No time for powers

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ABSTRACT
In this paper, I will investigate the compatibility of different metaphysics of time with the powers view. At first sight, it seems natural to combine some sort of powers ontology with a dynamical view of time, since the dynamic character of powers appears to account for the progression of time. Accordingly, it has been argued that a powers ontology, which is supposed to be inherently dynamic and productive, is incompatible with eternalism, which does not allow for any sort of real productivity. After having reviewed these arguments, I will argue that the powers view is not only incompatible with eternalism but also with the moving spotlight view and growing block theory. I will go on to argue that the specific notion of activity that the powers ontology provides is not straightforwardly compatible with presentism either.

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Introduction
With the popularity of the neo-Aristotelian powers view ever growing, a new debate in the philosophy of time is currently emerging. This debate is concerned with the question whether the different prominent temporal ontologies favour either the powers view or its main rival, neo-Humeanism. In this paper, I will investigate the compatibility of different metaphysics of time with the powers view. It will turn out that the powers view is at least not straightforwardly compatible with any of the most prominent temporal ontologies, which, if correct, would be a serious argument against the powers view. Granted, there is no single accepted view on powers, and every temporal ontology I discuss comes in a myriad of guises. So instead of claiming that this paper is an insurmountable attack on the powers view, I will pose it as a challenge to the proponents
of the powers view to make it apparent how their view can be made compatible with any prominent temporal ontology.

The proponents of the powers view place a big emphasis on the dynamism that their view, in contrast to Humeanism, is allegedly able to capture. In a brief reconstruction of the core tenets of the powers view, we will outline this dynamic aspect. It has recently been argued that the inherently dynamic and productive powers ontology is incompatible with static eternalism, which does not allow for productivity or activity, since there is no progression of an objective present and all past, present and future facts are equally real on such a view. After having reviewed and accepted these arguments, I will briefly discuss the moving spotlight view and go on to argue that the notion of dynamism is also incompatible with the growing block theory (GBT) and its static past. As it will turn out, the powers ontology is not straightforwardly compatible with presentism either. The culprit is again activity, which is so central to the neo-Aristotelian view, and which is hard to analyse without requiring a temporally extended present, in presentism as in the GBT.

**Background**

Before we set out to discuss the various arguments regarding the compatibility of a powers ontology with the most prominent ontologies of time, let us clarify the central concepts involved in the discussion.

**Temporal ontologies**

Let us first distinguish between dynamic versus static views of time. Roughly, we can distinguish between temporal ontologies that include some notion of temporal passage or progression, which often feature an objective present, and static views of time in which there is no real progression of time. These static views typically do not include an objective present. The archetypical static view is classical eternalism. I will first introduce eternalism before discussing three dynamic temporal ontologies: presentism, the moving spotlight theory (MST) and the growing block view.

**Eternalism**

Classical eternalism is a static view since the past, present and future facts are equally real and are not brought into existence as time progresses. In classical eternalism, there is no real temporal passage in the sense that new facts are brought into existence or that there is an objective present
which progresses. In its most intuitive reading, eternalism is a B-theoretic view: the facts are ordered according to an earlier/later relation, but there is no fact, or instant, which is intrinsically past, present or future.

Eternalism is popular for a number of reasons. It is the one view of time that is uncontroversially compatible with contemporary physics because it does not presuppose a privileged objective present, which is probably at odds with special relativity. Over and above the compatibility with special relativity, eternalism is attractive because it offers unproblematic truth-makers for past and future tense assertions. Since all facts, past, present, and future are equally real, and since whether a fact is past, present or future is not an intrinsic quality of the fact, but only evaluated in relation to some instant within the block, these facts can serve as truth-makers for past or future tense assertions uttered at any point in time. This feature of eternalism has one drawback, which probably explains the appeal of some of its rivals. Since the future facts are equally real as the past and the present ones, and since there are no facts added or subtracted from the block comprised of the totality of facts, there is no real change. Eternalism seems to be at odds with a genuinely, ontologically, open future. At any instant \( t_0 \) in time, the facts at instants \( t_1 \) to \( t_n \) later than \( t_0 \) are equally real as the facts at \( t_0 \). Since the future facts in a sense already timelessly exist, there is only one possible future at any time \( t_0 \), i.e. the set of facts later than \( t_0 \). The block is there, unchangeable. Dynamic views such as presentism and the GBT do not have this feature.

We must be careful here to disambiguate what the eternalists mean when they claim that all facts, past, present and future are equally real. That is not to say that at any time \( t_1 \) in the block, the facts that are prior to or later than \( t_1 \) are present at \( t_1 \). Shakespeare is not right now writing *Romeo and Juliet*. But his writing *Romeo and Juliet* is not any less real just because it is prior to any instant at which you read this paper. So we can distinguish between facts that are real or exist *simpliciter*, which in the case of eternalism are all facts, past, present and future, and facts that exist *presently*, which is to say that they exist at some instant in time that serves as the reference for ‘present’.¹ Similarly, when we talk about facts ‘past, present and future’ within eternalism, we have to be careful not to take this as the claim that there are intrinsically past, present or future facts. In this view, being past, present, or future is only defined relative to some reference instant.

¹For a discussion on the differences of existing *simpliciter* and existing *presently*, see Hestevold and Carter (2002).
Moving spotlight
The MST combines the eternalist notion of a block of all facts, events or things\(^2\) with the notion of an objective present and temporal progression. In its classical guise,\(^3\) the MST is an A-theoretic version of eternalism: while all facts past, present and future are equally real, there is an objective and progressing present in reference to which the past, present and future can be defined. The classical MST offers a non-reducible notion of tense. Daniel Deasy defines the MST as follows:

MOVING SPOTLIGHT THEORY: Some instant of time is absolutely, non-relatively present (A-THEORY) and it is always the case that everything exists eternally (PERMANENTISM). (Deasy 2015, 2075)

The MST is quite unpopular, since it combines the least attractive features of eternalism and the A-theory, which opens it up to McTaggart-style arguments, epistemic problems concerning whether we can know what the present is,\(^4\) and a possible inconsistency with special relativity, while the future in good permanentist tradition seems ontologically fixed and hence unalterable. I will not discuss these problems here but merely focus on its compatibility with the powers view.\(^5\)

Growing block theory
The GBT is, depending on whether one wants to defend or attack it, the best or the worst of both worlds: it is dynamic, with the distinction that the past and present facts, but not the future ones, are real. In GBT, the facts that are real or exist simpliciter are the past and present ones, while only the latter exist presently. So Shakespeare’s writing Romeo and Juliet exists simpliciter, but not presently, while the fact that you are right now reading this very paper exists both simpliciter and presently. The GBT resembles eternalism in the sense that the past and present facts form a block, which is the totality of existence, excluding the future facts. This block grows constantly as new facts are added to the block of past and present facts with the progression of time.\(^6\) According

\(^2\)We will turn to the differences regarding the inhabitants of the block in a second.
\(^3\)See, e.g. Deasy (2015) for a recent defence.
\(^4\)For a discussion of the analogue epistemic problem for the Growing Block Theory, see Braddon-Mitchell (2004).
\(^5\)Cameron (2015) has very recently offered a novel and very original account of the MST, which is designed to cope with a number of the original MST’s issues mentioned above. Although it is an interesting and novel addition to the ever-expanding menagerie of temporal ontologies, I will not discuss Cameron’s view in this paper.
\(^6\)For classical accounts of GBT, see, e.g. Broad (1923) and Tooley (1997), for more recent defences, see Correia and Rosenkranz (2013) and Forbes (2016).
to Briggs and Forbes (2017), the GBT can be characterised by two main features: its asymmetric ontology, meaning that the past and present events exist, while the future ones do not, and passage, meaning that the passage of time is just the coming into existence of events.

The view has the advantage over presentism that it gives an account of the fixity of the past and provides truth-makers for assertions about the past. Over eternalism, it has the advantage that it retains an intuitive notion of the open future without violating the fixity of the past. Critics reject GBT as the worst of both worlds since it shares with presentism the problem that the view might not be compatible with special relativity because GBT proposes an objective present. In addition to this, a completely new problem arises for GBT: since there is a block of equally real facts which grows as time progresses, the question emerges how this growth actually takes place, and what exactly is added to the block. It seems as if the most natural interpretation is that infinitely narrow time-slices are added to the block with the progression of the present, but that raises two questions. Firstly, there is the question whether the GBT is in a way ontologically secondary to and piggybacks on the block view, if the progression of time is merely the addition of infinitely narrow slices of a block to the growing block. Secondly, the question arises at what rate the addition of slices to the block happens. It seems like the growth of the block is something that needs a temporal framework. But if time is just the addition of time-slices to the block, do we not need a hyper-time to account for the growth of the block?

**Presentism**

Presentism is probably the most popular dynamic and A-theoretic view of time, since it gives an account of temporal progression and of becoming: only the present is real, the past is not real anymore and the future is not real yet. The present is all there is and it progresses. To use our vocabulary introduced above, the only facts that exist *simpliciter* are the ones that are objectively present. The future facts do not exist yet and the past ones do not exist anymore.

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7As is the case with all the temporal ontologies I present here, this is a woeful oversimplification. As most views of time can be further differentiated regarding what they take the occupants of times to be, there are presentist accounts which try to solve the longstanding issue of truth-makers for past tense assertions by proposing that while past times exist, past things do not (see, e.g. Bourne 2006 and Crisp 2007). However, I will ignore these differences in this paper as long as they do not make a difference for the arguments I propose here. To make our case, it is irrelevant whether there can be a way to find truth-makers in the past.

8For recent defenders of presentism, see, e.g. Markosian (2004) or Bigelow (1996).

9For a critical discussion of presentism, see Meyer (2005).
While presentism offers a more intuitive notion of the open future, since the future facts do not have the same ontological status as the present ones, presentism has two drawbacks: it is contentious whether it is compatible with special relativity, and while in presentism, the openness of the future might be rescued, the fixity of the past is more problematic. Since the past facts are not as real as the present ones, and there does not, like in eternalism, exist at any time \( t_0 \) a set of facts that are prior to the facts at \( t_0 \), we have no easy solution to the problem of what truth-makers past facts should have. The same goes for truth-makers for future tense assertions.

I will not argue for or against any of these ontologies of time in this paper. However, of these views discussed above, eternalism is arguably the most popular one at the moment, and the GBT is the most controversial.\(^\text{10}\) But if the following discussion shows that the powers view is not only incompatible with eternalism, but also with the MST, the GBT and presentism, then the powers view would either have to be given up or some serious modifications are in order. Before we turn to the various incompatibility claims below, let us briefly outline the powers view.

**Powers**

The last couple of decades saw the ascent of the neo-Aristotelian powers view.\(^\text{11}\) Even among proponents of the view, there is no single accepted definition of what powers are, and as we will see below, the view has not necessarily always been stated clearly enough for it to be easy to engage with it. In the following, I will try to reconstruct a common core of the neo-Aristotelian powers view, and differentiate it from other more classical dispositionalist views such as Alexander Bird’s. I will use the criticism of his view by the proponents of the powers view as a way to make the difference between these accounts more apparent. To reconstruct the powers view is no trivial matter. I will try to substantiate my reading of the powers view not merely by recounting the slogans of its supporters but also by taking a brief look at its application in the philosophy of action. If the rejection of the more standard dispositionalism by the powers metaphysicians has any substance to it, and if there really is a notable difference between these views, then this difference must lie in their understanding

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\(^\text{10}\) For a selection of the arguments against the GBT, see, e.g. Earman (2008) and Braddon-Mitchell (2004, 2013).

\(^\text{11}\) For influential accounts of the powers view, see, e.g. Harré and Madden (1975); Ellis and Lierse (1994); Ellis (2001); Mumford (1998); Mumford (2008); Mumford and Anjum (2011) and Molnar (2005).
of dynamism, or activity, which I will try to give an account of below. And it is exactly that aspect of the powers view that turns out to be problematic in its compatibility with standard views of time.

As a point of departure, let us begin with Alexander Bird’s prominent view of dispositional essentialism, which encompasses a lot of the features of the powers view, but which according to the latter’s most fervent supporters does not go far enough. According to Bird, powers, or potencies, as he calls them alternatively, are a subclass of dispositions. Bird holds that not all dispositions need to be powers, since there could be dispositions that are not characterised by an essence, apart from self-identity. Powers, on the other hand, Bird (2013) holds to be properties with a dispositional essence. On this view, a power is a property that furnishes its bearer with the same dispositional character in every metaphysically possible world where the property is instantiated. If the disposition to repel negatively charged objects if there are some in the vicinity is a power in that sense, then every object that has that property does the same in every metaphysically possible world, i.e. repel negatively charged objects if there are some in the vicinity. Bird’s dispositionalism employs a variant of the conditional analysis of dispositions. The conditional or counterfactual analysis of dispositions is supposed to give a reductive analysis of the dispositional character. In a counterfactual reading, such an analysis would be, e.g.: ‘x is disposed to \( \varphi \) iff, were x subjected to the manifestation conditions \( m \), it would \( \varphi \).’\(^{12}\) In Birds own notation, the dispositional essence \( D \) of a property \( P \) is characterised by the fact that a certain manifestation \( M \) is brought about if a certain stimulus \( S \) is present:

\[
D_{S,M} = \text{a certain manifestation } M \text{ is brought about if a certain stimulus } S \text{ is present. (Bird 2013, 27)}
\]

For most of the powers metaphysicians though, Bird is no true believer. The crucial split between Bird’s view and that of the neo-Aristotelian powers metaphysicians seems to be the latter’s notion of activity. The most common criticism from proponents of the powers view seems to be that Bird’s view is still reductive. Cartwright and Pemberton argue that Bird’s causal profile view lends itself to be understood as an account that at the end still reduces powers to the conditionals they warrant (Cartwright and Pemberton 2013, 109). Apparently, such a

\(^{12}\)The conditional and counterfactual analyses of dispositions are highly controversial. See Bird (2007, 24–42) for a run-down of the most influential arguments against the conditional and the counterfactual analyses.
reductive analysis is not what some of the powers metaphysicians are after. So according to their view, powers, and with them the activity they bestow upon their bearer when they are manifested, cannot be reductively analysed.

This anti-reductivist reading of the powers view and its notion of dynamism can also be substantiated if we look at Ruth Groff’s criticism of Bird’s and similar views. She argues that Bird’s view is ‘passivist’ unlike Stephen Mumford’s, Brian Ellis’s or her own account (Groff 2013, 222). In their view, powers, which do not necessarily need to be fundamental properties, are properties which render the world dynamic, as opposed to the pointillism that is the Humeans’ ‘just one little thing and then another’:

When Ellis or Mumford say that x is disposed to M when S, they mean by such an attribution something that a Humean will deny. They mean that x has the inherent, non-metaphorically dynamic, *wherewithal* to M. (Groff 2013, 222, original emphasis)

Let us try to dissect what it might mean that powers are irreducibly dynamic and bestow activity upon their bearer. As I will argue below, such a reading lends itself to a process-analysis of change, and at the very least presupposes that activity, or change, cannot be analysed as a sequence of events. We will find support for this interpretation of dynamism in the application of the powers view in the philosophy of action, which we will briefly outline below.

Brian Ellis’ account of process kinds and Groff’s analysis of prominent accounts of dispositionalism with regard to their notion of activity offer some pointers regarding such a process-analysis. Ellis holds that causal interactions such as energy transfer, chemical reactions and so on form a distinct category of kinds which he calls ‘process kinds’. Instances of process kinds are underpinned by dispositional properties (Ellis 2002, 143). On this view, the exercise of a power is the unfolding of a process. The crucial difference between passivism and dynamism seems to lie in the way these processes are analysed. A Humean, and Bird for that matter, might reconstruct activity or dynamic processes as a mere *sequence* of events, which Ellis, Groff and Mumford reject. According to Ellis, one of the characteristics that sets his scientific essentialism (or the powers view in general) apart from neo-Humean views is that the latter treat causality as a (however to be specified) relation between logically independent events. Notice that the question here goes beyond whether the causal relata are necessarily connected, but rather, if there even are independent relata. In Groff’s words, processes are ‘irreducibly
active displays of dispositional properties’ (Groff 2013, 214). Mumford seems to be on board with this analysis. He also analyses powers as giving rise to dynamic processes that are not analysable in terms of sequences of static parts. In Mumford’s view, processes that are the exercise of a certain individual’s powers are ‘continuous and constant’ in the sense that every proper part of a change process undergoes change itself and can hence not be reduced to static parts (Mumford 2009, 228). To some readers, this analysis might be unsatisfactorily vague. Groff argues that it is simply impossible to reductively analyse dynamism in terms and with concepts that the passivist accepts. Hence, any characterisation of dynamism will involve dynamic language (Groff 2013, 215–216).

This will turn out to be of great importance for the rest of the paper. Mumford’s, Ellis’s and Groff’s analyses suggest that there are irreducible processes, irreducibly active, rather than sequences of events. This is what sets the neo-Aristotelian powers view apart from Humeanism, the Armstrong–Tooley–Dretske view and Bird. Before we turn to the main issue, let us take a brief detour here. As we have seen, the debate between proponents of a powers ontology and passivists has consequences for the view of what the basic building blocks of reality are: whether we can reductively analyse temporally extended processes in terms of sequences of events or not. Typically, Humeanism, or Lewisianism, is paired with an event ontology: the basic building blocks of reality are temporally point-sized. If we take dynamism seriously, there are processes that cannot be reduced to a sequence of temporally point-sized events. Hence, in a powers view, we should abandon the talk of events, or facts, as what is present at a certain instant. Rather, it seems natural to accept a Priorian view that treats objects and their properties as the occupants of times (Prior 1962). This goes well with the powers metaphysicians’ view that the world is occupied by intrinsically active objects, their intrinsic activity bestowed upon them by their powers. However important the debate about what are the occupants of times is, it has no influence on the arguments presented below, apart from our discussion of the compatibility of the powers view and presentism. So in the following, I will for the sake of convenience continue to call the occupants of times ‘facts’, apart from the cases where it will make a difference. We will return to the question in the section on presentism.

13This renders any notion of dynamism as primitive. I will leave it to the reader to decide whether this kind of analysis is indeed unsatisfactory.
So what have we established so far? The powers view, at least as authors such as Groff, Mumford, Cartwright, Pemberton and Ellis present it, marks a serious departure from views, which treat activity as reductive. The manifestations of powers give rise to continuous change-processes, which are not analysable in terms of sequences of events. This analysis has been made use of in the philosophy of action. To use an example we will go on to torture in this paper: If I exercise my power to dance, this manifestation of my power gives rise to a process: I am dancing. And my dancing cannot be analysed as a sequence of events: it is a continuous irreducible process rather than just my left foot being in position $x$ at $t_1$, in position $y$ at $t_2$, and so forth. Also, the activity, me doing something, is bestowed upon me by having the power to dance (badly). Jennifer Hornsby, who is a supporter of the view that human actions cannot be analysed as sequences of static events, but rather as activities which should be analysed as continuous processes (Hornsby 2012), agrees that the neo-Aristotelian view offers the correct way of analysing human actions, precisely because it rejects the Humean analysis of actions as sequences:

Neo-Aristotelians do not treat cause as everywhere a relation – neither as a relation between two events, nor between two objects, nor between an object and an event. Neo-Aristotelians find fault with the empiricists’ treatment of dispositional properties as analysable away in favour of counterfactual conditionals which introduce relations between events. They take an object’s powers to tell us what kinds of processes the object can engage in [...]. (Hornsby 2015, 131–132)

So while the non-reductive, processes-ontological reading of activity might be hard to analyse precisely, if such an analysis is supposed to be a reductive one, it is exactly this feature of the powers view that makes it attractive to be applied in, e.g. philosophy of action. Hence, it is worthwhile to investigate whether this aspect turns out to be straightforwardly compatible with our most prominent notions of time.

I cannot foresee whether every proponent of the powers view will necessarily agree with the analysis provided here, but I hold that this is the only way to mark a meaningful difference between ‘dynamism’ and ‘passivism’. My arguments towards the incompatibility of the powers view and the various temporal ontologies rely largely on this reading of the powers view. As a consequence, one might avoid these arguments if one did not agree with my analysis of the powers view and if one rejected my analysis of dynamism. This would result in a dilemma:
either accept a strong reading of dynamism, and you run into problems with temporal ontologies, or give up a non-reductive reading of activity, which would deny any difference between classical dispositionalism and the powers view. Since that difference, as we have seen, seems to be important to powers metaphysicians such as Ruth Groff, it seems fair to assume that they would not take the second horn of the dilemma. In that case, however, they must face the problems their view generates for the compatibility with the most prominent temporal ontologies.

To wrap up, it is non-passivism that draws some proponents of the powers ontology to dynamic views of time. It is this reading that I will use in the remainder of the paper for power or potency: a non-metaphorically active, irreducibly dynamic property with a dispositional essence, whose manifestation gives rise to an irreducible change process. To be clear, we are not debating here whether all properties are dispositions, whether all dispositions are powers or whether any understanding of dispositions, in general, can be made compatible with dynamic or static views of time. What we are debating here is whether the neo-Aristotelian dynamical powers view is consistent with the most prominent temporal ontologies. So let us finally turn to these questions.

**Powers and eternalism**

In a very recent development, the free compatibility of various basic ontologies of properties such as the powers view or Humeanism with various temporal ontologies has been called into question. We can distinguish three different claims that have been made regarding the compatibility of various ontologies of properties with different temporal ontologies. First, it has been argued that Humeanism is supposedly incompatible with dynamical views of time. Second, it has been argued that a powers ontology can best account for the dynamic aspect of dynamic temporal ontologies such as presentism or the GBT. The third claim is that a powers ontology is incompatible with eternalism. Briggs and Forbes (2017) argue for the incompatibility of GBT and Humean Supervenience, and claims 1–3 are defended in a recent paper by Friebe (2018). While I neither agree with Briggs and Forbes that Humeanism is not compatible with dynamical views of time nor with Friebe that temporal progression can best be accounted for with a powers ontology, I will in the following concentrate my efforts on Friebe’s third claim that a powers ontology is incompatible with static eternalism. We will first discuss classical eternalism and then turn to the classical MST. Ultimately, I will argue that the
powers view is not straightforwardly compatible with eternalism in all its forms.

Let us begin with static eternalism as portrayed above. At first sight, it might seem unfair to even discuss whether eternalism is compatible with the powers view. Eternalism is classically a static view in the sense that all facts are equally real and exist *simpliciter* and eternally, and there is no objective progression of time. Any fact is present from the temporal viewpoint of that particular fact, but there is no objective present which progresses. Because of that, and because one of its most prominent applications has been Lewis’ ontology, it might be taken as a quintessentially Humean temporal ontology. But while eternalism and Humeanism are certainly natural allies, eternalism at least *prima facie* doesn’t require Humeanism. One could conceivably combine an anti-Humean view as Bird’s dispositional essentialism or a version of the Armstrong–Tooley–Dretske view of laws of nature with eternalism, if we for a moment ignore the fact that Tooley (1997) himself is one of the most prominent proponents of the GBT.

Since eternalism is not necessarily a Humean view of time, it is worthwhile to discuss whether it is compatible with the powers view, which it unsurprisingly turns out not to be. The issue is that in eternalism, events or facts are timelessly given and merely ordered in an earlier/later relation. That seems inconsistent with the dynamical aspect of powers. Cord Friebe argues that in a powers metaphysics, events or facts are not merely temporally ordered, but they are *existentially dependent* on one another, which he takes to be a case of production. One physical token’s powers, when expressed, bring new facts, new physical tokens, into existence. Friebe claims that the contrast between eternalism and dynamical views, as well as between Humeanism and powers metaphysics, is that they differ with regard to whether anything substantial is added when someone says that a certain physical token has been ‘produced’. For the eternalist, as well as for the Humean, that a physical token is produced can mean nothing over and above it being (regularly, lawfully) temporally located later than another token (Friebe 2018, 85–86). I might add that this could include counterfactual dependence, if that’s a feature of your Humean view of causation or laws. But even given counterfactual dependence, the facts exist ontologically independently from one another and from the laws in Humeanism. Denying this would introduce necessary connections.

Friebe claims that in dynamical views of time and the powers ontology, however, facts do not exist independently from one another. On such a
view, to say that a physical token is being produced at a certain time means that it has been brought into existence, dependent on the necessary connections between properties or events (Friebe 2018, 87–88). The power of a negatively charged object \( a \) to repel another negatively charged object \( b \) brought the fact that \( b \) being repelled by \( a \) into existence. The fact did not exist before it was produced. This is not consistent with eternalism, where all the facts exist equally, regardless of their temporal status. That some event, fact or physical token is located at a certain instant in time for a powers ontologist means that it has been produced at that instant. It has not existed before and came into being when another object expressed its powers. This coming into existence is supposed to account for the progress of time. Accordingly, Friebe claims that the powers view requires a dynamical view of time.

Friebe is on to something here. Let us try to make sense of this line of argument. When Friebe argues that the powers view entails that in a powers ontology, production entails that the produced token is existentially dependent on the producing token, what he presumably means by that goes beyond what a Humean could say about existential dependence. A Humean could easily give a reductive account of existential dependence along the lines of a counterfactual analysis: \( b \) existentially depends on \( a \), iff had \( a \) not been the case, \( b \) would not have been the case. On such a reductive view, that token \( a \) produced token \( b \) would mean nothing over and above that token \( a \) is temporally located immediately before \( b \), and that \( b \) counterfactually depends on \( a \). But obviously, Friebe, and with him, the proponents of the powers view, must have something stronger in mind than such a reductive account. After all, the powers ontology and its accompanying theory of causation\(^{14}\) are designed in opposition to such reductive counterfactual accounts.

So presumably, and without delving too deep into the debate about ontological dependence, existential dependence for the powers metaphysician is to be understood more along the lines of E. J. Lowe’s generic existential dependence:

\[
(EDG) \quad x \text{ depends}_{G} \text{ for its existence upon } F =_{dt} \text{Necessarily, } x \text{ exists only if some } F \text{ exists. (Tahko and Lowe 2016)}
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Since this generic existential dependence is an umbrella term to catch a lot of different dependence relations, including part–whole relations, we need to qualify it to get an ontologically substantial notion of production:

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\(^{14}\)For a powers account of causation, see, e.g. Mumford (2008) and Mumford and Anjum (2011).
a produced b, iff b generically existentially depends on a, and a existed before b existed. We have two possible ways of interpreting the notion that a existed before b did: a either existed presently before b, or simpliciter. The second option is altogether impossible, since in static eternalism, all facts, past, present and future, timelessly exist simpliciter, so they cannot be brought into existence simpliciter.

However, the second option to understand a producing b as a bringing b into the present is problematic as well. In static eternalism, it is not possible to give a non-reductive account of how one token could bring another one to exist presently. Every account of dynamism in eternalism, if dynamism is supposed to bring facts into the present, would have to be reductive in the sense that whatever is being made present would have to be reduced to some notion of dependence and of being located at earlier and later times, which are not ontologically privileged. Activity would be ultimately reduced to a sequence of events. In our case, a is existing presently at whatever time it exists at, and b is existing presently at whatever later time it exists at. How could we say that a brings b into the present, if there is no objective present, and both tokens are eternally present at their respective times? On such a view, dynamism and activity can only be reduced to sequences of facts which all exist equally simpliciter, but also presently, each at their own respective times. Such a reductive analysis is exactly what the proponents of the powers view wanted to get away from. So while we maybe could try to give an account of what it would mean to be active in a static universe, this would be exactly what powers metaphysicists like Ruth Groff were trying to avoid when she argued that we cannot give a reductive account of dynamism in non-dynamic terms (Groff 2013, 215–216) which would be all that eternalism would afford us with.

We do not have to fall too deep into the rabbit hole of production and existential dependence to see why static eternalism and the powers view aren’t the happiest of bedfellows. We have seen above how big an emphasis the defenders of the powers view place on ‘non-metaphoric’, and, crucially, non-reductive dynamism. What dynamism could we reasonably expect in a B-theoretic, static eternalism? Dynamism, if to be understood non-reductively, either involves production in the sense of bringing into existence or temporal progression: bringing a token into the objective present. As we have seen above, both options are off the table. Now it might be unfair to try to argue that static eternalism and the powers view are not straightforwardly incompatible, as firstly, nobody in the powers camp seems to argue that they are, and secondly, it is obvious
that static eternalism is incompatible with any sort of ontology that requires a non-reductive notion of activity or dynamism. But there does exist an eternalist view that does have a non-reductive dynamic aspect to it: the moving spotlight view. Let’s see whether it turns out to be straightforwardly compatible with the powers view.

**Powers and the moving spotlight**

The MST with its dynamic element of a progressing present might seem like a more natural ally for the powers view than static eternalism. As mentioned above, the MST differs from classical eternalism only in that there is an objective and progressing present. All facts, past, present, and future exist *simpliciter*. The view hence offers a non-reductive notion of tense: tensed facts cannot be reduced to non-tensed facts as is the case in static eternalism. There, tense is always defined in reference to a point of view within the block. What is past, present, or future is only ever past, present, or future relative to a point of reference. Not so in the MST: since there is an objective present that progresses through the block like a spotlight moves across a stage, tense can be defined without reference to tenseless facts.

So what could the combination of the MST and the powers view look like? What sort of dynamism is there in the MST that could satisfy the proponents of the powers view? Above, we argued that the activity or dynamism the powers view proposes would require production or temporal progression. Since we saw that the powers metaphysicists claim that powers are what renders our world active, one could now propose a view that the expression of powers is either nothing over and above, or is what is responsible for the progression of the present in the MST: The expression of my power to write this exact sentence would then bring into the present the fact that this sentence is written down. The present progressed because of or is the expression of a power. This is the change, the dynamism that powers could achieve on such a view. But, crucially, that is also all the dynamism and change that powers could bring about on such a view. But in the classical MST, all the facts past, present and future exist *simpliciter*. All there is, is this immutable block of facts, just like in eternalism. Accordingly, Ted Sider argues that all the change there ever happens in the MST is which facts are present:

[According to classic MST] there is genuine change in which moment is present. But notice that the spotlight theorist does not admit genuine change for
anything else! For her there is no genuine change in whether I am sitting, or in
whether there are dinosaurs, or whether a war is occurring, since her account of
these matters is identical to the [B-theorist’s]. (Sider 2011, 260)

The change in my plant from being healthy earlier to being wilted now is
merely the change that a later, wilted version of the plant, which eternally
exists simpliciter is now present as opposed to the healthy earlier one,
which also continues to exist simpliciter for eternity. Any change that
any object goes through is simply which version of it\textsuperscript{15} is present. The
same goes for the productive aspect of powers. My power to bake a
cake would not bring a cake that did not exist simpliciter before into exist-
ence, but only make a cake that eternally exists simpliciter present. Every
activity reduces to a change in what is present. We will discuss whether
that is compatible with the powers view on activity in a moment.

To sum up, change in the MST is either simply the change in what is
present. So what about this notion of change then, could this be the
activity and dynamism the proponents of the powers view were looking
for? Is that what powers do, move the present along? A proponent of
the powers view might argue now that despite all the admittedly grand-
iose sounding mission statements about what powers do and that they
render the world active in a way that is irreducible to a sequence of inde-
dpendently analysable events, what they do is not bring new substances or
new facts into existence simpliciter, but that powers, at the objective
present, determine which facts become present, and maybe even that
the expression of powers just is what the progression of the present con-
sists of Wherever there is activity, where powers are manifested, there is
the present. On such a view, it would be the manifestation of powers
that are responsible for change and for temporal progression.

However, this option does not seem to be available: all the facts are
eternally given in the MST, and the objective present progresses for the
entire present time slice of the whole block (which is exactly why it is prob-
ably inconsistent with special relativity). So the present progresses for all
the contemporaneous facts equally, no matter what. Consider me
baking again. I put all the ingredients into a baking form and put them
in the oven. The present progresses. Let’s assume that my switching on
the oven was a manifestation of my power to operate switches on
kitchen appliances. The manifestation of my power constitutes a real
change in the world. But here exactly is the problem: any change is
either a change in what is present in the MST. Any other change is

\textsuperscript{15}I am not taking a stance on perdurance versus en- or exdurance here.
either reducible to or derivative of this. So the manifestation of a power, if it constitutes a change, can also only be reducible to or be derivative of this. So even the expression of a power would be a change that is derivative the progression of the present. But this is not what we envisaged as a possibility for the role that powers were supposed to play here, as what brings facts into the present. Instead, it is the progression of the present, which is responsible for the manifestations of powers.

Let’s look at it this way. Does it make a difference for whether the present progresses that I exercised my power to switch on the oven? If I did exercise my power to manipulate kitchen appliances, the progressed present will hopefully at one point contain a delicious cake. If I don’t express my power to switch on the oven, the dough will continue to exist unchanged (only at a later time). So the progression of the present in the MST cannot depend on the manifestation of powers. In the MST’s universalist picture, if there exists a particle in some remote part of the universe such that no causal interaction with any other object is possible for it at the moment, and if this particle remains in a state of absolute rest such that it does not manifest any power, the present will still have progressed for it anyway, according to the MST. The progression of the present thus must be independent the expression of powers.

Let us recapitulate. We have seen that whatever change, whatever activity there is in the MST, can only be reduced the progression of the present through the block of eternally existing facts. But we have also seen that the powers cannot be responsible for this. Hence, the powers cannot be the source for activity in such a universe. But since that was the only change in an MST-Universe, or that which all other change is derivative of, it cannot be the powers, which drive change in the world, or which make the world active.

Maybe it was unfair to try to combine the powers view with static eternalism, which neither satisfies productivity in the sense discussed above, nor temporal progression, or with the MST, which does feature temporal progression, but not production. So let us now take a look at whether the powers view might fare better with other dynamical views.

**Powers and the growing block view**

In the following two sections, I will argue that the powers view is neither compatible with the GBT, nor with presentism. For the GBT, I will identify two problems, one concerning the past and one concerning the present. Since the problem concerning the present is exactly what generates the
problem for the compatibility of the powers view and presentism, I will present that argument in the section on presentism. So we should keep in mind here that the problem with the past I am about to give in this section is only half of what makes the powers view problematic for the GBT. In brief, I will argue that the static block of past facts in the GBT generates a problem if the properties instantiated in the past facts are supposed to be active powers. In the section on presentism, I will argue that there is no way to make sense of activity in the present either.

To get our argument for the incompatibility of the GBT and the powers view off the ground, let us remember the key features of the GBT. In contrast to eternalism, the GBT is dynamic: there is an ontologically privileged present which progresses. The progression of the present consists in the addition of new facts to the block of existing facts. The GBT resembles eternalism in the respect that there is a block of equally real facts, which are ordered according to an earlier/later relation. It resembles presentism in the respect that new facts, which did not exist yet, are coming into existence as the present progresses. After that, they are part of the block. The GBT has the supposed advantage of providing truth-makers for assertions about the past. The assertion ‘I inadvertently knocked my partner over the head with the boom of my family’s sailboat in spring 2015’ is made true by the fact that I, indeed, inadvertently knocked my partner over the head with the boom of my family’s sailboat in spring 2015. In the following, I will first consider a problem regarding truth-makers for past tense assertions about powers, and then extend this argument to a more general ontological problem.

Consider the past tense assertion ‘My tacking caused the boom to hit my partner’s head.’ Or, to use a toy example of a power: ‘The wind’s power to push a boom over when tacking propelled the boom rapidly towards my partner’s head.’ The truth-makers for these claims are the relevant facts in the block of past existences. So what is the problem?

The problem, which will turn out to go beyond the issue of truth-makers, is that there cannot be an exercise of a power in the past block. The past block is static, as is the eternalist block. If the exercise of a power is inherently productive, if it brings new facts into existence at the brink of the block, as Friebe (2018, 88) argues, then there cannot be an exercise of a power in a block of temporally ordered past facts. So our toy example of a past tense assertion ‘The wind’s power to push the

\[16\text{No people where harmed in the production of this article. Not seriously.}\]

\[17\text{Although Stephen Mumford, for example, argues that there are such macro-powers when he discusses the powers that people exercise when they are acting (Mumford 2013, 21–22).}\]
boom over when tacking propelled the boom rapidly towards my partner’s head’ cannot be made true by a past fact, located in the past block, where the wind exercises its power to push the boom makes it hit my partner’s head, because these past facts are already in place in the past block. A past \( a \) cannot exercise its power to \( b \) anymore, if \( b \) has already been produced by \( a \)’s exercise of a power when \( a \) was present. And if causation is nothing but the exercise of a power, as a lot of proponents of a powers view argue for,\(^{18}\) then facts in the past block cannot be causally related either. Hence, my past tense assertion: ‘My tacking the sailboat caused the boom to hit my partner’s head’ cannot be made true by a causal relation in the past block.\(^{19}\)

Anna Marmodoro holds that powers can be characterised as a ‘readiness for action’ (Marmodoro 2010, 29). Powers need not necessarily be expressed in order to exist, but they equip their bearer with the potential to act. The quasi-agential language here is no accident: George Molnar used the term ‘physical intentionality’ to describe the fact that powers are directed towards a certain manifestation (Molnar 2005, 63–65). A readiness to action, or a directedness towards a manifestation, does not require that the action will ever be performed. But in the past block, no action in the productive sense the powers metaphysicians invoke can ever be performed. So there cannot be a readiness for action in the past block. The unexercised powers at any past instant in the block cannot ever express themselves in such a productive manner. If there is no readiness for action in the past block, there cannot be any powers in the past block, given a productive, active reading of what a power is.

This demonstrates that the problem goes beyond the issue of truthmakers. Objects bear properties, and if the powers metaphysicians are correct, then at least some of the properties, if not all, are powers. But the past block has to be powerless for the reasons discussed above. So the powers metaphysicians have to explain to us which properties the objects in the past block bear. It is important to note at this point that at least in the classical GBT, the past facts are in no way different from the present facts, apart from them not being present anymore, as C.D. Broad insists:

Nothing has happened to the present by becoming past except that fresh slices of existence have been added to the total history of the world. The past is thus as

\(^{18}\)For a powers account of causation, see, e.g. Mumford and Anjum (2010, 2011).

\(^{19}\)Here you can see why, as mentioned above, it is irrelevant whether the occupants of times are facts, events, or per- or enduring objects. What matters at this stage here is solely productivity and ontological dependence. The examples given above are easily translatable into a language that satisfies the Priorian.
real as the present. On the other hand, the essence of a present event is, not that it precedes future events, but that there is quite literally nothing to which it has the relation of precedence. (1923, 66)

So according to the GBT, the past facts are completely unchanged, they are just not present anymore. So whatever occupies the past block, it must be completely identical to what is present, apart from it not being present anymore. But for the reasons discussed above, the properties instantiated in the past must be the same as the present ones. Yet they cannot be powers, because they must be inert, and powers are inherently active. This problem is especially pressing if we ignore our oversimplified talk of facts as occupants of times for a while and remember that the powers view seems to go best with a Priorian ontology where objects and their properties are the occupants of times, not facts. If we accept that, we can see the problem more clearly: some of the past objects’ properties have to be powers; powers are inherently active; there is no activity in the past for the reasons we discussed here; hence past properties cannot be powers.

This is a severe problem: dependent on your view of powers, all of the causally efficacious properties are powers. There is a dispute on whether all properties are powers or if there can be some non-powers.\(^\text{20}\) If the former is true, and if our argument above is correct, then past objects can have no properties at all. But even if there are at least some non-powers among the properties, then we still have the problem that the objects lose a lot of their properties in the past block.

Let us briefly look at a possible solution. One possible reaction would be to claim that past existences in the past block stand in other relations to one another than causing or the possibility to manifest powers to do something. They possibly exercise their powers in the present, and after that, they stand in some other, ersatzist relation to one another, like ‘b stands to a in a relation of having been produced when a was and b became present’. There are two problems with this move. Firstly, again, if that were the case, then the things would have different properties in the past and in the present; and the former would not be powers, because they are not inherently active. This is incompatible with powers monism. Secondly, our everyday talk of ‘a caused b yesterday’ or ‘a exercised its power to b yesterday’ would be problematic, because there are no direct truth-makers for this in the past, but some ersatz properties or relations. But taking an ersatzist stance does not pay respect to the

\(^{20}\)For an overview, see Bird (2013).
spirit of the GBT. Against presentism, the GBT has the advantage that we do not need ersatzist truth-makers for past tense assertions. Such an ersatzist truth-maker for ‘a exercised its power to b at t’ could be that there once was, but isn’t anymore, a time t where a was present and exercised its power to b. Such a truth-maker is arguably available in presentism.

So why propose the GBT? The GBT has the advantage to offer robust truth-makers for past tense assertions. Going ersatzist completely defeats the purpose of introducing the GBT in the first place.

If the above considerations are correct, the powers view is incompatible with the GBT, since the properties in the past block cannot be powers, if powers are meant to be inherently productive and dynamic, which the properties that are instantiated in the past cannot be. Especially for Monists, this problem is pressing: if all properties are powers, and there cannot be powers in the past block, what happens to the object’s properties once the present has moved on? But whatever your view on monism is, the problem of truth-makers for past tense assertions referring to powers and causation also remains. I will pose it as a challenge to the powers metaphysicians to make sense of powers in the GBT.

**Presentism to the rescue?**

At this stage, a perfectly natural response for a proponent of the powers view would be to simply abandon the GBT. The view is problematic anyway, so why try to fix it? And even if powers are incompatible with eternalism and the GBT, there is still presentism to turn to.

In this section, I will offer a number of arguments to the effect that a powers ontology and presentism are not as easily reconcilable as one might imagine. Firstly, we will revisit an old argument of David Armstrong’s against dispositions that claims that they have a Meinongian character and argue that this issue is even more pressing in presentism. This issue does not render powers incompatible with presentism, but serves to highlight the ontological cost that the view comes with. Secondly, we will turn to a more decisive problem: ironically, it is the dynamism the powers proponents claim sets this view apart from what they would call ‘passivist’ accounts that is not straightforwardly compatible with presentism. The issue at the heart of this problem is that if activity is supposed to be something over and above a succession of states, then it presupposes temporal extension, which presentism cannot provide.

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21For a thorough critique of the GBT, see, e.g. Braddon-Mitchell (2004, 2013).
Let us start with taking a look at David Armstrong’s argument against dispositionalism, as this will turn out to be a nice segue to the more pressing question of whether activity and dynamism of the sort the powers metaphysicians propose is compatible with presentism. David Armstrong, in his defence of categorical properties, argued that dispositions (not necessarily understood as powers in the narrow sense we established here, but his arguments apply just the same) have a metaphysically extravagant feature. Armstrong discusses the case of dispositions that for some reason are not manifested. In these cases, a disposition has, as part of its character, a reference to a non-existent manifestation. This is the feature of the dispositionalists’ view that Armstrong calls Meinongian, since there is a reference to non-existent states of affairs:

But more to the point, how can a state of affairs of a particular’s having a property enfold within itself a relation (of any sort) to a further first-order state of affairs, the manifestation, which very often does not exist? We have here a Meinongian metaphysics, in which actual things are in some way related to non-existent things. (Armstrong 1997, 79)

Like Meinongianism itself, this feature of dispositionalism is supposed to be metaphysically overindulgent.

In an eternalist picture, Armstrong’s objection would lose force for any dispositions that are manifested at some point in time, since there is a fact in the future block where the disposition is manifested, to which the unmanifested disposition that exists earlier can be related. So there, dispositions that will at some time be manifested point towards a future fact that does exist simpliciter. But Armstrong’s objection has much more force in presentism. Here, all dispositions that are not being exercised right at the present are quasi-intentionally directed at a possible manifestation. But this manifestation lies in the unreal future. In presentism, all dispositions that are not being manifested right at whatever time the present is ‘are in some way related to non-existent things’. The crucial question is how this relation to a non-existing thing is to be analysed, especially what sort of relatum the non-existing thing a power is directed at is supposed to be. If this means that, parallel to Meinongianism, non-existing (future) things are in some way real, that they exist in some ontologically robust way, then the powers view is flat out incompatible with any temporal ontology like the GBT or presentism in which the future is unreal. Alternatively, one could analyse the non-existing manifestation of a power, which the power stands in a relation to, in some ersatz way without positing its existence in any ontologically robust way.
To be perfectly honest, it is not entirely clear how devastating this objection is. Armstrong raised it in a way that was more supposed to demonstrate the metaphysical cost that a dispositionalist view comes with, rather than as a knockdown argument. The same is true for the amplified form of the argument that concerns powers and presentism. However, not only are proponents of a powers view tied to presentism as the only possible temporal ontology, they are also tied to the commitment that powers, as part of their character, bear a reference to a non-existent state of affairs. But, however, devastating this objection is, it serves as a segue to a much more pressing problem, which we will now turn to: can we actually make sense of the dynamic aspect of the powers view, of activity, in presentism? As it will turn out, it is not easy at all to spell out activity without a reference to past and present times, which according to presentism aren’t real.

Before we delve into the heart of the issue, a brief note on basic ontology is in order again. So far, we have largely ignored that there are differing views of what exactly the occupants of times are. So far we have stuck to facts as the occupants of times and avoided mention of events, since a lot of the powers metaphysicians’ programme rests on rejecting the view that all there is, is a succession of temporally ordered events, ‘just one little thing after another’. For the powers metaphysicians, a Priorian view seems to be the most natural alternative. In this view, the basic units of reality are objects that have a certain set of properties, rather than events. Whatever counts as change in this world is the change of the properties of the existing objects. Applied to presentism, this would entail that all there exists is the collection of objects that are present, having the properties that they instantiate at the present. Combined with the powers view, this would amount to the following picture: all there exists are the present objects and their powers. Change happens when powers are exercised, bringing about a change in what objects there are, or what properties/powers the existing objects instantiate. All activity in such a world is just the inherently active objects such as electrons, ducks, queens and ships, exercising their powers to fly about molecules, quack, wave, and sail. So far, the arguments presented towards the incompatibility of powers and eternalism and the GBT were independent of the question what the basic ontology is. As it will turn out, the same is true for the argument presented in this

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22And even Armstrong’s own view might suffer from the same problem. For an argument to that effect, see Handfield (2005).

23For a defence of such an account, see Prior (1962). I will ignore the question of whether presentism requires per- or endurantism, since it will make no difference for the following argument.
section. But for the sake of clarity, I will in the following forego talk of facts or events as occupiers of times in order to highlight that the following arguments do not hinge on a basic ontology the powers metaphysicians are likely to reject.

In the following, I will argue that the compatibility of presentism with the powers view depends on the way that activity or change is analysed. Two options are open here: either change or activity is reduced to a succession of states of objects with differing properties at different times. To use Thomas Crowther’s example: that I am waltzing, in this view, is nothing over and above me being in different states at different times: My left foot is in a certain position at $t_1$, and in a different position at a later time $t_2$ and so forth. This analysis of me waltzing is problematic for two reasons: firstly, it is problematic in conjunction with presentism, since this analysis of activity uses reference to past and future times which are not real, according to presentism. If the process of me waltzing now is a collection of past, present and future states that I am in, we cannot analyse waltzing in presentism without referring to unreal times.24 This way of analysing activity does not go too well with a powers view either: to say that activity is analysable in terms of a succession of states an object is in is passive: it reduces dynamism and activity to an intrinsically static succession of ‘one little thing and then another’. Above, we have reconstructed the powers view to favour some sort of process ontology in which a process is something over and above a sequence. This is in line with Ellis’s above-mentioned notion that the exercise of powers unfolds causal processes that have no logically independent causal relata (Ellis 2002, 143).

To pay respect to both presentism and the powers view, it seems we should not analyse activity as something irreducible to a succession of states but rather as something intrinsic to the objects at a certain time.25 But this alternative is unavailable. In a paper about the significance of the present in Zeno’s paradox of the arrow, Robin Le Poidevin discusses this very option. Le Poidevin discusses the Arrow as a problem that is especially pressing for presentism, and this is due to the way we analyse activity or change. If activity, or movement, is something over and above a succession of (static) states at different times, then it presupposes temporal duration. Movement, or activity, cannot be understood as taking

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24 For an argument that temporal extended activities cannot happen at point-sized instants, see Crowther (2011, 5).

25 For an account of the dynamical aspect of a powers view in which activity is analysed as directedness to the future from a temporally flat moment, see Rumberg (2016). I believe Rumberg’s view, while being much more precise and carefully developed than the prominent powers views, suffers from the same problem as any such account, which is why I will not discuss it any further.
place at an unextended temporal instant. Movement is something that happens over time, and this is unanalysable in presentism, as this would either require reference to unreal times other than the very present, or it presupposes that the present is temporally extended, which is unintelligible (Le Poidevin 2002). In Crowther’s words:

[If there is \( \varphi \)ing at \( t \), then there is a period of time within which \( t \) falls throughout which there \( \varphi \)ing. […] If there is something processively unfolding at \( t \), then there must be a period of time over which that thing is unfolding. (Crowther 2011, 33)

But this seems to be inconsistent with the whole spirit of presentism, in which only the present is real. A dilemma opens up: either activity is analysable only by reference to states of objects at a number of successive times, which are unreal with the exception of the present. Or activity is to be analysed as intrinsic to the objects at present: I am in the state of waltzing at the present. But since activity implies a temporal interval in which the activity or change takes place, this implies that the present would have to be temporally extended, which is nonsensical.26 Let us try to put these worries in the form of an argument, heavily modified27 from Le Poidevin (2002, 70) in order to fit our purposes:

(1) Activity is either reducible to an object’s states at different times or intrinsic to the object having certain properties at a certain single time. (Premise)
(2) Activity is something over and above the state of objects at successive times. (Premise)
(3) Activity is something intrinsic to the existing objects at the present. (From 1 & 2)
(4) Activity unfolds over a temporal interval. (Premise)
(5) Temporal intervals have parts that are earlier/later-related. (Premise)
(6) Only the present is real. (Premise, Presentism)
(7) The present does not have temporal parts that are earlier/later-related. (Premise)28

– There is no activity. (From 3–7)

26Although Hestevold (2008) proposes a version of presentism with a temporally extended present. I will not discuss this view at length here because I fear it is incoherent. I will deal with the notion of an extended present in a future paper.
27Mirroring Bob Dylan: ‘Nothing has been changed, except the words’.
28Tallant (2010) discusses a number of ways in which the presentist present would have to have duration. He ultimately uses this to construct an argument against presentism.
This concludes our argument against the compatibility of the powers view as it stands and a standard reading of presentism. The powers view as discussed here presupposes a notion of activity that is irreducible to a succession of states, which is incompatible with presentism. As far as I can see it, either the powers view and their notion of activity, or presentism would have to be modified in order to save the compatibility of the two. I’d like to pose it as a challenge to the proponents of the powers view to show a way how this might be achieved.

We mentioned in the above section on the GBT that there were two problems with the GBT: one concerning the past and one concerning the present. So in case you were waiting for the argument concerning the present, this was it. Regarding the present, the GBT is identical to presentism, with the sole difference that there is no attrition of past facts. So if we want to make sense of the dynamic aspect of powers for the present in the GBT, since it was not possible to do so for the past, we run into the exact same problem we discussed in this paragraph. In the GBT, all there is are the past and present facts. Even if we accept that powers make no sense for the past facts, although that would go against Broad’s view that past and present facts are exactly identical except for their temporal status, we still have to make sense of activity for the present facts. And here we run into the exact same problem just as for presentism. So even if you didn’t find the arguments against the combination of the GBT and the powers view I discussed in the last section compelling, the argument presented in this section applies to the GBT as well. It looks as if there really is no time for powers.

**Conclusion**

To wrap up the discussion above, we have seen that powers are at least not straightforwardly compatible with eternalism, the GBT and presentism. The powers view is tied for better or for worse to the notion of dynamism. Ironically, it is this dynamism that makes it incompatible not only with the static views of time but also with the dynamic ones. It renders the view incompatible with the inherently static eternalism and the MST, but also with the GBT with its static past. In presentism, we cannot make sense of irreducible activity without the notion of a temporally extended present, which goes against the core idea of presentism.

As mentioned in the introduction, there are a myriad of varieties of the discussed temporal ontologies and a heap of powers accounts. It would be presumptuous to claim that I have definitively shown that there is no
possible modification to either the powers view or the temporal ontolo-
gies that could make them compatible. But I will leave it to the powers
metaphysician to answer to the challenges I presented here. A staunch
supporter of the powers view who finds themself in the uncomfortable
position to be somewhat convinced by these arguments might also just
take them not as an argument against the powers view, but against the
temporal ontologies as I presented them here. To them, I would like to
extend the challenge to present a temporal ontology that is compatible
with the powers view, and add that Humeanism and static eternalism go
together just fine. That static eternalism is the only straightforwardly phys-
ically possible temporal ontology with its denial of an objective present is
another hint you might want to take here. But that is for another paper.
So for the time being, there really remains no time for powers.

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