

Problems with the Force-Biconditional Analysis of the T-schema

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§0. Introduction

Claims involving vague predicates are deeply puzzling. In his recent book, *When Truth Gives Out*, Mark Richard offers an interesting suggestion as to the proper treatment of our discourse surrounding such claims. On Richard's view, since the claims made by such sentences are neither true nor false, there are large swaths of our thought and talk that, while aimed at correctly describing the facts, do not aim at truth.

Richard cites as an example of such thought and talk the discourse surrounding applications of vague predicates to borderline cases. In this paper, I shall consider two problems for Richard's treatment of this discourse. I shall conclude that Richard's view incurs explanatory burdens that are not properly discharged.

§1. The Puzzle

Let Jones be a borderline case of baldness. He is not clearly bald, nor is he clearly not bald. We feel inclined to say that

(1) Jones is bald

is not true. We also feel inclined to say that

(2) Jones is not bald

is not true. Further, we seem committed to the general schema

(T) ‘S’ is true if and only if S.

We encounter a problem, however, with the (T) schema for (1):

(T1) ‘Jones is bald’ is true if and only if Jones is bald.

Mark Richard observes that since the right side is truth valueless, and since the left side is supposed to be equivalent in truth value, “we seem to have a biconditional flanked by truth-valueless sentences”, and, “on the normal ways of telling the story about such biconditionals, they aren’t true.”¹ Since (T1) is not true on the standard view of biconditionals, then we shouldn’t say it or believe it, right?

Richard considers a number of solutions to this problem, and finds them all lacking.² In this paper, I shall suggest some problems for Richard’s solution.

Richard introduces the notion of *rejecting* a claim in order to make sense of how (T1) seems like the obviously right thing to say. On Richard’s view, rejection is a *sui*

¹ Mark Richard, *When Truth Gives Out*, Oxford University Press (2008), 45.

² Mark Richard 2008.

generis speech act. Rejecting p is not defined as asserting not- p . Rather, rejecting p is “not to assert anything at all, but to do something which is appropriate (given that one’s goal is to ‘express all and only the facts’) just in case p is not true.”³

How does this help? Richard extends sentence logic to include, in addition to the sentence letters ‘A’, ‘B’, ‘C’, and so on and the sentential operators ‘ \sim ’, ‘ $\&$ ’, ‘ \vee ’, ‘ \supset ’, and ‘ \equiv ’, the “force-indicating” commitment operators ‘not’, ‘and’, ‘or’, ‘if...then’, and ‘iff’. Sentences containing the former, unforced operators, are assigned truth values according to the strong Kleene truth tables.⁴ Sentences involving the latter, forced connectives are not assigned truth values, for they are not used to make assertions. Rather they are used to signal the *appropriateness* of certain commitments. To take an example, suppose that A lacks a truth value. Then ‘not-A’ is used not to *assert* the (truth functional) denial of A (this is what $\sim A$ says), but rather to signal the appropriateness of the commitment to the inverse of A. ‘A or B’ signals the appropriateness of asserting A or asserting B, and so on for the other forced connectives.

If the occurrence of ‘if and only if’ in (T1) is understood as unforced as in

(T1’) ‘Jones is bald’ is true \equiv Jones is bald,

then (T1) is without truth value, and it is not clear why it is the right thing for us to say about (1). Richard’s suggestion is that ‘if and only if’ as it occurs in (T1) be interpreted as a force-indicating biconditional as in

³ Mark Richard 2008, 50.

⁴ For example, $\sim A$ is true if A is false, false if A is true, and otherwise undetermined. $A \vee B$ is true if one disjunct is true, false if both disjuncts are false, and otherwise undetermined.

(T1'') 'Jones is bald' is true iff Jones is bald.

On Richard's view, an utterance of 'A iff B' is acceptable just in case "A is deniable or B is assertible" and "B is deniable or A is assertible".⁵ Utterances of (T1'') signal a commitment to one of the following: either "'Jones is bald' is true" is deniable and "Jones is bald" is deniable or "'Jones is bald' is true" is assertible and "Jones is bald" is assertible. So, since we ought to reject both "Jones is bald" and "'Jones is bald' is true", then we ought to accept the commitment signaled by utterances of (T1'').

Uttering (T1''), on Richard's view, is not to assert anything. Rather it is to signal the appropriateness of the commitment to rejecting both sides of (T1'') or asserting both sides of it. Call a commitment 'apt' just in case it is a commitment we should make, a commitment that 'gets things right'. (T1'') is the right thing to say, not because (T1'') is true, but rather because it signals an apt commitment.

§2. An Embarrassment of Riches

Suppose that Richard's explanation of the intuitive acceptability of (T1) is correct. (T1) is acceptable because its force-biconditional rendering signals an apt commitment, namely the commitment to reject both

(T1L) 'Jones is bald' is true,

and

(T1R) Jones is bald.

⁵ By 'deniable' here, Richard means worthy of rejection in his *sui generis* sense of that term.

But, consider

(T1F): ‘Jones is bald’ is false iff Jones is bald.

Given the semantics for the force-biconditional, (T1F) signals a commitment to one of the following being appropriate: assert “‘Jones is bald’ is false” and assert “Jones is bald”, or deny “‘Jones is bald’ is false” and deny “Jones is bald”. Since we should reject both

(T1FL) ‘Jones is bald’ is false

and

(T1FR) Jones is bald,

(T1F) expresses an apt commitment. Is this sufficient to render

(*) ‘Jones is bald’ is false if and only if Jones is bald

acceptable? Should we believe (*) or seriously utter (*)? It seems clear we should not. What, however, is the relevant difference between (*) and (T1)? Both have unforced renderings that lack a truth value. Both have forced renderings that express apt commitments. Why is (T1) acceptable while (*) is not? No explanation seems forthcoming.

The situation worsens. For

(**) ‘Jones is bald’ is true if and only if Jones is not bald

also seems to have the same feature that (*) has. Unlike (*), however, (**) has several acceptable renderings. Consider first,

(**U) ‘Jones is bald’ is true \equiv \sim Jones is bald.

Since “ \sim Jones is bald” lacks a truth value and so does “‘Jones is bald’ is true”, it looks like (**U) is itself neither true nor false. What about the forced rendering,

(**F) ‘Jones is bald’ is true iff \sim Jones is bald.

(**F) Signals a commitment we should make in virtue of the fact that we ought to deny both “‘Jones is bald’ is true” and “ \sim Jones is bald”. There is a further acceptable rendering of (**) that contains only forced operators:

(**FF) ‘Jones is bald’ is true iff not-Jones is bald.

(**FF) is somewhat tricky. If we understand forced sentences to be without a truth value, then it is appropriate to reject them, for rejection of p is appropriate just in case p is

not true.⁶ Richard does appear to understand forced sentences (at least force negations) in this way, for he claims “denial itself is not truth valued.”⁷

So, given that the right side of (**FF) lacks a truth value, it is appropriate to reject it. As we have seen above, it is appropriate to reject the left side as well. Given the semantics for the forced biconditional (**FF) signals a commitment to either rejecting both sides of (**FF) or asserting both. Since we should reject both, (**FF) signals a commitment we should have, and it is therefore appropriate seriously to utter it. But it seems intuitively implausible that (**) is something we should seriously utter or believe. Again, some explanation of why (**) is not acceptable to utter or to believe seems required. We cannot claim that (*) and (**) are unacceptable because they do not say something true, for neither does (T1). Absent some suitable explanation for why (*) and (**) are unacceptable while (T1) is acceptable, Richard’s view seems lacking in an important respect.

Here it might be maintained that not all sentences are ambiguous between a forced and an unforced rendering. So, perhaps (*) and (**) do not have interpretations on which their main connective is the forced biconditional. If this is the case, however, one expects that there is some principled reason for the lack of a forced interpretation.

Richard does not give such a reason.⁸

§3. Higher-Order T-sentences

⁶ This is perhaps too quick. For in this formulation, Richard may not have intended p to range over statements whose main operator is a forced operator. However, Richard does not explain why forced sentences should be excluded from the range of p in this formula. For, presumably forced sentences express propositions. Further, when these propositions signal apt commitments, we should believe them. Some argument would be required to show why forced sentences shouldn’t be taken as values for p in the above formula. Thanks to Angel Pinillos here.

⁷ Mark Richard 2008, 155.

⁸ Thanks to Angel Pinillos here.

Richard claims that "...for *any* sentence *S*, the claim '*S* is true iff *S*' is the right thing to say so long as 'iff' is understood as signaling a certain (non-assertoric) force.⁹ In this section, I want to consider a problem for this general claim. Consider the (T) schema for (T1) (adding parentheses for clarity):

(TT1) (" 'Jones is bald' is true if and only if Jones is bald" is true) if and only if ('Jones is bald' is true if and only if Jones is bald).

What should we say about (TT1)? (TT1) should be the right thing to say about (T1). So, on Richard's view, we should accept the commitment made by uttering (TT1). But, how are we to interpret the occurrences of 'if and only if' in (TT1)? Suppose we interpret them as unforced as in

(TT1.1) (" 'Jones is bald' is true \equiv Jones is bald" is true) \equiv ('Jones is bald' is true \equiv Jones is bald).

On Richard's view, the right side of (TT1.1) lacks a truth value. If this is right, then (TT1) can't be the right thing to say for the same reason that (T1') was not the right thing to say. So, 'if and only if' in (TT1) cannot be rendered as an unforced biconditional.

Suppose we render (TT1) as follows:

(TT1.2) (" 'Jones is bald' is true \equiv Jones is bald" is true) iff ('Jones is bald' is true \equiv Jones is bald).

⁹ Mark Richard 2008. 68.

(TT1.2) looks like a plausible rendering of TT1. For its right side,

(TT1.2R) ‘Jones is bald’ is true \equiv Jones is bald

is deniable because it lacks a truth value, and its left side

(TT1.2L) “ ‘Jones is bald’ is true \equiv Jones is bald” is true” is true

is equally deniable. So, (TT1.2) signals a commitment we should make, so it is acceptable to utter it and to believe it. Since there is a rendering of (TT1) on which uttering it is acceptable, we have an explanation of why (TT1) seems like the right thing to say.

There is a problem with (TT1.2), however. (TT1) is supposed to be the (T) schema for (T1). This means that the right half of (TT1) must be synonymous with (T1). But, as we saw above, we cannot take (T1) to be equivalent to (TT1.2R), for (TT1.2R) contains an instance of the unforced biconditional while Richard’s preferred, forced rendering of (T1) does. So, (TT1.2) does not appear to be the correct rendering of (TT1).

We might try

(TT1.3)(“ ‘Jones is bald’ is true iff Jones is bald” is true) \equiv (‘Jones is bald’ is true iff Jones is bald).

This cannot be the correct rendering of (TT1), however, because forced operators cannot appear within the scope of unforced operators.¹⁰ This leaves us with

(TT1.4) (“ ‘Jones is bald’ is true iff Jones is bald” is true) iff (‘Jones is bald’ is true iff Jones is bald).

What should we say about (TT1.4)? Consider its left side

(TT1.4L) “ ‘Jones is bald’ is true iff Jones is bald” is true.

What sort of commitment should we make to (TT1.4L)? (TT1.4L) says the same thing as

(***) T1 is true.

It seems clear that Richard would recommend rejecting (***). For (***) says of a claim that lacks a truth value, namely (T1), that it is true. This means that if (TT1.4) signals a commitment that we should make, then we ought also to reject

(TT1.4R) ‘Jones is bald’ is true iff Jones is bald.

This sounds like the right thing to say about (TT1.4R), for, according to Richard, it is neither true nor false. So, we should reject (TT1.4)’s left side and its right side. So, it looks like, given the semantics for ‘iff’, (TT1.4) signals a commitment we should have.

¹⁰ Mark Richard 2008, 58.

So, uttering and believing it is acceptable. Since there is a plausible rendering of (TT1) on which uttering and believing it is acceptable, we have an explanation of our intuition that (TT1) is the right thing to say. So, there is no problem. Right?

There seems to be something intuitively wrong with taking (TT1.4) to be a correct rendering of (TT1). It seems plausible that any connective C that can be a proper rendering of ‘if and only if’ should have the following property (Where α and β are sentences):

(P) If $\alpha C \beta$ is acceptable, then if α is acceptable, β is acceptable.

The forced biconditional ‘iff’ does not have this property. Take (TT1.4) as an example. (TT1.4R) expresses an apt commitment. (TT1.4L) does not express an apt commitment. So, while the former is acceptable, the latter is not. Furthermore, it looks as though (TT1.4R) is something we should believe, while (TT1.4L) is something we should not believe. The following principle seems intuitively plausible as well (again, where C is any connective that can be a proper rendering of ‘if and only if’)

(Q) If $\alpha C \beta$ is something we ought to believe, then if we ought to believe α , we ought to believe β .

The forced biconditional ‘iff’ also lacks this property.

Perhaps it could be argued that (P) and (Q) do not express properties that an adequate rendering of ‘if and only if’ should have. But absent some independent motivation to think (P) and (Q) are not properties we should demand of a connective that

adequately renders ‘if and only if’, I am inclined to think that they represent suitable desiderata for such a connective. After all, what could someone mean by saying, “You ought to believe that A if and only if B and you ought to believe A, but you ought not to believe B.”? This strikes me as a very odd thing to say.

§4. Conclusion

If what I have said above is right, then Richard’s view incurs two separate explanatory burdens. First, in order to maintain the view, an adequate account must be given for why sentences like (T1) (instances of the T-schema) are acceptable while sentences like (*) and (**) are not. This explanation must preserve our intuitions about instances of the T-schema. As far as I know, Richard does not take up this issue in his book.

Second, some argument that (P) and (Q) do not represent suitable constraints on an acceptable interpretation of the expression ‘if and only if’ needs to be given if the forced biconditional ‘iff’ is to be taken as representing what is intended, in certain instances, by utterances of ‘if and only if’. Richard also neglects to address this issue.

I do not wish to represent myself as having decisively refuted Richard’s view. Rather, I mean to have suggested some fruitful research projects for anyone who wishes to adopt his explanation of the acceptability of T-sentences for borderline applications of vague predicates.