of *someone making something true*. Although it resembles the latter even more closely than the former, it differs from it in some aspects: *firstly* there is the quaint touch of van Inwagen's "render" – which is but an insignificant difference in style. *Secondly*, talk about truth is replaced with talk about falsity. But truth and falsity are two sides of one coin; accordingly, whatever we say about the notion of making something *true* should have a strict counterpart with respect to the notion of making something *false*. So, this second difference proves to be of little significance as well. *Thirdly*, and more importantly, we have the component phrase "is able to". Van Inwagen introduced his notion as a way of describing agents' *powers* or *abilities*. Now it is important to see that the whole phrase quite obviously follows some compositional semantic rules. It is the "is able to" part which makes the phrase a description of an ability, whereas the "render *y* true" part specifies a kind of *action* – namely the kind of action, which the ability allows the agent to commit. While many reactions on the *Consequence Argument* focus on van Inwagen's notion, offering explications of it, the compositional structure of the notion is usually ignored. This ignorance becomes visible by the fact that explications of the notion are addressed at the whole phrase only. No attempts are made to lay open its internal structure. Perhaps this does no harm to the discussion of the argument; but it is methodologically dubious to a certain degree. And it may have made people overlook that van Inwagen's phrase is built up from two more ordinary parts in a way which secures compositional understanding based on the understanding of the parts.

[3] Van Inwagen (1975: 189f.).

2. Structural Analogies Between Standard Approaches to the Notions

Both philosophical notions I introduced above demand of an analysis. Standard attempts at such analyses are formulated in *modal* terms. In what follows, I will briefly address some prominent accounts of both notions and show that they are contaminated with two kinds of problem.

I should make a cautionary note in advance; the problems I will introduce do not arise if one takes the notions simply as technical terms meaning exactly the same as the purported explications. However, such a stance does not reflect how philosophers actually argue in both of the two debates (about truth-makers and the ability to render something true). The problems I discuss have been acknowledged by philosophers who employ these notions. These philosophers obviously do not take the notions to be introduced by mere stipulation, but based on certain intuitions against which any alleged explication should be tested. These intuitions, I take it, derive straightforwardly from our understanding of the idiom "make something true", as employed in ordinary parlour.

a. *The Ability to Render Something False*

As I said before, several philosophers have tried to elucidate van Inwagen's notion. The attempts on offer fail to capture its intuitive content, though, because of two problems: most of them attest both *too little power* over truth to agents and at the same time *too much power* over truth. *Too little power*, that is to say there are propositions which, intuitively, can be made true by agents, while the available explications of van Inwagen's notion cannot account for this. *Too much power*, i.e. there are other propositions which, intuitively, are out of agents' reach to affect, while by the standards of some given explication they can be rendered true (or false).

Let me illustrate this by two representative attempts to analyse the notion.[4] David Lewis proposed the following explication:[5]

[4] Alternative explications (which suffer from analogous problems) are for example offered in Fischer (1983), (1986), and Horgan (1985).
[5] Cf. Lewis (1981: 297). Lewis also offers a second explication which I will not discuss for reasons of space.

(Lewis) *x* can render p false $\leftrightarrow_{df.}$

x can act somehow such that, if *x* did it, then either *x*'s action or one of its effects would have been such that, necessarily, if it occurs, then *p* is false.

This explication attests agents some of the powers that they in fact have; if, for instance, someone can raise his hand, then she can render it false that her hands stays motionless by the standards of (Lewis). But there are other powers which it fails to account for. The following case was made against (Lewis) by van Inwagen:[6] imagine that Quinlan, pointing his gun at Vargas, utters "You will not survive this night, Vargas!" Fortunately for Vargas, though, before Quinlan can pull his trigger he is shot by his colleague Menzies. Since nobody else is interested in inflicting some harm upon Vargas that night, it is true that

(Q) Quinlan's last words were mistaken.

Now whoever had it within his powers to kill Vargas that night, had it within his powers to render (Q) false. But this power cannot be accounted for by (Lewis) – neither the action of killing Vargas, nor any of its effects necessitate that (Q) is false. This is because Quinlan's choice of his last words is not (metaphysically) necessitated, and he could have uttered something completely different right before he died, as for example "2=4".

Van Inwagen reacted to this observation by proposing the following explication:[7]

(Inwagen) *x* can render *p* false $\leftrightarrow_{df.}$

x can act somehow, such that, necessarily: if *x* does it, and the past does not differ from the actual past, then *p* is false.

His proposal succeeds to manage cases like the dying Quinlan because of the clause which fixes the past. However, this move has an obvious drawback. According to (Inwagen), I can render any falsehood about the past false, as for instance

(Col) Columbus never travelled to America.

Surprisingly, I can do it by raising my hand: necessarily, if I raise my hand and the past does not differ from the actual past, then (Col) is false. But this result is

[6] I slightly modified van Inwagen's example; cp. van Inwagen (1983: 67f.) and Horgan (1985: 345ff.).
[7] Van Inwagen (1983: 68).

unacceptable; none of my potential actions have anything to do with the falsity of (Col).

So the two proposals (Lewis) and (Inwagen) illustrate how attempts of explicating our notion have to steer a narrow path between two equally pressing problems; we have seen how (Lewis) is infected by the problem of *too little power*, while the reaction of van Inwagen drove him right into the problem of *too much power.*

b. *Truth-makers as Necessitators*

We encounter two structurally equivalent problems in the debate of TM-theories: the problem of *missing truth-makers* on the one hand, and the problem of *unwelcome truth-makers* on the other. Let us take a look at the somewhat classic equation of truth-making and necessitation:[8]

(TM-Nec) x is a truth-maker of $p \leftrightarrow_{df.}$ x necessitates that p is true.

Quinlan's prophecy illustrates the problem of *missing truth-makers*. If someone had shot Vargas shortly after Quinlan's death, it would have been contingently true that:

(Q*) Quinlan's last words were correct.

TM-theorists usually hold that at least ordinary contingent truths should have truth-makers. But what could a truth-maker for (Q*) be? His shooting, we might think, would be a good candidate. But surely the shooting would not have *necessitated* (Q*) (for the reason given above; it is contingent what Quinlan uttered before he died), and it is disqualified as a truth-maker by (TM-Nec). Notice that this is a well-known problem in some disguise, the problem of finding truth-makers for negative existential statements. Statements that involve definite descriptions inherit this problem, because the use of definite descriptions presupposes the truth of some negative existentials.

The converse problem of the *unwelcome truth-makers* is generated by necessary connections holding between the existence of some entities and certain other entities. Let us assume that

(J) Anna is singing.

[8] Cf. Fox (1987: 189). Bigelow sympathises with this account (1988: 125), but vaguely hedges it when he says that a truth-maker of p is something whose existence entails p *in an appropriate way* (op. cit.). The hedging remark points to the problem, but falls off short of offering any constructive solution.

What should qualify as a truth-maker of (J) is Anna's singing. But if truth-making is nothing but necessitation, there are apparently other truth-makers as well: for example (i) my perception of her singing, (ii) my knowledge that Anna is singing, (iii) the beauty of her singing, (iv) the singleton of her singing, and others.[9] Because of such entities, which are necessitators of a statement but disqualify as truth-makers of it, one should not identify truth-making with necessitation. (That the cited cases really necessitate (J) of course hinges on different, more or less controversial theses; I do not intend to defend any particular of them here.[10])

The *problem of unwelcome truth-makers* as well as the problem of *too much power* also come up once we consider *necessary* truths and falsities. Take the latter problem first; both explications presented above (Lewis' and van Inwagen's) imply that everybody who is not wholly deprived of his powers to act can render true any necessary truth whatsoever: let *p* be a necessary truth. Now however anybody acts, if she does it, then necessarily *p* is true. So if someone is able to act at all, she is able to render *p* true by the standards of the above accounts (parallel remarks apply to the necessary falsities and the ability to render them false). Similarly, if truth-making were none but necessitation every old object would qualify as a truth-maker of any necessary truth, a consequence incompatible with the intuitions mobilised by TM-theorists.[11]

c. *An Intermediate Result*

It appears to be some sort of an accident now that the two notions of a *truth-maker* and *an agent's being able to render something false* (true) have led an unconnected existence so far. Their resemblance is not just a superficial one, not a mere resemblance in words. In trying to explicate the two notions we

---

[9] Smith (1999: 278) offers two similar examples of unwelcome truth-makers; one involves God's verdicts, the other second-order tropes.

[10] Let me briefly mention the relevant theses and cite some authorities holding them: (i) Perception is an informational state individuated via its causal origin (cp. Evans 1982: 122–129). (ii) Knowledge is a factive state (Williamson 2000: ch. 2) and no particular piece of knowledge could have been a mere belief (notice that Williamson hesitates to apply his thesis to *token* states because of some general worries about the idea of such entities; op. cit. 40). (iii) Tropes are dependent upon their bearers (cp. Mulligan *et. al.* 1984 : 294). (iv) Given a contingent existent *x*, singleton $\{x\}$ exists contingently as well (cp. Fine 1995: 271f.).

[11] Contrary to the cases discussed before, the problem of *unwelcome truth-makers* is widely acknowledged when it comes to necessary truths; see for instance Restall (1996: 334), Rodriguez-Pereyra (2000: 262), and Williamson (1999: 254).

encounter structurally equivalent problems. This makes it more than likely that, though obviously not identical, the notions are intimate relatives and probably share some common conceptual core. Bringing the two debates together should deepen our understanding of the conceptual resources involved here, resources which are accessible to ordinary speakers and still in want of an explication. The burden of the following section will be to provide such explications and to specify exactly the relation between the different notions discussed.

3. An Analysis of Some Related Notions of Making Something True

a. The Proposal for (the Ability of) Rendering Something True

I shall now propound an explication of van Inwagen's notion, which is immune against the discussed problems. Because of the structural similarities of the problems encountered by explications of the notion of a truth-maker, we may expect that what proves to be a remedy in the one case will be no less efficient in the other (see subsection c.).

The *proton pseudos* of the available explications, I hold, is the implicit contention that we should in the end rely on modal notions for our analysis. This attitude can perhaps best be understood before the background of the immense interest and developments in modal logics during the last decades. But modal notions, this is the lesson of the problems encountered, cannot pick out the right conditions of relevancy in which an agent (or her action) must stand to a truth if she is to be responsible for the truth's being true – if she is to render it a truth. And a better approach is easily found; someone counts, intuitively, only as rendering some proposition *p* true, if *p* is true *because of* some of the agent's conduct. I propose to take this as the analysis wanted:[12]

(TM) *x* renders *p* true $\leftrightarrow_{df.}$ *x* acts somehow, such that because *x* does it, *p* is true.

[12] I proposed this analysis in my (2004a) and (2004b). In the former of these papers I also show how this analysis bears upon van Inwagen's *Consequence Argument*.

The longer notion featuring in van Inwagen's argument is straightforwardly composed from this specification of a kind of action together with the general notion of an ability:[13]

(PTM) *x* can render *p* true $\leftrightarrow_{df.}$ *x* can act somehow, such that because *x* does it, *p* is true.

Let us see how this analysis fares with the abovementioned problems. Does it attribute *too little power* to agents? At least not to potential murderers of Vargas. If someone, let us call him *Mr. X*, had murdered Vargas in the night of Quinlan's death, then Quinlan's last words would not have been mistaken (in other words, (Q) would have been false). But there is more to be said: Quinlan's last words would have been right, *because* Mr. X had murdered Vargas. So by the standards of (PTM), everybody who was able to murder Vargas in that particular night, was able to render (Q) false, just as desired. But maybe, the account is prone to the problem of *too much power*? At least not due to the cases mentioned above; whatever I could do today, will not be such that because I do it, some historical falsities are false (or some historical truths true). Furthermore, none that I could do is such that, because I do it, the sum of the angles of a triangle equals 180 degree (here you could substitute any mathematical truth whatsoever). So it seems, (TM) and (PTM) deliver the goods.

b. A Generalisation of the Proposal

Above, I have drawn attention to the semantic complexity of the notion "*x* is able to render *p* true" and I already separated one of its components, the "is able to". A short reflection tells us that the remaining "to render something true" still exhibits some interesting complexity, for we often say of some people that they render (or make) other things *such and such* – and most often it is not truth, which they bestow upon other things. We can make things or persons happy, famous, hot, sick, etc. Now the idea behind (TM) gives rise to a general account of a whole variety of notions of making something *such-and-such*:

[13] Though the surface form of "*x* can render *p* true" suggests that the "can" has the widest scope and rules the rest of the expression, on my analysis the quantifying phrase has widest scope, which results from ascribing an implicitly quantificational form to the phrase "*x* renders *p* true". The compositionality of the longer phrase is not endangered, however. It is built up from its components in the same way as "*x* can dance a kind of Tango" is built up from "can" and "*x* dances a kind of Tango".

(M) *x* makes *y F* $\leftrightarrow_{df.}$ *x* acts somehow, such that because *x* does it, *y* is *F*.

Rendering (or making) something such-and-such *by acting* is, however, only a special case of rendering something such-and-such. In a broad sense of "do", many inanimate objects often do something (they break windows, they lie around, they fall down, they give us a bad stomach etc.), and also many things that agents do are not actions of them (they lie around, they fall down etc.). So we reach a broader concept of rendering something such-and-such if we substitute a "does something" for the "acts somehow":

(TM*) *x* makes *p* true $\leftrightarrow_{df.}$ *x* does something, such that because *x* does it, *p* is true.

Finally, since the "do something", which has a quantificational function here, tends to stand only for *verbs* (and only for verbs of some particular sort), one could arguably expand the notion yet further, by substituting a "does or is" for the "does". An author may be made famous by his widely illegible compositions. Then he will not be famous, because of something that his texts *do* (on a natural reading of "do"), but rather because of something that they *are*; to wit, *widely illegible*. Using the symbolic "$\exists F.\ F(x)$" as an abbreviation of "there is something which *x* is or does", we can get the following more general scheme of which (M) is a slightly restricted version:[14]

(M*) *x* makes *y F* $\leftrightarrow_{df.}$ $\exists G$ (*y* is *F* because $G(x)$).

c. The Application to Truth-makers

Now for the notion of a truth-maker. One thing is clear from nearly every exposition and defence of TM-theories: what should be relevant to some thing's being a truth-maker of a given proposition, is the thing's *existence*.

What remains at stake is how to spell out the relation between a thing's existence and a proposition's truth which justifies calling the thing a truth-maker of the proposition. And the accounts of this relation are typically based on modal notions.[15] From what I have said above, my view on this should be

[14] This reading of "$\exists F\ (Fx)$" was suggested by Prior (1970: 36). Like Prior, I sympathise with an *innocuous* interpretation of non-nominal quantifiers, such as "something", standing in the position of a general term. That is, I take them to be *neither* objectual nor substitutional (for a detailed defence of this position see Rayo/Yablo 2001). However, nothing in the present context particularly hinges on this view.

[15] So is the classic equation of truth-making and necessitation, and also the refinement proposed by Smith (1999: 282).

clear: to seek for a modal explication is to go on an aberrant cause. What is needed is the explanatory notion introduced by "because"; a straightforward account is the result:

(TM) *x* is a truth-maker of $p \leftrightarrow_{\text{df.}} p$ is true, because *x* exists.

The problems of *unwelcome* or *missing truth-makers* are overcome, once we accept (TM). While my knowledge that Anna is singing may necessitate that she is singing, it is certainly not true that she is singing *because* I know she is. Similarly, it is not because the beauty of her singing exists that it is true that she is singing, nor because the singleton of her singing exists, etc. We also get the right result in the case of necessary truths, since it is not because Anna's singing exists that 2 plus 2 equals 4 and so on. Finally, it *is* because the murder of Vargas takes place (exists) that Quinlan's last words are correct.

Incidentally, proponents of TM-theories often use formulations which come very close to my proposal in their *informal* characterisations of truth-making. A truth-maker, it is often said, is that *in virtue of* which a truth is true – but the phrase "in virtue of" seems to be simply a variant of the idiom "*because* of".[16] So if I am right, these TM-theorists are blind to what they have got before them. They had reached their goal before they even consciously started.[17]

[16] Such characterisations can be found, for example, in Armstrong (1997: 88), Bigelow (1988: 125), Mulligan *et. al.* (1984: 287), and Simons (1992: 159).

[17] Rodriguez-Pereyra's proposal (2002: 34f.) for defining a truth-maker in terms of the idiom 'in virtue of" is similar to mine. However, he neither relates the analysis to other notions of making, nor does he explain the use of 'in virtue of".

4. The connective "because"

a. Causal and Non-Causal Explanations

One might object to my analysis because of its employment of an obscure term, the sentential connective "because". One should not do so, I maintain. At least, no competent user of the connective "because" should do it. Of course one might find an inquiry into the conceptual content of this connective wanting and useful. But one should not, at the outset of such an enquiry, condemn the use of the word as long as no proper analysis has been found. After all, philosophers made use of modal notions long before the heyday of modal logics, and even now disputes about such notions still continue. Furthermore, one should allow for the possibility that "because" is a *primitive* operator whose conceptual content does not allow for any reductive analysis. Indeed, I reckon that this is the case (though I cannot prove it – it is rarely possible to literally *prove* the primitiveness of a notion). But primitiveness of a notion only debars it from enjoying some kind of explicit analysis – still it might be illuminated by pointing out conceptual connections, implications, etc. I shall now try to shed some light on the notion of *because*.

By using the connective "because" we enter the field of *explanation*. Now there are some very general distinctions to make between different notions of explanation. By an explanation we may understand an *act* of explaining or rather a piece of information possibly conveyed in such an act.[18] I shall stick with the latter meaning of the word here and furthermore equate information in the relevant sense with propositions. Linguistic vehicles which express such propositions are in particular sentences of the form "*p* because *q*". (Of course, these are not the *only* linguistic forms of explanation; we have a whole battery of expressions introducing explanatory contexts. The idioms "in virtue of", "by", "constitute", "is the ground of / is grounded in" are, for instance, often used for this purpose.) I shall call the propositions expressed by the sentential component "*p*" of such a sentence the *explanandum* and the component "*q*" the *explanans*, and say that the latter *explains* the former. An explanation then is a complex proposition in which one propositional component *correctly* explains another. One could be less restrictive and lend the title of an explanation to all propositions in which one propositional component *purportedly* explains another – irrespective of whether it correctly does so or not. My more restrictive

[18] Cp. Bromberger (1968: 104).

use is only a matter of terminological choice. Notice that the notion of an explanation thus outlined still allows for several explanations with the same *explanandum*, since explanations may well be partial (I shall come back to this later). But I presuppose that it is an objective matter whether a proposition explains another (a presumption I cannot defend here in detail).[19]

Finally, I shall expand my usage of "explanation", "explanans", etc. slightly, such as to cover not only the propositions expressed by such sentences, but sometimes the sentences themselves.

Among objective explanations we may now distinguish two basic types. First of all, there are causal explanations, such as

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

However, it is important to notice that not all explanation is causal. Indeed, the bulk of explanations given in philosophy and mathematics is of a different type. Let us take a look at some very simple examples here (which are, in itself, not of any particularly philosophical – let alone mathematical – interest):[20]

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

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

(4) This vase is coloured because it is red.

These explanations can all be called *conceptual*. They are based on certain conceptual relations which they in turn illuminate. Such relations can be of different character, as a brief run through the examples will show (for reasons of space I must limit myself to some hints). In (2) and (3), the explanation settles on the appropriate conceptual analyses of the *explananda's* central notions, the concept of a brother-in-law and the concept of a widow. By a brother-in-law of someone, we just mean the husband of a sister of this person, and by a widow

[19] Sometimes it is said that a proposition is (or is not) an explanation only *relative* to some background theory. This thesis allows for a weak reading which is compatible with everything I say, and for a strong one which I deny. The weak reading is that the question of the truth of some competing theories (about a given subject) will have consequences about which propositions (about that subject) are explanations of which propositions. Since, however, I take truth to be an objective and non-relational notion, this thesis does not result in a subjective or relational notion of an explanation. The stronger reading would hold that there are no facts of the matter whether something explains another thing, presumably because there are no facts of the matter about the correctness of theories. I reject this view.

[20] Jaegwon Kim (1973, 1974) has influentially drawn attention to examples of such kind.

we just mean a woman whose husband has died. But in the case of (4) a different mechanism is at work; we cannot analyse the concept expressed by the general term "colour" in terms of concepts of individual colours like red, yellow, blue etc.[21] Nevertheless, it is a conceptual truth that red, blue etc. are colours. And furthermore mastery of the concept expressed by "colour" requires a thinker to master at least *some* colour concepts and to know that these concepts stand for colours. Another example of a conceptual explanation not (at least not solely) based on conceptual analysis might be

(5) There cannot be any round squares, because the concept of a round square is contradictory.

An important feature of explanation is its internal *order*; explanations are in general asymmetric. The factors which determine the correct direction of an explanation will be different with causal and in conceptual explanations: in the first case the order of explanation is ruled by the order of the causal relation itself (which again might be in some ways connected to the order of time). The direction of conceptual explanations seems to be owed to factors of conceptual complexity and primitiveness; in general, statements involving complex or elaborated concepts are explained in recourse to more primitive concepts (which may or may not enter into an analysis of the complex concepts).

Notice that an explanation may involve both conceptual and causal components at the same time, as for example

(6) Xanthippe became a widow, because Socrates drank the cup of hemlock.

The truth of (6) is grounded in the truth of the following chain of explanations (and the fact that "because" is, by and large, a transitive connector):

(7) Xanthippe became a widow, because Socrates died. Socrates died, because he drank the cup of hemlock.

The first explanation in (7) is conceptual, while the second is causal.

Let me finish this section with some brief reflections on the connections between explanations and certain corresponding modal statements. An explanation of the form "*p* because *q*" does not seem to be totally independent of the corresponding strict conditional "necessarily, if *q* then *p*" on the one hand, and the corresponding counterfactual "$\neg q \mathrel{\Box\!\!\rightarrow} \neg p$" on the other hand. But

[21] W. E. Johnson (1921: ch. 11) pointed out the peculiarity of the relation between what he called *determinables* and *determinates* by using the example of colours.

a short reflection shows that the explanation is neither entailed by any one of the modal statements, nor does it entail either of them. Let me go through the four cases:

(i) Does the explanation entail the strict conditional? To accept the negative answer, all we have to realise is that explanations may well settle on contingent facts. This is normally the case with causal explanations: the tree fell, because de Selby hit it. But in some other possible world, de Selby could have landed hit after hit, not affecting the tree in any way (perhaps because the tree had been hardened by some strange chemicals before). However, it is worth noticing that conceptual explanations may also fail to establish a necessary connection: Xanthippe became a widow, because Socrates died. But in some other world, Socrates' death would not have affected her marital status, because they never met in the first place.

(ii) Does the strict conditional entail the explanation? No. Mathematical truths all entail each other. But surely, not every mathematical truth explains every other mathematical truth.[22] From a related consideration we can also conclude that explanation is *not* closed under logical entailment: we are not entitled to infer

r because *q*.

from the premises

p because *q*.

and

Necessarily, if *p* then *r*.

Otherwise, mathematical explanation would reduce to mathematical entailment, making every mathematical truth explain every other. As a consequence of the non-closure of "because" and the fact (if, as I argued, it is one) that the concept expressed by "because" enters into the concepts of truth-making and truth-makers, we should not expect them to be closed under entailment either.[23]

(iii) Does the explanation entail the counterfactual? Debates about causality provide the counter-examples. Take cases of preemption: the vase broke, because Clouseau stumbled into it. But it would have broken otherwise too; by his fall into the vase, Clouseau pushed a girl out of her way, which would have

[22] For a view on mathematical explanation which is congenial to much of what I say in this section see Steiner (1978).
[23] *Pace* Read (2000: 69).

led her directly into the vase instead. Similar cases exists also in the realm of conceptual explanations: I am an uncle because Thorben is the son of my sister; but had he not been the son of my sister (presumably because he had not been born at all), I would still have been an uncle, because Tobias is the son of my brother. Or imagine a woman being deeply in love with two brothers, Ed and Ned, having to chose which one to marry. After doing so, she is the sister-in-law of Ed's sister Zoe, because she is married to Ed. But had she not been married to Ed, she had been married to Ned, and thus been Zoe's sister-in-law anyway.

(iv) Does the counterfactual entail the explanation? No, since there are cases of mutually counterfactual dependence: take the widowing of Xanthippe: had she not become a widow until *t*, then Socrates could not have died until *t*. But Socrates did not die *because* Xanthippe became a widow – the proper explanation runs the other way round.

We have seen that none of the four envisaged modal implications of explanations hold. It is still possible, of course, that some more delicate relations of entailment between explanations and some modal statements, presumably of a more complex logical form, exist. I cannot pursue this question here any further; I am content with having shown that the relations between explanations and modal statements are at least not as straightforward as one might think.

b. Truth

A conceptual explanation particularly interesting for our present concerns was seen and stressed by Aristotle, when he wrote:

> It is not because we think that you are white, that you *are* white, but because you are white we who say this have the truth.[24]

Aristotle seems to claim that the following is true (while its converse is false):

(8) It is true that snow is white, because snow is white.

Aristotle's insight can then be generalised with the following theorem:[25]

[24] Aristotle, *Metaphysics*, 1051b6–8. The translation follows Barnes (1991: 1661).

[25] Bernard Bolzano developed an account of grounding, the explanatory relation signified by the connective "because", in which this principle plays an important role (see his *Wissenschaftslehre*, especially §198, and furthermore Tatzel, forthcoming, for a careful and illuminating reconstruction of Bolzano's views).

(T) $\forall p$: If it is true that p at all, then it is true that p, because p.[26]

Principle (T) exploits a crucial part of our understanding of the concept of truth. As Tarski had put it, it is a condition of adequacy to imply all instances of the well-known schema:

(Tarski) It is true that $p \leftrightarrow p$.

This schema lies at the heart of the concept of truth: it is constitutive of our mastery of this concept to accept instances of (Tarski).[27] This fact about the concept of truth gives rise to the correctness of (T) and its instances. The explanatory force of (T) is comparable to that in the examples of conceptual explanations discussed so far; it is an explanation of a proposition employing a logically elaborate concept, the concept expressed by "true", by a conceptually simpler proposition. This latter proposition does not employ concepts which enter into an analysis of the concept expressed by "true"; truth is not analysable in terms of the concepts expressed by "white" and "snow", because someone can have a grasp of the concept of truth without knowing anything about snow or the colour white. But mastery of the concept is constituted by the ability to relate statements involving it to statements involving only conceptual resources already at hand.[28] This claim, and thus (T), can be agreed upon by proponents of quite different theories of truth (I shall not enter into the debate about which

[26] As you might have noticed, the quantifiers in this formula should be treated with care. The variables do not stand in the position of a singular term but rather in *sentence* position. Under the common, objectual reading of quantifiers, the formula would thus collapse into ungrammatical non-sense. To avoid this, we could give them a *substitutional* reading. For my present purpose I may leave it like that. But I should note that I prefer a non-standard alternative (cp. footnote 14). Read substitutionally, the formula will lose an essential part of its generality, since substitutional quantification is dependent upon the availability of certain linguistic forms. The alternative would be to accept a *third* kind of quantification, quantification into sentence (or general term) position which is not substitutional. I cannot defend such an account here in detail; on these issues cp. Simons (1997), Williamson (1999: 259–263), and the texts by Prior and Rayo/Yablo that I mentioned earlier.

[27] Of course, a few instances of (Tarski) are problematic due to the semantical antinomies. Furthermore, some of the instances whose truth is unproblematic may nevertheless lack assertibility because of some delicate features of implicature (cp. Barker 2003: 26ff.).

[28] This claim is compatible with the view that the concept of truth allows for an explicit analysis (for a recent proposal which defends such a view and explicitly endorses (T) see Künne 2003: 333–339), but also with the view that no such analysis is to be found (Horwich, for instance, tries to justify (T) on the basis of his minimal theory of truth; cp. Horwich 1998: 104f.).

theory of truth is correct here; but I presuppose that an adequate theory should not only validate (Tarski), but also do justice to (T)).[29]

Given (T) and a basic understanding of how its correctness comes about, I shall now return to the analysis of the notions of making something true which I proposed. As I said, I cannot offer any reductive analysis of the involved concept expressed by "because"; but still we are in a better position to understand the mechanisms of the analysis now. If my analysis is correct, then to claim that something makes something true, is to assert a certain explanatory relation. The force of this relation will, in the most basic cases, simply reduce to the conceptual explanation given in (T): I raise my arm; by (T) it follows that it is true that I do it, because I do it. So, according to my analysis I render it true that I raise my arm.

But in most cases, the conceptual explanation given in (T) will only *contribute* to the relevant explanatory relation which will be more complex and might involve some causal explanations. Imagine I raise my arm, causing a glass to fall over. So, because I raise my arm, the glass falls, and because it falls, it is true that the glass falls, and my analysis yields the desired result that I render it true that the glass falls. In the two-step explanation I gave, the first "because" relies on a causal explanation, the second again on (T).

In other cases, a further conceptual explanation may work together with the one given in (T); a woman's mother wishes to become a granny. Now if her daughter gives birth to a child, then because she does so, her mother becomes a granny, and because she becomes one, it is true that she does. So, by giving birth to her child, the daughter makes her mother's wish come true.

c. Degrees of Directness

The foregoing example resembles statement (6) in its being grounded in a *chain* of explanations. To cite another case, let us look at the following statements:

(9) It is true that Thorsten is my brother-in-law because he is my brother-in-law.

[29] Presumably, not *every* conception of truth will do. Whoever thinks that the concept of truth is strictly redundant, such that "it is true that *p*" and '*p*" express the same proposition, will have problems accepting (T), since she will not be able to see any conceptual difference between the *explanans* and the *explanandum* (cp. Anscombe 2000: 4f.).

(10) It is true that Thorsten is my brother-in-law because he is married to my sister.

Both (9) and (10) are correct explanations. But they are not independent of one another. The truth of (10) is grounded in the truth of a chain of explanations, in which (9) forms one part, while the other is the following:

(11) Thorsten is my brother-in-law, because he is married to my sister.

So the explanatory force of (10) is constituted by a (small) series of explanations which are contracted into a single one.

From this example (and the two parallel ones we already looked at) we can see that *explanantia* with the same *explanandum* can be ordered in respect to how *close* (or remote) they are to the *explanandum*; the *explanans* of (9) is a closer *explanans* of its *explanandum* than the *explanans* of (10). In general, we may characterise the closeness of an *explanans* as follows:

(CE) the proposition that *p* is *a closer explanans* of the proposition that *r* than the proposition that *q* $\leftrightarrow_{\text{df.}}$ (*r* because *p*) and (*p* because *q*).

Given two explanations with the same *explanandum*, we may furthermore call the one containing the closer *explanans* the more direct explanation.

Remoteness of an explanation may be due to several factors. In the case of purely causal explanations, the closeness or remoteness of an explanation results from the place which the cause it cites occupies in the causal chain leading to the event to be explained: given an explanation which causally explains a certain happening *h* by naming a cause *e* of it, another explanation will be more remote if it names a cause of *e*, and it will be more direct if it names an effect of *e* which again is a cause of *h*.[30] A parallel phenomenon can be found with conceptual explanations: an explanation may be based on the analysis of a concept involved in the *explanandum*, while an explanation based on the analysis of a concept entering into the first analysis will be more remote. But there is another source of directness to be acknowledged. To understand it, let us return to (9); is not only more direct than (10), but it seems intuitively appealing to call it the *most direct* possible. We don't have to rely on intuitions, to justify this judgement, though; we can give a reason for it. 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

[30] Cases of over-determination show that not all causal explanations of the same *explanandum* can be thus compared in respect to their directness.

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).

With these remarks I shall end my discussion of the connective "because" for now; obviously, there is still a lot of ground to be covered. Especially the mechanisms of conceptual explanations are hardly explored in the vast amount of literature on explanation in science, since the relevant literature unsurprisingly is particularly engaged in discussions of *causal* explanations. This whole section can be seen as formulating some *prolegomena* to a theory of conceptual explanation; such a theory is highly desirable. It will not only be important for several philosophical issues (such as the issue of truth-making), but it will also contribute to an understanding of what explanations *in philosophy* may consist in.

5. An Argument Against TM-Theories

Hitherto I have argued how we should understand the notion of a truth-maker. Insofar, my contribution to the debate has been a positive one. But now, I shall finally develop an argument to the effect that TM-theories are a result of some capital philosophical mistake; the argument is based on the proposed understanding of "truth-maker".

For the following I need a simple example of an atomic truth; let us use

(S) Socrates is pale.

What should qualify as a truth-maker for (S) is Socrates' paleness, a particularised quality. If my analysis of the notion of truth-making is correct, then Socrates' paleness is a truth-maker of (S) if, but only if, the following holds:

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

One thing should be, I take it, beyond dispute: it is far from *evident* that (?S) really expresses a true explanation. Nevertheless, it might.

As we have seen, however, there is another correct explanation with the same *explanandum* as that of (?S):

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

This is just an instance of principle (T). And it is, as I have argued earlier, the most direct explanation with respect to its *explanandum*. Hence (?S), if correct, would be a more remote explanation than (S-T) – but then, its *explanans* should not only explain its *explanandum*, but also the *explanans* of the *more direct* explanation (S-T).

So the question whether Socrates' paleness qualifies as a truth-maker of (S) turns on the question of the truth-values of the following statement:

(S-1) Socrates is pale, because Socrates' paleness exists.

It is a hard question; I confess that I lack any stable intuitions here, just as I do in the converse case:

(S-2) Socrates' paleness exists, because Socrates is pale.

At least we may expect, for a start, that at most one of these purported explanations is true – explanation is asymmetric. But is there a principled way of deciding which, if any, of them really deserves the title of an explanation? I shall now argue that there is a way, and that it leads to the acceptance of (S-2), and so to the rejection of (S-1).

Let us take a look at the phrase which brings the particularised property in (S-1) and (S-2) into play, the designator "Socrates' paleness". It can be called a *canonical* designator of a particularised property; it has the standard form of such designators, combining an expression capable of designating a property with a designator of a subject which possesses the property in question – other examples would be "Little Voice's singing", "Jean's piety", or "Belmondo's charm". Most often, when the idea of a particularised property is introduced by friends of such entities, it is by the use of such terms. And this is not an accident; these designators are central to our acquisition of the conceptual framework of particularised properties. It is by certain linguistic contexts which contain such designators and which resist a reading of them as denoting shareable properties that we are driven towards the acceptance of this framework.[31]

Canonical designators of particularised properties, such as "Socrates' paleness", are semantically complex expressions, whose meaning is a function

[31] The strongest arguments for the acceptance of tropes rely on their role in *causal* contexts (see for instance Campbell 1981: section 3), and in particular on their role in contexts of perception (see Mulligan *et al.* 1984: 304–308).

of the meaning of their parts and their way of combining.[32] Mastery of the rules that govern the formation of such expressions will give rise to an understanding of any combination of a property term, such as "paleness", with an arbitrary singular term, such as "Socrates", as long as the terms combined are understood. But this is just to say that such a canonical designator of a trope expresses a *logically complex* concept, the grasp of which requires us to relate it to the concepts expressed by the phrase's components, which will be conceptually more primitive. Thus we understand "Socrates' paleness" along the following line: it denotes a particular instance of paleness, existing as a feature of Socrates just in case that he is pale.[33] Generally, we understand an expression of the form "*x*'s *F*-ness" to denote a particular instance of *F*-ness, existing as a feature of *x* just in case that *x* is *F*.

So we see that it is part of our understanding of "Socrates' paleness" that it denotes an entity that exists if *Socrates is pale*. Now notice that the sentence in italics is exactly the purported *explanans* in (S-2). Here we encounter a conceptual structure we have met before; the *explanans* employs certain concepts which build the layer for the more elaborate concepts employed in the *explanandum*. But such a kind of structure we have acknowledged before as giving rise to a conceptual explanation – Thorsten is my brother-in-law, because he is married to my sister; Xanthippe became a widow, because Socrates died. And Socrates' paleness exists, because Socrates is pale. This way we can justify the explanatory relation holding in (S-2); accordingly, (S-2) is explanatory.

But then, on the other hand, (S-1) is not. It presupposes an explanatory relation, where there is none. No causal and no conceptual explanation is given with it; the conceptual explanation which one might deem it to give would invoke logically complex concepts for an explanation of their more primitive components. But this is to turn things upside down; accordingly I conclude that (S-1) is nothing but a *pseudo*-explanation. Socrates' paleness does not do much; in particular, it does not make it true that Socrates is pale.

---

[32] Cp. Wolterstorff (1970: 136f.), Strawson (1974: 131), and Schnieder (2004c: chapter 2) on the semantics of such terms.

[33] This involves a slight simplification, since I abstract from the factor of time; under certain circumstances, we might be willing to distinguish between several instances of paleness belonging to Socrates. As long as Socrates is pale and simply stays pale, we may countenance one instance of paleness only (which can either be conceived of as an occurrent or a continuant). But if Socrates was once pale, then well tanned for while, and finally pale again, we should distinguish between two instances of paleness; after all, they could have quite different causal origins and effects (the one might be due to an illness, the other due to a lack of sunshine).

Now Socrates and his paleness were arbitrarily chosen examples; what I have said about them can, *mutatis mutandis*, also be said about LV's singing, Belmondo's charm or Jean's piety. It can be said about all the standard cases of purposed truth-makers for atomic statements; they are denoted by logically complex expressions which 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. So they are none. TM-theories worked with a central notion which was never made sufficiently clear by their proponents. After clarifying it, we can see, however, that TM-theory is in need of some explanatory relation holding in a direction where no such relation holds. TM-theorists have drawn a blank.

My argument could equally be formulated against TM-theories based on *facts* as truth-makers. Just like the designators for particularised properties, canonical terms for facts of the form "the fact that *p*" are as well semantically complex. We understand them on the basis of our understanding their components, such that the fact that *p* will be an entity of a certain sort (a fact) existing just in case that *p*. But then a statement of the form "*p* because the fact that *p* exists" will no more qualify as an explanation than (S-1) above.

I conclude this section with some kind of a concession: one may regard my argument against TM-theories as a *challenge* rather than a defeat. The challenge is twofold. Given that my analysis of truth-making is correct, TM-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. As long as this challenge is not met (and I doubt it could ever be met), we can and should be sceptical of the tenability of TM-theories.

Acknowledgment

I would like to thank Wolfgang Künne, Kevin Mulligan, and furthermore Paolo Casalegno, the commentator of my paper at a workshop in Trieste (December 2003), for helpful comments and discussion.

References

Anscombe, Elizabeth ' "Making True" ', in: Teichmann, Roger (ed.), *Logic, Cause & Action*, Cambridge: University Press, 1–8.

Aristotle, *The Complete Works of Aristotle*. Barnes, Jonathan (ed.), Princeton; Guildford: Princeton University Press, 4th edition, 1991.

Armstrong, D. M. (1997), *A World of States of Affairs*, Cambridge: University Press.

Barker, Stephen (2003), 'Truth and Conventional Implicature', *Mind* 112, 1–33.

Bigelow, John (1988), *The Reality of Numbers*, Oxford: Clarendon Press.

Bolzano, Bernard, *Wissenschaftslehre* (in four volumes), Reprint, Leipzig 1981.

Bromberger, Sylvan (1968), 'An Approach to Explanation', in: Butler, R. J. (ed.) (1968), *Analytic Philosophy*, Oxford: Basil Blackwell, 72–105.

Campbell, Keith (1981), 'The Metaphysics of Abstract Particulars', in: French, P. *et al.* (eds.) (1981), *The Foundations of Analytical Philosophy*, Minneapolis: University of Minnesota Press, 477–488; reprinted in Mellor, D.H./ Oliver, A. (eds.) (1997), *Properties*, Oxford: OUP, 125–139.

Evans, Gareth (1982), *Varieties of Reference*, Oxford: Clarendon Press.

Fine, Kit (1995), 'Ontological Dependence', *Proceedings of the Aristotelian Society* 95 (1995), 269–290.

Fischer, John Martin (1983), 'Incompatibilism', *Philosophical Studies* 43, 127–137.

Fischer, John Martin (1986), 'Van Inwagen on Free Will', *Philosophical Quarterly* 36, 252–260.

Fox, John (1987), 'Truthmaker', *Australasian Journal of Philosophy* 65, 188–207.

Horgan, Terence (1985), 'Compatibilism and the Consequence Argument', *Philosophical Studies* 47, 339–356.

Horwich, Paul (1998), *Truth* (2nd edition), Oxford: Clarendon Press.

Johnson, W. E. (1964), *Logic (In Three Parts) I*, New York: Dover publications. (Reprint of 1st edition 1921, Cambridge: Cambridge University Press.)

Kim, Jaegwon (1973), 'Causes and Counterfactuals', *Journal of Philosophy* 70, 570–572.

Kim, Jaegwon (1974), 'Noncausal Connections', *Noûs* 8, 41–52.

Künne, Wolfgang (2003), *Conceptions of Truth*, Oxford: OUP.

Lewis, David (1981), 'Are we Free to Break the Laws?', in: Lewis, David (1986), *Philosophical Papers* II, Oxford: OUP, 291–298.

Mulligan, Kevin / Simons, Peter / Smith, Barry (1984), 'Truth-makers', *Philosophy and Phenomenological Research* 44, 287–320.

Prior, A. N. (1971), *Objects of Thought*, Oxford: Clarendon Press.

Rayo, Augustin / Yablo, Stephen (2001), 'Nominalism Through De-Nominalization', *Noûs* 35, 74–92.

Read, Stephen (2000), 'Truthmakers and the Disjunction Thesis', *Mind* 109, 67–79.

Restall, Greg (1996), 'Truthmakers, Entailment and Necessity', *Australasian Journal for Philosophy* 74, 331–340.

Rodriguez-Pereyra, Gonzalo (2000), 'What is the Problem of Universals?', *Mind* 109, 255–273.

Rodriguez-Pereyra, Gonzalo (2002), *Resemblance Nominalism*, Oxford: OUP.

Schnieder, Benjamin (2004a), 'Compatibilism and the Notion of Rendering Something False', *Philosophical Studies* 117, 409–428.

Schnieder, Benjamin (2004b), 'The Ability to Render Something False', *Proceedings of the Aristotelian Society* 104 (2004), 295–303.

Schnieder, Benjamin (2004c), *Substanzen und (ihre) Eigenschaften*, Berlin/New York: Walter de Gruyter.

Simons, Peter (1992), 'Logical Atomism and its Ontological Refinement: A Defense', in: Mulligan, Kevin (ed.), *Language, Truth and Ontology*, Dordrecht: Kluwer Academic Publishers.

Simons, Peter (1997), 'Higher-Order Quantification and Ontological Commitment', *Dialectica* 51, 255–271.

Smith, Barry (1999), 'Truthmaker Realism', *Australasian Journal of Philosophy* 77, 274–291.

Steiner, Mark (1978), 'Mathematical Explanation', *Philosophical Studies* 34, 135–151.

Strawson, P. F. (1974), *Subject and Predicate in Logic and Grammar*, London: Methuen & Co.

Tatzel, Armin (2002), 'Bolzano's Theory of Ground and Consequence', *Notre Dame Journal of Formal Logic* 43, 1–25.

Van Inwagen, Peter (1975), 'The Incompatibility of Free Will and Determinism', *Philosophical Studies* 27, 185–199.

Van Inwagen, Peter (1977), 'Reply to Narveson', *Philosophical Studies* 32, 89–98.

Van Inwagen, Peter (1983), *An Essay on Free Will*, Oxford: Clarendon Press.

Williamson, Timothy (1999), 'Truthmakers and the Converse Barcan Formula', *Dialectica* 53, 253–270.

Williamson, Timothy (2000), *Knowledge and its Limits*, Oxford: OUP.

Wolterstorff, Nicholas (1970), *On Universals*, Chicago / London: The University of Chicago Press.