



Can truth relativism account for the indeterminacy of future contingents?

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Abstract

John MacFarlane has recently argued that his brand of truth relativism provides the best solution to the puzzle of future contingents: assertions about the future that express propositions that are metaphysically neither necessary nor impossible. In this paper, we show that even if we grant all of the metaphysical, semantic and pragmatic assumptions in terms of which MacFarlane sets and aims to solve the puzzle, his truth relativism is not apt to solve the problem of future contingents. We argue that the theory fails to vindicate the intuition that future contingent propositions are neither true nor false, leaving the theory open to a charge of *Reductio*. We show that these problems cannot be answered while preserving the core tenets of truth relativism.

Keywords Future contingents · Truth relativism · Assessment sensitivity · Indeterminacy · Monadic truth · Vindication problem · *Reductio* charge

1 Introduction

In several recent works, John MacFarlane (2003, 2008, 2014) appeals to his distinctive brand of relativism about truth to resolve the puzzle of future contingents: assertions about the future that express propositions that are neither necessary nor impossible, such as ‘There will be a sea battle tomorrow’. The way MacFarlane sets it up, at the

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heart of the puzzle lies a metaphysical assumption that he explicitly endorses: that the future is objectively open or unsettled.¹

For instance, suppose that on Monday it is objectively unsettled whether there will be a sea battle on Tuesday; in some possible futures there is a sea battle on Tuesday, in others there is peace. Suppose also that on Monday you assert ‘There will be a sea battle tomorrow’, thereby stating the proposition that there is a sea battle on Tuesday.² According to MacFarlane, when we evaluate this proposition from different temporal perspectives, we have clashing intuitions.³ From Monday’s perspective, the proposition strikes us as unsettled or neither true nor false: it is true in some possible futures, but not in others—we have an ‘indeterminacy intuition’. Yet, if we fast forward to the future, and view the previous day’s assertion from the midst of a sea battle, the proposition strikes us as settled or true—we have a ‘determinacy intuition’. These intuitions appear to lead to an incompatibility, since the same proposition seems to be neither true nor false on Monday and true on Tuesday.

As MacFarlane sees it, ‘a satisfactory account of future contingents must give both intuitions their due’ (2003, pp. 321–232). He claims that his brand of truth relativism is best placed to do so. On his view, future contingent propositions are ‘assessment sensitive’ in that whether they are true depends on features of the context of assessment—the context at which a proposition is evaluated as true or false. In the particular case of future contingent propositions, truth value is sensitive to the *time* at which a proposition is evaluated as true or false. (MacFarlane, 2014, p. 64) For instance, the proposition that there is a sea battle on Tuesday may have a different truth value whether it is assessed on Monday, at the time it is asserted, or whether it is assessed on Tuesday, at the time a sea battle is said to take place.

MacFarlane’s view has generated considerable interest for a variety of reasons. For one thing, the problem of future contingents is a resilient philosophical problem, rooted in Aristotle’s (1984) discussion of the open future in *De Interpretatione IX*, combining intricate issues in semantics, logic and metaphysics. Any promise of a well worked out solution to this problem, let alone one that is entirely novel, deserves scrutiny. For another, since MacFarlane uses sophisticated tools from cutting-edge philosophy of language to define his relativized truth-predicate, his formulation of relativism is regarded as one of the clearest available.

In this paper, we argue that MacFarlane’s brand of truth relativism⁴ (henceforth: truth relativism, for simplicity) runs into difficulties when it comes to accounting for

¹ See Besson and Hattiangadi (2014) for a critical discussion of various way of construing the claim that the future is open. See also Torre (2011) for a good overview of the debate around the open future.

² We come back to the issue of how exactly this proposition should be understood according to MacFarlane in Sect. 2(ii).

³ While in his early papers (2003; 2008), MacFarlane states this clash of intuitions as pertaining to utterances, he states the clash as pertaining to propositions in his latest, (2014) account. We follow the setting of the (2014) account, and as we will stress later, when we will have introduced more of his account, we do not think that this change impacts much on our discussion, as some of the key tenets of his (2014) account are already present in the early papers. See also fn 8.

⁴ MacFarlane is one of a number of ‘new relativists’ who use the tools of mainstream philosophy of language to articulate more precisely relativist treatments of a variety of domains, such as predicates of personal taste, and epistemic modals. Other new relativists include for instance (Kölbel 2004; Lasersohn 2005; and Egan 2007). There are subtle and important differences between all these forms of relativism.

the indeterminacy intuition regarding future contingents—for instance, that when you say on Monday that there will be a sea battle tomorrow, what you say is neither true nor false. Our argument focuses on a tension between the specific account MacFarlane offers for future contingents and two core commitments of truth relativism, as a general theory of relative truth. Though these commitments will be explained in due course, they can be briefly glossed as follows. The first core commitment is that the assessment sensitivity of any ordinary proposition P gives rise to the assessment sensitivity of the proposition that P is true (see MacFarlane, 2014, p. 93). For instance, if the proposition that *there is a sea battle on Tuesday* is assessment sensitive, then the proposition that *there is a sea battle on Tuesday is true* is also assessment sensitive. That is, assessment sensitive discourse is assessment sensitive whether or not it makes use of *ordinary notions of truth and falsity*. The second core commitment is that the ordinary English truth predicate is *monadic*—in particular, it is not a relativized truth predicate like the one MacFarlane defines so as to capture the assessment sensitivity of future contingent propositions. For instance, if someone says ‘ P is true’, the truth predicate she uses is monadic: what she says is simply that P is true, not that P is *relatively-true*.

We argue that when combined with MacFarlane’s proposed account of future contingents, these core commitments of truth relativism generate two interrelated difficulties that center around the indeterminacy intuition. First, it implies that this intuition cannot be truly asserted even on Monday, when we are supposedly in its grip. This, we call the ‘Vindication Problem’, which we show can then be used to bring a charge of *Reductio* against truth relativism.

The paper runs as follows. In section 2 we outline MacFarlane’s solution to the puzzle of future contingents: in 2.1 we explain how he understands the puzzle; in 2.2 we show how truth relativism is meant to address it. In section 3 we show that the indeterminacy intuition cannot be ‘vindicated’, and that a charge of *Reductio* can be made. In section 4 we consider and reject four potential responses to the objection.

2 Truth relativism and the puzzle of future contingents

2.1 MacFarlane’s puzzle of future contingents

According to MacFarlane, the future is objectively open or unsettled. A natural way of fleshing out this idea, to which MacFarlane appeals, is through so-called ‘Branching Time Theory’ (cf. Belnap & Green, 1994), an eternalist theory of time according to which past, present and future are equally real; and according to which the unfolding of time involves multiple histories that form a rootless tree, with a single trunk representing the settled past history, and multiple branches representing the unsettled future histories. On this view, there is an asymmetry between past and present histories on the one hand and future ones on the other: while there is at any moment a unique past and present history, there are multiple future histories that are ontologically on a par.

Footnote 4 continued

However, rather than provide an overview, we focus on MacFarlane’s brand of truth relativism here as he is the only relativist to have an in depth proposal concerning the semantics of future contingent statements.

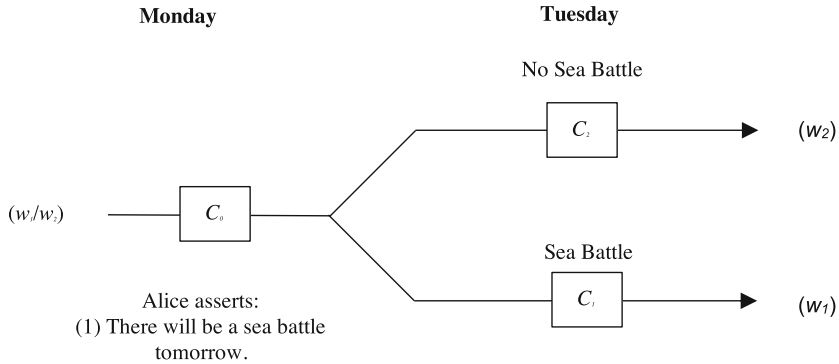


Fig. 1 The Puzzle of Future Contingents

The future is objectively unsettled because no future history is yet singled out as *the* future history of the world (see MacFarlane, 2003, 2005).

Now, here is how our puzzle arises. Suppose that on Monday it is objectively unsettled whether a sea battle will occur on Tuesday and that Alice asserts the following contingent, future tensed sentence:

(1) There will be a sea battle tomorrow.

The situation is represented by Fig. 1. Here, w_1 and w_2 are distinct possible worlds that are qualitatively identical in their past and present, but which represent different ways the future might be: at w_1 a sea battle occurs on Tuesday, but not at w_2 . We suppose with MacFarlane that for every world, it is determinate how the future is at that world. C_0 , C_1 and C_2 are particular contexts—where contexts are sets of parameter values, including worlds, agents, locations and times.

For convenience, let ' $W(C_i)$ ' denote the set of worlds contained in a context C_i (where ' C_i ' is a variable for contexts), such that: at C_0 , it is unsettled whether there is a sea battle on Tuesday, since both w_1 and w_2 are in $W(C_0)$. At C_1 , it is settled that there is a sea battle since only w_1 is in $W(C_1)$; and at C_2 it is settled that there is no sea battle since only w_2 is in $W(C_2)$.

Against this metaphysical background, we are meant to be torn between two intuitions when we evaluate Alice's assertion of (1) 'There will be a sea battle tomorrow'. From the concurrent perspective of Monday, what she says strikes us as neither true nor false. After all, the future is open. But from the perspective of Tuesday, it seems that what she said on Monday not only *is* true, it *was true all along*. She was right!

Thus, the two intuitions, call them *Indeterminacy* and *Determinacy*, conflict:

Indeterminacy: What Alice said is neither true nor false.⁵

⁵ Contrary to MacFarlane, we do not endorse the view that these formulations capture the way an ordinary person might voice these intuitions. See Besson and Hattiangadi (2014) for further discussion. Note that MacFarlane oscillates between characterising the indeterminacy intuition in terms of truth and falsity on the one hand, and in terms of accuracy and inaccuracy on the other. In his early paper on the topic he tends

Determinacy: What Alice said is true (false).⁶

What Alice said cannot both lack a truth value and be true (false).⁷

2.2 Truth relativism applied to the puzzle of future contingents

Nevertheless, MacFarlane offers a way to give both *Indeterminacy* and *Determinacy* their due. The theory he puts forward has two key aspects, which must be viewed as a package: the first is the formal apparatus he uses to account for the assessment sensitivity of future contingents; the second has to do with broader core commitments of truth relativism concerning the nature and scope of assessment sensitivity. We explain them in turn.

The first aspect is a formal semantic, postsemantic and pragmatic account. In general, MacFarlane distinguishes between semantics proper, which delivers a content of an expression at a context and an index, and postsemantics, which delivers the truth value of a sentence at a context of utterance and assessment. His pragmatics then specifies the conditions under which assertions may be made or ought to be withdrawn: it is tied to the postsemantics in that these conditions are stated in terms of truth and falsity as defined by the postsemantics.

We now explain how the postsemantics and pragmatics work and explain how they help address the puzzle raised by the combination of *Indeterminacy* and *Determinacy*.

Let us assume with MacFarlane that the proposition stated by Alice when she asserts (1) is P_1 :

(P_1) There is a sea battle on Tuesday.

Following MacFarlane, we assume that propositions are eternal and should be construed as sets of possible worlds—though we agree with him that nothing of substance

Footnote 5 continued

to state this intuition using the truth-predicate ‘neither true nor false’ (MacFarlane, 2003: p. 322) But in his recent book, he says, for instance: ‘We must accept that the *truth* of a sentence like “There will be a sea battle tomorrow” (or the proposition it expresses) depends not just on the context in which it is used but on the context from which it is assessed. From today’s point of view, we...can rightly assess yesterday’s prediction of sunny weather as *accurate*.’ (MacFarlane, 2014: p. 202). This variation in formulation is a reflection of the fact that, as we explain below, his account of future contingents involves both what he calls a ‘postsemantics’ that describes how the truth values of assertions of future contingent propositions vary with the context of assessment, and a pragmatic theory that describes how the accuracy of assertions of future contingent propositions similarly varies. Given how closely tied the postsemantics and the pragmatics are for MacFarlane, indeed accuracy is defined in terms of assessment sensitive truth (see MacFarlane, 2014: p. 127), the latter do not come apart, and to this extent are interchangeable in stating the indeterminacy intuition. Accuracy and truth march in step on MacFarlane’s view.

⁶ One might think that *Determinacy* should be stated as: ‘What Alice said *was* true’, in which case it is not obvious that the intuitions conflict. MacFarlane’s rationale for stating it using the present tense is that it is meant to capture the perspective of Tuesday: it is now on Tuesday that what Alice said on Monday is true. Note also that MacFarlane (2008: p. 95) thinks that the tense of the ordinary English truth-predicate does not have ‘any independent semantic significance: it is determined, rather, by the grammatical context.’ We will go along with MacFarlane’s assumption here. But see Heck (2006) for criticism of the assumption that the English truth-predicate is tenseless, which directly addresses MacFarlane’s treatment of future contingents.

⁷ See Todd and Rabern (2021) for a good discussion of the interaction between the metaphysical picture of objective indeterminacy sketched here and the very possibility of both *Indeterminacy* and *Determinacy* being correct.

hangs on this. It is however interesting to note here that one reason he offers in favour of working within an eternalist framework is that it makes it easier to show that the ordinary, English truth predicate is monadic: ‘For simplicity, we will work with eternalist propositions. This will help illustrate our earlier claim [t]hat assessment sensitivity does not require propositional truth to be relativized to anything besides possible worlds.’ (MacFarlane, 2014: p. 207) The treatment of the ordinary truth predicate as monadic is a core feature of the account to which we return shortly, since it will play a key role in our argument against truth relativism in Sect. 3.

Now consider again P_I and the scenario described in Fig. 1. The account aims to show that P_I is evaluated as neither true nor false from the perspective of Monday (at C_0) and as true from the perspective of Tuesday (at C_I).⁸ This is achieved by appeal to an assessment sensitive truth predicate defined in terms of two key notions: a *context of utterance*, which is a set of parameter values, including worlds, agents, locations, and times, representing the circumstances in which a sentence is uttered; and a *context of assessment*, which is a set of shiftable parameters from the context of utterance representing the perspective from which an asserted proposition can be assessed (MacFarlane, 2014, p.78). This truth predicate applies to propositions, and is defined for future contingent propositions as follows (MacFarlane, 2014, p. 226):

Relativist Postsemantics for Truth (RPT): A proposition ϕ is true as used at C_i and as assessed at C_j iff for every $w \in W(C_i, C_j)$, ϕ is true at w , where $W(C_i, C_j) = W(C_j)$ if $W(C_j) \subset W(C_i)$ and $W(C_i)$ otherwise.

Given that the postsemantics is non-bivalent, falsity is not the dual of truth, but can be defined as truth of the negation, as follows:

Relativist Postsemantics for Falsehood (RPF): A proposition ϕ is false as used at C_i and as assessed at C_j iff for every world $w \in W(C_i, C_j)$, ϕ is false at w , where $W(C_i, C_j) = W(C_j)$ if $W(C_j) \subset W(C_i)$ and $W(C_i)$ otherwise.⁹

⁸ In MacFarlane’s early account of future contingents (2003; 2008), he formulated his formal theory as applying to *utterance* truth (2003) or the truth of occurrences of sentences (2008). However, in his (2008: 94), he notes that his informal gloss even in (2003) speaks of propositional truth, because that is how we ordinarily predicate truth, and in (2014: ch.3), he further justifies, at length, the reformulation of the view as an account of the truth of propositions as used and assessed at a context. We therefore take the (2014) formulation to be canonical. Furthermore, we think that the problems we will be raising here apply equally to the view formulated in terms of utterance truth, since the package deal that he develops comprehensively in (2014), which we describe in detail in this section, contains commitments that are as much in tension with the (2003; 2008) accounts as they are with the later formulation. In fact, some of these commitments are present in earlier work, such as the monadicity of the ordinary English truth-predicate and the equivalence schema (see 2008: pp. 94–6), where his discussion suggests that utterances of assessment sensitive propositions stated using this truth-predicate are also assessment sensitive, thus committing himself to what we call ‘ASOT’ below.

⁹ As MacFarlane notes (2014: 226), from a technical point of view, his postsemantics is a kind of tweak on a supervaluationist semantics for future contingents, which does not have a parameter for contexts of assessments (see Thomason, 1970). Introducing such a parameter renders his postsemantics apt to regard *Determinacy* as true, something which the supervaluationist cannot do (see MacFarlane 2008: pp. 89–90). There is a lot to say about the comparison between MacFarlane’s style of postsemantics and supervaluationism in the context of future contingents. See for instance MacFarlane (2003, 2008, 2014), García-Carpintero (2008; 2013) and Todd and Rabern (2021). We do not engage with the question of the relative merits of supervaluationism *versus* truth relativism, for the reason that our arguments really focus on quite specific

For simplicity, let RP be the conjunction of RPT and RPF . MacFarlane combines RP with a pragmatic account concerning norms of assertion, which are also relied upon to fully explain our intuitions about the accuracy and inaccuracy of assertions of future contingents. Roughly, an assertion is appropriate at a context of utterance and a context of assessment iff it is true relative to both contexts. As he puts it:

Accuracy: An attitude or speech act occurring at C_i is accurate as assessed from a context C_j just in case its content [proposition] is true as used at C_i and assessed from C_j . (MacFarlane, 2014, p.127)

For MacFarlane, inaccuracy is the denial of *Accuracy*—for an assertion to be inaccurate, it is sufficient that it is not true as used at C_i and assessed from C_j , in which case it should be retracted:

Retraction Rule: An agent in context C_j is required to retract an (unretracted) assertion of P made at C_i if P is not true as used at C_i and assessed at C_j . (MacFarlane, 2014, p.108)

With this in place, here is how both *Indeterminacy* and *Determinacy* can be given their due. Recall that *Indeterminacy* was the intuition that the proposition,

(P_1) There is a sea battle on Tuesday,

is neither true nor false when assessed from the perspective of C_0 . *Indeterminacy* is given its due as follows. Given RPT , P_1 is not true when used at C_0 and assessed at C_0 , since it is not true at w_2 and so is not true at all worlds $w \in W(C_0, C_0)$. Given RPF , P_1 is not false when used at C_0 and assessed at C_0 , since it is not the case that it is false at all worlds $w \in W(C_0, C_0)$. Thus, P_1 is neither true nor false when used and assessed at C_0 .

Furthermore, given *Accuracy*, Alice's assertion of (1) is inaccurate when assessed at C_0 , since P_1 , the proposition that Alice expresses in asserting (1), is not true as used at C_0 and assessed at C_0 . Given *Retraction Rule*, Alice ought to retract her assertion of (1) if she is challenged at C_0 while it is still open that there will be no sea battle on Tuesday.

Let us turn now to *Determinacy*, the intuition that P_1 is true when assessed from the perspective of C_1 . This intuition is given its due as follows. Given RPT , P_1 is true when used at C_0 and assessed from C_1 since it is true at every world $w \in W(C_0, C_1)$. Given *Accuracy*, Alice's assertion is accurate when assessed at C_1 , since P_1 is true at C_1 , and *Retraction Rule* does not require her to retract her (unretracted) assertion of (1) if she is challenged at C_1 .

Thus, RP seems to give both *Indeterminacy* and *Determinacy* their due, where that is reflected at the pragmatic level by *Accuracy* and *Retraction Rule*: it entails that what Alice said is neither true nor false when assessed at C_0 , yet it is true when assessed at C_1 ; when assessed at C_0 , Alice's assertion is inaccurate and should be retracted, but not when assessed at C_1 .

Footnote 9 continued

features of the package deal offered by MacFarlane that are not a part of supervaluationism. We thus do not take our arguments to apply *eo ipso* to supervaluationism.

The second feature of truth relativism considered as a package is as follows. The relativized truth predicates defined in *RP* just discussed are used to specify the truth conditions of assessment sensitive discourse as well as the pragmatics of such discourse. They are part of a broader theory of relative truth, which also includes the two core commitments mentioned in the introduction, and which are therefore crucial to the evaluation of the overall account of future contingents. We now spell them out in detail.

The first core commitment is that, as MacFarlane puts it, ‘if the language can express any assessment sensitive propositions, “true” will also be assessment sensitive, since if *P* is assessment sensitive, the proposition that *P* is true must be assessment sensitive too’ (2014, p.93). We call this commitment ‘ASOT’:

Assessment Sensitivity of Ordinary Truth (ASOT): If the proposition that *P* is assessment sensitive, then the proposition that *P* is true is assessment sensitive.

The second core commitment is that, as distinct from the relativist truth predicates defined in *RP*, the ordinary truth-predicates used in English are not defined in terms of the parameters specified in *RP*. Rather, according to MacFarlane, the English predicate ‘is true’ is monadic. This is captured in (*SMIT*):

Semantics for monadic ‘is true’ (SMIT): ‘True’ expresses the same property at every context of use—the property of being true. The extension of this property at a circumstance of evaluation *e* is the set of propositions that are true at *e*. (MacFarlane, 2014, p.93)

This ordinary English, monadic truth-predicate naturally obeys the *Equivalence Schema* (MacFarlane, 2014, p.93):

Equivalence Schema (ES): The proposition that φ is true iff φ .¹⁰

Here is how these core commitments work together. The first clause of *SMIT* makes it clear that, as MacFarlane puts it, ‘The relativist... can treat the monadic predicate ‘true’ as just another predicate of the object language—the language for which she is giving a semantics.’ The second clause of *SMIT* leaves open the possibility that the truth values of some propositions vary from one circumstance of evaluation to another. Furthermore, given *ASOT*, if our discourse about future contingents is assessment sensitive, then so too are the propositions of that discourse which are asserted using the English predicates ‘true’ and ‘false’. Hence if *RP* provides the correct post-semantics for future contingents in general, it must provide the correct post-semantics for propositions about future contingents stated using the ordinary English truth predicate.¹¹

¹⁰ Note that since MacFarlane accepts *Indeterminacy*, he takes it to be possible for an assertion of ‘*P* is neither true nor false’ to express a truth in English at certain contexts of assessment. If so, then ‘is false’ cannot be defined in terms of ‘is not true’. So *ES* needs to be supplemented with the following equivalence for falsity:

*ES**: The proposition that φ is false iff φ .

¹¹ This treatment of the English truth-predicate is effectively the same as that which he gives in (2008: pp. 94–96), where he distinguishes the truth-predicate ‘True’, the ordinary English truth-predicate, which is monadic and applies to propositions, from the relativistic truth-predicate, as defined by his semantic theory, and which applies to utterances.

In what follows, we show that this package—*RP*, *Accuracy*, *Retraction Rule*, *ASOT* and *SMIT* – cannot vindicate *Indeterminacy* and is open to a charge of *Reductio*.

3 Vindication and *Reductio*

At first blush, it looks as if *RP* solves the problem of future contingents, where that is framed against the backdrop of the assumption that the future is objectively open, and is understood as the problem of giving both *Indeterminacy* and *Determinacy* their due. However, we now argue that truth relativism, as a package, faces a difficulty that centers around *Indeterminacy*, in the following way. The ‘Vindication Problem’ arises when we consider someone stating *Indeterminacy* at the time when we are supposed to be in its grip. As we shall see, *RP* entails that the proposition, stated in (1), that *what Alice said is neither true nor false*, is false when used at C_0 and assessed at C_0 . While, as we note later, an analogous problem has been raised for similar (post-)semantic theories (specifically, supervaluationism),¹² we argue that in the context of truth relativism framed in terms of *RP*, *Accuracy*, *Retraction Rule*, *ASOT* and *SMIT*, it has more unpalatable consequences than have previously been acknowledged. As we show, it can be used to bring a charge of *Reductio* against it.

We can set up the Vindication Problem as follows. Suppose that Hugo witnesses Alice’s assertion of (1) on Monday. Suppose also that he gives voice to *Indeterminacy* by asserting the following concurrent assessment of Alice’s assertion:

(2) What Alice said is neither true nor false.

This situation is represented in Fig. 2.¹³ Recall that what Alice states with her assertion of (1) at C_0 is the proposition P_1 :

(P_1) There is a sea battle on Tuesday.

What Hugo states with his assertion of (2) at C_0 is the proposition (P_2):

(P_2) That there is a sea battle on Tuesday is neither true nor false.

By *ASOT*, if P_1 is assessment sensitive, so is P_2 . That is, if *RP* applies to future contingent propositions such as P_1 , it applies equally to propositions about future contingents such as P_2 . The problem is that, though *RP* entails that P_1 is neither true nor false when assessed at C_0 , it entails that P_2 is *false* when assessed at C_0 , exactly when we are supposed to be in the grip of *Indeterminacy*. This is because, given that there is a sea battle at w_1 , P_1 is *true* at w_1 . Since P_2 is the proposition that P_1 is *neither true nor false*, P_2 is false at w_1 . And given that there is no sea battle at w_2 , P_1 is *false* at w_2 . Since P_2 is the proposition that P_1 is *neither true nor false*, P_2 is false at

¹² See MacFarlane (2008, p.97). Note that he does not discuss the bearing of this kind of problem on his own view.

¹³ For simplicity, we are here assuming that Alice’s assertion of (1) and Hugo’s assertion of (2) take place at the same context of utterance C_0 . This is of course not strictly true, given that Hugo is commenting on an assertion already made by Alice. This simplifying assumption makes no difference to our argument, which really relies on the assumption that the contexts of utterance of either (1) and (2) contains both worlds in which there is a sea battle on Tuesday and worlds in which there isn’t.

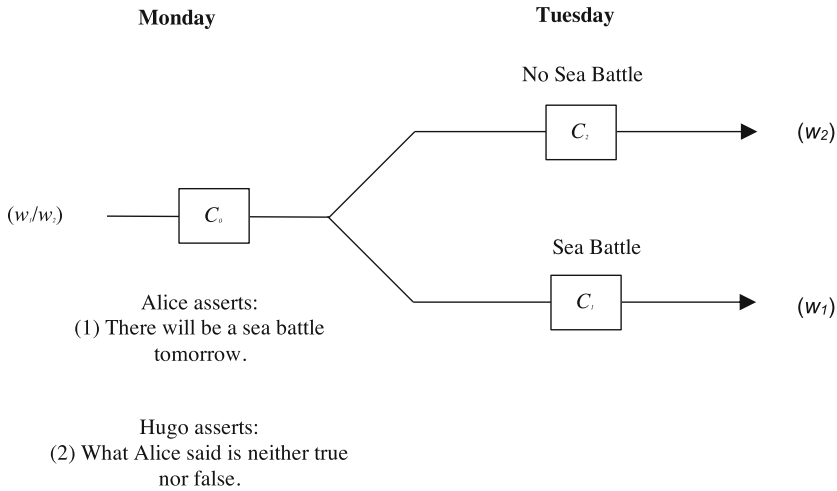


Fig. 2 The Vindication Problem

w_2 .¹⁴ Therefore, P_2 is false at every world $w \in W(C_0, C_0)$; when Hugo gives voice to *Indeterminacy*, what he says is false when assessed from the very perspective at which we are supposed to be in its grip. Indeed, since P_2 is false at both w_1 and w_2 , what Hugo says is false at *all* contexts of assessment C_0, C_1 and C_2 . This is our Vindication Problem.

To state the problem more precisely, it will be useful to mark the distinction between the ordinary truth predicates of English that Hugo uses in the way he states *Indeterminacy*, and those defined in the theory. Thus, let ‘true’ and ‘false’ denote the ordinary truth predicates of English. Let ‘true_{RP}’ and ‘false_{RP}’ denote the truth predicates defined by *RP*. The Vindication Problem can now be stated as follows:

Vindication Problem: Assessment Sensitivity fails to vindicate *Indeterminacy* because it entails that a proposition stating *Indeterminacy using the ordinary English truth predicates* is false_{RP}, even when it is used and assessed at a time at which we take it intuitively to be true.

The Vindication Problem highlights the fact that *RP* does not capture the intuitive truth status of what is supposed to be one of our core intuitions about future contingents—*Indeterminacy* as stated by (2). However, one might expect that an adequate semantics or postsemantics for an area of discourse such as future contingents would capture the intuitive truth status of core intuitions about that discourse. In other words, one might expect a pre-theoretic intuition regarding future contingents—one that can be stated using an ordinary English truth predicate—to be captured using the truth pred-

¹⁴ Here we are assuming that if there is in fact a sea battle at a world, w , then (assessed at that world) it is true that there is a sea battle at that world. Likewise, if there is in fact no sea battle at a world w , then (assessed at that world) it is false that there is a sea battle at that world. Of course, these assumptions could be challenged, but not only are they extremely natural, they are also invited by MacFarlane’s semantic framework underpinned by its appeal to Branch Theory to model determinacy and indeterminacy, which is then reflected at the semantic level within a truth value gap setting.

icate of the (post-)semantics for that discourse. We can state this as the following *Adequacy Condition* regarding the truth status of shared core intuitions about future contingents that we might have:

Adequacy Condition: if P is a proposition about future contingents that is intuitively true/false/neither true nor false, P should be true/false/neither true nor false by the lights of the relevant (post-)semantic theory of future contingents.

MacFarlane makes apparent his commitment to this condition of adequacy when he discusses rival theories and argues that they fail to predict the truth status of core intuitions about future contingents. For instance, he considers the following propositions, which he takes to be intuitively true (MacFarlane, 2014, p.217):

One or the other will happen: It is possible that it will be sunny tomorrow, it is possible that it won't be, and either it will be or it won't be.

He argues that rival theories fail to match the intuitive truth status of these propositions, and that his own theory does. Thus, it seems that, for MacFarlane, a general condition of adequacy on a semantic theory of future contingent propositions is in place requiring that the theory should predict the truth statuses of propositions concerning our core intuitions about future contingents, such as *One or the other will happen*, and of course, *Indeterminacy* as stated using (2).

Indeed, coming back to *Indeterminacy*, recall that Hugo is merely giving voice to an intuition that reflects our 'ordinary thought and talk about the future' (MacFarlane, 2014: p. 202), one we are meant to all share with respect to Alice's assertion, using the ordinary, monadic truth predicate of English. If truth relativism is to satisfy *Adequacy Condition*, given *SMIT* and *ASOT*, *RP* should not only predict the intuitive truth status of P_1 , but also the intuitive truth status of P_2 : it should imply that P_2 , the proposition that P_1 is neither true nor false, is also $true_{RP}$: true when assessed at C_0 . Yet, not only does it fail to do so, it implies that P_2 is $false_{RP}$: false when assessed at C_0 .¹⁵

The Vindication Problem wreaks havoc with the pragmatic theory of assertion associated with *RP*: Alice says on Monday that there will be a sea battle on Tuesday. When used and assessed on Monday, what Alice says is neither $true_{RP}$ nor $false_{RP}$. Yet, if Hugo asserts on Monday that *what Alice just said is neither true nor false*, thereby challenging her assertion, what he says is *false* when it is assessed on Monday: it is

¹⁵ P_2 is not the only place where *Adequacy Condition* is not met because *RP* does not reflect intuitive truth status. Consider *Symmetry*, a core intuition about future contingents, which MacFarlane states as follows (2014, p. 218):

Symmetry. Where \ulcorner Tomorrow $\varphi \urcorner$ is a future contingent, it has the same truth status (at every context) as \ulcorner Tomorrow $\neg\varphi \urcorner$.

RP in some sense gives *Symmetry* its due because it has it that both \ulcorner Tomorrow $\varphi \urcorner$ and \ulcorner Tomorrow $\neg\varphi \urcorner$ are neither true nor false as used at any C_i and assessed at any C_j . But it does not vindicate *Symmetry*. Consider the instance of *Symmetry* that says that *Tomorrow P and Tomorrow $\neg P$ are both neither true nor false*. This is intuitively true, yet, it is $false_{RP}$: false as used at any C_i and assessed at any C_j . As in the Vindication Problem, while *RP* can reflect a fact of indeterminacy, it cannot state its truth. It is thus unclear that MacFarlane can hold on to *Symmetry*: it is not true on his view that *Tomorrow P and Tomorrow $\neg P$ have the same truth status*. But the intuition behind *Symmetry* is something that one should be able to say truly. Indeed, its truth is assumed by MacFarlane in his objections against rival theories (2014: 218–221).

false_{RP}. Thus, by *Accuracy*, Hugo's assertion is inaccurate;¹⁶ by *Retraction Rule*, if Hugo's assertion were to be challenged, he would be obligated to retract it, since the proposition he asserts is false when used and assessed on Monday. More precisely, Alice asserts P_1 at C_0 , and P_1 is neither true nor false when assessed at C_0 . By *Accuracy*, her assertion is inaccurate and by *Retraction Rule* she should retract it, if challenged at C_0 . Hugo's assertion of P_2 at C_0 is such a challenge. Yet, because P_2 is false when assessed at C_0 , by *Accuracy* his assertion is inaccurate, and if it were to be challenged, by *Retraction Rule*, it would have to be retracted.

How serious are these difficulties? As we noted at the beginning of this section, the kind of issue raised by the Vindication Problem is not entirely unfamiliar. Though MacFarlane does not address this problem in connection with his own theory, he raises a similar issue in connection with supervaluationism applied to future contingents. He offers the following gloss on the problem: any statement to the effect that a future contingent proposition is neither true nor false is 'ineffable from the "internal" point of view' (2008, p.97), i.e. no such statement can be truly stated by the lights of the theory. Supervaluationists, as he notes, may simply bite the bullet, and accept that *Indeterminacy* cannot be truly stated by using (2).¹⁷ Perhaps that is so, but this option is unavailable in the context of truth relativism taken as a package deal, crucially involving *SMIT* and *ASOT*, to which supervaluationists need not be committed. To highlight the seriousness of the difficulty, we show that the Vindication Problem can be used to generate a *Reductio* of truth relativism.

The *Reductio* charge we raise makes use of one independently plausible semantic assumption, which concerns the relation of the falsity of a proposition to its negation:

F . The proposition that ϕ is false_{RP} $\rightarrow \neg\phi$.

F is an extremely natural assumption to make, one that most would be hard-pressed to give up, since it captures a core feature of our intuitive understanding that if something is false then it is not the case. It is hard to imagine a kind of truth predicate to which it would not apply. Moreover, F entirely fits RP , which regards every instance of F as holding at every context of use and context of assessment.

Informally, here is how the charge of *Reductio* goes. RP implies that P_1 is neither true_{RP} nor false_{RP}. This follows straightforwardly from its application to the proposition that Alice states when she asserts (1). Now Consider P_2 . This is just one way to state *Indeterminacy*, which is intuitively true at the time that it is stated, and is stated using the ordinary English truth predicate governed by *SMIT*. By *ASOT*, if P_1 is assessment sensitive, so too is P_2 . And if P_2 is assessment sensitive, RP applies to it.

¹⁶ Note, as we have done before (see fn. 5), that since *Accuracy* is defined in terms of truth at a context of assessment, there is little to be gained by reformulating *Indeterminacy* as the intuition that assertions of future contingent propositions that are unsettled at the time of assertion are neither accurate nor inaccurate. So long as truth is modeled by RP , if Hugo were to give voice to this intuition by stating 'Alice's assertion is neither accurate nor inaccurate', his own assertion would be inaccurate because its content is not true at C_0 , C_0 .

¹⁷ As MacFarlane notes, supervaluationists could introduce a 'determinate truth' predicate, in terms of which it can be truly stated that a future contingent proposition is neither determinately true nor determinately false. One might think this is also an option for the defender of truth relativism. We discuss in detail why this option has unpalatable consequences for truth relativism in Sect. 4.1. See García-Carpintero (2013) for critical discussion of this second option in the context of supervaluationism.

However, as our discussion of the Vindication Problem shows, when applied to P_2 , RP entails that P_2 is $false_{RP}$. Now, consider an application of F to the claim that P_2 is $false_{RP}$. Applied to this claim, it follows that $not-P_2$. But one of starting points was that RP entails P_2 . Thus, it appears that RP can be used together with $SMIT$, $ASOT$, and F to derive a contradiction.

More formally, the argument goes as follows.

Reductio of truth relativism

- | | |
|---|--|
| (i) RP | (Ass.) |
| (ii) $RP \rightarrow P_1$ is neither $true_{RP}$ nor $false_{RP}$ | (RP applied to P_1 at C_0, C_0) |
| (iii) P_2 | (Ass.: <i>Indeterminacy</i> stated by (2)) |
| (iv) P_2 is assessment sensitive | (Ass.: $SMIT, ASOT$) |
| (v) $RP \rightarrow P_2$ is $false_{RP}$ | ((iv), RP applied to P_2 at C_0, C_0) |
| (vi) P_2 is $false_{RP}$ | ((i), (v), <i>Modus Ponens</i>) |
| (vii) $\neg P_2$ | ((vi), F) |
| (viii) $\therefore \neg RP$ | ((iii), (vii), <i>Reductio ad Absurdum</i>) |

Thus, RP is false. This is our *Reductio* charge, which rests on the Vindication Problem, $SMIT$, $ASOT$ and F .

In the next section, we consider several avenues of response to this charge of *Reductio*. Let us first narrow the field of possible responses that we will consider. Rejecting step (i) would be bizarre, since it is the theory to be defended. While we think this theory ultimately should be rejected, we do not consider alternative semantic theories, or modifications to RP itself, as this would broaden the discussion too far to be manageable. One could reject step (ii), but that would be to reject the solution to the problem of future contingents delivered by RP , to reject the whole point of appealing to truth relativism in the first place. One could reject F , and thus block the *Reductio* at step (vii), but F is highly intuitive, and so difficult to give up. Moreover, giving it up would leave the Vindication Problem untouched, which would only constitute a partial solution to the difficulties we have highlighted. It is clear that one can hardly reject (vi) or (viii) without rejecting *Modus Ponens* or *Reductio ad Absurdum*.

So, the most promising responses to the foregoing argument will focus on reinterpreting step (iii) so as to block step (v) of the *Reductio*. Simply rejecting P_2 , so as to block step (iii), is not really an option; this amounts to either rejecting *Indeterminacy*, one of the intuitions that truth relativism sets itself to account for, or requiring that *Indeterminacy* cannot be stated using ordinary English truth predicates, which would be a distinctively odd thing to require. It would also mean failing to satisfy *Adequacy Condition*, the requirement that a (post-)semantics for future contingents predicts the intuitive truth status of a propositions about future contingents. Rather, we will look at replies that suggest that Hugo states a different proposition from P_2 when he asserts (2), thereby blocking the *Reductio* at step (v). We will look at what these strategies mean for our understanding of step (iv). Thus, according to these replies, even if we could reach a step analogous to (iii), with a different proposition from P_2 , the argument could not proceed further and no *Reductio* occurs. These will be in large part the focus of the next section.

4 Possible responses

We now consider four lines of response to block the charge of *Reductio*. The first three proceed along the lines just suggested. They effectively reject the idea that the truth predicate used by Hugo in (2) is the ordinary English truth predicate, which MacFarlane takes to satisfy *SMIT*. The first re-interprets (2) as stating a proposition involving—not truth—but *determinate* truth, so what Hugo says is really that P_1 is *neither determinately true nor determinately false*. The second re-interprets (2) as really involving a dyadic truth predicate, roughly glossed as ‘true at C_i, C_j ’. The third re-interprets (2) as really involving a metalinguistic truth predicate of some kind, such as one defined in the spirit of MacFarlane’s *RP*. We show that none of these responses addresses the difficulties we have raised above. More precisely, we show that if P_2 can be stated at all, then *RP* is false; and if P_2 cannot be stated, but some proposition can—one stated using a different truth predicate from the ordinary monadic English truth predicate—then we are effectively giving up on *ASOT*, a core feature of MacFarlane’s truth relativism.

Finally, the fourth response takes a different path, that of severing the link between *RP* on the one hand and the pragmatic account in terms of *Accuracy* and *Retraction Rule* on the other. This response, we argue, is difficult to motivate, and ultimately leaves the difficulties we have raised untouched.

4.1 Determinate truth and determinate falsehood

The first response we consider is one that reformulates *Indeterminacy* in terms of lack of *determinate* truth value rather than lack of truth value. Though we informally express the intuition we are meant to share as Hugo does when he asserts (2), one might think that, strictly speaking, the intuition that we share is not that *what Alice said is neither true nor false*, but that *what Alice said is neither determinately true nor determinately false*. Thus, a proper statement of *Indeterminacy* involves a determinacy operator, and if Hugo is giving voice to *Indeterminacy*, then he must implicitly make use of this operator. This response has the potential benefit of evading the Vindication Problem and blocking step (v) of the *Reductio*, the step that is highlighted by the Vindication Problem. It does so by requiring that Hugo expresses a different proposition from P_2 , thus revising step (iii). Let us consider this response in more detail.

The response first says that the proper way of understanding the indeterminacy intuition is as *Indeterminacy** rather than *Indeterminacy*:

*Indeterminacy**: what Alice said is neither determinately true nor determinately false.

That is, when Hugo asserts (2) on Monday, he *in fact* gives voice to *Indeterminacy**, and thus states the proposition P_3 :

(P_3) *That there is a sea battle on Tuesday is neither determinately true nor determinately false.*

P_2 is simply not the content of the indeterminacy intuition that Hugo is voicing.

How might we understand ‘is neither determinately true nor determinately false’? The natural way is to understand this phrase as involving supervaluationist, non-bivalent, truth predicates; for instance, these could be defined as follows¹⁸:

Determinate Truth: A proposition ϕ is *determinately true* at C_i iff for every $w \in W(C_i)$, ϕ is true at w .

Determinate Falsehood: A proposition ϕ is *determinately false* at C_i iff for every $w \in W(C_i)$, ϕ is false at w .

Up to now, we have assumed that the truth predicate Hugo is using is the English truth predicate. The response currently under consideration denies this assumption, in an effort to avoid the difficulties we have raised. The proposal is that it is not the English truth predicate that is involved in the assertion of (2), but a distinct truth predicate defined by *Determinate Truth* and *Determinate Falsehood*. According to this proposal, when Hugo asserts (2), he is really voicing *Indeterminacy**, since the predicates ‘is true’ and ‘is false’ as he uses them are defined in terms of *Determinate Truth* and *Determinate Falsehood*. Thus, the proposition he expresses is P_3 rather than P_2 . Our step (iii) of the *Reductio* now is step (iii) _{P_3} :

(iii) _{P_3} P_3

(Assumption: *Indeterminacy**)

With all this in place, this response successfully avoids the Vindication Problem and blocks the move in the *Reductio* at step (v): P_3 is not false_{RP}. Indeed, given RP , P_3 is true at (C_0, C_0) , since it is true at every world $w \in W(C_0, C_0)$. While at w_1 there is a sea battle on Tuesday, it is true at w_1 that the proposition that *there is a sea battle on Tuesday* is neither determinately true nor determinately false when used at C_0 and assessed at C_0 . Similarly, while at w_2 there is no sea battle on Tuesday, it is true at w_2 that the proposition that *there is a sea battle on Tuesday* is neither determinately true nor determinately false when used and assessed at C_0 . Thus, the Vindication Problem does not apply if the proposition stated by Hugo is P_3 .

As we said, this response blocks the *Reductio* at step (v), at which RP is applied to P_2 at C_0, C_0 . If instead RP is applied to P_3 , the corresponding step would be:

¹⁸ Let us stress here that we are considering supervaluationism merely as an articulation of the truth-predicate that Hugo might be using when voicing the indeterminacy intuition. We are not here considering it as a wholesale, rival semantics to RP . This would be an entirely different philosophical project. As we have noted in fn. 9, there are already many comparisons between supervaluationism and truth relativism’s respective treatments of future contingents. Indeed MacFarlane regards the former as the main contender to his view (see for instance MacFarlane, 2008, p.97). See also García-Carpintero (2008; 2013) for a defense of supervaluationism in reply to MacFarlane’s own’ criticism of it.

Interestingly, García-Carpintero (2013, p.8) discusses MacFarlane’s proposal that the supervaluationist adopt predicates defined along the lines of *Determinate Truth* and *Determinate Falsehood*. He argues that this proposal is not entirely convincing, since it implies that *Indeterminacy* cannot be stated using an ordinary English truth-predicate that satisfies ES , and hence that ordinary speakers must either be confused about the truth of *Indeterminacy* or confused as to what truth-predicate they are using in stating it. García-Carpintero does not discuss the analogous difficulty for MacFarlane’s account—what we call the ‘Vindication Problem’—and he does not discuss the postulation of these determinate truth-predicates in the context of a potential response on MacFarlane’s behalf. However, the concerns he raises about the plausibility of this response a supervaluationist setting arise equally in a truth relativist one.

$(\forall P_3) RP \rightarrow P_3$ is false_{RP}.

Thus, $(\forall P_3)$ is false. As we have just seen, when RP is applied to P_3 , P_3 is true at every context of assessment.

The trouble with this response is that it radically departs from the initial, intuitive way in which the problem of future contingents was set up, and that it sacrifices a core commitment of truth relativism. First, if a response along these lines is to fend off the difficulties we have raised, it must be assumed that there is no ordinary English truth predicate—that does not contain a determinacy operator—for Hugo to use, and thus that P_2 is truly ‘ineffable’; he cannot so much as state it. Otherwise, if it is at all possible for Hugo to state P_2 , then defining this alternative truth predicate would leave the original difficulties untouched. Not only is this implausible, but it departs from MacFarlane’s own articulation of *Indeterminacy*, which is framed using ordinary English truth predicates.

Second, this line of response requires giving up *ASOT*, according to which if P is assessment sensitive, then P is true is assessment sensitive. After all, P_1 is assessment sensitive, but the proposition P_3 , that P_1 is neither determinately true nor determinately false, is not. So, rewriting step (iv) of our *Reductio* as (iv_{P_3}) :

$(iv_{P_3}) P_3$ is assessment sensitive

would yield a false proposition.

Yet, *ASOT* is even more central to the theory, since a commitment to it is taken by MacFarlane to be a defining feature of what makes one a relativist about truth. Thus, to reject *ASOT* is in effect to reject truth relativism altogether.

Finally, the proposal under consideration radically departs from MacFarlane’s original understanding of the puzzle, which involved *Indeterminacy*, not *Indeterminacy**. *Indeterminacy* and *Determinacy* were meant to articulate ordinary intuitions we have about the puzzle of future contingents, ordinary intuitions that we have about the openness of the future and the closedness of the past.¹⁹ An argument would need to be given as to why, besides it being semantically convenient, these intuitions must be framed in terms of *Indeterminacy** and *Determinacy**, or why it is impossible for one to state proposition P_2 by an assertion of (2).²⁰

4.2 Dyadic truth and falsity

The second response we consider once again rejects step (v) of the *Reductio* as illicit on the grounds that P_2 is not the proposition that Hugo states when he asserts (2), so in the first place step (iii) has to be revised. Unlike the foregoing response, this is

¹⁹ There are complicated issues that might arise here which would deserve papers in their own right. One host of issues has to do with the relation of this proposal to how an ordinary agent might conceptualise any intuition of indeterminacy they might have. We are not taking this proposal as articulating any thing like the intuitive content of an indeterminacy intuition. Another concerns the issue of whether *Determinate Truth* is just one amongst many truth-predicates available in the language. We might think that English contains many truth-predicates, and embrace a kind of truth pluralism (see Wright (1992), for a classic exposition). Whether *Determinate Truth* is in place might depend on the subject matter – e.g. discourse around the future versus, say, mathematical discourse.

²⁰ See Besson & Hattiangadi (2014) for further discussion.

because the truth predicate that he uses is dyadic, with the upshot that the proposition that he asserts contains an explicit relativization of truth value to contexts of utterance and assessment. That is to say, the response under consideration has it that when Hugo asserts (2), he does not use the monadic truth predicate of English, which according to MacFarlane obeys *SMIT*, but a dyadic truth predicate, which does not. Using this dyadic predicate, he states the following proposition:

(P_4) *That there is a sea battle on Tuesday is not true at (C_0, C_0) and not false at (C_0, C_0) .*

Once again, it is easy to see how an appeal to a dyadic truth predicate helps to evade the Vindication Problem and block step (v) of the *Reductio*. First, consider the Vindication Problem. Given *RP*, P_4 is true at (C_0, C_0) , since it is true at every world $w \in W(C_0, C_0)$. While at w_1 there is a sea battle on Tuesday, it is true at w_1 that the proposition that *there is a sea battle on Tuesday is neither true nor false when used at C_0 and assessed at C_0* . Similarly, while at w_2 there is no sea battle on Tuesday, it is true at w_2 that the proposition that *there is a sea battle on Tuesday is neither true nor false when used and assessed at C_0* . Thus, the Vindication Problem does not arise if the proposition stated by Hugo is P_4 .

This response blocks the charge of *Reductio* at step (iv). By the lights of *RP*, if Hugo's assertion of (2) states P_4 , then what Hugo says is not only true at (C_0, C_0) , it is also true as assessed at C_1 , and as assessed at C_2 because it is true at both w_1 and w_2 , and hence true at every world $w \in W(C_0, C_1)$ and at every world $w \in W(C_0, C_2)$. There is no assessment sensitivity to be found there. So step (iv $_{P_4}$), which is equivalent to step (iv) but concerns P_4 ,

(iv $_{P_4}$) P_4 is assessment sensitive,

would be false. Moreover, the response blocks the charge of *Reductio* at step (v $_{P_4}$), which would be the equivalent of step (v) but applied to P_4 :

(v $_{P_4}$) $RP \rightarrow P_4$ is false $_{RP}$.

Again, (v $_{P_4}$) is false because when *RP* is applied to P_4 , P_4 is true at every context of assessment: P_4 is true $_{RP}$.

Though this response addresses both the Vindication Problem and the charge of *Reductio*, it is really a non-starter for anyone sympathetic to truth relativism, because it is incompatible with both *SMIT* and *ASOT*. This response is inconsistent with *SMIT* because, according to *SMIT*, '*P* is true' does not express the proposition that *P is true at (C_i, C_j)* ; it simply expresses the proposition that *P is true*. Moreover, once again, for this response to succeed in evading the foregoing difficulties, it must be assumed that there just is no monadic truth predicate for Hugo to use in this context, and hence that he simply cannot state the proposition P_2 , which represents an even more radical departure from a core commitment of truth relativism, and is implausible to boot.²¹ Once again, this response is inconsistent with *ASOT* because while P_1 is assessment

²¹ Again, as with the first response that we considered in terms of *Determinate Truth*, we remain agnostic as to whether this monadic truth-predicate is available to him with respect to other areas of discourse. See fn 19.

sensitive, P_4 , effectively the proposition that P_1 is neither true nor false at (C_i, C_j) is not—and, as we have noted, *ASOT* is a defining feature of relativism about truth. Since the dyadic route is fundamentally at odds with both *SMIT* and *ASOT*, both of which are core tenets of MacFarlane’s view, this is not a route that he will wish to take.

4.3 Metalinguistic truth and falsity

Another way to attempt to block the *Reductio* at step (v) is to go metalinguistic. On this view, the truth predicate that occurs in Hugo’s assertion of (2) is a metalinguistic truth predicate to which *RP* was never intended to apply. Thus, this attempt follows the previous ones in suggesting that the proposition stated by Hugo when he asserts (2) is not P_2 but another one. Again, as before, the proposal would be to revise step (iii) first.

There are two general strategies one might have here. The first one is inspired by a kind of Tarskian thought (see Tarski, 1944) whereby the object language does not as such contain a truth predicate. When Hugo asserts ‘What Alice said is neither true nor false’, he is not stating P_2 but rather P_5 :

(P_5) *That there is a sea battle on Tuesday satisfies ‘is neither true nor false’.*

The second one has it that when Hugo uses a truth predicate to voice *Indeterminacy*, he has to be understood as using a theorist’s truth predicate, not simply a truth predicate of English, to which truth relativism is meant to apply. It would be natural in this context to take this theorist to be committed to truth relativism and thus working with the truth predicates defined in *RP*. On this strategy, when Hugo asserts ‘What Alice said is neither true nor false’ he is not stating P_2 but rather P_6 :

(P_6) *That there is a sea battle on Tuesday satisfies ‘is neither true_{RP} nor false_{RP}’.*

Appealing to this second truth predicate avoids the Vindication Problem and blocks the move in the *Reductio* at step (v) in the same way as appealing to the dyadic truth predicate did. First, consider the Vindication Problem. Given *RP*, P_6 is true at (C_0, C_0) , i.e. it is true_{RP}, since it is true at every world $w \in W(C_0, C_0)$. While at w_1 there is a sea battle on Tuesday, it is true at w_1 that the proposition that *there is a sea battle on Tuesday is neither true nor false when used at C_0 and assessed at C_0* ; i.e. it is neither true_{RP} nor false_{RP}. Similarly, while at w_2 there is no sea battle on Tuesday, it is true at w_2 that the proposition that there is a sea battle on Tuesday is neither true nor false when used and assessed at C_0 ; i.e. it is neither true_{RP} nor false_{RP}. Thus, the Vindication Problem does not arise if the proposition stated by Hugo is P_6 .

Similarly, the step analogous to (iv) of the *Reductio* applied to P_6 does not hold:

($\forall P_6$) $RP \rightarrow P_6$ is false_{RP}

Indeed, ($\forall P_6$) is false.

It is easy to see that the core objection which arose in relation to both of the foregoing responses to the difficulties applies here. The present response rejects a core commitment of our truth relativism, namely *ASOT*, since P_1 is assessment sensitive,

but P_6 , the proposition that P_1 satisfies ‘is neither true_{RP} nor false_{RP}’, is not. As we have pointed out in our discussion of the previous responses, to give up *ASOT* is to give up truth relativism altogether.

Moreover, as with the previous proposed responses, this one too departs from the suggestion that *Indeterminacy* is an intuition that we are all meant to share, though the departure is sharper still, since on the present response, it is assumed that when Hugo voices *Indeterminacy* he must assume the role of the theorist. This assumption is starkly at odds with the thought that *Indeterminacy* is a core pre-theoretic intuition we all share, including those not well versed in the theory and those who oppose it: it voices a bystander’s reaction to what Alice says in (1). Furthermore, if *Indeterminacy* is understood to involve the very truth predicates defined by *RP*, it is hardly an achievement that *RP* gives *Indeterminacy* its due.

Now consider the Tarski inspired suggestion that English does not contain a truth predicate at all, but that the words ‘true’ and ‘false’ belong to a metalanguage. On this suggestion, (2) expresses the proposition P_5 , which involves these metalinguistic truth predicates. The point of invoking these truth predicates, however they are defined more precisely, is to block the application of *RP*, on the ground that the metalinguistic truth predicates are not assessment sensitive. Of course, if these truth predicates are not assessment sensitive, then for reasons that parallel those just given above, P_5 is true at every context of use and assessment, and the corresponding line of the *Reductio*,

$$(\forall P_5) RP \rightarrow P_5 \text{ is false}_{RP},$$

is false.

The key complaint here is as above. Though this move might respect the spirit of *SMIT*, it does so at the cost of the assessment sensitivity of the English language truth-predicate, which is at odds with a core thesis of truth relativism, namely *ASOT*. This is non-negotiable, since to deny the assessment sensitivity of the truth-predicate Hugo uses is to give up on truth relativism.

Furthermore, the Tarski inspired metalinguistic proposal seems to be a non-starter for reasons that go beyond these theoretical commitments. What underpins this proposal is the wholesale view that the English language does not contain its own truth-predicates, a view that is contentious at best, and will certainly feel like an over-reaction in the case of debates about future contingents. It is simply bizarre to think that there is no object language truth-predicate for Hugo to use when he is voicing *Indeterminacy*—a view that few will find attractive.

4.4 Changing the pragmatics of indeterminacy

The responses we have considered so far have all attempted to evade the Vindication Problem and block the charge of *Reductio* by postulating an alternative account of the proposition Hugo states when he asserts (2). As we have seen, all of these responses have a common cost: *ASOT*. We now turn to a response that attempts a very different approach to the difficulties that we have raised, one that starts with pragmatics of assertion.

We have taken Hugo to perform the speech act of *assertion* when he gives voice to *Indeterminacy* by uttering (2), and assumed that what he asserts is the proposition

P_2 . However, one might argue that in giving voice to *Indeterminacy*, Hugo does not perform the speech act of assertion, but some other speech act. Though there may be many different ways to flesh this response out in detail,²² to fix ideas, we can consider the possible response that what Hugo does when he gives voice to *Indeterminacy* is not to *assert* that *what Alice said is neither true nor false*, but to *reject* that *what Alice said is either true or false*. The response involves appealing to the suggestion that there is a *sui generis* speech act of rejection of a proposition that is not equivalent to the assertion of the negation of that proposition or to the assertion that that proposition is false.²³

Thus, suppose that Hugo merely rejects that *that there is a sea battle on Tuesday is either true or false*. Then step (iv) of our *Reductio* charge could be blocked as follows: there just isn't a proposition P_2 that is asserted by Hugo using (2) that comes out false according to *RP*. By merely rejecting the proposition that *there is a sea battle on Tuesday is either true or false*, he is not thereby asserting anything; in particular, he is not asserting P_2 . That is to say, there is no Vindication Problem, since this would require P_2 to be asserted. Rather, P_1 is rejected as either true or false.

Now, obviously, to give a full discussion of the matter, we would need to know more about how to understand rejection, how exactly the speech act of rejection is to be distinguished from the speech act of assertion, and how all this might be integrated to the overall architecture of truth relativism.²⁴ But this would lead us too far afield. At any rate, two points can be made here, which suggest that further development of this line of response is not likely to bear fruit. First, the proposal does not seem to be in the spirit of MacFarlane's own pragmatic account articulated in terms of *Accuracy* and *Retraction Rule*. Roughly, *Accuracy* tells you that an assertion of a proposition is accurate at a context of assessment iff it is true at that context, while *Retraction Rule* tells you that an assertion of a proposition that is not true at a context of assessment is one that is to be retracted at that context of assessment. The natural way to read these norms is as going along with the standard Fregean view that rejection is the denial of assertion. When one has to retract, one has to retract an assertion because the proposition asserted is not true, and the natural way to understand this is as requiring the assertion of the negation of the proposition—or some speech act that amounts to, or commits one to, such an assertion.

Second, if the rejection of a proposition is not an assertion of the negation of that proposition, then Hugo's rejecting P_1 would not suffice to trigger *Retraction Rule*, which states that an agent should retract an assertion of a proposition if that proposition is *not true* at a context of assessment. If Hugo were merely to reject Alice's assertion, that would not amount to his stating that what she said was not true, and hence would

²² See Besson and Hattiangadi (2014) for a discussion of alternative speech acts one might perform in uttering future contingent sentences.

²³ See Geach (1965) for the classic discussion of the Fregean view that rejecting P is just asserting not-P. See Rumfitt (2000) for a rejection of this view and the development of a view – 'bilateralism' – on which the speech act of rejection is a *sui generis* speech act.

²⁴ In our (2014), we consider other possible moves that have to do with not taking at face value an assertion of future contingents or an assertion that a future contingent has a certain truth value, either because it is not really viewed as an assertion or it is viewed as hedged in some way.

not meet the requisite for a demand for retraction. But this is odd, because it makes in some sense that demand impossible to formulate.

Finally, the proposal would work only if it implied that it is impossible to assert that P_1 is neither true nor false. After all, if it is so much as possible for Hugo to assert that P_1 is neither true nor false, then it is possible for him to assert P_2 , and both the Vindication problem and the *Reductio* arise once more. So, the proponent of this line of reply would have to argue that *Indeterminacy* could only be expressed through the speech act of rejection. But why think that? Perhaps it could be argued that it is simply impossible to assert that a proposition is neither true nor false. Yet, such a suggestion is too implausible to merit serious consideration. Or perhaps it could be argued, more plausibly, that there is an available speech act of rejection alongside assertion, but that Hugo in fact performs the speech act of rejection rather than assertion. However, it is difficult to see how one might argue on that basis that it is not possible for Hugo to assert that P_1 is neither true nor false altogether.

5 Concluding remarks

We have leveled related charges at MacFarlane's articulation of truth relativism: the Vindication Problem and a charge of *Reductio*. They can only be evaded at a high cost: that of leaving no room for an ordinary, monadic truth predicate, as defined in *SMIT*, to be used to talk about future contingents, with the effect that ordinary English sentences containing a truth predicate are not themselves assessment sensitive. This cost is too high to be borne: it sacrifices *SMIT*, the monadicity of the ordinary English truth predicate, and it sacrifices *ASOT*, the natural assumption that if P is assessment sensitive then so too is P is true. Both are not only highly intuitive, but also core tenets of truth relativism. The responses imply that even if the language contains sentences that express assessment sensitive propositions, and even if one can evaluate those propositions as true or false, when one does so, what one says cannot be assessment sensitive. This is counterintuitive because evaluations of truth and falsity appear to be in the same boat as the propositions they evaluate. Ultimately, these responses cannot accommodate the existence of the truth predicate that we are intuitively using when we speak English.

It is interesting to note that the foregoing argument is akin to a self-refutation charge against global relativism—which of course is as old as relativism itself. The classical charge is roughly that global relativism can in some sense be 'turned against itself' (see Kölbel, 2011, p.11). Without going into the vexed issue of how we might understand what self-refutation amounts to more exactly, there is a sense in which the foregoing arguments show how truth relativism can be turned against itself. We have pressed the view specifically on the interaction between truth in the object language, ordinary truth, and truth about truth in the object language. We have found that truth relativism cannot vindicate one of its core implications, that it ultimately implies a contradiction of one of its core implications, and thus is turned against itself. The only plausible responses to these difficulties sacrifice core tenets of truth relativism, and thus turn the theory against itself once more.

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