

Logic and Philosophy of Time:

Further Themes from Prior

Edited by:

Patrick Blackburn, Per Hasle, and

Peter Øhrstrøm

Logic and Philosophy of Time, Volume 2

AALBORG UNIVERSITY PRESS

Logic and Philosophy of Time: Further Themes from Prior
Edited by Patrick Blackburn, Per Hasle & Peter Øhrstrøm

1. Open Access Edition

© The authors and Aalborg University Press, 2019

Interior design: Ulrik Sandborg-Petersen & Fatima Sabir
Cover design: akila by Kirsten Bach Larsen
Photo on front cover: A.N. Prior, courtesy of Martin Prior
Copy editing: Fatima Sabir
Set with the TeX Gyre Pagella & TeX Gyre Heros fonts

ISBN: 978-87-7210-265-8

ISSN: 2596-4372

This book is financially supported by the Danish Council for
Independent Research | Culture and Communication

Published by:
Aalborg University Press
Langagervej 2
DK – 9220 Aalborg Ø
Phone: +45 99407140
aauf@forlag.aau.dk
forlag.aau.dk



Attribution-NonCommercial-NoDerivatives



**PEER
REVIEWED**

Table of Contents

Preface: Nows and Thens in the Prior Project <i>Patrick Blackburn</i>	5
The Return of Medieval Logic in the Philosophy of Time <i>David Jakobsen</i>	15
The Significance of the Contributions of A.N. Prior and Jerzy Łoś in the Early History of Modern Temporal Logic <i>Peter Øhrstrøm & Per Hasle</i>	31
B-theory and Time Biases <i>Sayid R. Bnefsi</i>	41
Presentism and Cross-Time Relations <i>R.D. Ingthorsson</i>	53
Ingthorsson, McTaggart's Paradox and the R-theory of Time <i>L. Nathan Oaklander</i>	73
Dummett on McTaggart's Proof of the Unreality of Time <i>Brian Garrett</i>	105
A Logical Framework for the Spotlight Theory of Time <i>Ciro De Florio, Aldo Frigerio and Alessandro Giordani</i>	113
Now There Will be Trouble <i>Giuseppe Spolaore and Fabio Del Prete</i>	127
Actuality and Possibility in Branching Time: The Roots of Transition	

Semantics <i>Antje Rumberg</i>	145
TRL Semantics and Burgess' Formula <i>Roberto Ciuni and Carlo Proietti</i>	163
The Role of Time in Phronetic Activities <i>Anne Gerdes</i>	183
The Prior eArchive as Virtual Research Environment: towards Serendipity and Explorability <i>Fatima Sabir & Volkmar Paul Engerer</i>	201

B-theory and Time Biases

Sayid R. Bnefsi
University of California, Irvine
sbnefsi@uci.edu

Abstract

We care not only about what experiences we have, but when we have them too. However, on the B-theory of time, something's timing isn't an intrinsic way for that thing to be or become. Given B-theory, should we be rationally indifferent about the timing *per se* of an experience? In this paper, I argue that B-theorists can justify time-biased preferences for pains to be past rather than present and for pleasures to be present rather than past. In support of this argument, I appeal to the doctrine of temporal parts or "four-dimensionalism" for short. When held in conjunction with a certain evaluative principle about *whose* experiences matter, four-dimensionalism reconciles B-theory with some time-biased preferences.

Keywords: B-theory, time bias, four-dimensionalism.

1 Introduction

When were you last in great pain? That might not be worth remembering. For what it's worth, that's all in the past now—or so the saying goes. According to the B-theory of time, however, that might not be saying much. B-theory denies that something's timing is an intrinsic way for that thing to be or become. Instead, B-theory holds that *when* something happens is not metaphysically importantly different from *where*

it's happening. Yet in conceiving time and space as parallel metaphysical dimensions, must B-theory also conceive them as parallel evaluative dimensions?

All else equal, we should be and typically are rationally indifferent about a pain's whereabouts. Being in pain here, wherever I am, wouldn't be evaluatively importantly different from being in pain there, wherever you are. Call this *spatial neutrality* about experiences. Dissimilarly, some philosophers disagree that we should be rationally indifferent about a pain's timing. They believe that being in pain now, in the present, is importantly different from being in pain earlier, in the past.¹ Indeed, it seems most people prefer their pains to be past rather than present and their pleasures to be present rather than past. These preferences exemplify temporal value asymmetries, or "time biases" for short, which represent the various ways in which we care not only about what experiences we have, but when we have them too.

Many philosophers have claimed that B-theory undermines the rationale for being time biased and strengthens the rationale for *temporal neutrality*: roughly, the thesis that we should be rationally indifferent about an experience's timing *per se*.² The arguments from B-theory to temporal neutrality might have something like the following premises as their common ground. According to B-theory, time has an ontologically homogeneous structure, i.e., being past, present, and future are extrinsic ways for things to be or become. If something's timing is an extrinsic way for it to be or become, then we should care about when an experience happens *per se* to the same extent that we should care about where an experience happens *per se*. But we shouldn't care about where an experience happens *per se*. Therefore, according to B-theory, we shouldn't care about *when* an experience happens *per se*.

However, I will argue that B-theory does not necessarily predict that all time biases are irrational. This argument requires that B-theorists maintain a certain view about diachronic identity: namely, four-dimensionalism. According to four-dimensionalism, persistence through time is like extension through space. This means that facts about us over time are given by facts about our temporal parts at various times, in the same vein that facts about us at a time are given by facts about our spatial parts

¹See Prior (1959, [16]), Parfit (1984, [13]), and Hare (2007, [7]; 2009, [8]).

²See Cockburn (1998, [2]), Zimmerman (2008, [20]), Greene and Sullivan (2015, [5]), and Pearson (2018a [13], 2018b [14]).

at that time. In the next section, I'll explicate an infamous objection against B-theory's compatibility with reasons for being time biased. In turn, I'll develop and outline my argument from four-dimensionalism for B-theory's compatibility with reasons for being time biased.

2 Thank Goodness That's Over

Some philosophers doubt that the correct semantic analysis for an area of inquiry indicates the correct ontological analysis for that area, but some B-theorists took this for granted in their arguments for their view.³ These arguments appealed to certain reductive analyses of linguistic tense, but it is in effect an argument from parsimony. The argument's main premise is that the linguistic category of tense is available for paraphrase in entirely tenseless, but synonymous language. And that premise is supposed to support the conclusion that what it is for something to be past, present, or future just is for that thing to stand in certain tenseless, frame-relative relations: respectively, the earlier-than, simultaneous-with, or later-than relations. Whatever that parsimony argument's validity, the main premise has come under fire. And in that connection, most of the smoke has come from an objection made familiar by A. N. Prior:

One says, e.g. "Thank goodness that's over!" ... [which] 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? (Prior 1959, p. 17, [15]).

Initially considered, Prior's objection is that tenseless analyses of tense—for example, the date and token-reflexive analyses—fail to preserve the cognitive relations between tensed propositions and the propositional attitudes which embed them. Therefore, arguments in support of B-theory from the semantic eliminability of tense are unsound. But there's another objection against B-theory to which Prior gestures to-

³See Dyke (2007, [4]).

wards when, at the end of the foregoing passage, he raises the question: “Why should anyone thank goodness for that?”

When we fill in the anaphora, what Prior seems to be asking is this: “Why would a tenseless fact about the timing of an experience ever give someone a reason to value it differently?” In the next section, I’ll offer a novel answer to the question that I take Prior to be raising against the B-theorist. Subsequently, I’ll compare my answer to, and defend its superiority against, comparable answers due to D. H. Mellor [10-11], Murray MacBeath [9], and Heather Dyke and James Maclaurin [4].

3 Thank Goodness That's No Longer Me

According to four-dimensionalism, people are temporally extended wholes whose lifetimes are given by their moment-bound temporal parts. More specifically, four-dimensionalism maintains that there exist moment-bound things, i.e., temporal “parts” or “stages,” just as there exist spatial parts of things. These temporal parts are what comprise temporally extended things, i.e., continuants, and facts about continuants supervene on facts about the temporal parts of the continuant.⁴

Four-dimensionalists can disagree about what continuants are, whether they have their properties derivatively, and the kind of relations that underlie the various facts about our properties over time. Worm theorists, or “perdurantists,” maintain that the continuants over which we quantify and talk about are aggregates of moment-bound individuals or “worms” who derive their properties from the properties their temporal parts have. Stage theorists, or “exdurantists,” agree that spacetime worms exist, but they identify the continuants over which we quantify and talk about with the individual stages of the worm, who have properties at other times by standing in particular counterpart relations to other stages of the worm at other times.⁵ For the intents and purposes of reconciling B-theory and the rational permissibility of some kinds of time biases, not much weighs on the ontological and semantic differences between perdurantism and exdurantism. That said, I’ll be raising my argument according to the perdurantist’s account of diachronic

⁴See Balashov (2010, [1]) for a scientifically informed investigation into the debate about persistence.

⁵Balashov (2010, p. 13, [1]).

identity.

The first substantive premise of my argument is that B-theory in conjunction with four-dimensionalism entails that any experience that is over at a time for some temporal part also has the property of not belonging to that temporal part at that time. To illustrate, imagine that all of yesterday someone—Student—suffered from a mild headache, which is over today. According to B-theory, for Student’s headache to be over just is for that headache to conclude simultaneously with respect to some frame of reference. And according to four-dimensionalism, for Student’s headache to conclude today just is for that headache to belong to Student’s temporal parts yesterday, but not to Student’s temporal parts today. Student’s temporal parts yesterday—Student-Yesterday—is not numerically identical to Student’s temporal part today, Student-Today. Therefore, for Student’s headache to be over at a time, if that is a tenseless feature of the headache, is also for the headache to belong to Student-Yesterday rather than Student-Today.

The second substantive premise of my argument involves a certain evaluative principle with respect to pleasures and pains inspired by Caspar Hare’s [7, 8] work on biases towards our own favor or “self-bias” for short. The principle provides the normative reason for which one might “thank goodness” for the fact that some pain is past if that is merely a tenseless fact:

Mild Egocentric Hedonism (MEH): All other things being equal, one should prefer a pain that is not one’s own rather than one’s own. Conversely, one should prefer a pleasure that is one’s own rather than not one’s own.

It is tempting, but *incorrect*, to confuse MEH above with this principle below:

Egocentric Schadenfreude (ES): All other things being equal, one should prefer a pain that is someone else’s. Conversely, one should prefer a pleasure that is no one else’s.

Here’s the difference between the two. Imagine a group of restaurant workers drawing straws to decide who should clean the restrooms. Mild egocentric hedonists prefer not to draw the short straw themselves. Sure, by preferring not to draw the short straw, one prefers by extension that

someone else does. But it's the *schadenfreuder* who finds preference fulfillment not only in not drawing the short straw, but also in someone else drawing it. If they were able to choose, the mild egocentric hedonist can consistently prefer that no one, including them, have some negative experience. In contrast, the egocentric *schadenfreuder* is satisfied by the thought that someone experiences something unpleasant.

With MEH in tow, my argument for the reconciliation between B-theory and time biases continues as follows. For convenience, I put the argument in premise-conclusion form.

Premise 1, B-theory: What it is for one's pain to be over is for its conclusion to be simultaneous with some current reference frame (e.g., an utterance).

In turn, we assume four-dimensionalism:

Premise 2, 4D: Continuants are temporally extended beings who exist at various times with different qualities over time in virtue of having temporal parts of different qualities who exist at various times.

The sub-argument for the next premise was provided earlier.

Premise 3: Any experience that is over at a time for some temporal part also has the property of not being experienced by that temporal part.

And the next premise provides the reason for which an experience that is over at a time is something for which one should thank goodness, given B-theory and four-dimensionalism.

Premise 4, MEH: Whatever painful experience has the property of not belonging to some temporal part at a time would satisfy that temporal part's mild egocentric hedonism.

From the foregoing premises we have this to conclude:

Conclusion: A continuant should thank goodness that some pain is over at a time, if that is a tenseless fact, because that continuant has a temporal part at some time whose mild egocentric hedonism is fulfilled in virtue of that tenseless fact obtaining.

Finally, it's worth illustrating my argument's logic. Consider *Dentistry*:

Student is scheduled for a routine checkup with their dentist, Dentist. Of course, Student dislikes seeing the dentist. To provide them with some relief, Dentist says: "It'll all be over soon." As a B-theorist, however, Student puts Dentist's time bias into question: "And why should anyone thank goodness for that?" Dentist replies: "Because *then* it will no longer be *your* problem!"

4 Prospects for Temporal Relativity

Call my argument in the previous section the "Thank Goodness That's No Longer Me" argument. Not only does it answer Prior's question, but it also addresses a family of objections against the normativity of B-theory. Consider, for instance, the objection that David Cockburn raises:

To show how anything like our current emotional life might be consistent with the claim that 'past', 'present', and 'future' events all have exactly the same kind of reality...His problem, that is, is to show how familiar ways in which we offer 'the fact' that something *has* happened, *is* happening, or *will* happen as a reason for actions and feelings can be acceptable if 'there are no tensed facts'.

(Cockburn 1998, p. 85, [2])

More recently, Preston Greene and Meghan Sullivan imply that, for the purposes of rational evaluation, when an experience happens *per se* is not importantly different from where it is happening *per se*:

Given the B-theory of time, distinguishing between past and future experiences can seem just as arbitrary as distinguishing between experiences that happen here and experiences that happen there.

(Greene and Sullivan 2015, p. 953, [6])

The claims being made in the foregoing passages have a common denominator. Since B-theory implies that there is no intrinsic or absolute way to distinguish between past, present, and future events, it seems

that there is no reason to be responsive to an experience's timing for the purposes of rational evaluation. However, even if there is no intrinsic way to distinguish between past, present, and future events, nevertheless there may be some feature about an experience's pastness, presentness, or futurity—if those are tenseless ways for an experience to be—that's evaluatively relevant; that is what my Thank Goodness That's No Longer Me argument shows.

To show the unique contribution my argument makes, it is worth discussing how the argument interacts with similar arguments in the literature on the compatibility between B-theory and temporal value asymmetry. In response to Prior, among other A-theorists, Murray MacBeath (1994, [9]), with D. H. Mellor concurring (1993, [11]), presented an account of tensed propositional attitudes that distinguishes their formal objects from the content that constitutes them. On this account, the formal object of our relieving *belief* that a pain is over is a tenseless proposition or fact about that pain. But the object of one's *relief* in the belief that a pain is over is that belief's irreducibly tensed content. One thus has reason to feel relief in the belief that a pain is over rather than present or forthcoming not because that belief's formal object is an irreducibly tensed fact, but because of that belief's irreducibly tensed *content*.⁶

Heather Dyke and James Maclaurin (2002, [3]) have also presented an account of the compatibility between B-theory and temporal value asymmetry. They claim that our reasons for being time biased stem from considerations about natural selection, which themselves are ultimately responsive to the tenseless fact that the direction of causation is from earlier to later.⁷ On their account, time-biased behaviors typically confer certain evolutionary advantages and fitness-enhancing effects due to causation's tenseless asymmetric direction. One thus has reason to feel relief in the belief that a pain is over not only because that belief's object or content is tensed, in contrast to Mellor and MacBeath, but also because relief is the evolutionarily useful attitude to have towards a past pain, and dread is the evolutionarily useful attitude to

⁶Let us illustrate the distinction. Suppose you are about to get into what looks like a fatal car accident. Of course, you scream in terror in the belief that you will die. Fortunately, you will not die. The object of your belief is a false proposition. But the object of your terror in the belief that you'll die is not the false proposition, rather it's that belief's terrifying content—the way the world would look like if the object of your belief were true.

⁷See Dyke and Maclaurin (2002, p. 285, [4]).

have towards a future pain.

Unlike my Thank Goodness That's No Longer Me argument, however, MacBeath and Mellor's argument, as well as Dyke and Maclaurin's, seem to confuse an important distinction between what we have *motivational* reason to do and what we have *normative* reason to do. That is, their arguments mistake what we are under psychological pressure to do with what we are under rational pressure to do. Indeed, reconsider MacBeath and Mellor's account. If the object of one's relief about past pains is some irreducibly tensed content, then the objects of relief, among other such tensed attitudes, are based on misrepresentations of reality if B-theory is true. But attitudes that are based on misrepresentations of reality are unjustified. Therefore, if B-theory is true, the various tensed attitudes that embody our temporal value asymmetries are unjustified.

In a similar vein, Dyke and Maclaurin's account also seems to imply that our tensed attitudes are unwarranted. Their account says that natural selection pressures explain why there are reasons to act in time-biased ways. But these natural selection pressures do not always track the truth. Being time biased may be a better way for a species to survive. That said, being a better way for a species to survive is not always a justified way for a species to behave. Unless there is an intrinsic connection between such natural selection pressures and the reasons that we have to evaluate experiences in certain ways rather than others, an evolutionary account of time bias seems to raise skepticism against the claim that being time biased is justified.

Finally, it is worth discussing a potential limitation of my view, but also foregrounding a potential solution. I have offered a tenseless account of some time biases. But as it stands, my account does not seem to justify our bias in favor of the future over the past with respect to pleasure and our bias in favor of the past over the future with respect to pains. Indeed, my argument only establishes that there are reasons to prefer present rather than non-present pleasures, and non-present rather than present pains. But both past and future pains are also non-present pains, so on my account distinguishing between them is arbitrary for the purposes of rational evaluation. Yet there seems to be something importantly different about a pain being future rather than past. To be sure, we are constantly under great psychological or evolutionary pressure to treat matters future and past differently. But being under

such pressure does not justify bias towards the future for the same reasons it does not justify bias towards the present.

In order to justify future bias in a manner compatible with B-theory, there must be something importantly different between the past and the future in virtue of which we have normative reason to prefer pleasures to be located in our future and pains to be located in our past. In this connection, there may be a parity argument according to which our temporal value asymmetries between the past and future are not importantly different from our personal value asymmetries between people with whom we are in variously intimate relationships. On this argument, just as it is not arbitrary to be more concerned about the experiences of certain relatives rather than others, i.e., one's nuclear rather than extended family, similarly it is not arbitrary to be more concerned about experiences that occur in certain parts of my lifetime rather than others, i.e., the future rather than past. In other words, in the interpersonal context, it seems our asymmetric attitudes between others are justified by the variously intimate relationships that we stand in with others, and the reasons that we have for standing in those relationships with them. Likewise, in the intertemporal context, it may be that our asymmetric attitudes between the past and the future are justified by the variously different metaphysical, epistemological, and ethical relations that we stand in with ourselves in the future rather than the past.

Bibliography

- [1] Balashov, Y. (2010). *Persistence and Spacetime*. Oxford: Oxford University Press.
- [2] Cockburn, D. (1998). *Tense and Emotion*. In: Le Poidevin, R. (ed.): *Questions of Time and Tense*. Oxford: Oxford University Press: pp. 77–91.
- [3] Dougherty, T. (2015). Future-Bias and Practical Reason. *Philosophers' Imprint*, **15**(30): 1–16.
- [4] Dyke, H. and Maclaurin, J. (2002). "Thank Goodness That's Over": The Evolutionary Story. *Ratio* **15**(3): 276–292.
- [5] Dyke, H. (2007). *Metaphysics and the Representational Fallacy*. London: Routledge.
- [6] Greene, P. and Sullivan, M. (2015). Against Time Bias. *Ethics*

- 125(4): 947–970.
- [7] Hare, C. (2007). Self-Bias, Time-Bias, and the Metaphysics of Self and Time. *Journal of Philosophy* 104(7): 350–73.
- [8] Hare, C. (2009). *On Myself, and Other, Less Important Subjects*. Princeton: Princeton University Press.
- [9] MacBeath, M. (1983). Mellor’s Emeritus Headache. *Ratio* 25: 81–88. Reprinted in: Oaklander, L.N. and Smith, Q. (eds.): *The New Theory of Time*. New Haven: Yale University Press, 1994: pp. 305–312.
- [10] Mellor, D.H. (1981). “Thank Goodness That’s Over”. *Ratio* 23: 20–30. Reprinted in: Oaklander, L.N. and Smith, Q. (eds.): *The New Theory of Time*. New Haven: Yale University Press, 1994: pp. 293–305.
- [11] Mellor, D. H. (1983). MacBeath’s Soluble Aspirin. *Ratio* 25: 89–92. Reprinted in: Oaklander, L.N. and Smith, Q. (eds.): *The New Theory of Time*. New Haven: Yale University Press, 1994: pp. 312–316.
- [12] Oaklander, L.N. and Smith, Q. (1994). *The New Theory of Time*. New Haven: Yale University Press.
- [13] Parfit, D. (1984). *Reasons and Persons*. Oxford: Oxford University Press.
- [14] Pearson, O. (2018). Appropriate Emotions and the Metaphysics of Time. *Philosophical Studies* 175(8): 1945–1961.
- [15] Pearson, O. (2018). Tensed Emotions, Evolution, and Time. *Philosophia* 46(2): 401–409.
- [16] Prior, A.N. (1959). Thank Goodness That’s Over. *Philosophy* 34(128): 12–17.
- [17] Sider, T. (1997). Four-Dimensionalism. *The Philosophical Review* 106(2): 197–231.
- [18] Sider, T. (2001). *Four-Dimensionalism: An Ontology of Persistence and Time*. Oxford: Oxford University Press.
- [19] Suhler, C. and Callender, C. (2012). Thank Goodness That Argument is Over: Explaining the Temporal Value Asymmetry. *Philosopher’s Imprint* 12(15): 1–16.
- [20] Zimmerman, D. (2008). The Privileged Present: Defending an “A-theory” of Time. In: Sider, T., Hawthorne, J. and Zimmerman, D. (eds.): *Contemporary Debates in Metaphysics*. Blackwell: pp. 211–225.