

The Shape of Things to Come:

Introduction to Special Issue on *Nothing to Come* by Correia & Rosenkranz

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Abstract

In *Nothing To Come: A Defence of the Growing Block Theory of Time*, Correia and Rosenkranz present in great depth their own version of the Growing Block Theory. This special issue contains several commentaries on Correia and Rosenkranz's position made by leading figures in contemporary philosophy of time, together with extremely thorough replies by the authors themselves which clarify crucial aspects of their view.

Keywords

A-theory; growing block; theory; time

According to the Growing Block Theory (henceforth GBT), with the passage of time the ontology gets constantly increased, as things get added to the catalogue of what exists. GBT is thus an instance of the A-theory, or dynamical view of time, since for time to genuinely pass the present moment has to be privileged and metaphysically distinguished from past and future moments. Contrary to other A-theories such as presentism or the moving spotlight view, however, GBT provides a distinct answer to the ontological question concerning what exists: the past and the present do, the future does not. The conjunction of these two features, genuine becoming and an ontological asymmetry between past/present and future, is what broadly defines GBT with respect to alternative views. And thanks to

these, GBT allows us to preserve two main common sense intuitions about time, namely that the world is genuinely dynamic and that there is an objective difference between the past and the future which explains why I can only act to change the latter.

This view was first proposed almost exactly a century ago, in 1923, by C. D. Broad in his book *Scientific Thought* (1923). And yet, it started to gain some attraction in the philosophy of time community only in the last two or three decades,¹ with several proponents of this view such as Tooley (1997), Forrest (2004, 2006), Diekmeyer (2005) and Forbes (2016). Nowadays, GBT is seen by many as one of the major metaphysics of time, so that even the detractors of this view have been forced to confront it seriously. As a concrete proof of the renewed interest in GBT, it is with great pleasure that we are about to introduce a series of contributions dedicated to the book *Nothing To Come: A Defence of the Growing Block Theory of Time* (NTC) by Correia and Rosenkranz (2018). NTC is a detailed and comprehensive defence of the coherence of GBT, but more generally, we believe, the book is a must-read for anyone with an interest in the philosophy of time. Correia and Rosenkranz present in great depth their own version of GBT—which, as we shall see, differs provocatively in many respects from previous ones and along the way they touch on the main conceptual issues surrounding this theory. Roughly, they characterize the core of GBT as the combination of two theses: that new things constantly come into existence and that nothing ceases to exist. They use Williamson's (2013) idea of characterizing the various approaches in temporal ontology in terms of the opposition between temporaryism and permanentism, and articulate it into a view in which reality is characterised by the continuous change in which facts about existence there are. Proper articulation of the view requires a sophisticated tense-logical machinery, but no unfamiliar theoretical devices such as a further time dimension or a duplication of tense operators, as postulated by other formulations of GBT like Tooley's or Button's (2005, 2006).

We suggest that the reader consider the special issue she is about to read as a sort of complement to the book itself, for it not only contains a number of useful commentary and criticisms made by leading figures in contemporary philosophy of time, but also features a long and extremely thorough response piece by the authors themselves which will clarify some crucial aspects of their view.

As clearly stated from the outset, Correia and Rosenkranz core goal is *not* to provide new arguments in favour of GBT. What you will find in NTC is, rather, a systematic attempt

¹ A notable exception is Jeffrey (1979).

to design a version of the theory that is capable of addressing all the major extant objections against GBT:

This monograph undertakes to give a limited defence of the Growing Block Theory of time (GBT), as first conceived by C. D. Broad in his 1923 book *Scientific Thought*. The defence is limited in that we do not aim to show that GBT is better than its rivals. Rather, we merely intend to show that GBT is better than proponents of rival views make it out to be. We set out to do so by showing that there is a coherent, logically perspicuous and ideologically lean formulation of GBT that is suited to successfully answer certain philosophically motivated arguments against it that tend to dominate the literature on the growing block. (NTC: v)

This is by no means a purely defensive project, however. In fact, it is the very idea of locating the various objections against GBT in a more global context, and not somehow in isolation, that allows the authors to achieve the immodest goal of providing what is undoubtedly one of the most mature formulations of the view. In a nutshell, unlike previous interpretations of Broad's original insight, which tend to see GBT as a hybrid view between tense realism and the so-called "block universe" view, Correia and Rosenkranz construe the idea of an advancing edge of the universe as implying that reality is dynamic through and through. Consequently, the "block" of their version of GBT is not to be understood as an amputated version of the block universe, but rather as a world in which also the past, and not only the present, changes as times goes by.

In the book, the authors offer a rich and careful analysis of Broad's 1923 version of the GBT, and insist on what are the limits of this view, and conclude by suggesting the direction to take in order to improve the theory. They then develop a tense-logic framework and introduce the basic conceptual notions through which they formulate their own version of GBT. The final part of the book is dedicated to assessing how the new GBT can address the main challenges to the previous versions. In this respect, a great attention is devoted to the Epistemic Objection, the issue of the openness of the future, and the compatibility with Einstein's theory of relativity.

This special issue includes eight original papers. In her "Plenty to Come: Making Sense of Correia and Rosenkranz's Growing Block", Natalja Deng starts by offering an analysis of NTC with respect to two major background issues, namely the notion of existence *simpliciter* at play in the book, and the metaphysical interpretation of the tense-logical framework developed by the authors. As a conclusion to her illuminating analysis, Deng questions whether the way in which Correia and Rosenkranz frame the debate about GBT does indeed justice to what are commonly considered the main tenets of the view. She

then articulates two worries. The first is that the view developed in NTC may not be as dynamic as initially intended by the authors. The second worry concerns whether or not, by adopting Correia and Rosenkranz tense-logic, one is able to address the metaphysical and ontological questions about time, rather than merely to describe how our language *would* behave if GBT were true. Deng's criticism gets at the very core of NTC, and as we are about to see, other commentators have suggested similar worries about the relationships between the linguistic and the metaphysical side of Correia and Rosenkranz's project.

In her paper "Taking Tense Seriously Cannot Help the Growing Block", Heather Dyke offers an insightful reconstruction of the idea of "taking tense seriously", that is crucial throughout the whole book. As with Deng's criticism, once again here the discussion revolves around the connection between the linguistic and the metaphysical theses developed in NTC. The idea of "taking tense seriously" is explicitly taken as a starting point by Correia and Rosenkranz, for it should provide the basis for the discussion of the tense-logic framework and of the metaphysical significance of GBT. According to Dyke, however, the authors fail to appreciate an important distinction, the one between a metaphysical and a linguistic way of taking tense seriously. After showing in great detail how to think about such a distinction, Dyke goes on to argue that neither of the above meanings of this slogan can provide the conceptual grounds the authors need. Taking tense seriously from a linguistic perspective alone would not allow us to reach the conclusion that GBT is true. On the other hand, if the metaphysical reading is the one the authors have in mind, Dyke argues that taking tense seriously in that sense would amount to assuming exactly what is in need of an argument.

Kristie Miller's contribution, "Times, Locations and the Epistemic Objection", also focuses on the epistemic objection. Miller puts Correia and Rosenkranz's take on the epistemic objection in perspective, by discussing two versions of it and some of the replies that have been given in the literature, in particular the so-called dead past hypothesis, as articulated by Forrest (2004), and subsequently Forbes (2016). Roughly, the dead past hypothesis is the thesis that for things to be happening they have to *presently* instantiate properties. To instantiate a property at a certain temporal location is not sufficient for having things happening at that temporal location. If the hypothesis is true, *nothing* is going on in the past (although past things exist and have properties), and thus it is not true that Cesar is now believing that he is in the present crossing the Rubicon. As Miller correctly points out, Correia and Rosenkranz do not take such a way out of the conundrum. Their view is that regardless of whether the past is dead or not, it is wrong to evaluate our claims about what is happening in the past with respect to how the past is now. Miller voices her

perplexity in the face of this proposal. Her main point is that Correia and Rosenkranz seem to arrive at this result by limiting the expressive resources of their basic language in a somewhat arbitrary way. According to Miller, in the context of GBT the past is in some way now. Presentism is the view according to which it is only legitimate to say how past things were, since according to presentism there are no past things; but the ontology of GBT seems to allow for the distinction between how past things are now and how they were. If so, the expressive limitation by means of which Correia and Rosenkranz try to solve the problem does not reflect a metaphysical commitment of the theory.

In his contribution “The Growing Block, the Epistemic Objection and Zombie Parrots”, Ned Markosian offers an analysis of Correia and Rosenkranz’s extensive response to the *Epistemic Objection*, one of the main objections to GBT, and a topic that looms large in other contributions as well. In a nutshell, the Epistemic Objection is this. Assume that while Cesar is crossing the Rubicon, at a certain time t , he is thinking that he is in the present. When t is the edge of reality, Cesar is right. But Cesar’s thought exists also when t is no longer the edge of reality, and at all those other times Cesar is thinking something false. You can now apply the same argument to your own thoughts. Are you right in believing that you are in the present? The probabilities speak against you; except for a single moment where you are right, at any later time you would still have the same thought but that thought would then be false. To address this worry, Correia and Rosenkranz start by identifying two background assumptions which they call *Presumption A* and *Presumption B*. The former is that subjects in the past that once believed to be in the present, are now still believing this, the latter is that if such a subject is no longer present, their past token beliefs (which were once true) are now false. According to Correia and Rosenkranz, who dedicate the whole chapter 6 to these issues, both *Presumption A* and *B* are false, roughly because they incorrectly assume that on GBT we should believe that nothing ever changes its properties by becoming past. Markosian provides a general analysis of the history of this objection, and assesses in its light Correia and Rosenkranz’s proposal. According to him, it is crucial that GBT be combined with an endurantist theory of identity through time to avoid the epistemic objection. He then suggests ways to avoid apparent drawbacks of such a combination.

Jacek Wawer’s contribution, “Tensed Metaphysics and Non-Local Grounding of Truth”, is more sympathetic to the overall approach to future contingents taken by Correia and Rosenkranz. Wawer discusses the idea of a local understanding of truth-grounding, namely the thesis that if a proposition is true at a time t , only what goes on at t can ground its truth. Such an idea is clearly problematic for many propositions whose tense is not the present

tense. Although tenseless theorists have sometimes argued against tense realism on the ground that it entails something like the local understanding of truth-grounding, Wawer praises NTC for containing convincing arguments in favour of the idea that non-local truth-grounding can, and should be coupled with tense realism. Indeed, the dilemma between bivalence failure and “cheating” Lucretian properties arises only if we take the “focus” on the present typical of tense realism as a constraint on the grounding relation for truth, but—Wawer argues in line with Correia and Rosenkranz—we have no reason to do that, as shown by the fact that a “non-local” version of tense realism can be articulated. Finally, Wawer raises a challenge for Correia and Rosenkranz, concerning a risk of overgeneralization. A non-local understanding of truth-grounding in the case of counterfactual truths seems unappealing. Consider “Had Giuliano been to the party, he would have drunk a beer”. If its truth value is determined non-locally, namely by what happens at non-actual worlds, then it should be reasonable to talk about *the* possibility that would have been realised, had Giuliano been at the party; but this seems wrong, since there are many such possibilities, some including Giuliano drinking a beer, others not. What, then, distinguishes the modal from the temporal case?

In his contribution, “The Growing Block, the Open Future and Future Truths”, Stephan Torre raises several worries about Correia and Rosenkranz’s treatment of future contingents. He begins by noticing that the authors are right in maintaining that GBT can both vindicate the idea that the future is ontologically open and keep bivalence unrestricted. However, Torre argues that their proposed version of the principle according to which truths “do not float free” is explanatory deficient. As others in the debate about what grounds past and future tensed truths in metaphysical scenarios that do not encompass past and future parts of reality (respectively), Torre thinks that tensing the grounding relation leads to a regress problem: if we explain what makes true future tensed truths in terms of things that will exist, then we are explaining a future tensed truth in terms of another future tensed truth, which requires an explanation in terms of a further future tensed truth. Torre then goes on to discuss Correia and Rosenkranz’s ideas on openness. He criticises the idea that nomological determinism has a bearing on the asymmetry between the fixity of the past and the openness of the future, which should rather be captured in terms of the difference in counterfactual dependence on the present between future and past truths. Finally, he casts some doubts on the way Correia and Rosenkranz characterise ontological openness in GBT as a viable third way between the Aristotelian “bivalence failure” view, and the block theorist’s stance on metaphysical openness.

In the contribution, “Nothing to Come in a Relativistic Setting”, Mauro Dorato and

Carl Hoefer focus on chapters 8 and 9 of NTC, where GBT is analysed with view to the notorious conflict between views of time with a privileged present and Einstein's Special theory of Relativity (SR). The great merit of Correia and Rosenkranz is to lay down, in a clear and detailed way, what are the various options for defenders of GBT in order to make their view compatible with SR. Then, the authors defend a novel approach to this issue that does not postulate any physical geometry other than the one to be found in SR—thus, without postulating a preferred foliation of spacetime. In their contribution, Dorato and Hoefer recognize these merits, and go on to evaluate in depth the pros and cons of the strategy favoured by Correia and Rosenkranz. The two main options for a relativistic GBT are the so-called “bow-tie” or “pointy” views, which disagree as to whether to include the *absolute elsewhere* among what is real (the former) or not (the latter). In NTC the ‘bow-tie’ view is defended. Dorato and Hoefer offer a set of criticisms of this choice, in particular pointing out that the rejection of the transitivity of the existence-as-of relation, entailed by the “bow-tie” view—as recognized by the authors themselves—is too high a price to pay, and potentially a departure from the very spirit of GBT.

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