

Contingent facts: a reply to Cresswell and Rini

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My 1998: 78–81 contains an argument against tensed facts, like the fact that it's raining *now*, which exist at some (tenseless) times like 1 January 2010 and not others. 'Facts' here means truthmakers, not facts in the trivial sense defined (e.g. by Prior 1971: 5) by the equivalence principle

EP: For all P , P is a fact iff the proposition 'P' is true,

in which no one can deny the existence of tensed facts. The argument, which I'll call TA, may be summarized as follows, where a B-theory of time is one that says there are not, and an A-theory one that says there are, tensed truthmakers.

B-theory: Any tensed 'P' is made true at any time t by the tenseless fact P -at- t .

So: 'P' has as many truthmakers as there are times.

A-theory: 'P' is made true by the tensed fact P , which exists at some but not all t .

So: 'P' has only *one* truthmaker, P .

So: P makes *all* tokens of 'P' true now.

So: P makes tokens of 'P' at times when P didn't exist true now, which is absurd.

TA: So: P only makes *present* tokens of 'P' true.

So: tokens of 'P' at any time t are true iff P exists at t ,

i.e. 'P' is made true at any time t by the tenseless fact P -at- t .

So: there are no tensed facts.

Max Cresswell and Adriane Rini (2010) have now produced a modal analogue of TA, which I'll call MA, whose conclusion is that there are no *contingent* facts, like the fact that I live in Cambridge, and which may be summarized as follows:

Modal realism: Any contingent 'P' is made true in any world w by the necessary fact P -in- w .

So: 'P' has as many truthmakers as there are worlds.

Actualism: 'P' is made true by the contingent fact P that exists in some but not all w .

So: 'P' has only *one* truthmaker, P .

So: P makes *all* tokens of 'P' true in the actual world.

So: P makes tokens of ‘ P ’ in worlds where P doesn’t exist actually true, which is absurd.

MA: So: P only makes *actual* tokens of ‘ P ’ true.

So: tokens of ‘ P ’ in any world w are true iff P exists in w ,
i.e. ‘ P ’ is made true in any world w by the necessary fact P -in- w .

So: there are no contingent facts.

Cresswell and Rini decline to say whether they think TA (and, by implication, MA) is a good argument. What they do claim to show is that

CR: if Mellor’s argument is correct, then, in that same sense [of fact], there are no contingent facts. (Cresswell and Rini 2010: 425)

In other words, in whatever sense of ‘fact’, if any, TA shows that there are no tensed facts, it also, via the analogy with MA, shows that there are no contingent facts.

The first thing to say about Cresswell and Rini’s claim CR is that, as we’ve seen, TA’s and hence MA’s ‘facts’ are *not* the vapid entities defined by EP above. In that sense of ‘fact’, contingent facts are as undeniable as tensed ones. And MA does not deny them. Contingent *truthmakers* are what CR says MA shows to be a myth if TA shows that tensed ones are. And so understood, I say CR is false: B-theorists can consistently accept TA, and hence reject tensed truthmakers, while rejecting MA and accepting contingent ones. And few if any A-theorists could use Cresswell and Rini’s analogy to accuse ‘contingentist’ B-theorists of inconsistency without exposing themselves to the same charge.

First, however, I must distinguish two kinds of truthmaker theory: the ‘maximalist’ view of Armstrong (2003) and others that *all* truths have truthmakers; and the ‘moderate’ view that I shall call MT and share with Heil (2000) and others:

MT: Only some truths, the primary ones, have truthmakers, while other truths and falsehoods are derivable from the primary truths by means of truth conditional semantics. (Forrest and Khlentzos 2000: 3)

Because MT lets necessary truths lack truthmakers (since all truths entail them), we ‘moderates’ can deny that any contingent ‘ P ’ is made true in any possible world w by the necessary fact P -in- w , since there need be no such facts. The necessary truth of ‘ P -in- w ’ can simply follow from taking w to be a world where ‘ P ’ is true and ‘ P -in- w ’ to be true in all worlds if in any.

Still, those of us who deny necessary truthmakers must admit *some* contingent ones if we are to have any truthmakers at all. So while, as MT shows, truthmaker theorists can deny that *all* contingent truths have truthmakers, they must accept that some do. If then ‘ P ’ is one of these, the dilemma MA poses is this: either ‘ P ’ is really indexical, i.e. its truth in w follows from the

necessary truth of ‘P-in- w ’; or ‘P’s contingent truthmaker P makes tokens of ‘P’ true in worlds where P does not exist, which they evidently are not. How should contingentists respond to this dilemma?

Modal realists who are also maximalists, i.e. credit all truths with truthmakers, can accept its first horn and hence the analogy with TA. That is, they can take all possible facts to comprise a single universe of truthmakers, just as B-theorists take all past, present and future facts to do. They can then agree with Lewis (1970: §IX) that ‘P’ is indexical, being true in any world w if w contains the necessary fact P -in- w , and false if it doesn’t; just as a tensed ‘P’ is true at any time t if P -at- t is a tenseless fact and false if it isn’t. While even modal realists who, as moderate truthmaker theorists, deny that necessary truths have truthmakers, can still say that what makes ‘P’ contingent is that while, for all w , ‘P-in- w ’ is necessary if it *is* true, it is not true for all w .

But B-theorists need not be modal realists. They can be actualists, who assert that while the universe of truthmakers contains all actual past, present and future facts, it contains no non-actual ones. This lets them reject MA while accepting TA by denying that the contingent fact P , which exists in our world, makes tokens of ‘P’ true in other worlds, because there are no such worlds and hence no such tokens. This is the modal analogue of presentists, who think all facts are present, rejecting TA by denying that a present fact P makes past and future tokens of ‘P’ true, because there are none. Whether TA or MA should be thus rejected is a good question, but not one I need discuss, since Cresswell and Rini do not. Here, the only question is whether actualist B-theorists who do accept TA can consistently reject MA.

I say they can, because TA’s and MA’s merely structural similarity cannot impugn the apparent independence of their different subject matters, time and modality. Nor can most A-theorists deny that independence, since they must take time to be equally independent of space in order to reject the A-theory’s spatial analogue, which they do. To see this, suppose that ‘P’, e.g. ‘It’s raining here now’, is what I’ll call ‘spatially tensed’ as well as temporally tensed, is true and has a truthmaker. Then what I’ll call ‘spatial A-theorists’ will take ‘P’s truthmaker to be P , the spatially and temporally tensed fact that it’s raining here now, a fact that exists in some places s and not others. On the other hand, temporal A-theorists who are ‘spatial B-theorists’ will take ‘P’ to be made true at any place s (e.g. Cambridge) by the ‘spatially tenseless’ fact (i.e. one that’s a fact everywhere) that it’s raining at snow, which I’ll call P -at- s . They can then produce the following spatial analogue of TA, where ‘ s -tensed’ means ‘spatially tensed’ and ‘ s -tenseless’ means ‘spatially tenseless’.

Spatial B-theory. Any s -tensed ‘P’ is made true at any place s by the s -tenseless fact P -at- s .

So: ‘P’ has as many truthmakers as there are places.

Spatial A-theory: ‘P’ is made true by the *s*-tensed fact *P* that exists at some but not all *s*.

So: ‘P’ has only *onetruthmaker*, *P*.

So: *P* makes *all* tokens of ‘P’ true here.

So: *P* makes tokens of ‘P’ at places where *P doesn’t* exist true here, which is absurd.

SA: So: *P* only makes *spatially present* tokens of ‘P’ true.

So: tokens of ‘P’ at any place *s* are true iff *P* exists at *s*,

i.e. ‘P’ is made true at any place *s* by the *s*-tenseless fact *P-at-s*.

So: there are no spatially tensed facts.

The point of this analogy is that almost all A-theorists who reject TA will deny that it requires them to reject SA too. They will do so because their strongest reason for being B-theorists about space is that it lets them give ‘change’ a uniquely temporal sense. This is the sense in which time *flows*, meaning that A-theory truthmakers for ‘P’, ‘It’s raining here now’, come in and out of existence, i.e. vary from time to time, thereby making ‘P’ true at some times and not others. And only if ‘P’ is spatially indexical, as spatial B-theorists say, will its truthmakers, like the present fact *P-at-s* that makes ‘P’ presently true at *s*, *not* vary from place to place, thereby preventing reality containing a spatial analogue of the flow of time.

In short, the vast majority of A-theorists must take the evident independence of time and space not only to entitle them to reject TA and accept SA, but to use those reactions to explain *how* time differs from space, namely by being the dimension of change. And while I reject their rejection of TA, and with it their account of change, I cannot deny that SA’s analogy to TA, far from being an objection to their account, is precisely what gives it its appeal. That is why, given the equally apparent independence of time and modality, A-theorists who are B-theorists about space can hardly accuse contingentist B-theorists, who accept TA and reject MA, of inconsistency.

There is of course more to be said about what makes tensed and modal propositions true, and about how time and modality may be linked in reality. For a start, while Cresswell and Rini naturally stress the analogy between *presentist* A-theorists, who think that only what is present exists, and *actualist* B-theorists, who deny the existence of non-actual worlds, not all A-theorists are presentists. Some, like McTaggart (1927: Vol. II, §311), think the past and future exist too while others, like Broad (1923: Part I, Ch. II), deny only that the future exists. Part of the latter view’s appeal is that, by rejecting future truthmakers, it blocks one (admittedly bad) argument for fatalism by letting propositions about the future lack truth-values. This however assumes that truths about the past or future need past or future truthmakers, which presentists cannot provide, just as actualists cannot provide non-actual truthmakers for truths about non-actual situations. But then what

truthmakers *can* presentist and actualists provide for such truths, e.g. about yesterday's weather, or about whether or how an undropped coin would have landed had it been dropped?

Presentists and actualists who deny that any truths need truthmakers do not of course face this question. One such presentist is Prior, who, as EP does, identifies facts with true propositions (1971) and, because prefixing 'It is now the case that' to English sentences never alters their truth values, can take all truths to be about the present (1970). Similarly, because prefixing 'It is actually the case that' to English sentences also never alters their truth values, non-truthmaker actualists can take all of them to be about the actual world.

The obvious objection to these readings of presentism and actualism is that they make those doctrines trivially true, which they are evidently not meant to be. Hence the appeal of truthmaker theories, whose presentist and actualist versions must then provide present or actual truthmakers for some truths about other times and worlds, although, as we have seen, not necessarily for all of them. In particular, moderate presentist and actualist theorists who deny that necessary truths need truthmakers, need provide none for truths like 'It rained yesterday or it didn't' and 'The coin landed heads or it didn't'. For them truthmakers are needed only for some contingent truths, which we may take to include 'It rained yesterday', 'Had the coin been dropped it would have landed' and 'The coin that landed heads might have landed tails'. What present or actual truthmakers might truths like these have?

As presentism and actualism are independent doctrines, this is not one question but two. The question for presentists is what the present truthmakers are for tensed truths about the past or future; for actualists, what the actual truthmakers are for contingent truths about non-actual situations. The B-theory answer to the first question is that as there are *no* tensed truthmakers, past, present or future, 'It rained yesterday' must be made true on any day by rain the day before; and similarly (*mutatis mutandis*) for all other tensed truths. One actualist answer to the second question is that 'Had the coin been dropped it would have landed' is made true by the earth's gravity and the fact that the coin is denser than air; 'The coin that landed heads might have landed tails' is made true by the coin having actually had a non-zero chance of landing tails; and similarly (*mutatis mutandis*) for all other contingent truths about non-actual situations.

These two answers are indeed highly contentious, but that is irrelevant: all that matters here is that MA's analogy to TA does not show their conjunction to be inconsistent. That analogy no more forces B-theorists who reject MA to believe in tensed facts than SA's analogy to TA forces A-theorists who reject TA to believe in spatially tensed facts.

The evident logical independence of TA's, SA's and MA's subject matters does not of course preclude A- and B-theory accounts of some equally evident

non-logical links between them. The most important of these I take to be that (i) time and space form a four-dimensional manifold of ways in which things can fail to be in contact (Mellor 2005: §2), and (ii) alternative futures are possible in some way or sense that alternative pasts are not. Of (ii), the link between time and modality that concerns us here, A- and B-theorists naturally offer different accounts. Some A-theorists explain it by saying, as we have noted, that the past and present exist and the future doesn't; others by saying that the past is fixed and the future, except when determined by the fixed past, isn't (Mackie 1974: Ch. 7). B-theorists also offer a range of rival explanations, one being that as causation is what distinguishes time from space, and its direction what distinguishes later from earlier, causes must always precede their effects, which is why what we do may affect what happens after we act, but not what happens earlier (Mellor 1998: Ch. 10).

All these theories are contentious too, of course, but that again is irrelevant. The point is that they are metaphysical theories of time, space and modality, the subject matters of TA, SA and MA, and of how these subject matters are linked. A-theorists and B-theorists will therefore agree, if on nothing else, that as their disputes are substantial, not formal, TA's merely structural analogies to SA and MA will do nothing to settle them. Cresswell and Rini can only have been led to think otherwise by an equivocal use of 'argument' that lets them say they

aren't concerned about taking issue with Mellor's metaphysics. What we are interested in is his *argument* (430),

while, as we've seen, claiming to show that

CR: if Mellor's argument is correct, then, in that sense, there are no contingent facts. (425)

But for any argument to be correct, i.e. to establish its conclusion, it must be not just valid but sound: its premisses must be true. This applies not only to my argument, TA, but to Cresswell's and Rini's argument for CR. And for that argument's premiss, that TA entails MA's conclusions, to be true, TA and MA must be more than structurally similar: TA's temporal premisses must also entail MA's modal ones. But whether they do that depends, as we've seen, on the very metaphysics of time and modality that Cresswell and Rini say does not concern them.

Perhaps this is why, at the end of their paper, after advising 'someone faced with [TA] who wants to be an A-theorist' to

find an actualist who accepts [TA] and say 'How do you avoid [MA]?'
When the actualist tells you, you say 'Fine, I will do the same for [TA].
So leave me alone' (430),

Cresswell and Rini admit that ‘responses like this are not *arguments* for or against the various metaphysical positions’. Indeed not; although that modest disclaimer sits ill with their argument for CR and does scant justice to the interest of their paper, which is why I have so far ignored it. For why should MA’s analogy with TA impress A-theorists, or concern actualist B-theorists like me, who accept TA but reject MA, unless it provides an argument against our position? But now we have seen that it does not, we may agree that Cresswell’s and Rini’s modest disclaimer is not too modest after all.¹

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1 This reply to Cresswell and Rini has been rewritten in the light of their and other helpful contributions to a symposium on their paper held on 7 July 2010 at the University of New South Wales during the Australasian Association of Philosophy Annual Conference.