Semantics, Tense, and Time. PETER LUDLOW. Cambridge, MA: MIT Press, 1999. xxi + 252 p. Cloth – $45.00.

This is not your typical book about the A-theory/B-theory controversy in metaphysics. Peter Ludlow attempts something that few philosophers have tried in the last thirty years: he actually argues from linguistic premises for metaphysical conclusions. The relevant linguistic premises have to do with the nature of language, a general theory of semantics, the proper analysis of tense, and various technical theses involving the treatment of temporal indexicals and temporal anaphora (among other things). The metaphysical conclusions that Ludlow argues for from these linguistic premises are some of the main claims normally associated with the A-theory in the philosophy of time, namely, (i) that tense is a genuine feature of the world (which means, roughly, that there are monadic, temporal properties – like pastness, presentness, futurity, being two days past, being three days future, etc. (sometimes called "A-properties") – and that the instantiation of these properties does not somehow reduce to the instantiation of two-place, temporal relations like earlier than, simultaneous with, later than, etc.), (ii) that temporal becoming (roughly, successively coming to possess different A-properties) is intrinsic to all events, and (iii) that only the present is real.

The overall plan of the book is as follows. First Ludlow spends four chapters defending a cluster of related claims about language and semantics in general and, in particular, the semantics for temporal indexicals and temporal anaphora. (Ludlow says that none of this material is original – he attributes most of it to Davidson, Chomsky, Evans, and Higginbotham – but it seems to me that a fair portion of what goes into this part of the book (including, especially, Ludlow's way of combining various ideas) is indeed both original to Ludlow and of genuine significance.) Then he devotes a chapter to developing a B-theory semantics, and another chapter to discussing what he takes to be certain insurmountable problems with the B-theory semantics. Next he devotes a chapter to developing an A-theory semantics, and another chapter to discussing what he takes to be the main problems

facing those A-theory semantics, together with his reasons for thinking that those problems can be overcome. The penultimate chapter of the book is devoted to arguing that considerations from "cognitive psychology generally" and "the theory of concept/language acquisition specifically" favor the A-theory over the B-theory. And the final chapter contains remarks by Ludlow on what he takes to be the philosophical and linguistic consequences of his investigations. There are also two "philosophical appendices" and five "technical appendices." (Taken together, the appendices constitute about one-fourth of the entire book.)

Semantics, Tense, and Time is an impressive and ambitious book. Ludlow touches on a huge number of different arguments, almost all of which raise interesting and important issues. (In fact, some will find the book to be almost too ambitious, and will wish that Ludlow had focused on a smaller number of topics and arguments, in order to be able to consider in greater detail those arguments and the most likely rejoinders to them.) There is no way I could do justice to even half a dozen of the most important arguments in the book, so in the remainder of this review, I will limit my discussion to three main worries concerning Ludlow's treatment of some of his central topics.

My first worry has to do with the relation between the A-theory, as formulated by Ludlow, and the claim – sometimes called "presentism" – that only present objects exist. Ludlow formulates the A-theory in such a way that it incorporates presentism. But in my mind, this is both unnecessary and problematic.

Building presentism into the A-theory is unnecessary because, although presentism entails the A-theory, the opposite is not true. That is, the essential claim of the A-theory – that tense is a genuine feature of the world – does not entail presentism. For one could believe that tense is a genuine feature of the world – that various events, for example, have the property of being past, while others have the property of being present and still others have the property of being future – without thereby being committed to the claim that only present things exist. In other words, it is quite possible to be an A-theorist but not a presentist. (In fact, I suspect that the majority of A-theorists are not also presentists.)

So there is no reason why we are forced to build presentism into the A-theory. Moreover, doing so is problematic because of the many difficulties facing the presentist. For example, Ludlow is forced to conclude that the A-theorist must avoid all reference to past and future things, including past and

future times. This turns out to be a major constraint on the different possible A-theory semantics that Ludlow considers, and it leads to all manner of difficulties for the A-theorist. (For the record, I think that there are some important ways around this problem that are available to the presentist but not considered by Ludlow, including the construction of past and future times out of present resources (such as maximal propositions). For more on this line, see Arthur Prior and Kit Fine's 1977 book, *Worlds, Times and Selves*, and Ed Zalta's 1987 paper, "On the Structural Similarities Between Worlds and Times.")

My second main worry has to do with Ludlow's treatment of what he considers to be the biggest problem facing the B-theory, namely, the problem of temporal indexicals. As Ludlow spells it out, the problem begins with an alarming episode from his personal life. It seems that Ludlow is sitting at his desk one day (March 12th, to be specific), unaware of the exact date, when he has the thought that his fifth anniversary is coming up sometime soon, and so calmly utters a token of this sentence:

(1)   My fifth anniversary is (this) March 12.

A short time later, he happens to glance at his calendar, whereupon he goes into a panic, and frantically utters a token if the following sentence.

(2)   My fifth anniversary is today.

Suppose we call these two utterances "(u1)" and "(u2)," respectively. Then it should be clear that, intuitively, there is a huge difference between the meanings of (u1) and (u2).

The A-theorist can explain our intuition that (u1) and (u2) have different meanings by invoking the putative A-property of presentness. That is, he can say that (u2) asserts that Ludlow's fifth anniversary has the property of being present, while (u1) merely asserts that Ludlow's fifth anniversary and March 12th are simultaneous with each other. And this difference in what the two utterances assert can be attributed to a difference in the meanings of sentences (1) and (2).

The B-theorist, on the other hand, is limited to just B-theory resources, so she cannot explain our intuition that (u1) and (u2) have different meanings in this way. And in fact, if we limit ourselves to considering just B-theory concepts, we seem forced to say that the two utterances say exactly the same thing.

Ludlow considers various possible ways for the B-theorist to respond to this problem. Each of the ways he considers is a semantical solution that involves trying to give "tenseless" truth-conditions for sentences like (2). And each of the proposed solutions either fails miserably, or else leads to further difficulties, or both. Thus, Ludlow concludes, consideration of the problem of temporal indexicals shows that the B-theory should be rejected.

This appears at first glance to be a good argument against the B-theory, but I think that the argument turns out to be a little bit too good. The problem of temporal indexicals is indeed a serious problem for the B-theorist (one that is discussed by Arthur Prior in his 1959 paper, "Thank Goodness That's Over," and by Richard Gale in his 1968 book, *The Language of Time*). But, fortunately for the B-theorist, it is not a problem that is peculiar to the B-theory. For as John Perry showed in his 1979 article, "The Problem of the Essential Indexical," the problem of temporal indexicals is a special case of a more general problem involving temporal, spatial, and personal indexicals alike.

To see this, consider a variation on Ludlow's example. Suppose that Ludlow is cycling in Vermont, and has promised to call his wife from the town of Ludlow immediately upon arriving there. Late one morning he arrives at a picturesque town and stops for lunch. As he sits in the town square munching on a sandwich, his thoughts turn to his wife and home, and he calmly utters a token of this sentence:

(3)   I promised to call my wife as soon as I arrived in Ludlow.

A short time later, a passerby happens to remark casually as he walks past, "Welcome to Ludlow," whereupon Ludlow (the man, not the whole town) goes into a panic, and frantically utters a token of the following sentence.

(4)   I promised to call my wife as soon as I arrived here.

Now, it is clear that these last two utterances – call them "(u3)" and "(u4)," respectively – do not at first glance appear to have the same meaning. But it is not at all clear that this should count as evidence for the claim that there are special, monadic, spatial properties like hereness.

Or consider this example. Suppose that Ludlow is suffering from amnesia, and can't remember who he is or what he has done. While puzzling over those topics, he is reading with great fascination from a book called *Semantics*,

Tense, and Time. He glances at the title page and calmly utters a token of this sentence:

    (5)   Ludlow is the author of *Semantics, Tense, and Time*.

A short time later, something in the book jogs his memory, and it all comes back to him, whereupon he excitedly utters a token of the following sentence.

    (6)   I am the author of *Semantics, Tense, and Time*.

I think that what Ludlow's example and these other examples all show is that there is something essential about indexicals, whether they be temporal, spatial, or personal indexicals. But I don't think there is any reason to conclude that any such example shows that there must be ineliminable, monadic properties of the relevant kind. Moreover, I think that if Ludlow's argument from temporal indexicals succeeds, then it shows too much. For there will be an analogous argument from spatial indexicals, whose conclusion is that there are ineliminable, monadic, spatial properties; and there will also be an analogous argument from personal indexicals, whose conclusion is that there are ineliminable, monadic, personal properties. Since these are wildly implausible conclusions about the metaphysics of places and the metaphysics of people, we should resist the spatial and personal analogues of the argument from temporal indexicals. And this suggests that, whether or not we have independent reasons for accepting the A-theory (such as, for example, the fact that it strikes many of us as obviously true), we should not endorse the argument from temporal indexicals for that theory.

The third of my main worries is a general one that concerns Ludlow's overall approach to metaphysics. Ludlow explicitly says that he sees his entire project as an attempt to show that one can argue from the structure of human language to the nature of reality. My worry is this. Even if we grant that aspects of a natural language (including its semantics) reflect the metaphysical commitments of that language's speakers, we have no reason to think that those commitments must be correct. After all, it's perfectly possible to have a language built around some false metaphysical views.

To be fair, this is a worry that applies to a large number of well-known arguments in philosophy, many of which are rightfully taken with great seriousness. But I do think that, insofar as an argument for a metaphysical conclusion has purely linguistic premises (as opposed to a mixture of metaphysical and linguistic premises), we should be highly suspicious of that

argument. And I worry that many of Ludlow's main arguments may fall into this category.

One final note, on a related point. The title of Ludlow's book is well chosen. It accurately reflects the contents of the book, which is more about semantics than it is about tense, and more about tense than it is about time. There are some philosophical purists who will be put off by this approach, and who will consider the book to be for linguists rather than philosophers. But even if this is true, it is also true that *Semantics, Tense, and Time* is a remarkably rich sourcebook for both philosophers of time and linguists. The book contains numerous fascinating cases – mainly in the form of sentences from natural languages – that present all kinds of perplexing puzzles and provocative problems for various theories in both the philosophy of time and linguistics.

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