

Frege and Prior on Tense and Sense

David Cockburn, Department of Philosophy, University of Wales, Trinity Saint David

1. The debate

A debate that has dominated the philosophy of time for some time now is articulated in these remarks:

Debate in the metaphysics of time has been focused on the question of whether events and times possess non-relational properties of pastness, presentness and futurity. One way of grasping the significance of this question is to consider whether, had humans (or observers of any kind) never evolved, there would have been an objectively present moment, and an absolute [observer-independent] distinction between past, present and future. Those who think tenses are real [“tensed theorists”] think there would have been such a distinction, even in the absence of any perceivers to designate events as past, present or future. ... and furthermore, they think that time flows inexorably with respect to this distinction. The ontological privilege of being the objective present moment continually passes from one moment to the next. Those who think tenses are not real think that temporal reality is constituted merely by the network of temporal relations in which events and times stand to each other [“earlier than”, “at the same time as”, “later than”], with no time being marked out as an ontologically privileged present moment. According to this view the distinction between past, present and future is not a characteristic of time itself, but merely a distinction that we project onto time, from our perspective.¹

The dominant view for a considerable time now has been the tenseless-theory. The following passage captures clearly the spirit in which this view is widely articulated:

We treat as objective our own current temporal perspective on the world. We possess an almost irresistible temptation to believe that the present moment—right now, as you read this—is the moment that is *really* happening. Conscious decisions and actions happen in the present, we think. The present is not simply one perspective among many, like up-side-down and right-side-up are two spatial perspectives on one world, but we regard it as something objective and common amongst us. This amazing slice of time divides the world in two. We invest the two sides of this division with importantly distinct properties. Past

¹ Dyke, Heather, “Time and Tense”. (2015). In Heather Dyke and Adrian Bardon (eds), *A Companion to the Philosophy of Time*, Wiley-Blackwell, p. 328.

events are fixed whereas future events are ripe with possibility. These differences are crucial guides in how you live your life. Unlike future headaches, past headaches mean little to you now, for they are “over and done”..... Dub this somewhat rough-around-the-edges common conception *manifest time*. Despite its importance, our best science of time suggests that manifest time is more or less rubbish. We don’t know the true nature of time, but we do have strong hints from the physical sciences that manifest time may portray a deeply mistaken picture.²

As it has been pursued within analytic philosophy, the debate can be formulated in terms of a distinction between “dates” and “tenses”.³ Thus, there are two quite different answers that can be given to a question “When did the earthquake happen?” One answer places the occurrence of the earthquake in a historical series. This is characteristically achieved through our system of dates (and clock times): to say that an earthquake that destroyed the cathedral occurred on 12th October 1949 is to place the earthquake four years after the end of WWII, 14 years earlier than the assassination of President Kennedy, and so on. A different kind of answer to the question “When did the earthquake happen?” gives a central role, not to dates, but to tenses. Thus, someone may, on 13th October 1949, say “There was an earthquake that destroyed the cathedral yesterday”. While this is also an answer to the question “When?”, and is no less precise than the other, the information conveyed by it is of a quite different character.

According to the tensed view the distinctions embodied in our use of tenses – the distinctions between past, present and future - mirror genuine distinctions in the world: our language marks ontological distinctions between three realms. (Or, as we will see with Prior, between one realm – the present – and two non-realms.) According to the tenseless view while events really are earlier, at the same time as, or later than others, the distinctions between past, present and future are simply a reflection of the temporal location of speaker or thinker; as the statement “The Empire State Building is to the left of the Hudson River” is a reflection of the spatial location of the speaker rather than of a genuine feature of reality.⁴ As this can be put, only statements purged of tenses – for example, “It rains at 11 am on 1st February 2022”⁵ - are really articulations of truths about the world. In lacking a

² Callendar, Craig (2023). *What makes time special?* Oxford University Press, pp. 1-2

³ The literature on this debate makes extensive use of a terminology introduced by McTaggart: that between the “A-series” and the “B-series”. Since I believe that this terminology is neither necessary nor helpful I will avoid it.

⁴ I do not mean to endorse this way of treating the spatial case. But it is, I believe, helpful in giving the flavour of this view about time and is regularly appealed to in the discussion.

⁵ Where “rains” is “tenseless”: as in “2 plus 2 is four”.

tense, such a statement is timeless in the sense that neither its content nor its truth depends on *when* it is said.

2. Prior: explanation and logic

Defences of the tenseless view often are basically of the form indicated in the final sentence of the passage quoted from Callender: it is physics that tells us how things really are; and physics – in particular, the Special Theory of Relativity – has no place for the distinctions between past, present and future. I will say nothing about approaches of that form. I will speak briefly of another way in which an appeal to science has featured in the debate and then turn to my central concern: arguments grounded in considerations of a “logical” character.

In a remark widely discussed in certain sections of the recent literature on time Arthur Prior writes:

One says, e.g. "Thank goodness that's over!", and not only is this, when said, quite clear without any date appended, but it says something which it is impossible that any use of a tenseless copula with a date should convey. It certainly doesn't mean the same as, e.g. "Thank goodness the date of the conclusion of that thing is Friday, June 15, 1954", even if it be said then. (Nor, for that matter, does it mean "Thank goodness the conclusion of that thing is contemporaneous with this utterance". Why should anyone thank goodness for that?) Wilson seems to have the notion that a tensed copula is analysable into a tenseless one plus a date (which once obtained can be transferred to any other part of the proposition that we fancy); but the above example is sufficient to refute this assumption.⁶

One way in which this remark has been taken up in the literature is along the following lines. Prior presents us with a widespread feature of our attitudes – one we might summarize as “a bias towards the future” – that stands in need of explanation. We much prefer our pains to lie in the past than in the future. We can ask: what explains this feature of our preferences? The philosophical importance of this question lies in the fact that this widespread and deep preference might be evidence for a particular metaphysical view of the nature of time: for, it might be argued, the asymmetries in our attitudes are only explainable on the assumption that there is, in the nature of things, a deep asymmetry between past and future.

That people have found it possible to read Prior's remark as a presentation of such an argument is testimony to the power of the preconceptions that underpin much

⁶ Prior, A. N. (1959). “Thank Goodness That's Over”. *Philosophy*, Vol. 34, No. 128, p. 17.

recent work on the philosophy of time. It is supposed that, however it may look, Prior's appeal *must* be to how some phenomenon is to be explained. Once construed in this way the argument is very readily challenged by the observation that we do best to leave explanation to the scientists. To which the tenseless theorists add: science provides the materials for explanations for our attitudes (in evolutionary terms) that involve no appeal to the idea that the distinctions between past, present and future are a fundamental feature of reality.

But it is, I believe, fairly clear that Prior's interest is *neither* with explanation (in the above sense) *nor* with certain widespread features of human psychology. It would, I believe, be closer to the mark to say that his interest is in *logic* or in *sense*. He is drawing attention to the fact that the tense of what we say may play crucial roles in the ways our words provide reasons for particular feelings. In the absence of special circumstances, the fact that "The worst is over" may be offered as a reason for feeling relief and the fact that "The worst is still to come" may not. Different, but related, we take certain observations as *making sense* of someone's feelings. We take the information that John was extremely rude to Mary as rendering intelligible her obvious indignation towards him: as, in the absence of special circumstances, the information that John gave her a bunch of flowers would not. Further, and closely related to this, there are occasions on which information of that form – information concerning what someone is responding *to* – renders intelligible the claim that it is, for example, *indignation* that he is feeling.⁷

I spoke of those as features of "logic" or of "sense". I am not sure if those characterisations might be controversial. However that may be, it should not be controversial that it is an important feature of human life that the *tense* of an assertion – for example, the fact that I *have* promised – can be crucial to the way in which it functions as giving a reason for action or feeling: where the notion of a "reason" stands in contrast to that of a "factor that may have a psychological impact on us". Certainly there is philosophical debate around the question of whether what we offer and accept as reasons in such cases really *are* reasons. There are also questions about the relation between the "logical" and the "psychological" here. My point at the moment is simply that before we get to questions about "explanation", "justification" or criticism of the place that tense – the distinctions between past, present and future – has in our lives we had better be clear about *what* that place is.

⁷ This is related, I think, to a crudity in the terms in which our emotional lives tend to be characterised in much of the discussion. For example, one of the many things obscured by the common talk of a "bias towards the future" is the fact that even in the over-discussed case of our feelings about our own physical sensations it is not simply that we "prefer" pains to be past rather than future. We *fear* future pains and feel *relief* when a pain is over.

There is, then, a failure in some of the discussion of tense that is essentially that criticised by Frege as “psychologism”. My aim in stressing the distinction between logic and psychology is to open the way to a different perspective on Prior’s thought here. In particular, in so far as our interest is in the interpretation of Prior it may be that we will do better to view his brief remarks about relief in the light of his interest in “tense logic”. Speaking of the project that dominated his philosophical life over many years, Prior wrote: “The greatest gain that a logic of tenses brings is the accurate philosophical description of the reality of the passage of time”.⁸ The understanding of “tense logic” with which Prior’s name is associated does not include the “logic” of which I have spoken: that embodied in our practices of giving reasons for our feelings. Setting any concerns about such an “extension” of the term to one side for the moment, in so far as Prior’s view is that an accurate logic of tenses is *itself* a “description of the reality of the passage of time” he is far from any idea that how we speak and think are *grounds* for some metaphysical view. Prior makes this point explicitly when he writes: “The formation-rules of the calculus of tenses are not only a prelude to deduction but a stop to metaphysical superstition.”⁹ Prior is then far from any argument that appeals to *explanation* along the lines sketched above. With that, he is, I think, far from any idea of a “metaphysics of time” in so far as that is construed as a characterisation of the “nature of time as it is in itself”: construed, that is, as something that underlies, and perhaps justifies, the logic of our everyday ways of speaking and thinking.

But if it is clear what Prior is *rejecting* it may be less clear what his positive suggestion amounts to: how, that is, we should take his phrase “philosophical description of the reality of the passage of time”. Some will see in his suggestion that “a logic of tenses” gives us *that* a clear statement of linguistic idealism: of the idea that how we speak determines the character of that of which we speak. While I very much doubt that this is at all what Prior has in mind my interest now will be less in exegesis than in finding a way of taking this remark that might advance the discussion.

Here, then, is another possibility. Prior’s point is of the form: it is only if someone’s thought and speech more or less conform to this logic that it can be construed as thought about *time*. Compare: it is only if two people speaking of some number speak of it in more or less *these* ways – it comes immediately after 5, is divisible by 2 and 3, is the product of 4 and 2 – that the number they are speaking of is 6. Construed in an analogous way, Prior’s idea would be of the

⁸ Prior, A.N. (1996). ‘A statement of temporal realism’. In Copeland B. J. (ed), *Logic and reality: essays on the legacy of Arthur Prior*. Clarendon Press, Oxford, p. 46

⁹ Prior, A. N. (1967). *Past, Present and Future*, Oxford University Press, p. 19.

form: a person can only be taken to be talking about *time* in so far as she accepts inferences of the form: “It rained yesterday” so when Mary said two days ago “It will rain tomorrow” what she said was true. It is in the logic of a person’s talk that we see that it is of the passage of time that he is speaking.

In the one remark quoted more often in the philosophical literature on time than Prior’s “Thank goodness that’s over”, St Augustine writes: “What, then, is time? I know well enough what it is, provided that nobody asks me; but if I am asked what it is and try to explain, I am baffled”.¹⁰ What I take to be one lesson of this remark has not, I think, been well learned in the philosophy of time. Assuming we are not to take Augustine as expressing a proneness to panic attacks when he is put on the spot philosophically, the best way to read this remark is, I think, to take it as, in effect, a rejection of the idea that the philosophical task here is to *say* what time is. It is true, perhaps, that a serious attempt to do this *can* readily induce a panic attack. (Witness some of the answers that have historically been offered to the question.) But we can take Augustine to be offering, not so much another display of such panic, but more a diagnosis of it. “Knowing what time is” should not be construed in terms of being able to *say* what it is; but, rather, in terms of being at home in everyday talk about it. That at homeness may come under pressure in the face of certain philosophical questions; but we should not assume that what is needed to relieve such pressure is a statement of “what time is” that will make everything clear.

When Prior speaks of tense logic as a “philosophical description of the reality of the passage of time” he is, I take it, making a suggestion of the same form. It is important to be clear that, so understood, there is nothing here so far that should arouse any suspicions of idealism. With that, there is nothing here so far to rule out the most radical philosophical challenges to our normal thought: to rule out, for example, the claim that there *is no such thing as time* or no such thing as the passage of time. The point is just that before we start launching philosophical critiques or endorsements of our everyday “thought about time” we had better be clear about the character of that everyday thought.

I have tried to present Prior’s remark about the philosophical significance of a logic of tenses in a way that might make it acceptable to philosophers of quite varied approaches to questions about time. That said, the “tense logic” for which Prior is widely known in certain circles is very different from the kind of thing – the points about “logic” – that I have drawn from his brief remarks about relief. Further, it may be fairly clear that the spirit of Prior’s work is not such as to

¹⁰ Augustine, *Confessions*, (1961). R. S. Pine-Coffin (Trans.). Harmondsworth: Penguin, Book XI, chapter 14

wholeheartedly welcome such an assimilation. In his development of “tense logic” Prior’s goal was a formalization of the relations between tensed statements – the relation, for example, between “It rained yesterday” and “It was the case yesterday that it is raining today” – in a manner that matches the formalisation and rigour of “modern logical systems”.¹¹ That model was *philosophically* important to him in his resistance to the dominant “tenseless theories”. It goes with his explicitly contrasting a philosophical approach that gives central place to “logic” with one that seeks illumination through a focus on *life*. While a proposed contrast between “logic” and “life” might be taken in different ways (it could, for example, mark a resistance to psychologism), Prior’s general approach suggests that he would place points about the “logic of emotion” on which I have touched on the side of “life” rather than “logic”. For it might seem clear that such points are highly resistant to “formalisation and rigour” in the sense he aspires to.

This last point (to which I will return) goes with the fact that the way I have presented Prior’s appeal to the logic of our thought and speech about time may not get us to quite the level of discussion needed here. The situation is not, I think, that we are clear what *thought* and *speech* are and just need to get into clearer view the particular character of the logic of our thought and speech about *time*. For I believe that underlying the divergent philosophical views about time are divergent presuppositions about the character of thought and speech, and, with that, logic. To express the point in terms to which I will return at the end of this paper: much philosophical discussion of time fails to give due weight to the fact that thought and speech are themselves in time.

3. Propositions and eternal truth

Frege’s own opposition to psychologism goes closely with what we might speak of as a radical disconnecting of logic from life. For Frege, logical relations hold between one “proposition” and another, between one “thought” and another: “propositions”/ “thoughts” (on Frege’s understanding of these) being entities that – in contrast, most obviously, with a person’s *saying* something - are not aspects of a life in space or time. On the face of it, resistance to psychologism does not *have* to involve a disconnecting of logic from life in *this* sense. But however that may be, this disconnecting brings with it a stand on issues central to the current debate

¹¹ See Prior, A.N. (1996). ‘A statement of temporal realism’. In Copeland B. J. (ed), *Logic and reality: essays on the legacy of Arthur Prior*. Clarendon Press, Oxford, pp. 43-51.

about tense. We see this in Frege's clear endorsement of the tenseless view in the following remark:

The thought we express by the Pythagorean theorem is surely timeless, eternal, and unchangeable. But are there not thoughts which are true today but false in six months' time? The thought for example that the tree there is covered with green leaves, will surely be false in six months' time. No, for it is not the same thought at all. The words "this tree is covered with green leaves" are not sufficient by themselves for the utterance, the time of utterance is involved as well. Without the time indication this gives we have no complete thought, i.e. no thought at all. Only a sentence supplemented by a time indication and complete in every respect expresses a thought. But this, if it is true, is true not only today or tomorrow but timelessly.¹²

When Frege speaks here of a "time indication" he is speaking of the time of utterance. So, for example, if I find a piece of paper pinned to a tree on which is written "This tree is covered with green leaves" I do not know what to make of the words unless I also know when they were written. Since Frege does not, in this paper, work with the distinction between the two forms of time specification - dates and tenses - it may seem an open question whether his idea is that what is needed is the date the note was written (say, 24th July 2003) or the information that it was written, say, 25 days ago. It is, however, clear from the context that it is the first of these that is at work in his thinking. For it is only *this* that could underpin the idea that the thought expressed by the words "This tree is covered with green leaves" is timeless, eternal, and unchangeable.

The contrast with the tensed view comes out fairly explicitly in Prior's endorsement of the idea he finds in the scholastics:

For a scholastic, "Socrates is sitting" is a complete proposition, *enuntiabile*, which is sometimes true, sometimes false; not an incomplete expression requiring a further phrase like "at time t" to make it into an assertion. The "Socrates is sitting" example is not only in the scholastics but in Aristotle, who says that "statements and opinions" vary in their truth and falsehood with the times at which they are made or held.¹³

Prior contrasts this approach - in which "changes in respect of truth and falsehood are thought of as demanded by changes in the fact referred to" - with theories (such as Frege's) that insist that "the passage of time is quite irrelevant to the truth and falsehood of propositions".

¹² Frege, Gottlob (1956). "The Thought: A Logical Inquiry". *Mind*, Vol. 65, No. 259, p. 309.

¹³ Prior, A. N. (1967). *Past, Present and Future*, Oxford University Press, p. 15.

There are some terminological issues to sort out here. In the thinking and speech of at least some philosophers the “eternalness of a proposition” is central and fundamental to the very idea of a “proposition”. On such an understanding of the term “proposition” Prior’s suggestion that “‘Socrates is sitting’ is a complete proposition, which is sometimes true, sometimes false” is, at best, a terminological confusion. To avoid confusion here (and, I believe, more generally) I propose that we try to get by without the term “proposition”. I believe that the crucial work done by the term “proposition” in this literature can be done as well, and without some potential attendant confusion, by the expression “what she said”.

There is another “terminological” issue that must be briefly addressed here. Philosophers sometimes speak of “sentences” as “expressing thoughts”, “being true”, “having truth conditions” or as “stating or asserting” things. (Or are represented in English translations as speaking in such ways.) I am inclined to think that all such locutions are indications of confusion.¹⁴ However that may be, I will avoid them. I will use the word “sentence” in a way such that someone who says today “It is raining” has uttered the same sentence as someone who yesterday said “It is raining”. It is clear, I take it, that on this understanding we cannot say of a *sentence* that it is true or false: cannot speak of the English sentence “It is raining” as true.

Perhaps on this last point my terminology aligns with Frege’s. But if so the agreement ends there. For Frege, the crucial point is that, as he conceives the matter, a sentence is a “material” thing (something “perceptible to the senses”) and “everything material and perceptible is excluded from this sphere of that for which the question of truth arises”;¹⁵ and so he concludes that it is “the *sense* of a sentence” – a “thought” – that is strictly speaking true or false: that in speaking with others “I have to content myself with presenting the reader with a thought, in itself immaterial, dressed in sensible linguistic form”. In contrast to Frege, in rejecting talk of “sentences” as true or false, I will speak of *the things that people say* as being what is true or false.

As perhaps is generally the case, differences in preferred terminology here go hand in hand with substantial differences in philosophical view.¹⁶ Nevertheless, abstracting from background differences, it may be possible to extract a disagreement between Frege and Prior that can be articulated in terms of the idea of “what someone said”. Both camps are agreed that one person may say at dawn

¹⁴ I believe the confusion is seen in Prior’s assumption that in giving us a string of words – “Socrates is sitting” – he has given us a “proposition”: that is, something that can be true or false.

¹⁵ Frege, Gottlob (1956). “The Thought: A Logical Inquiry”. *Mind*, Vol. 65, No. 259, p. 292.

¹⁶ The, as it seems to me, terminological chaos in much philosophy of language is, perhaps, both cause and symptom of the deep philosophical divides here. With this, it is very possible that both Frege and Prior will have serious concerns about my characterisation of their disagreement at this point.

“Socrates is sitting” and another at noon “Socrates is sitting” and yet the first have spoken truly and the second falsely. The difference between them lies in the fact that while on Frege’s view this is possible because although the two have uttered the same words they have not said the same thing, on Prior’s it is possible because the very same thing can be true at one time and false at another.

But one might now wonder whether the disagreement between them does not rest on a false assumption: the assumption that there must be a *general* answer to the question: does a person who said yesterday “Socrates is sitting” and one who utters these words today say the same thing? At any rate, the idea that there is such a general answer is not reflected in our everyday talk. Suppose that, speaking on the phone from Finland, Lars tells me on Tuesday that (I quote) “It’s a bit chilly today” and Merete on Wednesday “It was a bit chilly yesterday”. I might remark: “That’s what Lars said”. But we might also say of someone: “He says the same thing every morning as he steps outside: ‘It’s a bit chilly today’”.¹⁷ The first example appears to conform to Frege’s view, the second to Prior’s.

4. Having the same thought

It will be helpful here to stand back a bit. Frege came to his views on thought and language through his concern with *arithmetic*. It may be fair to say that examples from arithmetic remained, for him, the touchstone for the ideas that he developed. In so far as this is so, it is important to keep clearly in mind any ways in which arithmetic may differ from (some) other areas of our thought and speech.

One significant difference is this. In the case of assertions involving the words “ $17 \times 3 = 51$ ” there is, in practice, little room for variation in *what* is being asserted on account of context.¹⁸ The contrast with many other kinds of assertion has different

¹⁷ My example is of a case in which we remark that “He *says* the same thing ...”, not one in which we remark that “He *utters* the same words”. Thus, I would suggest that we would comfortably describe the case in those terms were he sometimes to say “It’s a bit chilly today” and sometimes “Il fait un peu froid aujourd’hui”. Travis develops key points here with a wealth of powerful examples. See, for example, Charles Travis (2001), *Unshadowed Thought: Representation in Thought and Language*, Harvard University Press.

¹⁸ Some care is needed here. In an earlier draft I had here: “assertions such as ‘ $17 \times 3 = 51$ ’”, which, as Andrew English pointed out to me, is just the form of articulation that I am warning against. One might say that the temptation to such formulations is particularly acute in the context of arithmetic precisely because of the absence of room for variation in what is being asserted. I am also grateful to Andrew for drawing my attention to the following remark by Wittgenstein: “One would like to say that the understanding of a mathematical proposition is not guaranteed by its verbal form, as is the case with most non-mathematical propositions.” Wittgenstein, Ludwig (1978). *Remarks on the Foundations of Mathematics*, G.E.M. Anscombe and G.H. von Wright (eds.), G.E.M. Anscombe (trans.). Oxford: Blackwell. V, § 25, p. 284. This might appear to stand in flat contradiction with my suggestion here. I am not sure what to make of Wittgenstein’s remark and of the apparent conflict. Andrew suggests that when

dimensions. One concerns indexicals; and, in particular, tense. With arithmetical assertions we can generally identify *what* is said on the basis of the words alone: that is, with limited knowledge of the speaker or her context; most pertinently, *when* she said it. This feature of arithmetical statements is of great importance to some of the roles that they play in human life. In particular, exchanges in mathematical journals, or work on some theorem in arithmetic that is ongoing over generations, require that the other's words can be considered largely independently of *any* knowledge of the other aside from what can be gleaned from his or her words.

With this in mind, consider Frege's reflection on what a thought is in the following remarks:

... by grasping a Thought I come into a relation to it and it to me.when we call a sentence true we really mean that its sense is. The thought, in itself immaterial, clothes itself in the material garment of a sentence and thereby becomes comprehensible to us. thoughts are neither things of the outer world nor ideas. A third realm must be recognised.¹⁹

The aim of the picture that Frege presents here is, in part, to ensure that we allow sense to the suggestion that two people might have the same thought: might think the same thing. As Frege construes the matter, to achieve this we must conceive of a thought – a proposition – as something wholly distinct from the thinker: as something with which both I and others may *come into relation*. In so far as our philosophical focus is on engagements with the thoughts of people widely separated spatially, temporally, or culturally – as may be the case in such intellectual pursuits as mathematics or geometry – we will feel pressure to conceive of thoughts as things distinct from particular thinkers in this radical kind of way: as occupants of “a third realm”.²⁰

Frege's clear alignment with the tenseless-theory is, at least in part, a reflection of his prioritising of certain portions of language. Prior's resistance to that theory will be much welcomed by those who resist the holding up of arithmetic or the natural

Wittgenstein speaks of “a mathematical proposition” he has in mind something like Fermat's Last Theorem or Pythagoras Theorem; and, with this, his observation may relate to ideas concerning the relation between proof and understanding in mathematics. This leaves me with some unease about Wittgenstein's suggestion that the understanding of “a non-mathematical proposition” is generally guaranteed by its verbal form. But I do not know how to take this any further.

¹⁹ Frege, Gottlob (1956). “The Thought: A Logical Inquiry”. *Mind*, Vol. 65, No. 259, p. 292.

²⁰ Cora Diamond offers a very different approach to situations of this kind in Diamond, Cora (1999). “How Old Are These Bones? Putnam, Wittgenstein and Verification”. *The Aristotelian Society; Supplementary volume*, pp. 99-134.

sciences as the paradigm of the place of language in our lives. But his commitment to a rival theory should possibly make us wary. Wariness may flow simply from reservations about theorising in philosophy; and, more specifically, from concerns over failures to acknowledge the variety in the places that language has in our lives and in the kinds of interest that we may have in another's words. In any case, if our leanings are in the direction of Prior's, as opposed to Frege's, prioritising (as mine certainly are) it is important to be clear about respects in which Prior himself may fail to move decisively beyond the tradition from which he tries to free us.

5. Prior and the priority of the present

Setting to one side his work on tense logic,²¹ Prior's name is, in contemporary discussion in the philosophy of time, primarily associated with two things: an example (relief that a pain is over) and a thesis about the nature of time: "presentism". Prior remarks:

It is tempting to think of the present as a region of the universe in which certain things happen, such as the war in Vietnam, and the past and the future as other regions in which other things happen, such as the battle of Hastings and men going to Mars.²²

He objects to this picture that:

It doesn't bring out what is so special about the present; and to be more specific, it doesn't bring out the way in which the present is real and the past and future are not.

One reaction to this may be to welcome the rejection of the "regions of the universe" image while wondering whether what Prior puts in its place is really so helpful.²³ Austin's remarks about the term "real", combined with the history of recent debates about the "reality", or "existence", of past and future strongly suggests that it is not. Be that as it may, Prior's language here may readily conjure up images of blank spaces on either side of the oasis of the present: images of the realms of past and future as mirages in what is in reality a desert landscape. And with this imagery in place, it might seem clear that if, as Prior suggests, the past and future are unreal any worry about the cruel remark I made yesterday or about

²¹ Which, slightly curiously, *can* be set to one side in the sense that it is generally treated fairly separately from these other themes.

²² This and the following quotation: Prior, A. N. (1972). "The Notion of the Present". In J.T. Fraser, F.C. Haber and G.H. Muller (eds.), *The Study of Time*. Springer, Berlin, Heidelberg, New York, pp. 320–323.

²³ We might construe Prior as giving in here to the temptation, often so difficult to resist, to deny what those he is opposing are insisting on: to deny, that is, that all times are equally real.

my painful surgery tomorrow are radically misplaced. Such a reading might be eased, or positively encouraged, by the fact that people sometimes *do* use language in this region to articulate just such thoughts.

It is clear – not least from his remarks about “Thank goodness that’s over!” - that nothing of *this* form is at all what Prior means to endorse in his use of this language. With that, he makes it very clear that he is not denying that there are truths about the past and future. Nor, I think, is he suggesting that those truths are in some sense “reducible to” truths about the present: that the statement “I fell out of a boat” can be “analysed in terms of” statements about the present grounds for the assertion.²⁴

We may get closer to what Prior’s denial of the reality of past and future *does* amount to in remarks such as this:

To say that Whitrow’s lecture is past is to say that *it has been the case* that Whitrow is lecturing. To say that Scott’s lecture is future is to say that *it will be the case that* Scott is lecturing. But to say that my lecture is present is just to say that *I am lecturing* – flat, no prefixes. The pastness of an event, that is to say its having taken place, is not the same thing as the event itself; nor is its futurity; but the presentness of an event *is* just the event. The presentness of my lecturing, for instance, is just my lecturing.²⁵

Prior’s proposal, then, is that the present tense is special in that, as Perry expresses it: “tensed propositions consist of tense operators prefixed to a core, present tense proposition.”²⁶ In another of Prior’s examples: “the truth that I was falling out of a boat may be expressed by writing ‘It was the case that...’ in front of ‘I am falling out of a boat’”.²⁷

One might wonder whether *this* thought is well articulated in the claim that “the present is real and the past and future are not”. (For reasons given above, my own answer is that it is certainly not.) That aside, we can ask whether we have been given good reason for accepting that the present tense *does* have fundamental place in *this* sense. Prior suggests that this idea is required by the kind of tense logic that he develops:

²⁴ I use these phrases to gesture towards a range of views that perhaps find their most sophisticated form in Dummett’s proposed versions of “anti-realism”.

²⁵ Prior, A. N. (1972). “The Notion of the Present”. In J.T. Fraser, F.C. Haber and G.H. Muller (eds.), *The Study of Time*. Springer, Berlin, Heidelberg, New York, pp. 320-21.

²⁶ Perry, John (2015). “Temporal Indexicals”, Dyke, Heather, “Time and Tense”. (2015). In Heather Dyke and Adrian Bardon (eds), *A Companion to the Philosophy of Time*, Wiley-Blackwell, p. 180.

²⁷ Prior, A.N. (1996). “A statement of temporal realism”. In Copeland B. J. (ed), *Logic and reality: essays on the legacy of Arthur Prior*. Clarendon Press, Oxford, p. 46

The building up of complexes like Findlay's "(X past) future" requires that tensing be an operation of which the subjects are themselves tensed sentences, and when we have got inside all other tensing to the "kernel" of the complex, its tense will have to be the present.²⁸

But if "tense logic" is simply²⁹ a formalisation of valid moves between different tensed propositions it is not clear why one of the tenses – the present – should have the kind of priority Prior speaks of. That aside, if Prior's conception of the primacy of the present *is*, for some reason, required for the "tense logic" project³⁰ then we should be open to the possibility that the relation of "tense logic" to the logic of our normal thought about past, present and future is fairly tenuous. For we should not take it to be *obvious* that the present tense has that kind of priority in our everyday thought and speech. Doubts might begin at the level of fairly basic reflections on language acquisition. Is it plausible to suggest that the child's mastery of the words "I fell out of the boat" is in any sense parasitic on her mastery of "I am falling out of the boat"? Prior's own example might be judged a rather unfortunate choice in view of his purposes.

The idea that the relation between the senses of differently tensed statements can be articulated in *that* way – in terms of a "tense operator" "prefixed to a core, present tense proposition" – is nicely challenged by a remark of Wittgenstein's:

"But surely 'I believed' must tell of just the same thing in the past as 'I believe in the present!'--Surely $v-1$ must mean just the same in relation to -1 , as it means in relation to $v1$! This means nothing at all."³¹

Rather than exploring the various ways in which an analogous thought might be developed in our case, I will mention another doubt about Prior's understanding of the relations between tenses: a doubt that may arise when we ask whether it is clear that mastery of the present tense is independent of mastery of the past and future tenses in the way required by the proposed priority of the first. A little reflection on such basic linguistic forms as the definite article or proper names should, I believe, be sufficient to raise doubts. Consider the relationships between mastery of

²⁸ Prior, A. N. (1967). *Past, Present and Future*, Oxford University Press, p. 15.

²⁹ I do not wish that "simply" mean to suggest that this much is plain sailing. It is probably clear that I do not think that at all.

³⁰ "These are the laws of what is now called tense logic, and the conception of the present that I have just been suggesting is deeply embedded in the syntax of that discipline." Prior A.N. (1972). "The Notion of the Present". In J.T. Fraser, F.C. Haber and G.H. Muller (eds), *The Study of Time*, Springer, Berlin, Heidelberg, New York, p. 323.

³¹ Wittgenstein, Ludwig (1958). *Philosophical Investigations*, G.E.M. Anscombe and G.H. von Wright (eds.), G.E.M. Anscombe (trans.), p. 190.

sentences of the form “Ted is awake”, the question “Who is Ted?” and the use of the past tense in answering that question.

There may be something else at work in Prior’s thought here. He speaks of

Aquinas’s dictum ... that “things are called past and future with respect to the present”, which he [Aquinas] explains by adding, “For that is past which was present, and future which will be present”. The dictum is equally well elucidated by the converse point, that what is said to be future is thereby said to be future now (and may cease to be so later), and what is said to be past likewise is said to be so now (though it may not always have been so); i.e. “X future = (X future) present” and “X past = (X past) present”.³²

However things may stand with Aquinas, Prior’s formulation of “the converse point” contains a crucial ambiguity. We may read the phrase “what is said to be future is thereby said to be future now” as either “what is said to be future is thereby now said to be future” or as “what is said to be future is thereby said to be now future”. And this may not be the end of the matter. For perhaps the first reading, as I have formulated it, can itself be read in two ways. On one, it states that the only time at which anyone says something about the future is now ie nobody has ever done such a thing in the past or will in the future. But we have already seen that (fortunately) Prior does not endorse anything of *that* form. On another, it states that “what is said to be future is said at the time at which it is said” – with which it is not easy to disagree.

What of the alternative reading of Prior’s remark: “what is said to be future is thereby said to be now future”. On this reading, it is claimed that all statements about the past and future contain an implicit reference to the present.³³ This reading seems to be confirmed by the following:

When we say, for example, “I shall have seen John”, the remark directs us, not in the first place to the time at which my seeing of John occurs, but to a time later than that, with reference to which my seeing of John is past. ... But once this possibility is seen, it becomes unnecessary and misleading to make such a sharp distinction between the point or points of reference and the point of speech; the point of speech is just the first point of reference.³⁴

³² Prior, A. N. (1967). *Past, Present and Future*. Oxford University Press, pp 9-10.

³³ That is, to the speaker’s present. The tangles that arise with statements of the form “It will be the case tomorrow that someone who says ‘It was raining yesterday’ is speaking truly” will not, I think, call for any qualification of this claim. It will simply call for care in our handling of the indexical “now”.

³⁴ Prior, A. N. (1967). *Past, Present and Future*. Oxford University Press, p. 9.

When I say “It was true yesterday that it would rain today” I *refer to* a certain day: yesterday. In the quoted passage Prior suggests that this is in no fundamental way different from the case in which I say “It is raining”. The latter assertion contains a reference to *today* (now) as surely as – in the same sense as – the former contains a reference to yesterday. That is, Prior here offers a clear endorsement of the view that all statements about the past and future contain an implicit reference to the present.

If this were so it would give *some* clear sense to “the specialness of the present”. But have we been given any reason to think it *is* so? There is room for a suspicion that Prior’s thinking at this point shares a key assumption with Frege’s understanding of tensed thought and speech: the assumption that the time of utterance must figure in what is said through its being something *referred to* in what is said.³⁵ The difference between the views would then lie in the character of that time specification: that is, in whether, as on Prior’s view, it is itself tensed or, as on Frege’s, it is tenseless.

5. Time in speech / speech in time

I suggested that underlying the divergent philosophical views about time may lie divergent presuppositions about the character of thought and speech, and, with that, logic. I added: much philosophical discussion of time fails to give due weight to the fact that thought and speech are themselves in time. In this and the following sections I want to give a sense – it will, at best, be no more than that – of what I have in mind in saying this.

Frege writes: “Only a sentence supplemented by a time indication and complete in every respect expresses a thought.” If we find, pinned to a tree, a scrap of paper on which is inscribed the words “This tree is covered with green leaves” we may well simply have to agree that there is a sense in which we do not know what is said without the additional information of when these words were written: whether that additional information is construed in the terms favoured by de-tensors (for example, “2.00 pm on 3rd January 2022”) or in those favoured by tensors (for example, “just now”, “yesterday” or “five weeks ago”.) But what of cases in which the words are *spoken*: in particular, in which they are addressed to me. On Frege’s understanding, the situation is not fundamentally

³⁵ Recall Frege’s remark: “The words ‘this tree is covered with green leaves’ are not sufficient by themselves for the utterance, the time of utterance is involved as well”. Frege, Gottlob (1956). “The Thought: A Logical Inquiry”. *Mind*, Vol. 65, No. 259, p. 309.

different³⁶: to know what is said, what thought is being expressed, I need additional information, namely the date. On Prior's, when the words are spoken, in my hearing, I *already have* the crucial bit of information needed: namely, that they are being spoken *now*.³⁷ Given the choice, some (including me!) might be inclined to go with Prior. But is it possible that this view of the options already contains some misrepresentation of the situation? It certainly does so if it encourages us to overlook the distinction between cases in which I am an observer of the other's words – in which the other's words are centrally something from which I may learn – and cases in which the other's words are a contribution to a shared conversation.

In a remarkable passage Plato writes:

You know, Phaedrus, that's the strange thing about writing, which makes it truly analogous to painting. The painter's products stand before us as though they were alive, but if you question them, they maintain a most majestic silence. It is the same with written words; they seem to talk to you, as though they were intelligent, but if you ask them anything about what they say, from a desire to be instructed, they go on telling you just the same thing forever.³⁸

Plato adopts the conceit of its being the *words* that speak. While the conceit is clearly self-conscious and is employed to good effect the echoes of Plato in some strands of recent philosophy lack these features. In particular, talk of “*sentences*” “expressing thoughts” or as “describing reality” effectively discourages reflection on the significance of the fact that it is *people* – people in particular spatial, temporal and social contexts – that do so. And, as Plato reminds us, when the thought is *spoken* – when, in particular, the words are addressed to me – there is such a thing as asking for clarification of what has been said, asking for grounds

³⁶ Frege can hardly avoid acknowledging that the situation is different with respect to the relevance of the words to my actions. I will not pursue the question of what he might say about this. The issue is discussed in John Perry (2015), “Temporal Indexicals”. In Dyke and Bardon (eds), *A Companion to the Philosophy of Time*. Wiley-Blackwell,

³⁷ Setting aside possible complications relating to the speed of sound: complications that, when we turn to physics – and, in particular, to views of time that take their lead from Special Relativity – can be expected to loom large.

³⁸ Plato, *Phaedrus*, 275d-e. R. Hackforth (Trans.). In Edith Hamilton and Huntington Cairns (eds.), *The Collected Dialogues of Plato*, p. 521. In ways that are relevant to my theme but which I will not develop, the passage continues: “And once a thing is put in writing, the composition, whatever it may be, drifts all over the place, getting into the hands, not only of those who understand it, but equally of those who have no business with it; it doesn't know how to address the right people, and not address the wrong. And when it is ill-treated and unfairly abused it always needs its parent to come to its help, being unable to defend or help itself”.

for believing it, contesting what has been said, and so on. There is such a thing because I have before me the living being whose words they are.

But that way of putting things may still fail to do justice to something of central importance here. Suggesting that there is a serious oversight in many contemporary philosophical treatments of language, Charles Taylor articulates what he regards as a key notion in this way:

A conversation is not the coordination of actions of different individuals, but a common action in this strong, irreducible sense; it is *our* action. It is of a kind with - to take a more obvious example, the dance of a group or a couple, or the action of two men sawing a log.³⁹

What drives the suggestion that self-reference – reference to the time of utterance – must be in some way implicit in the verbal expression of tensed thoughts is the idea that, since the author of the words and the receiver of them may have different temporal perspectives on the events spoken of, the receiver of the words would not know what to make of them in the absence of a time indicator in some way implicit in them. But in so far as a conversation is *our* action – one that is extended over time – talk of the “author” and the “receiver” of the words involves a misrepresentation of the situation. In so far as I am in *conversation* with another she and I are speaking from the same temporal perspective: we have a shared understanding of which events are past, present and future.⁴⁰ With that, the grounds for holding that the time of utterance is in some sense *referred to* in what is said are no better than would be those for holding that the time of the dancer’s movement is in some sense *referred to* in the movement. To highlight a different face of this: the grounds are no better than are those for holding that my thought, on looking outside, that it is raining involves such reference. We might, with some plausibility, maintain that my thought involves a reference to when it is raining (ie now). But does it also involve some *self*-reference: a reference to *when it is thought*? While I speak mostly for myself here, there is, I think, little to tempt us in that suggestion.⁴¹

³⁹ Taylor, Charles (1995). “Cross-Purposes: The Liberal-Communitarian Debate”. In Charles Taylor, *Philosophical Arguments*. Harvard University Press, p. 189.

⁴⁰ Recall here, Callender’s characterisation of what he suggests is a misconception in our everyday understanding of time: “The present is not simply one perspective among many, like up-side-down and right-side-up are two spatial perspectives on one world, but we regard it as something objective and *common amongst us*”. Callendar, Craig (2023). *What makes time special?* Oxford University Press, pp. 1-2. (My italics.)

⁴¹ Perhaps two particular cautions should be added to these sketchy remarks. First, while, in the passages quoted, Plato and Taylor highlight the idea of conversation as face to face interaction between living human beings there are many (and ever growing) forms of interaction that approximate to a greater or lesser extent to this case. Amongst these are the “conversations”, in writing, that take place in academic

6. Logic, life and time

I suggested that Prior's appeal to the relation between the relief expressed in the words "Thank goodness that's over" and the fact that something unpleasant is now past should not be construed as an appeal to a feature of human psychology offered in defence of a particular metaphysical view of time: that it may be closer to the mark to say that he offers it as a contribution to a proper understanding of the "logic", or of the "sense", of tensed talk. He is reminding us that the tense of what we say may play crucial roles in the ways our words provide reasons for particular feelings. In the absence of special circumstances, the fact that "The worst is over" may be offered as a reason for feeling relief and the fact that "The worst is still to come" may not. I also remarked, however, that the significance he attaches to his work on "tense logic" is closely linked with a contrast between "logic" and "life" that may sit slightly uneasily with that suggestion. At any rate, in so far as what one values in an appeal to "logic" in a philosophical context is its "formalisation and rigour" there may be pressure to place such points about the emotions on the side of "life" rather than "logic".

But perhaps that "formalisation and rigour" was an illusion arising from a failure fully to assimilate the fact that talk is in time. Consider, for example, a construal of "logic" in terms of relationships between "thoughts" or "propositions". In so far as we are working in an area where that terminology, understood in roughly Frege's way, sits fairly comfortably – for example (Frege's example), the thought we express by the Pythagorean theorem - such applications of logic may flow fairly smoothly. Matters may look rather different when it comes to applications to much of what we think and say in our everyday lives with others. Thus, suppose we say, as it is very natural to do, that the "statement" ("thought", "sentence", "proposition") "It is raining" contradicts the statement ("thought" etc) "It is not raining". It had better be clear that what we mean there does not entail that if someone on Tuesday says "It is raining" and someone on Wednesday says "It is not raining" what the second says contradicts what the first said. How, then, *does* our articulation of the logical point relate to things that people say about the weather in everyday conversation?

For Frege, the relation will be straightforward in connection with "thoughts" and non-existent in connection with the "sentences" that express those thoughts.⁴² But

journals; along with others that may spread over centuries. In the case of the latter in particular it may be important to keep in mind the distinction between being engaged in the same conversation as someone (say, Pythagoras or Hume) and being in conversation *with* them.

⁴² As I noted earlier, as Frege conceives the matter, a sentence is a "material" thing (something "perceptible to the senses") and "everything material and perceptible is excluded from this sphere of that

how will it work at the level of an everyday notion of “what we say”? We might try something like this: the “cash value” of the claim about contradiction lies in the fact that if one person says “It is raining” and another, speaking at the same time and place, says “It is not raining” what the second has said contradicts what the first has said. But while this seems to be along the right lines it does point to other questions that may arise here. For example, *how close* do you and I have to be standing for your words “It is raining” to be contradicted by my words “It is not raining” (telephone enquiries about the weather in Barcelona to one side)? Again, how much time must elapse between one person’s saying “The British Museum is in Bloomsbury” and another’s saying “The British Museum is not in Bloomsbury” for it not to be the case that the second has contradicted the first; and what about “Jones is in Bloomsbury” and “Jones is not in Bloomsbury”, or “Jones lives in Bloomsbury” and “Jones does not live in Bloomsbury”? And is the answer to this last question the same whatever substitutions are made for “Jones” and “Bloomsbury”? (What about “The President lives in the White House”?) We can add: reasonable answers to questions like this will be dependent on the context of concerns in which the particular discussion is set. For example, how close in time must our utterances be for your words “It is very hot here now” to be contradicted by my words “It is not very hot here now”? The answer may depend on whether what is at issue is, on the one hand, our inviting a relative from Wales to visit us here in Mumbai at this time of year or, on the other, the suggestion that we should turn on the air conditioning tonight.

Mastering the application of the notion of “contradiction” (or other logical notions: for example, “entailment”) is not something to be done once and for all, prior to and independently of mastering the ways in which it may be appealed to in discussion of particular topics or in particular contexts of interest.⁴³ With this, in so far as our concern is with the application of formal logic to most of what is said in day-to-day life its formalisation and precision, while potentially serving useful purposes, may readily become expressions of philosophical fantasy. And with *that*, if Prior’s “tense logic” is to have the kind of significance that he hopes for – providing an “accurate philosophical description of the reality of the passage of

for which the question of truth arises”. Frege, Gottlob (1956). “The Thought: A Logical Inquiry”. *Mind*, Vol. 65, No. 259, p. 292. By the same token, on Frege’s understanding, everything material and perceptible will be excluded from the sphere of those things between which logical relations may hold.

⁴³ As we might equally express this in the context of the range of examples that have been my concern: mastering the present tense, and the contrast with the past and future tenses, is not something to be done once and for all, prior to and independently of mastering its employment in constructions with particular verbs and in particular contexts of interest. Consider for example the relations between “The planet is warming” and “Today is colder than yesterday”

time” – we may have to abandon the goal of “formalization” and “rigour”, along with his contrast between a philosophical approach that gives central place to “logic” and one that seeks illumination through a focus on *life*. Only once *this* is done will we be able to acknowledge the crucial contribution made to the tensed / tenseless debate by Prior’s reflections on “Thank goodness that’s over!”⁴⁴

⁴⁴ I would like to acknowledge the very useful input that I received from those who attended a seminar at Abo Akademi at which I presented an earlier version of this paper. I owe a quite particular debt to Andrew English who both contributed to discussion in that seminar and sent me some extremely helpful feedback in writing.