Does this sentence have no truthmaker?

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According to the *truthmaker principle*, every truth – at least, every contingent truth – has a truthmaker, something in virtue of which it is true. Some philosophers have thought that the truthmaker principle faces problems with true negative existentials (such as the truth that there are no unicorns) and with true atomic predications (such as the truth that the rose is red). In a recent paper, Peter Milne (2005) argues that the principle can be jeopardized much more easily – indeed, can be disproved by a few lines of natural deduction. Consider the sentence:

> *M*: This sentence has no truthmaker.

A simple argument purports to show that *M* is a truth without a truthmaker:

> Suppose that *M* has a truthmaker. Then it is true. So what it says is the case is the case. Hence *M* has no truthmaker. On the supposition that *M* has a truthmaker, it has no truthmaker. By *reductio ad absurdum*, *M* has no truthmaker. But this is just what *M* says. Hence *M* is a truth without a truthmaker. (Milne 2005: 222)

Unfortunately, essentially the same form of argument could be used to establish (the negation of) just about anything you please. Consider the sentence:

> *S*: This sentence is not both true and short.

To our own surprise, we 'prove' that *S* is not short after all:

> Suppose that *S* is both true and short. Then it is true. So what it says is the case is the case. Hence *S* is not both true and short. On the

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> supposition that *S* is both true and short, it is not both true and short. By *reductio ad absurdum*, *S* is not both true and short. But this is just what *S* says. Hence *S* is true. Hence, since it is not both true and short, it is not short.[1]

As Milne himself remarks, the only feature of the truth-making relation on which his argument depends is 'what is arguably a conceptual truth given the notion of *truthmaker* – that a declarative sentence … is true if it possesses a truthmaker' (Milne 2005: 223). Say that a predicate is *factive* iff it is a conceptual truth that a declarative sentence is true if the predicate applies to it. Clearly, if the form of argument used by Milne is to carry any conviction with respect to *M*, it should do so also with respect to similar sentences involving *any* other factive predicate – at least if the conclusion is not itself inconsistent. But it doesn't, as the case of *S* witnesses.[2] Milne claims:

> The difficulty here is that *M* engenders no outright inconsistency. That there be a truth without a truthmaker is inconsistent with the unqualified truthmaker principle, but, unlike the Liar Sentence, *M* itself gives

[1] Admittedly, the last step (an instance of modus ponendo tollens) does not have a counterpart in Milne's argument. It is valid, however, even in minimal logic. Anyway, it is clear that the damage has already been done by the time we arrive at the result that *S* is true and not both true and short.

[2] Milne himself can hardly object to our use of the instance of the schema:

(T) '*P*' is true iff *P*

for *S*, as the argument against the truthmaker principle crucially uses the instance of the (T)-schema for *M* in the step from *M*'s having no truthmaker to *M*'s being true (a step which is not dispensable, for little trouble is caused to the truthmaker principle by the mere consideration that *M* has no truthmaker). However, in order to appreciate the problem in its full generality and thereby forestall attempts to run similar arguments in a language free of a truth predicate, it is worth stressing that the paradoxicality of the form of argument under consideration does not essentially involve the use of such a predicate. All we need is a factive predicate satisfying a condition *strictly weaker* than the right-to-left direction of the (T)-schema. Consider the predicate '*x* is short*', satisfying the schema:

(S) '*P*' is short* iff '*P*' is short and *P*,

and consider then the sentence:

*S**: This sentence is not short*.

To our own surprise, we 'prove' that *S** is not short after all: by the left-to-right direction of the instance of the (S)-schema for *S** and *reductio*, *S** is not short*, wherefore, by contraposition on the right-to-left direction of the same instance, *S** is not both short and not short*, wherefore, by modus ponendo tollens, *S** is not short.

> rise to no inconsistency when treated as an ordinary sentence and subject to the usual rules of logic. (Milne 2005: 222–23)

True, but neither does *S*: that *S* is not short is inconsistent with the deliverances of our senses, but, unlike the Liar sentence, *S* itself gives rise to no inconsistency when treated as an ordinary sentence and subject to the usual rules of logic.[3]

As with many other paradoxes involving semantic, modal and epistemic predicates, the problem with our arguments consists, very roughly, in the application of a factive predicate to a self-referential sentence containing a suitable occurrence of that very same predicate. The various ways of avoiding paradox while preserving as much expressive power as possible are well known and we will not try to assess them here. The truthmaker theorist who wants to introduce a truth-making predicate in her language does have to take a stand in this respect, but whichever solution she will finally endorse, it will enable her to defuse *M* as a genuine counterexample to her theory.[4]

We conclude that the truthmaker principle has not been proven false – not by *M*, anyway.[5]

[3] Indeed, if Milne's argument were acceptable, one would absurdly be endowed with a general recipe sufficient for the refutation of any philosophical theory identifying (contingent) truth with some property or other (such as corresponding to the facts, being warrantedly assertable under certain conditions, being part of a maximally coherent system, etc.). Just consider the sentence saying of itself that it does not have the property in question.

[4] A brief remark on the logical relations between our class of paradoxical sentences and other more famous classes is in order. Assuming a logic at least as strong as minimal logic, the predicate '*x* is not both true and short' is strictly weaker than the predicate '*x* is not true and is short', which gives rise to *Epimenides' paradox* when a sentence consists in the self-application of such a predicate (see Goldstein 1986). Under the same logical assumption, the predicate '*x* is not both true and short' is equivalent to the predicate 'If *x* is true, then *x* is not short', which gives rise to *Curry's paradox* when a sentence consists in the self-application of such a predicate (see Curry 1942). However, this equivalence fails, for example, in a relevant framework. In such a framework, our paradoxical sentences would constitute a distinctive class, which we may call '*Geach's paradox*', since – to the best of our knowledge – it was first identified by Peter Geach when he pointed out the paradoxicality of a Cretan utterance of 'Not every sentence uttered by a Cretan is true' (see Prior 1961: 18).

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References

Curry, H. 1942. The inconsistency of certain formal logics. *The Journal of Symbolic Logic* 7: 115–17.

Goldstein, L. 1986. Epimenides and Curry. *Analysis* 46: 117–21.

Milne, P. 2005. Not every truth has a truthmaker. *Analysis* 65: 221–23.

Prior, A. 1961. On a family of paradoxes. *The Notre Dame Journal of Formal Logic* 2: 16–32.