

BOOK REVIEW: LUDLOW, P., *Interperspectival Content*
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Abstract: In this review, I present and discuss the main aspects of Peter Ludlow's theory of intersperspectival contents.

Peter Ludlow's most recent book is a systematic defense and exploration of what he calls *intersperspectival contents*. Such contents are a *sui generis* kind of content expressed in language by tense and indexical expressions. They are essentially perspectival, and they cannot be eliminated or reduced to non-perspectival contents. Moreover, the 'inter' in 'intersperspectival' means they are not subjective, private

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things: they are *shared* across agents situated in different perspectives. According to Ludlow, reality is shot through with such contents, from language and thought to computation and the flow of information, and they are needed to explain a number of phenomena, including intentional action, rule-following and the passage of time. In a sense, then, Ludlow's new book is the perfect antithesis to Cappelen & Dever (2013). He makes a comprehensive case that perspectival content is not merely philosophically interesting, but also that it runs as deep as basic physics (Ch. 8). The book is ambitious, broad-ranging and interdisciplinary, and it would be impossible to discuss all of its contents in a short review. For this reason, I concentrate on the main points of his theory (laid out in the first three chapters) and try to spell them out in a bit more detail.

Perry's messy shopper and Lewis' twin gods convinced almost everybody that certain beliefs and desires must involve an essentially perspectival ingredient if they are to explain human intentional action adequately. Referential content, they claimed, is not enough. Because this perspectival ingredient is expressed in language by tense and indexicals, it is usually referred to as 'indexical content', but Ludlow prefers to call it 'interperspectival content', or 'perspectival content' for short (p. 3). Since Perry's and Lewis' work, philosophers started seeing ineliminable perspectival components everywhere: in emotion, perception, consciousness, temporal reasoning, ethical agency and in normative behavior more generally. Of course, they disagree on the precise nature of this perspectival component (e.g. if it reflects a deep feature of reality or is merely a narrow psychological state), but there is widespread agreement that it must be there to explain various aspects of human activities. There is a vocal minority, though, who remains deeply unconvinced. The

most notable case is that of Cappelen and Dever (2013), henceforth C&D.

C&D's work had a huge impact, so it is a natural starting point for Ludlow. In the first chapter, he uses C&D objections as a foil to show why interspectival contents are indispensable. His main target are the so-called Impersonal Action Rationalizations (IAR). IARs attempt to explain an agent's behavior only in terms of non-perspectival attitudes. C&D argue that IARs are perfectly adequate explanations of behavior, even though they are perspective-free. If they are right, this would show that there is no necessary connection between perspectival and agency, *pave* Perry and Lewis. To better see the point, it is useful to reproduce here two action rationalizations Ludlow discusses, one personal and the other impersonal (p. 26):

Personal Action Rationalization (explanation) 1.

- Belief: François is about to be shot.
- Belief: I am François.
- Belief (Inferred): I am about to be shot.
- Desire: That I not be shot.
- Belief: If I duck under the table, I will not be shot.
- Action: I duck under the table.

Impersonal Action Rationalization (explanation) 1.

- Belief: François is about to be shot.
- Desire: François not be shot.
- Belief: If François ducks under the table, he will not be shot.
- Action: François ducks under the table.

For C&D, IAR-1 is an adequate explanation of why François ducked, and therefore the supposedly essential perspectival component is dispensable. Ludlow grants that some IARs have the appearance of genuine explanations, but he claims that we have good reasons to suspect that they appear that way because there is “something enthymematic” (p. 27) about them. For instance, IAR-1 seems to work only because the premise that François believes that he himself is François is implicit. This is not a new argument, but Ludlow gives it a different spin by asking us to consider a case in which François *lacks* the perspectival belief that he himself is François, but still ducks. The lack of a first-personal belief seems to make his ducking completely random and unconnected to the attitudes described in the rationalization.

To me, however, the most interesting argument Ludlow offers against C&D appeals to *temporal* beliefs. Ludlow notes that François’ attitudes are already knee-deep in temporal perspectival contents:

The desire is not that François timeline be free of getting-shot events; it is too late to realize such a desire. You can’t get unshot. His desire is that he not get shot *now*. Similarly for François’ belief: His belief is that if he ducks under the table *now* he will not get shot now. (p. 27)

Thus, even if the first-person perspective is somehow eliminated from the rationalization, temporal perspectival contents must remain, otherwise we cannot explain why François ducks at the moment he ducks. For some reason, the role of temporal perspectival contents in action explanation has mostly slipped under philosophers’ radars,

and Ludlow does a nice job of bringing it out¹. In fact, because temporal contents do not involve the complexities of the first-person, they seem to make a better and more straightforward case for the indispensability of the perspectival element, as Morgan (2019) argued.

Another interesting aspect of the first chapter is the discussion of C&D's example of the aperspectival god. C&D claim that there could be a god who does not have perspectival thoughts but who could nevertheless act upon the world just by thinking things like 'the door is closed', and the door is closed. This example is supposed to show that there could be intentional action without perspectivality. But, Ludlow argues, this is very implausible. Suppose the aperspectival god creates a universe containing only ten qualitatively identical doors arranged in a circle (p. 33). How can the god form a *particular* intention to close one of the doors in this case? Indexical-free definite descriptions cannot single out any of them, and neither can proper names, since to name something you must first be able to identify it, either perceptually or by description. Even being omniscient, there must be a perspectival way of singling out one particular door in the god's 'awareness space' (e.g. 'that door'), otherwise she would not be able to form a particular intention about it. Ludlow's example bears some similarities to Strawson's *massive reduplication universe* (1959: 20-23), and both have more or less the same moral: every act of particular identification seems to ultimately rest on demonstrative (i.e. perspectival) identification. If this is right, then the aperspectival god would not be able to form particular intentions in these cases, and hence could not act upon particular objects.

¹ An exception is Morgan (2019).

Ludlow concludes that perspectival components are indispensable.

Having established why we need perspectival contents, in the second chapter Ludlow goes on to explain what they are. In particular, by focusing on tense, he argues that perspectival contents are substantial features of reality, and not merely superficial aspects of language or thought. His argument leans heavily on a methodological doctrine he calls *Semantic Accountability*. As he puts it, “the basic idea is that meaningful use of language carries ontological commitments” (p. 16), and “that the metalanguage of the semantics must be grounded in the world and the contents that are expressed in the metalanguage are features of the external world” (p. 38). In other terms, if we cannot purge perspectival contents from the metalanguage that gives the semantics of a certain piece of perspectival discourse, then we must treat these contents as irreducible and ineliminable features of reality. Ludlow argues that this is not only the case with tense, but also with information theory, computation and even with physics. As we can see, the doctrine of semantic accountability plays a crucial role in the whole book.

In the second chapter he also expands on the two central notions of the book, namely, perspectival position and perspectival content. In short, perspectival positions are “egocentric spaces anchored in external positions” (p. 6), where external positions are objective locations in space and time. Because we are embedded in such positions, certain things will be *there* or *here*, *past* or *future*, and so on, with respect to us. More importantly, Ludlow argues that perspectival positions are not a matter of phenomenology, i.e., of how things are experienced by the relevant agents. According to him, the same perspectival position can have different phenomenal experiences associated with them,

whereas different perspectival positions can yield the same phenomenal experience (p. 7).

Now, things get more complicated with interspectival contents. Because they are primitives for Ludlow (p. 42), it is pretty hard to define them precisely. He attempts to circumvent this difficulty by employing several metaphors. First, he asks us to think of perspectival positions in terms of panels on a storyboard. Each panel is anchored in the agents' perspectival position and represents the world from their point of view. For example, in a situation where I say 'I am here' and you say 'you are there', there is a panel representing my utterance, your utterance and the world from *my* perspectival position, and a panel representing your utterance, my utterance and the world from *your* perspectival position. The interspectival content, in turn, "consists of this collection of storyboard panels...and a theory of how the panels in the storyboards are related (p. 42). As I understand it, this theory describes the events occurring – my utterance and your utterance – in a way that explains what we are doing, our motivations, beliefs and emotions in that situation. This explanatory theory would be the perspectival content. Another metaphor Ludlow offers is that of a dramaturge who has all the panels before her. The dramaturge knows how to coordinate them and has a theory of what is happening (p. 42). Finally, Ludlow emphasizes that perspectival contents are *shared*. When I say 'I am here' and you say 'you are there', we are expressing the same perspectival content, but from different perspectival positions. That is, we are expressing the same theories from different perspectives (p. 40), and to do that we have to use a different set of expressions. The same phenomena occurs with perspectival contents expressed across different temporal positions. If I think 'today is a fine day', and in the next day I think 'yesterday was a fine day', my thought episodes have the

same referential content *and* the same perspectival content under a different verbal clothing.

The fact that perspectival contents are shared and remain stable across perspectival positions might make them look just like referential contents, since the latter also have the same properties. But Ludlow quickly points out that this cannot be right, for referential contents cannot explain action, emotion, and so on (p. 45), as he argued in the first chapter. Thus, whatever perspectival contents are, they cannot be referential contents. In fact, in the next chapter he is going to claim that perspectival contents bear important similarities to Fregean senses, which are notoriously richer and more fine-grained than referential content.

I understand that perspectival content is a pretty difficult notion to grasp, but the fact that Ludlow's attempts to 'define' them are not so obviously equivalent makes things somewhat more confusing. For instance, in various passages he seems to *identify* perspectival contents with theories of some sort:

the resulting *local theory is your intersperspectival content.*" (p. 72, italics mine).

I've offered a proposal in which *we think of intersperspectival contents as local theories* that we express in different ways from different perspectival positions. (p. 75, italics mine)

Earlier, though, when discussing the storyboard metaphor, he talks about perspectival contents as being the *combination* of the panels (i.e. perspectival positions) and a theory, and not just the theory itself (p. 42). The following passage is also a bit odd: "[a]s we saw in Chapter 1, stripping the perspectival content from these theories [i.e. action rationalizations] neuters them" (p. 71). This makes it

seem that perspectival contents are something *contained* or *invoked* in theories, and not theories in themselves. Also, assuming that perspectival contents are identified with theories, it is not clear how to interpret this passage: “[p]erspectival contents, when expressed, do not supervene on the state of a single individual, but they rather supervene (at least partly) on multiple individuals in multiple perspectival positions.” (p. 44). It surely sounds weird to say that a theory *supervenes* on individuals in perspectival positions; supervenience does not seem to be the right sort of relation here. Although I think I understand what perspectival contents are, I confess that I still feel a bit confused about the particulars and how they are supposed to work exactly.

In the third chapter, Ludlow sets out to explain our “cross-perspective communication abilities” (p. 57), that is, how we manage to communicate across perspectival positions. As I mentioned earlier, in order to express the same perspectival content across spatial, temporal or personal perspectival positions we need to adjust its verbal expression. But how exactly do we do that? To answer this question, Ludlow draws from his theory of Interpreted Logical Forms (ILFs)² and from his theory of microlanguages³. The problem ILFs set out to explain was the problem of how using different expressions at different times could count as attributing the same attitude to an agent (p. 66). The basic idea is that, in making attitude reports, we are offering a “contribution to our shared theory of the agent’s mental life” (p. 67). This theory has two components: the *Modeling Component* and the *Expression Component*. The Modeling Component is roughly the ability

² Cf. Larson & Ludlow (1993) and Ludlow (2000).

³ Cf. Ludlow (2014).

to model an agent's mental life, and it is sensitive to various factors, such as our interests and goals, our common ground, our knowledge of folk psychology, and so on. The Expression Component, in turn, involves a tacit negotiation among speakers regarding which expressions to use to talk about the agent's belief structure as modeled by the Modeling Component. Drawing from research in psychology, Ludlow calls this process of negotiating expressions *entrainment* (p. 68). The result of entrainment is a microlanguage built on the fly, in the context, to describe the relevant agent's attitudes. Thus, given our models and our local microlanguages, different words sometimes express the same content, sometimes different contents, or leave the matter open (p. 68). This same general idea applies in the case of perspectival contents and how they are expressed across different perspectival positions. The ability to form microlanguages help us express local theories, constructed on the go, about perspectival information. In other terms (as I understand it), by modeling perspectival information and by building microlanguages we are able to express *shared* local theories so as to explain action, emotion, and so on, from different perspectives and about agents in different perspectival positions. To illustrate this point, Ludlow again uses the metaphor of the storyboard:

... we can think of the storyboards as illustrating the Modeling Component. The overarching theory of content attribution combines the perspectival information (illustrated by the multiple storyboards), coordinates its expression across the agents represented, and combines that with fine grained contents as in the Larson and Ludlow

ILF theory (...) The resulting local theory is your interspectival content. (p. 72)

What I have discussed so far covers, I think, the main body of Ludlow's theory of perspectival contents. These chapters are dense and complicated, and some points would benefit from a lengthier exposition. For example, ILFs and microlanguages are very important to the overall theory, and it would help if they were explained in a bit more detail. This also happens later in the book, when he uses his theory of the dynamic lexicon to account for the passage of time. I suspect that readers who are not familiar with Ludlow's earlier work might fail to fully appreciate his point.

In the fourth chapter, Ludlow considers alternative accounts of perspectival contents: token reflexive theories, Lewis' *de se*, Kaplan's theory of indexicals and demonstratives, and use theories. He argues that all of them try to purge perspectival contents from the semantics, but sooner or later they reappear with a vengeance. According to him, such sanitized semantics (especially token-reflexive theories) fail to do the very thing they were supposed to do, i.e., explain action, emotion, temporal reasoning, etc., and they often end up surreptitiously reintroducing perspectival contents in the metalanguage. His objections to Perry's reflexive-referential theory, in particular, are very compelling. He ends with an interesting discussion of rule-following and normative behavior in general, which provides the perfect hook for the next chapter, where he applies his theory to computation and information theory. In short, he argues in that chapter that perspectival contents are necessary to understand the very notion of information, and that "all information flow, whether natural or the product of human intentions, ultimately bottoms out in perspectival contents." (p. 134).

In the sixth chapter, Ludlow argues for what he calls *A-series and B-series compatibilism*. This is the thesis that we can combine the immutable ordering of events in time (the B-series) with the tensed series of events (the A-series) without generating puzzles. Again, he draws on his earlier work on the dynamic lexicon (Ludlow 2014) and relates it to his theory of perspectival contents to explain how that is possible. He claims that both the B-series and the A-series are needed to account for the passage of time, and perspectival contents and the dynamic lexicon play an essential role in his explanation. Also, he notes that one can endorse his view of the A-series without being a presentist. A detailed argument for this latter claim, however, is found in the appendix. The remaining chapters deal with further metaphysical issues and argue that perspectival contents cannot be eliminated even from science, both in its practice and in its theories.

In sum, Ludlow's book puts forward provocative claims and an interesting and novel theory of perspectivality. The amount of ground covered in such a relatively short book is admirable. Even if it is not all that clear that Ludlow's theory can explain everything it is meant to explain – after all, its ambitions are far from humble –, his arguments, objections and examples are vivid and persuasive, and they cannot be ignored by philosophers working on these issues. Philosophically inclined computer scientists, information theorists and physicists might also find the book an interesting read.

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