

Williamson on Counterpossibles

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A Case for Vacuism

Lewis/Stalnaker semantics has it that all counterpossibles (i.e., counterfactual conditionals with impossible antecedents) are vacuously true. Non-vacuism, by contrast, says the truth-values of counterpossibles are affected by the truth-values of the consequents. Some counterpossibles are true, some false. Williamson objects to non-vacuism. He asks us to consider someone who answered ‘11’ to ‘What is $5 + 7$?’ but who mistakenly believes that he answered ‘13’. For the non-vacuist, (1) is false, (2) true:

- (1) If $5 + 7$ were 13, x would have got that sum right
- (2) If $5 + 7$ were 13, x would have got that sum wrong

Williamson is not persuaded by the initial intuitiveness of such examples:

... they tend to fall apart when thought through. For example, if $5 + 7$ were 13 then $5 + 6$ would be 12, and so (by another eleven steps) 0 would be 1, so if the number of right answers I gave were 0, the number of right answers I gave would be 1. (2006)

That’s the whole argument—much of it implicit. Alan Baker’s critique (2007) of Brogaard and Salerno (2007) prompts us to say something less abbreviated about a less abbreviated form of Williamson’s argument. Then we further develop our (2007) counterfactual analysis of essence.

Williamson's above conclusion is this:

- (3) If the number of right answers I gave were 0, then the number of right answers I gave would be 1.

The implicit reductio must be this. If (3) is true, then (1) and (2) are true contrary to what the non-vacuaist supposes. For if I gave 0 right answers (in close worlds where $0=1$), then I also gave 1 right answer (in those worlds). Hence, I got the sum right and wrong.

Williamson's abbreviated eleven-plus-one steps must be these:

- (i) If $5 + 7$ were 13, then $5 + 6$ would be 12
(ii) If $5 + 7$ were 13, then $5 + 5$ would be 11
...
(xi) If $5 + 7$ were 13, then $5 + -4$ would be 2.
(xii) If $5 + 7$ were 13, then $5 + -5$ would be 1.

Getting to (3) from here, however, is trickier than Williamson supposes. His reasoning seems to be that any world where $5 + -5 = 1$ is one where $0 = 1$, substituting '0' for ' $5 + -5$ '. Hence,

- (xiii) If $5+7$ were 13 then 0 would be 1.

If $5+7$ were 13 (and I gave 0 right answers), then (since 0 would be 1) I would have given 1 right answer.

If this is Williamson's argument, then it's unsuccessful. First, substituting '0' for ' $5+5$ ' is illicit, since as Williamson himself notes the non-vacuous counterfactual is hyperintensional. Hyperintensional operators do not permit substitutions of co-referring terms *salva veritate*.

Incidentally, Williamson takes hyperintensionality to be a mark against non-vacuism, because substitution is valid in more ordinary counterfactual contexts. However, we need not throw out the baby with the logically ill-behaved bath water. Only non-trivial counterpossible contexts (i.e., counterfactual contexts whose accessibility relation invokes impossible worlds) are hyperintensional. Our logical principles can be restricted accordingly.

A second problem for Williamson's position emerges in steps (i) through (xiii). These conclusions hold, if the game is to evaluate the consequent of each at *deductively closed* worlds where $5+7 = 13$. But if there are non-trivial counterpossibles, the relevant worlds of evaluation must not be deductively closed—lest they collapse into the trivial world where everything is true.

Once we deny deductive closure, Williamson's reasoning fails. Let the following world, W, be non-deductively closed:

(W): { $5 + 7 = 13$, the number of right answers I gave wasn't 1, the number of right answers I gave was 0, ... }

In contexts where W-worlds are closest, (2) is true and (1) false, as the non-vacuumist predicts. For Williamson's argument to succeed, however, the relevant impossible worlds in which I gave 0 right answers *and* I gave 1 right answer must be closer than the relevant impossible W-worlds. This hasn't been shown. Indeed, pending further discussion, W seems closer to the actual world than Williamson's impossible world, since W conflicts with fewer salient background conditions.

Using Counterpossibles Non-Trivially

We noted in (2007) that despite his vacuumism, Williamson intends a non-vacuum reading of some counterpossibles that he uses. Baker (2007) alleges that we commit the opposite "fallacy". He quotes us:

(6) "If all counterpossibles were trivially true, much of philosophy would be less substantial than it is"

and then argues "according to B & S, (6) is a counterpossible. Thus, in the situation where its antecedent is true all counterpossibles are trivially true, including (6) itself".

Reply: (6) may well be true *at worlds at which its antecedent is true*. But that does not make (6) trivial. (6) is asserted in *this* world, and (ex hypothesi) not all counterpossibles are *actually* trivial.¹ Baker's mistake is that he fails to distinguish between worlds at which one evaluates counterfactuals and worlds at which they are assigned truth-values. That is, he fails to distinguish world(s) of evaluation from world of utterance.

Essential Properties

We conclude by developing our modal analysis of essence. If all necessary properties are essential, it absurdly follows that it is essential to Fine that 7 is prime. Non-trivial counterpossibles can help. Let *a* be essentially *F* iff if nothing had been *F*, *a* wouldn't have existed. Then if 7 hadn't been prime, Fine might still have existed; but if there hadn't been humans, he wouldn't have.

Our right-to-left is bit curious.² If Uncle Mike hadn't protected Joe, Joe wouldn't exist. Yet, arguably, it isn't essential to Joe that Mike protects him. Worse, if there

¹Besides, (6) wouldn't be a counterpossible in a situation in which its antecedent is true—so, it needn't be trivially true even if all counterpossibles would be.

²Thanks to Jim Stone and Mike Almeida.

were no doctors, I wouldn't exist. But I am not essentially a doctor, since not a doctor. A natural fix: a is essentially F iff (i) necessarily, if a exists then a is F , and (ii) if nothing had been F , a wouldn't have existed. This modification has the benefit of solving the doctor problem. Moreover, it separates the essential from the necessary, while ruling out the essential but contingent.³

References

- Baker, A. 2007. "A Counter on Counterpossible" *The Reasoner* 1(2): 7-8.
- Brogaard, B., and J. Salerno. 2007. "Why Counterpossibles are Non-Trivial" *The Reasoner* 1(1): 5-6.
- Williamson, T. 2006. *The Philosophy of Philosophy*. Carl G. Hempel Lectures: Lecture 3.

³For those more inclined toward essential but contingent properties, we recommend a technical modification: F is *essential to* a iff if there were no F s then a wouldn't exist. This still gets around the doctor problem. If there were no doctors, indeed, a would fail to exist. By the above account, doctorhood is essential (although contingently) to a 's existence. But this isn't to say that a is a doctor.