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Fabrice Correia
Andrea Iacona *Editors*

Around the Tree

Semantic and Metaphysical
Issues Concerning Branching
and the Open Future

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Concerning Branching and the Open Future



Editors

Fabrice Correia
Philosophy
University of Geneva
Geneva, Switzerland

Andrea Iacona
Humanities
University of L'Aquila
L'Aquila, Italy

ISBN 978-94-007-5166-8 ISBN 978-94-007-5167-5 (eBook)

DOI 10.1007/978-94-007-5167-5

Springer Dordrecht Heidelberg New York London

Library of Congress Control Number: 2012954175

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Preface

In 1958 Arthur Prior received a letter from Saul Kripke in which the latter expounded an idea Prior found congenial, as it suggested one way to give substance to some of his reflections on time and modality. The idea was that in order to capture the idea of indeterminism, one should represent the courses of events which are possible from a given moment on as branches of a tree (see Ploug and Øhrstrøm 2011). Prior (1967, p. 126) sketched a model for tense logic along these lines:

[...] a line without beginning or end which may break up into branches as it moves from left to right (i.e. from past to future), though not the other way; so that from any point on it there is only one route to the left (into the past) but possibly a number of alternative routes to the right.

Shortly after, the tree model was formulated in a more rigorous way by Richmond Thomason (1970), and since then it has constantly aroused the interest of people working in philosophy and logic, as well as other areas such as computer science and physics.¹

This volume discusses the philosophical implications of the tree model. Over the past few years, the model has been widely employed to deal with issues concerning the semantics of temporal discourse. The thought which has motivated its adoption is the Kripke-Prior thought that the most plausible way to make sense of indeterminism is to conceive of future possibilities as branches that depart from a common trunk, constituted by the past and the present. However, the thought still needs to be further articulated and defended, and several important questions, both semantic and metaphysical, remain unanswered. The volume is intended to be a 360° reflection on the tree model. The contributions it gathers concern the model and its alternatives, both from a semantic and from a metaphysical point of view.

¹ The references in all these areas are numerous. The papers in this volume contain references to the main philosophical works. For computer science, see, e.g., Huth and Ryan (2004) and for physics, Belnap (1992), McCall (1994), and Saunders et al. (2010). For logic, one may consult Hodkinson and Reynolds (2006) and Zanardo (2006).

One of the questions that are still open is how actuality can be understood and formally represented in a branching framework. This question, which concerns the conceivability of the actual future as a *Thin Red Line* (to borrow a term coined in Belnap and Green 1994), is addressed primarily by Andrea Borghini and Giuliano Torrenço, Manuel García-Carpintero, and Andrea Iacona. Another question is whether the tree model is really the best way, or even a coherent way, to make sense of indeterminism. This question is addressed particularly by E. J. Lowe and Sven Rosenkranz. Further questions may be raised about the relation between the idea of branching and other notions or views: Craig Bourne and Emily Caddick Bourne focus on fictional representation, Fabrice Correia on presentist reductions of eternalist discourse, Ned Markosian on presentism and the truth-maker problem, and Storrs McCall on rational agency.

The idea of a volume with this title comes from a meeting on *Language and Temporality* held in L'Aquila, Italy, in September 2009. On that occasion, some of the contributors had the opportunity to discuss, among other things, the materials of their papers. The remaining contributors joined the project at a later stage. A shared feeling that emerged at the meeting, and that grew stronger as other works were added to the initial papers, is that an extensive discussion on the tree model as such would be welcome in many respects. We hope that this volume can help to raise the level of the debate on branching and the open future. Its main purpose is to show that there is still plenty of room for discussion on these issues.

Fabrice Correia and Andrea Iacona

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Relativism, the Open Future, and Propositional Truth

Manuel García-Carpintero

Abstract In his paper “Future Contingents and Relative Truth,” John MacFarlane argues for truth relativism on the basis of the possibility of the open future. He defends the relativization of a truth predicate of linguistic items: utterances of sentences produced in concrete contexts. In more recent work, however, he contends that this was wrong, because when propositions are taken as truth bearers, the truth absolutists he was objecting to have an escape, and offers a new argument for relativism based on the semantics of “actually.” Here, I will critically examine these points. In the first place, I will suggest that the new argument concerning “actually” is not convincing. More importantly, I argue that truth absolutists should not accept MacFarlane’s “gift,” that is, his proposal for them to resist his previous arguments once they take truth to be a predicate of propositions: *if* there was a good argument in “Future Contingents and Relative Truth” for truth relativism taking truth as a property of linguistic items, there is still one when taking it as a property of propositions; these issues do not depend on the nature of truth bearers. I conclude by outlining what I take to be the best line for truth absolutists to take regarding the open future.

Keywords Future contingents • Open future • Indeterminism • Truth

Preamble

In his paper “Future Contingents and Relative Truth,” John MacFarlane (2003) argues for truth relativism on the basis of the *a priori* possibility of the open future. He defends the relativization of a truth predicate of linguistic items: utterances of

M. García-Carpintero (✉)

Departament de Lògica, Història i Filosofia de la Ciència,
Universitat de Barcelona, Barcelona, Spain
e-mail: m.garciacarpintero@ub.edu

sentences produced in concrete contexts. In more recent work (2008, 94), however, he contends that this was wrong, while, on the one hand, taking linguistic entities such as sentences or utterances as truth bearers goes against ordinary usage,¹ on the other, his arguments depend at crucial points on intuitions about ordinary truth predications.² Moreover, he contends that, once his arguments are evaluated with respect to a reconstruction of the ordinary truth predicate applied to propositions, truth absolutists – in particular, truth absolutists defending supervaluationist accounts of truth vis-à-vis the open future – are in a position to resist them. Fortunately for him, he has a new argument for truth relativism, this one based on the semantics of the “actually” operator.

In this chapter, I will critically examine these points. In the first place, I will suggest that the new argument concerning “actually” is not convincing. More importantly, I want to argue that truth absolutists should not accept MacFarlane’s “gift,” that is, his proposal for them to resist his previous arguments once they take truth to be a predicate of propositions: *if* there was a good argument in “Future Contingents and Relative Truth” for truth relativism taking truth as a property of linguistic items, there is still one when taking it as a property of propositions; these issues do not depend on the nature of truth bearers.

The latter point turns on the nature of truth relativism, and so my main aim is to contribute to clarifying this issue. Several people, MacFarlane himself among them, have distinguished two varieties among recent truth-relativist proposals: a “moderate” one (which MacFarlane, with a descriptively accurate label, calls “non-indexical contextualism” – the proposal advanced by Kölbel (2004), for instance) and a more “radical” one, which is the one that he himself endorses (under the simpler label “relativism”). According to my own (2008) previous suggestions for characterizing the debate, which in their turn follow Evans’ (1985), the two varieties correspond to *content-truth* relativism, which is not worrying and is, I think, an adequate semantic proposal for some applications, and *assertion-truth* relativism, which may well be incoherent and which in any case we should resist, for reasons already outlined by Evans. I will argue that by accepting MacFarlane’s proposals the purportedly truth absolutist ends up embracing the latter – which would make his views doubly incoherent, if assertion-relativism is so already. Thus, truth absolutists have every reason to reject MacFarlane’s poisoned gift.

This leaves us with the original argument for relativism based on the open future, which, if my main point in this chapter is correct, still stands when we take

¹ As he (2005, 322) puts it, “there is something a bit odd about calling utterances or assertions, in the ‘act’ sense, true or false at all. We characterize actions as correct or incorrect, but not as true or false”; assertions in the object sense – “what is asserted” – are according to him (2008, 93) just propositions.

² Austin (1950, 119) – who had as good an ear for common usage as anybody – pointed out that it is also far away from common usage to predicate truth of propositions, in the philosophers’ sense. Ordinary language predicates truth of *things said*, which in my own view are not just propositions, but propositions taken with a generic constative force.

propositions to be our primary truth bearers. Although this will not be my main concern here, I will rely on recent work by Greenough (ms) and Barnes and Cameron (2009), as well as a previous proposal by Tweedale (2004), to suggest that, at least if we take for granted the atemporal metaphysical foundations that MacFarlane himself assumes, the truth absolutist has no need for worry.

This chapter is structured in four sections. In the first, I present MacFarlane's (2003) original argument for truth relativism based on the open future and then his (2008) recent worries about the original argument and his suggestion for how the supervaluationist can resist it. In the second, I present his new argument concerning "actually" and show why it is unconvincing. The third section discusses the core issues just summarized concerning the irrelevancy of the nature of truth bearers for disputes concerning truth relativism. The final concluding section outlines the view I favor to resist truth relativism based on the open future.

MacFarlane's Original Argument and the Truth Absolutist's Alleged Escape Through Propositional Truth

There are *dynamic* (presentist, growing-block-theoretical, etc.) and *static* ways of thinking of the metaphysics of the open future. MacFarlane assumes a static, atemporalist way of presenting the issues, and it will be convenient for me to follow suit – although, at the end of the day, this might betray the most fundamental problems at stake. The assumption is that the basic particular facts until a given moment in time m_0 (today) – which we will think of as specified in tenseless language – plus the laws of nature leave open several possibilities: on a history h_1 open at m_0 , there is a sea battle at m_0 plus one day (tomorrow), m_1 in h_1 ; on another h_2 , there is peace at that time in that history, m_2 .³ At m_0 , Jake assertorically utters (1):

(1) There will be a sea battle tomorrow.

"Is his utterance true or false?" MacFarlane (2003, 323) asks and goes on to argue as follows: "The utterance takes place at m_0 , which belongs to both h_1 and h_2 . In h_1 there is a sea battle the day after m_0 while in h_2 there is not. We may assume that nothing about Jake's intentions picks out a particular history (h_1 or h_2). Jake may

³ I follow MacFarlane (2003, 323) in presupposing "the metaphysical picture of objective indeterminism articulated in N. Belnap *et al.*, *Facing the Future* (Oxford University Press, 2001), pp. 29–32, 139–41. Moments are idealized time-slices of the universe, partially ordered by a causal–historical precedence relation ($<$) with no backward branching, and histories are maximal chains of moments." Cf. also Thomason (1970). In speaking of "basic particular facts," I am gesturing in the direction of any adequate way of putting aside "facts about the future" such as the fact that it is true in 1492 that the Olympic Games were going to be held in Barcelona 500 years later.

take himself to be making a claim about ‘the actual future history’, but if this means ‘the future history that includes this utterance’, then it is an improper definite description. There is no such unique history. Given that nothing about the context of utterance singles out one of the histories of which it is a part, symmetry considerations seem to rule out saying either that the utterance is true or that it is false. Thus, it seems, we must count it neither true nor false. This is the indeterminacy intuition.”

MacFarlane then argues that a supervaluationist account of the truth conditions of utterances (modeled here as sentences in contexts) provides the best way of capturing this alleged *indeterminacy intuition*. For familiar reasons into which we do not need to go here, we need double indexing of the *points of evaluation* posited by our semantic machinery (distinguishing *contexts* and *indexes*), in order to discriminate the relativization of the semantic values of context-dependent expressions such as indexicals (which depend on nonshiftable features of context) from that of expressions whose values depend on indexes shiftable by operators.⁴ For present purposes, we only need to care about the relativization of truth values to the times of contexts and histories passing through them.⁵ Thus, to illustrate, we define as follows the semantics of a “settled at *m*” operator:

(Sett_{*m*}) \ulcorner Sett_{*m*}: ϕ \urcorner is true at a point of evaluation $\langle C, h \rangle$ if and only if, for every h' overlapping with h at m , ϕ is true at $\langle C, h' \rangle$

When we consider the evaluation of an utterance of a sentence at a context, we fix the relevant parameters in these relativizations, thus obtaining an absolute truth value; this is how the supervaluationist account, to be discussed here, proposes to do it, with $H(C)$ designating the class of histories overlapping at C :

(SVT) ϕ is true [false] at a context of utterance C if and only if ϕ is true [false] at every point $\langle C, h \rangle$ such that $h \in H(C)$.

(SVT) assigns an absolute truth value to Jake’s utterance of (1), which agrees with the indeterminacy intuition: on this proposal, the utterance is neither true nor false at m_0 , the time of Jake’s utterance.

The problem with this, MacFarlane (2003, 324–5) argues, is that given the absoluteness of utterance truth on this proposal, it cannot capture a *determinacy intuition* we also allegedly have when it comes to *retrospective* assessments of utterances such as Jake’s: “But now what about someone who is assessing Jake’s utterance from some point in the future? Sally is hanging onto the mast, deafened by the roar

⁴ See Kaplan (1989) and Lewis (1980) for clear expositions of those familiar reasons and different versions of the ensuing framework.

⁵ I am presenting the arguments in MacFarlane’s (2003) using the terminology in his (2008), for ease of exposition. As far as I can tell, nothing hinges on these decisions.

of the cannon. She turns to Jake and says ‘Your assertion yesterday turned out to be true’.” Sally’s reasoning appears to be unimpeachable:

- (2) Yesterday, Jake asserted the sentence “There will be a sea battle tomorrow.”
 There is a sea battle taking place today.
 \therefore The assertion that Jake made was true.

Sally’s reasoning is additionally supported by Dummett’s (1969/1978, 363) *Truth-Value Links* – the principles that articulate necessary connections of truth value between variously tensed sentences conceived as uttered at different times, such as this:

- (TVL) “There will be a sea battle tomorrow” was true if uttered at d iff “There is a sea battle today” is true if uttered at $d + 1$.

MacFarlane argues that the best account of the case is given by relativizing the truth of utterances to *contexts of assessments*, which ontologically are the same kind of thing as context of use, “a concrete situation in which a use of a sentence is being assessed” (2005, 309):

- (RT) ϕ is true [false] at a context of utterance C_U and a context of assessment C_A
 iff ϕ is true [false] at every point $\langle C_U, C_A, h \rangle$ such that $h \in H(C_U) \cap H(C_A)$.⁶

If we evaluate Jake’s assertion with (RT) simultaneously when it is made, so that $C_A = C_U$, it is neither true nor false exactly as it was using (SVT), because both h_1 and $h_2 \in H(C_U) \cap H(C_A)$, but now, if we evaluate it with Sally’s as context of assessment, it turns out to be true, because non-sea-battle-at-that-time histories are ruled out from then on. We thus capture the determinacy intuition, while sticking to the supervaluationist’s diagnosis of the indeterminacy intuition. Later on, we will be in a better position to appreciate the cost we have incurred in obtaining this result. Let us now move on to MacFarlane’s (2008) recent qualms about this argument for truth relativism.

The problem he sees, as announced above, is that the argument is based *on intuitions we are supposed to have* as regards the evaluation of claims or assertions in the face of the open future, but we do not have any intuitions when it comes to evaluating linguistic items such as utterances, because this is not a practice that we follow in ordinary parlance. In fact, as MacFarlane notes, Sally’s argument (2) was not presented in his original paper, as it is above, but thus:

- (3) Yesterday, Jake asserted that there would be a sea battle tomorrow.
 There is a sea battle today.
 \therefore Jake’s assertion was true.

⁶ Or just to $H(CU)$, if no history overlaps with both CU and CA . I will disregard this possibility in what follows.

MacFarlane (2008, 94) comments on this as follows: “I think there is a reason I slipped into proposition talk in giving the retrospective assessment argument, despite my efforts to avoid it elsewhere. I was trying to elicit the intuition that the retrospective assessment of Jake’s prediction as true was a natural one – something no ordinary person would reject. And in ordinary speech, truth and falsity are almost invariably predicated of *propositions*.” The problem this poses is as follows:

[S]upervaluationism gives the “wrong” retrospective assessments of truth for past utterances of future contingents. But if I am right that utterance truth is a technical notion that plays no important role in our ordinary thought and talk, then the supervaluationist can accept these consequences without being revisionist about our ordinary future-directed talk. What really matters is whether supervaluationism can vindicate our retrospective assessments of the truth of *propositions*.

MacFarlane contends that, indeed, it can. In order to see this, we need to model the ordinary language monadic truth predicate of propositions; MacFarlane proposes this definition:

(True) “True” applies to x at a point of evaluation $\langle C, h \rangle$ iff (i) x is a proposition, and (ii) x is true at h .

MacFarlane (2008, 25) highlights what he takes to be two virtues of this definition. In the first place, it does not have an argument place for a time, so it is never true to say that a proposition is True at a time and not True at another time; MacFarlane suggests that tense indications in ordinary talk about the truth or falsity of propositions (as in “what you said yesterday *was* true”) result from merely grammatical, nonsemantic requirements. Secondly, on the assumption (EXP), it implies every instance of a disquotational principle, (DIS):

(EXP) If S at C expresses x , then x is True at h iff S is true at $\langle C, h \rangle$.

(DIS) $\forall x ((x = \text{the proposition that } S) \rightarrow (\text{True}(x) \equiv S))$.

But now, MacFarlane claims, the supervaluationist truth absolutist that invokes (SVT) as the proper account for the metalinguistic truth predicate *can* capture Sally’s *propositional* retrospective assessment in (3), that is, the determinacy intuition properly stated. Let us consider how (SVT) leads us to evaluate Sally’s assertion of (4),

(4) Jake’s assertion is True.

Given (SVT), (4) is true at Sally’s context C_1 including m_1 iff “True” applies to the referent of “Jake’s assertion” at every point $\langle C_1, h \rangle$ such that $h \in H(C_1)$. Now, according to MacFarlane (2008, 93), “‘Jake’s assertion’ denotes what Jake asserted, not Jake’s act of asserting it. Although the word ‘assertion’ can be used to refer either to an *act* of asserting or to the content of such an act, it is doubtful that we ever predicate truth of *acts* at all, even if they are speech acts.” Thus, given (True), (4) is true at C_1 iff what Jake asserted is true at every such $h \in H(C_1)$. What Jake asserted is the proposition that there would be a sea battle the day after m_0 , but the way we have described C_1 (with Sally “hanging onto the mast, deafened by the roar of the cannon”) guarantees that proposition is true at

every $h \in H(C_1)$, because, as we put it before, non-sea-battle-at- m_1 histories are ruled out from then on.⁷

Can the supervaluationist also capture the indeterminacy intuition now? What would be the result of a supervaluationist evaluation of an assertion of (4) concurrent with Jake's assertion of (1) or just after it? There is a problem here, as MacFarlane admits; if the supervaluationist said that (5) is true, that would commit him to (6), given the disquotational principle (DIS):

- (5) What Jake just asserted – that there would be a sea battle tomorrow – is not True.
- (6) There will not be a sea battle tomorrow.

Given that, on the supervaluationist account, the utterance of (6) in Jake's context is untrue as much as (1) is, he should also deny that (5) is true; in fact, this appears to be the diagnosis provided by (SVT) and (True). It thus seems that now the supervaluationist is unable to capture the indeterminacy intuition; as MacFarlane (2008, 97) puts it: "the semantic fact recorded in the metalanguage by the observation that neither [(6)] nor its negation is true at such a context is *ineffable* from the 'internal' point of view. To express it, one must deploy the semanticist's technical notions of utterance truth or sentence truth relative to a context." To deal with the difficulty this poses, MacFarlane makes a proposal to the supervaluationist. The proposal is to introduce a "determinate truth" predicate:

- (Det) "DetTrue" applies to x at a point of evaluation $\langle C, h \rangle$ iff (i) x is a proposition, and (ii) x is true at every history $h \in H(C)$.

Thus, as MacFarlane (2008, 97) says, using this predicate "our speakers can correctly characterize propositions whose truth is still unsettled as 'not Determinately True'."

⁷ On behalf of what she describes as "traditional semantics" – which she characterizes by its not countenancing relativizations to context of assessments, nor therefore MacFarlane's "very radical view" rejecting "the assumption of standard semantics that sentence truth is relative only to a context of use," Brogaard (2008, 329) accepts MacFarlane's suggestion for traditionalists to account for the determinacy and indeterminacy intuitions, in contrast to what I will later suggest they should do. She rejects instead MacFarlane's contention that traditional, supervaluationist semantics cannot capture those intuitions when it comes to the evaluation of linguistic items. She argues that even on the traditional assumptions, the following counts as true, uttered by Sally to Jake: "The sentence 'There will be a sea battle tomorrow,' as uttered by you yesterday, was true at the time of utterance." To show that she contends that the mentioned sentence is not merely mentioned but also used and resorts to Recanati's proposal concerning such *mixed* or *open quotation* cases. The essential feature of the idea is that, while indexicals such as tense or "tomorrow" in the mentioned sentence obtain their value from the implied context (Jake's) in which it was uttered, in order to obtain the ascribed proposition, the worlds/histories at which it is supposed to be evaluated are rather provided by the context of the ascription (Sally's). In this way, we obtain the same effect as with MacFarlane's proposal concerning evaluations of propositions as True or otherwise. Thus, Brogaard and I argue for the same claim, that the issues concerning relativism do not depend on whether sentences or propositions are truth bearers. Of course, for the reasons I will provide in the third section, I think that the way Brogaard's proposal manages to show this gives the game away to the relativist, much as MacFarlane's does.

I'd like to consign here, for later use, what I take to be a small oversight in MacFarlane's description of the status of this suggestion. He motivates the proposal as one useful "for those supervaluationists who *do* think that a proof of unsettledness should compel withdrawal of an assertion about the future" (as we have seen, they cannot demand this by using "True"). I find this way of motivating the proposal slightly inadequate, in the context of the present dialectics. The reason is this. The problem with the (2003) argument was held to be that the open future argument for relativism is based on intuitions we have, which any proper account should capture; our intuitions concern the evaluation of the truth of propositions, but when we consider an acceptable account of such intuitions, it turns out that the supervaluationist can capture one of them, the determinacy intuition. Now, if all of this is right, any proper account should *also* capture the indeterminacy intuition; hence, the supervaluationist who allegedly can capture the determinacy intuition must be shown to be equally able to capture it as well. Unfortunately, this, as we have seen, cannot be done *in the very same terms* invoked to account for the determinacy intuition. So I take it that MacFarlane's suggestion of introducing a "determinate truth predicate" is not merely intended, in the context of this dialectics, to help those who demand withdrawal of unsettled claims in the object-language but motivated first and foremost by the need to allow the supervaluationist to capture also the indeterminacy intuition *somehow*.

In fact, this is what MacFarlane's (2008, 98) concluding remark on the matter roughly acknowledges: "It now appears that [...] the supervaluationist *can* account for the asymmetry between contemporary and retrospective assessments of contingent claims about the future. She can acknowledge that I can now truly assert 'What I said was true', even though I couldn't truly assert this yesterday. And she can acknowledge that I can now truly assert 'What I said was determinately true', even though yesterday I could have truly asserted 'What I just said is not determinately true'." The slight inaccuracy I am complaining about here consists in not making sufficiently explicit that, in fact, the proposal for the supervaluationist to capture the intuitions is not entirely convincing. To capture the determinacy intuition, he appeals to an object-language disquotational truth predicate of propositions, modeled by "True." But this cannot capture as well the indeterminacy intuition; to the extent that we ordinary speakers have it, the supervaluationist must say, it is either because we are deploying a unique ordinary truth predicate modeled by "True," and then we are confused, or it is because we have it with respect to a different truth predicate (a nondisquotational one), and then we are also confused, this time by our not realizing that we are deploying two different (even if related) truth notions, one disquotational, the other not.

I will come back to this point later when we are in a better position to evaluate the full package of pros and cons concerning the proposals at stake, including the one that MacFarlane makes on behalf of the supervaluationist. But before we come to that, I want to present and critically examine the new argument he thinks he has for relativism against the allegedly enlightened supervaluationist whose views we have just characterized.

MacFarlane's New Argument for Truth Relativism

In the framework we are using, the usual semantics for “actually” goes as follows:

(Act) $\ulcorner \text{Actually: } \phi \urcorner$ is true at a point of evaluation $\langle C, h \rangle$ iff ϕ is true at $\langle C, h_c \rangle$, where h_c is the world/history including the context C .

As MacFarlane (2008, 98) notes on this definition, the operator satisfies an intuitively mandatory requirement of *initial redundancy*, which he proposes to state as (IR):

(IR) An operator $*$ is initially redundant just in case for all S and C , S is true at C iff $\ulcorner *S \urcorner$ is true at C .

Now, in a branching framework, there is not just one world/history overlapping the context. Given this, MacFarlane suggests that in order to respect (IR), the supervaluationist should define “actually” as follows:

(Act)_s $\ulcorner \text{Actually: } \phi \urcorner$ is true at a point of evaluation $\langle C, h \rangle$ iff ϕ is true at $\langle C, h' \rangle$ for every $h' \in H(C)$.

In contrast, the relativist would offer the following definition:

(Act)_R $\ulcorner \text{Actually: } \phi \urcorner$ is true at a point of evaluation $\langle C_U, C_A, h \rangle$ iff ϕ is true at $\langle C_U, C_A, h' \rangle$ for every $h' \in H(C_U) \cap H(C_A)$.

We have seen in the previous section how the supervaluationist can somehow mimic the relativist account of the indeterminacy and determinacy intuitions when it comes to claims such as (1), once he turns to truth evaluations of propositions in the object-language. Compare now what supervaluationism has to say about an alternative utterance of (7) in the context of (1):

(7) There will actually be a sea battle tomorrow.

On the one hand, it appears that we have exactly the same indeterminacy and determinacy intuitions with respect to, respectively, contemporary and retrospective evaluations of the two assertions. And on the other, in the presence of (Act)_s, the combination of (SVT) and (True) will not now allow the supervaluationist to capture the determinacy intuition regarding the retrospective evaluation today of the assertion of (7) yesterday: when evaluated today, in the middle of the sea battle, the claim made with (7) is as much unTrue as it was when evaluated yesterday, after it was made; because in both cases, given (Act)_s, we are supposed to consider all histories overlapping the context at m_0 , when the claim was made.

Before moving on to compare this result with the relativist proposal, I would like to highlight at this point one more small oversight in MacFarlane's presentation of the supervaluationist he characterizes, which adds to the one pointed out at the end