

## SEA BATTLE SEMANTICS

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*The assumption that the future is open makes well known problems for traditional semantics. According to a commonly held intuition, today's occurrence of the sentence 'There will be a sea battle tomorrow', while truth-valueless today, will have a determinate truth-value by tomorrow night. Yet given traditional semantics, sentences that are truth-valueless now cannot later 'become' true. Relativistic semantics have been claimed to do a better job of accommodating intuitions about future contingents than non-relativistic semantics does. However, intuitions about future contingents cannot by themselves give good reasons for shifting to a new paradigm, for despite the initial appearances, standard non-relativistic semantics (plus an account of truth-value gaps) can accommodate both intuitions about future contingents.*

## I. THE PROBLEM OF FUTURE CONTINGENTS

Imagine that at some time<sup>1</sup>  $t_1$  I assert the sentence

1. There will be a sea battle tomorrow.

Imagine furthermore that nothing about the present state of the world determines whether a sea battle will take place tomorrow. Relative to one possible future a sea battle will take place; relative to another a sea battle will not take place. My assertion of (1), it seems, is then neither determinately true nor determinately false.

We can account for truth-value gaps in a variety of ways. One is to treat them in the way suggested by Arthur Prior:<sup>2</sup> Prior's approach to truth-value gaps is a kind of supervaluation: a future-tensed claim is true iff it expresses a proposition which is true relative to all possible continuations of the current state of the world, false iff it expresses a proposition which is false relative to all possible continuations, and neither true nor false iff it expresses a proposition which is true relative to some possible continuations, and false relative to others. One virtue of Prior's approach is that it allows us to be logical classicists: all instances of excluded middle come out true. My current assertion of 'Either there will be a sea battle tomorrow, or there will not be a sea battle tomorrow', for example, is true relative to all possible continuations of the current state of the world.

<sup>1</sup> I shall use 'time' to refer to what MacFarlane calls a 'moment': see J. MacFarlane, 'Future Contingents and Relative Truth', *The Philosophical Quarterly*, 53 (2003), pp. 321–36.

<sup>2</sup> A.N. Prior, *Time and Modality* (Oxford UP, 1957).

Superevaluation captures intuitions about the present truth-value of (1) with respect to my current context. But it has trouble accommodating tomorrow's intuitions about (1) as uttered by me today. When we are actually standing on deck with a sea battle going on all around, it is tempting to think that my earlier assertion of (1) was true. However, standard semantics seems unable to accommodate this intuition.

On standard semantic theory, a context of use is a sequence of parameters, which, following David Kaplan, include a speaker, an addressee, a world, a time and a location (if the universe is truly indeterministic, there will not be a unique world but a set of worlds).<sup>3</sup> The context of use plays two distinct roles: it fixes the semantic values of indexicals, and it determines an index with respect to which the proposition expressed by the sentence is evaluated for truth.<sup>4</sup> Which parameters of the context go into the index will depend on which index-shifting operators the language contains. Assuming that the language contains only modal operators and tense operators and the universe is truly indeterministic, indices will be pairs of a set of worlds and a time.<sup>5</sup> Index-shifting operators shift the parameters of the indices of evaluation. 'It is possible that', for example, shifts the world feature of the index, and 'it has been that' shifts the time feature of the index. In the case of 'It has been that there are dinosaurs', for example, 'it has been that' shifts the time feature of the index determined by the context of use to a time  $t$  such that  $t$  is earlier than the time of speech.

Given standard semantics, then, (1), as uttered by me at  $t_1$ , is true *simpliciter* iff the proposition expressed by (1) at my current context of use is true at the index determined by that context. Any potential future speech situation at which my assertion at  $t_1$  is evaluated is irrelevant to whether or not the assertion is true. So since my assertion of (1) at  $t_1$  is neither determinately true nor determinately false relative to my context of use at  $t_1$ , it cannot later turn out to be true. But later, when we are in the midst of a sea battle, it surely seems that my earlier assertion was true at the time of utterance. This is the problem of future contingents.

## II. DOUBLE-TIME REFERENCE SEMANTICS

John MacFarlane has recently developed a new relativistic semantics that can account for both of the standard intuitions about future contingents. MacFarlane's

<sup>3</sup> D. Kaplan, 'Demonstratives', in J. Almog, H. Wettstein and J. Perry (eds), *Themes from Kaplan* (Oxford UP, 1989), pp. 233–49.

<sup>4</sup> For ease of exposition I shall call the semantic value of sentences 'propositions', even if this terminology is not entirely happy. See J. C. King, 'Tense, Modality, and Semantic Values', in J. Hawthorne and D. Zimmerman (eds), *Philosophical Perspectives, 17: Language and Philosophical Linguistics* (Malden: Blackwell, 2003), pp. 195–246.

<sup>5</sup> Other possible parameters include a location parameter and a standard of precision parameter. I shall ignore these parameters in what follows. The assumption that there are tense operators in English has come under recent attack: see King, 'Tense, Modality, and Semantic Values'. Here I shall assume that it is unproblematic. Nothing of substance hangs on this.

semantics,<sup>6</sup> which is based on Nuel Belnap and Mitchell Green's double-time reference semantics,<sup>7</sup> rejects the standard assumption that sentence truth is relative only to a context of use. Sentence truth, on MacFarlane's view, is relative to both a context of use and a context of assessment. Using the above terminology rather than MacFarlane's, a context of use and a context of assessment together determine a set of worlds that run through the time of the context of use and the time of the context of assessment. (If the universe is indeterministic, there is no unique world that runs through the moments determined by the context of use and the context of assessment.) Which worlds are relevant for evaluating a given assertion for truth will thus depend on parameters of the context-of-use/context-of-assessment pair. Whether the sentence

1. There will be a sea battle tomorrow

as uttered by me at  $t_1$  is true depends partially on the context of assessment. My current context of use and my current context of assessment determine a set of overlapping worlds that all run through the current time  $t$ . Since a sea battle is taking place in some of these worlds but not in others, it is indeterminate with respect to these worlds whether there will be a sea battle tomorrow. So (1), as uttered by me at  $t_1$ , is neither determinately true nor determinately false.<sup>8</sup>

But suppose now that you are evaluating (1), as uttered by me at  $t_1$ , at some time  $t_2$  late tomorrow. My context of use and your context of assessment together determine a set of overlapping worlds that run through the times determined by my context of use and your context of assessment. Relative to this set, there is a determinate answer to the question of whether a sea battle is taking place the day after my assertion at  $t_1$ . So relative to this set, (1), as uttered by me at  $t_1$ , has a determinate truth-value. Relativism is thus able to accommodate both of the usual intuitions about future contingents.

<sup>6</sup> MacFarlane, 'Future Contingents and Relative Truth', and 'Truth in the Garden of Forking Paths', manuscript. For other defences of relativism see, e.g., MacFarlane, 'Epistemic Modalities and Relative Truth', manuscript; 'The Assessment Sensitivity of Knowledge Attributions', in T. S. Gendler and J. Hawthorne (eds), *Oxford Studies in Epistemology, 1* (Oxford UP, 2005), pp. 197–233; M. Kölbel, *Truth without Objectivity* (London: Routledge, 2002), and 'Faultless Disagreement', *Proceedings of the Aristotelian Society*, 104 (2003), pp. 53–73; M. Richard, 'Contextualism and Relativism', *Philosophical Studies*, 119 (2004), pp. 215–42; P. Laserson, 'Context Dependence, Disagreement, and Predicates of Personal Taste', *Linguistics and Philosophy*, 28 (2005), pp. 643–86, at p. 655; A. Egan, J. Hawthorne and B. Weatherston, 'Epistemic Modals in Context', in G. Preyer and G. Peter (eds), *Contextualism in Philosophy* (Oxford UP, 2004); Egan, 'Epistemic Modals, Relativism and Assertion', forthcoming in *Philosophical Studies*.

<sup>7</sup> See N. Belnap and M. Green, 'Indeterminism and the Thin Red Line', in J. Tomberlin (ed.), *Philosophical Perspectives, 8: Logic and Language* (Atascadero: Ridgeview, 1994), pp. 365–88; N. Belnap, M. Perloff and Ming Xu, *Facing the Future: Agents and Choices in Our Indeterministic World* (Oxford UP, 2001).

<sup>8</sup> See MacFarlane, 'Truth in the Garden of Forking Paths', §3.

### III. TRADITIONAL SEMANTICS AND FUTURE CONTINGENTS

MacFarlane's relativistic semantics solves the problem of future contingents by relativizing sentence truth to a context of use and a context of assessment. But it is a very radical view. It requires us to revise the assumption of standard semantics that sentence truth is relative only to a context of use. Still, if no competing view is able to accommodate all the usual intuitions about future contingents, perhaps it is time to reconsider the standard assumptions of traditional semantics.

I think, however, that there is no need to relativize sentence truth to contexts of assessment, as standard semantics (plus an account of truth-value gaps) can accommodate all the intuitions about future contingents.

The alleged problem for standard semantics is that it cannot account for the intuition that from the perspective of an evaluator located some time late tomorrow, sentence (1), as uttered by me at  $t_1$ , has a determinate truth-value. Suppose, for instance, that you and I are present at  $t_2$  in the midst of a sea battle. You might say

2. The sentence 'There will be a sea battle tomorrow', as uttered by you yesterday, was true at the time of utterance.<sup>9</sup>

The intuition that by asserting (2) you have said something true is very strong. In fact, it would be extremely odd to deny at  $t_2$  that 'There will be a sea battle tomorrow', as uttered by me at  $t_1$ , was true at the time of utterance.

The problem for standard semantics, then, is that (2), as uttered by you at  $t_2$ , seems to be attributing the property *was true* to a sentence that was asserted, or uttered, by me at  $t_1$ . So whether or not this attribution is correct will, it seems, depend on, and only on, the truth-value of the sentence as asserted by me the day before.

This standard objection, however, betrays a mistaken view of direct speech reports. The reported sentence in (2) is supposed to represent adequately the sentence I uttered yesterday: it is merely mentioned, not used, in my current context. As François Recanati has argued, however, there is good reason to think that reported sentences are used, not simply mentioned.<sup>10</sup> One reason is that the quoted material in a direct speech report may be available for copying, as in (3):

<sup>9</sup> I am aware that we would not ordinarily talk like this. However, I shall begin with the more difficult case, and then turn to an easier (and more natural) case below. Also, I originally had you saying 'The sentence "There will be a sea battle tomorrow", as uttered by you yesterday, turned out to be true'. However, as a referee pointed out to me, this weaker version of the puzzle emerges on the growing-block conception of Tooley, and on the shrinking-tree model of McCall (which MacFarlane rejects). As the referee further notes, the stronger version of the puzzle, now presented in the paper, does not emerge on the growing-block or shrinking-tree conceptions. The growing-blocker posits new facts which change the truth-value of the uttered sentence from neither to either true or false, while McCall posits branch attrition which allows us to say why (2) holds despite (1).

<sup>10</sup> F. Recanati, 'Indexicality and Context-Shift', conference paper, Workshop on Indexicals, Speech Acts, and Logophors, Harvard University, 2004, pp. 11–20, §3.2.

3. 'I'm going to talk to the doctor', she said; and she did.

'And she did' is elliptical for 'and she did talk to the doctor'. The elided material 'talk to the doctor' is available for copying. But this suggests that the quoted material is used. For if the sentence were merely mentioned, the quoted material would not be available for copying, as shown in "I'm going to talk to the doctor" is a well formed sentence; and she did'.

Another reason to think that a reported sentence in a direct report is used, not simply mentioned, is that expressions in the embedding matrix clause can depend anaphorically on expressions in the reported sentence.<sup>11</sup>

For instance, in

4. 'Give me your money; or I'll shoot', he said, but I didn't give it; to him

the pronoun 'it' in the matrix clause is anaphoric on 'your money'. But this requires that 'your money' picks out an individual for 'it' to refer to.

Recanati suggests that direct speech reports create a shifted context that determines the semantic values of the indexicals in the report. So in my assertion of 'Then John said "I am leaving now"', the semantic value of 'I' is John, not me, and the semantic value of 'now' is a time in the past, not the current time. Direct speech reports can thus be seen to function as context-shifters, or monsters, as Kaplan called them.<sup>12</sup> Kaplan thought there were no context-shifting operators in English, but he did not rule out direct-speech-report shifts.<sup>13</sup>

Given Recanati's account of direct speech reports, a more adequate account of post-sea battle reports can be provided. When you assert

2. The sentence 'There will be a sea battle tomorrow', as uttered by you yesterday, was true at the time of utterance

at  $t_2$ , your context of use fixes the semantic values of the indexicals in the matrix of (2). So it fixes the semantic values of 'you' and 'yesterday'. But the direct speech report in (2) creates a shifted context. So the context with respect to which the quoted sentence is interpreted is not your context of use but a context in which I am the speaker and the time is some time yesterday. Any indexicals in the scope of the direct speech report are assigned semantic values relative to this shifted context. 'Tomorrow', for example, is assigned the day of  $t_2$ . So with respect to the shifted context, the quoted sentence expresses the proposition that it will be the case that a sea battle takes place on the day of  $t_2$ .

Besides fixing the semantic values of the indexicals that occur in the matrix of (2), your context of use at  $t_2$  also determines an index with respect to which the content

<sup>11</sup> The first argument is Recanati's (§3.2, example 4); the second is my own.

<sup>12</sup> No operator can control the character of the indexical within its scope, because they will simply leap out of its scope to the front of the operator. I am not saying we could not construct a language with such operators, just that English is not one. And such operators could not be added to it: Kaplan, 'Demonstratives', p. 510.

<sup>13</sup> 'There is a way to control an indexical, to keep it from taking primary scope, and even to refer it to another context. Use quotation marks. If we mention the indexical rather than use it, we can, of course, operate directly on it': Kaplan, pp. 510–11.

of (2), relative to your context at  $t_2$ , is evaluated. The content of the quoted sentence in (2) is not evaluated with respect to the index determined by your context of use at  $t_2$ . But the reason for this is not that it is quoted. For direct speech reports do not by themselves shift any of the parameters of the index determined by the context in which the report is made. To shift the index we need an index-shifting operator. For example, the proposition expressed by ‘I am hungry’ is evaluated with respect to the index determined by the context of use in an assertion of John *said* ‘I am hungry’, but with respect to a shifted index in an assertion of John *said* ‘I am hungry’.

The reason why the quoted sentence in (2) is not evaluated with respect to the index determined by your context at  $t_2$  is that the matrix of (2) contains a past-tense operator (‘was true at the time of utterance’). The past-tense operator shifts the time feature from the time of speech to some time before the time of speech. So the proposition that there will be a sea battle on the day of  $t_2$ , expressed by the quoted sentence in (2), is evaluated with respect to a time  $t_1$  earlier than the day of  $t_2$ , and a set of overlapping worlds determined by your context at  $t_2$ . Since all the overlapping worlds determined by your context at  $t_2$  contain a sea battle at  $t_2$ , the proposition expressed by the quoted sentence in (2), *viz* the proposition that there will be a sea battle on the day of  $t_2$ , is true; hence (2), as uttered by you at  $t_2$ , is true.

One can thus account for the truth of (2) without relativizing sentence truth to contexts of assessment. (1) is neither determinately true nor determinately false with respect to my context of use at  $t_1$ . Nevertheless, when you report the sentence I uttered, the proposition expressed by the reported sentence relative to the shifted context is evaluated with respect to an index that is determined by your context of use and index-shifting operators. Since the matrix of (2) does not contain any operators on the world parameter of the default index determined by your context at  $t_2$ , the proposition expressed by the reported sentence in (2), *viz* the proposition that there will be a sea battle on the day of  $t_2$ , was true.

In the above cases I took you to utter the very same sentence that I uttered yesterday. But evaluators may not actually utter the reported sentences: they may just quietly assess them for truth. However, such cases can be treated in the same way as (2) as well, for on Kaplan’s theory, any sequence of parameters that includes a speaker, an addressee, a set of worlds, a time and a location counts as a context. The speaker need not be speaking, and the addressee need not be listening. So a context in which someone quietly assesses a sentence for truth is a context. A sentence assessed in such a context can be treated as reported, and so can be treated in the same way as the sentence reported in (2).

Standard semantics (plus an account of truth-value gaps) can thus accommodate the intuition that when you assert ‘The sentence “There will be a sea battle tomorrow”, as uttered by you yesterday, was true’ at  $t_2$ , the proposition expressed by the reported sentence has a determinate truth-value. There is thus no need to relativize sentence truth to a context of use *and* a context of assessment.

Granted, (2) is not the most natural way of evaluating past assertions. A more natural way of evaluating (1), as uttered by me yesterday, would be to say something like ‘What you said yesterday was true when you said it’. But as MacFarlane has recently argued,<sup>14</sup> such cases are unproblematic for traditional semantics. ‘What you said yesterday was true when you said it’ is evaluated with respect to the index determined by the speaker’s context. The past tense (‘... *was* when you said it’) shifts the time feature of the index determined by the speaker’s context, not the world feature. As a sea battle is taking place at every world in the index, the proposition denoted by ‘what you said yesterday’ is true at the index.

#### IV. ‘ACTUALLY’

MacFarlane admits (though for different reasons) that it may be that traditional semantics can perhaps account for intuitions about past assertions of future contingents.<sup>15</sup> However, he says, traditional semantics cannot account for future contingents which contain the word ‘actually’.<sup>16</sup> Suppose, for instance, I assert the following sentence at  $t_1$ :

5. There will actually be a sea battle tomorrow.

According to MacFarlane, (5) makes trouble for standard semantics. For suppose you assert the following sentence at  $t_2$  (in the midst of a smoking sea battle):

6. The sentence ‘There will actually be a sea battle tomorrow’, as uttered by you yesterday, was true at the time of utterance.

Given standard semantics, (6) is true at your context of use at  $t_2$  iff the proposition that there will be a sea battle at  $t_2$  is true at  $t_2$  and the set of overlapping worlds that run through  $t_1$ . The reason is that given the standard treatment of ‘actually’, actually’ as it occurs in ‘There will actually be a sea battle tomorrow’ always takes us from the worlds of evaluation to the worlds of speech. As MacFarlane puts it:

No matter how deeply embedded we are, no matter how far the world of evaluation has been shifted, the actuality operator returns it to the world of the context of use... the effect of adding an actuality operator to the *front* of the a sentence is to shift the world of evaluation to the world of [the context of use].<sup>17</sup>

If the standard treatment of ‘actually’ is correct, then (6) is true relative to your context of use at  $t_2$  iff the proposition that there will be a sea battle at  $t_2$  is true at  $t_2$

<sup>14</sup> ‘Truth in the Garden of Forking Paths’. See also R. Heck Jr., ‘MacFarlane on Relative Truth’, in E. Sosa and E. Villanueva (eds), *Philosophical Issues 16: Philosophy of Language* (Boston: Blackwell, 2006), pp. 88–100, who offers different arguments for thinking that standard semantics can explain the shifty nature of utterances of sentences such as ‘What Bill said was true (when he said it)’.

<sup>15</sup> ‘Truth in the Garden of Forking Paths’.

<sup>16</sup> The following recasts MacFarlane’s original objection. The basic idea underlying the original objection is the same.

<sup>17</sup> ‘Truth in the Garden of Forking Paths’, §10, p. 23.

and the set of overlapping worlds that run through  $w_1$ . But the proposition that there will be a sea battle at  $t_2$  is neither determinately true nor determinately false with respect to this time and this set of worlds (since some of the worlds contain a sea battle while others do not). So, given standard semantics, (6) is false with respect to your context of use at  $t_2$ . But surely it is true.

I think, however, that standard semantics is not committed to any such thing. For it is not clear that ‘actually’ plays any significant semantic role in ordinary English. If I say ‘Actually, there will be a sea battle tomorrow’ in reply to your prediction ‘Tomorrow will be another boring day’ I am merely using ‘actually’ to indicate that I disagree with you. Another example that illustrates the same point: John, an inhabitant of the actual world with special powers, is communicating with Mary, an inhabitant of a nearby world  $w_1$ . In  $w_1$  the inhabitants are approaching a presidential election.

MARY: I wonder who is going to win. A Democrat, I hope.

JOHN: No, a Republican will actually win the election at your world.

John clearly does not intend to say that at Mary’s world, a Republican will win the election in the actual world.

‘Actually’ has other non-semantic uses. As Jason Stanley points out, sometimes ‘actually’ simply indicates a “colouring”, or “tone”, like the difference between typical unphilosophical usages of “truth” and “absolute truth”.<sup>18</sup> Someone might use ‘the actual president’ (as in ‘The actual president of the United States came for a visit’), ‘not to distinguish different possibilities, but rather for emphasis, to convey ... surprise’.<sup>18</sup>

MacFarlane is right that standard semantics is in trouble if the role of ‘actually’ is to shift the world of evaluation to the world of speech. If it functions in this way, then it is the modal equivalent of ‘now’, which shifts the time of evaluation to the time of speech. It will be the case that I am happy that I am writing now’, for example, does not mean that it will be the case that I am happy that I am writing in the future. Rather, it means that it will be the case that I am happy that I am writing at the time of speech. Because ‘now’ shifts the time of evaluation to the time of speech, it does not admit of disquotation. The following claim, for example, is less than obviously true:

7. If John spoke truly when he said ‘I am hungry now’, then he is hungry now.<sup>19</sup>

If MacFarlane were right that ‘actually’ is the modal equivalent of ‘now’, then we should expect it to behave in the same way as ‘now’. Thus we should not expect the following claim to be obviously true:

<sup>18</sup> See J. Stanley, ‘Rigidity and Content’, in R. Heck (ed.), *Logic, Language and Reality: Essays in Honor of Michael Dummett* (Oxford UP, 1997), pp. 131–56, at p. 137. Stanley thinks ‘actual’ makes a difference to the semantic content of sentences in which it occurs, even if it does not make a difference to the assertoric content. But the further examples presented suggest that ‘actual’ does not even make a difference to the semantic content of the sentence.

<sup>19</sup> H. Cappelen and E. Lepore, ‘Context-Shifting Arguments’, in J. Hawthorne and A. Zimmerman (eds), *Philosophical Perspectives 17: Language and Philosophical Linguistics* (Malden: Blackwell, 2003), pp. 25–50.

8. If John had spoken truly when he said ‘I am actually hungry’, then John would actually have been hungry.

For if the content of ‘actually’ returns us to the world of speech, then the reported occurrence of ‘actually’ would take us to a non-actual world, whereas the non-reported occurrence of ‘actually’ in the consequent would take us to the actual world. So the counterfactual in (8) would not be obviously true. But as (8) does seem obviously true, there is good reason to think that ordinary language uses of ‘actually’ do not function in the way suggested by MacFarlane.

Of course, there is also a technical use of ‘actually’. On this use, ‘actually’ functions in exactly the way suggested by MacFarlane. So if the reported occurrence of ‘actually’ in

6. The sentence ‘There will actually be a sea battle tomorrow’, as uttered by you yesterday, was true at the time of utterance

is interpreted in this way, then (6) is false. But I doubt if this poses any special problem for standard semantics. For it is not clear that anyone has strong intuitions about the truth-value of sentences including highly technical terms. It may well be that the feeling that (6) is true owes something to the fact that the quoted sentence would have had a determinate truth-value if we had used ‘actually’ in one of its non-technical senses. When given a technical interpretation, cases like (6) show that standard and relativistic semantics come apart. But they do not show that standard semantics gets things wrong.

## V. CONCLUSION

*Prima facie*, it seems that ‘There will be a sea battle tomorrow’ is neither determinately true nor determinately false with respect to our current context of use, but ‘becomes’ true tomorrow if it turns out that a sea battle is indeed taking place. Because traditional semantics takes sentence truth to be relative only to a context of use, it might seem not to accommodate this appearance. The problem of future contingents thus seems to require a shift from traditional semantics to a semantics that rejects the assumption that sentence truth is relative only to a context of use.

On MacFarlane’s relativistic semantics, sentence truth is relative to a context of use and a context of assessment. So the sentence ‘There will be a sea battle tomorrow’ is neither true nor false relative to my current context of use and my current context of assertion, but is true relative to my current context of use and the context of someone who evaluates it tomorrow when a sea battle is taking place.

I have argued, however, that despite initial appearances to the contrary, traditional semantics can accommodate all of the intuitions about future contingents. Suppose yesterday you said ‘There will be a sea battle tomorrow’. Today I am evaluating the sentence ‘There will be a sea battle tomorrow’ with respect to your context of use yesterday. On an adequate account of direct speech reports, the reported sentence in ‘The sentence “There will be a sea battle tomorrow”, as

uttered by you yesterday, was true at the time of utterance' is *used* in addition to being mentioned. The reported sentence is interpreted with respect to a shifted context created by the direct speech report, and the proposition it expresses is evaluated with respect to an index with a shifted time parameter. Since the past-tense operator does not shift the set of worlds at which the content is evaluated, the reported sentence is true relative to the reporter's context of use. Thus when the truth-predicate it is restricted to the meta-linguistic level, it must be treated differently from when it is not so restricted.<sup>20</sup>

Here is my suggestion in a nutshell: object-language occurrences of both *s* and '*s* is true' are true iff *s* expresses a proposition which is true at the index determined by the context of the speaker who uttered *s* or '*s* is true'. But the truth-predicate as restricted to the meta-linguistic level is the usual one (given Kaplan-style semantics). So in the meta-language, *s* as uttered in context *c* is true *simpliciter* iff the proposition expressed by *s* in *c* is true at the index determined by the context of the speaker who uttered *s* (and not the context of the semanticist).

I conclude that the problem of future contingents does not provide any reason for a shift from non-relativistic semantics to relativism.<sup>21</sup>

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<sup>20</sup> Compare the claim 'Yesterday when *S* said "There will be a sea battle tomorrow", *S* was speaking the truth' with the claim 'Yesterday when *S* said "There will be a sea battle tomorrow" what *S* said was not yet determinately true'. If what *I* am saying is right, then we should expect ordinary speakers to make only the first sort of meta-linguistic claim.

<sup>21</sup> I am especially indebted to Kent Bach, David Chalmers, André Gallois, John Gabriel, John Greco, John Hawthorne, Richard Heck, Mark Heller, David Jehle, Carrie Jenkins, Max Kölbel, Ernie Lepore, Ishani Maitra, Julien Murzi, Stephen Neale, Joe Salerno, Eric Schliesser, Walter Sinnott-Armstrong, Jason Stanley, Brian Weatherston, Ralph Wedgwood and Robbie Williams for discussion of these and related issues, and to Peter Ludlow, John MacFarlane and referees for comments which improved the paper considerably. A shorter version of the paper was presented at the Pacific Meeting of the APA, San Francisco, 2007. I am grateful to the audience and my commentator Peter Ludlow for their comments, suggestions and encouragements.