

Free Will in the Block Universe

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Received: 1 March 2007 / Revised version received: 1 May 2007 / Accepted: 7 May 2007 /

Published online: 19 June 2007

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Abstract Carl Hoefer has argued that determinism in block universes does not privilege any particular time slice as the fundamental determiner of other time slices. He concludes from this that our actions are free, insofar as they are pieces of time slices we may legitimately regard as fundamental determiners. However, I argue that Hoefer does not adequately deal with certain remaining problems. For one, there remain pervasive asymmetries in causation and the macroscopic efficacy of our actions. I suggest that what Hoefer may have shown us is that causation, not determinism, was the threat to free will all along. Additionally, Hoefer might avoid the problem of the asymmetry of macroscopic efficacy by noting we have a very small region of space-time completely determined by our choices. However, this move implies our freedom to act is freedom to do very little, given that the region is trivial. I suggest that Hoefer should instead claim that we do have pervasive macroscopic efficacy toward the past, though I am unsure of how well this thesis works. Regardless, there remains a problem that the inside-out perspective requires us to see our choices as brute facts or random occurrences. Attempts to resolve this problem seem to require either a theory of agent causation or a traditional compatibilist argument, making Hoefer's thesis extraneous, unless he can show us that these require the inside-out perspective. However, Hoefer has not yet shown us this, so there is work to be done.

Keywords Free will · B-series time · A-series time · Block universe · General relativity · Compatibilism · Causation · Humean compatibilism · Inside-out perspective

Introduction

Carl Hoefer, in his “Freedom from the Inside Out”, offers an unusual and inspired perspective on the problem of free will.¹ Determinism has often been viewed as the

¹Hoefer, C. (2002). Freedom from the Inside Out. In C. Callender (Ed.), *Time, Reality, & Experience* (pp. 201–202) ed. Craig Callender (New York: Cambridge University Press).

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principle threat to freedom. In response, many have argued for compatibilism, i.e., the thesis that we have free will is compatible with determinism. Some compatibilists have even argued that free will, properly understood, requires determinism.² Hoefer's novel suggestion is that the focus on determinism as a potential menace to freedom is misguided. The case for free will, he contends, depends not so much on determinism/indeterminism, but the nature of time. It seems we experience time as a *nunc fluens*, a flowing now, in which the present is ontologically privileged and a creation of the past, while the future is not yet real. If time really were of this character, we would not have free will. However, physics is likely incompatible with this view of time. Instead, we inhabit a block universe, a 4-dimensional space-time manifold in which no particular moment in time is any more real than another. Hoefer argues that on this model of time, we can regard ourselves as free. The supposed conflict between freedom and determinism was a mistake; the conflict all along was between freedom and A-series time.

Though Hoefer's solution to the problem is ingenious, in this paper, I argue that it fails. Below I offer a brief overview of his proposal and the metaphysics of time that it involves. I then levy a series of objections to it. Some of these objections can be partially answered by modifications of his theory. However, ultimately, the theory has serious shortcomings. It may not even be relevant to the free will debate.

Hoefer's Theory of Freedom

Hoefer begins his argument by invoking McTaggart's distinction between A and B-series time. A-series time corresponds to the intuitive, commonsense view of temporal progression. On the most common description of the A-series, only the present is fully real. The past *used to exist*, but has passed out of existence, and the future has yet to be. Time flows, such that time used to be in the past, is now in the present, and will then be in the future. Alternatively, we can describe this by saying that the future becomes the present and then the past.

The B-series, however, does not flow. We can describe the B-series as a line, a one-dimensional ordering of points of time. Each point, e.g., 1000 BC, 2004 AD, 35000 AD, is as real and determinate as any other. On the B-series, the difference between any two instants in time is not one of ontological status, as in the A-series, but of geometric location.

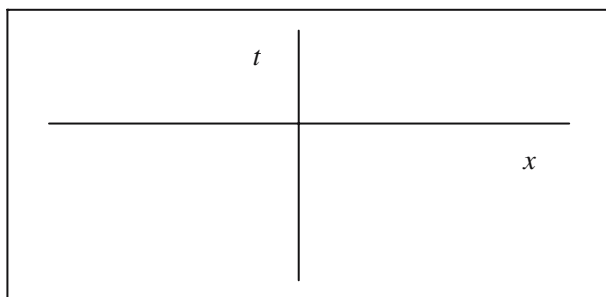
The B-series naturally lends itself to a block universe view. On the block universe model, we can represent the world, including all of history, on a four-dimensional manifold.

In figure one, line *t* represents the world-line of an unaccelerated object. Line *x* is one spatial dimension. The reader can imagine another spatial dimension coming out at her from the intersection of *t* and *s*, while the third spatial dimension is suppressed for the purposes of representation. Lines *t* and *x* also represent a temporal ordering of this world. Every event occurring on *x* is simultaneous with the event that occurs at the intersection of *x* and *t*. Moreover, if we were to draw another line parallel to *x*, every event on this new line would be simultaneous with respect to the intersection of *t* and that new line.³ If we imagine the intersection of *t* and *x* as the event of the reader's reading this paper right now, we

²The classic statement of this is, of course, Hobart, R. (1934). Free Will as Involving Determinism and Inconceivable without It. *Mind* 43, 1–27.

³I have described the block universe this way so as to make it compatible with relativistic physics.

Fig. 1 Diagram of the relationship between multiple events



would describe every event on t above this intersection as the reader's absolute future, and every event on t below this intersection as the reader's absolute past.⁴ Figure 1, then, is just a diagram showing the relationship between multiple events. It is a simplified map of all of the events in our universe. Just as we can have 2-dimensional maps of a city's surface or three-dimensional maps (globes) of Earth, we can have four-dimensional maps of the entire universe, including its history.

In the current diagram, the B-series appears on line t . Given relativistic physics, this B-series is relative only to the object whose world-line is the t axis and any objects in the same inertial frame. Thus, we have more than one B-series. Indeed, this is one reason why physics appears incompatible with the reality of the A-series.⁵ In relativistic physics, no event is simultaneous with all other events according to all inertial frames. It is possible for two events to be simultaneous in one inertial frame, but temporally distinct in another. Imagine that you walk by me while I am sitting in a chair, and you give me a high five as you pass. From your inertial frame, there is some event e (very far away in space) that is simultaneous to the high five, but e is in the future of the high five relative to my inertial frame. From the A-series perspective, in which only the present is real, we would have to say that e exists and is real relative to you but is unreal relative to me. Such existential relativism is odd, at the very least.

A better alternative is to think of the universe as a large block of events. The events we would like to call future, past, and present all exist "timelessly" in the block universe, with certain geometric relationships between them. There is no difference in ontological status. No event is any more or less real than another. Simultaneity, rather than existence, is relative to a frame of motion.

Determinism is a thesis about the relationship between sets of events in the universe and universal, exceptionless laws of nature. By "state of the universe at a time", I mean the set of all simultaneous events at that time (This will be relative to frames of motion). Determinism is usually put forth as the thesis that the state of the universe at a given time, S_0 , together with the laws of nature, L_n , logically imply the subsequent state of the universe, S_1 . Normally this is presented as a thesis about the necessitation of current events by past events and the laws, or the necessitation of future events by current events, etc. However,

⁴Strictly speaking, this is not correct. In the Minkowski space-time of special relativity, this would be true. However, we can describe general relativistic universes where this description of the block universe would be incorrect. This model works well enough for most places in our own universe, which are normally locally Minkovskian.

⁵See also Saunders, S. (2002). How Relativity Contradicts Presentism. In C. Callender (Ed.), *Time, Reality, & Experience* (pp. 277–292) ed. Craig Callender (New York: Cambridge University Press).

Hoefer rightly points out that this implication need not be one way. It need not even be between successive events. Any state of the universe at a time implies any other state of the universe at a different time, regardless of the ordering of those times (There are some complications to this because of relativity, but we can ignore them here). Thus, determinism can be formally written as follows:

Universal Determinism:

1. For any state of the universe at some time, S_p ,
2. and any other state of the universe at some other time, S_q ,
3. and the laws of nature, L_n ,
4. $L_n \supset (S_p \equiv S_q)$

This holds regardless of which state is earlier.⁶

It should be noted that in order for this to be a proper description of determinism, there must be some restriction on what counts as a law of nature; otherwise determinism would include indeterminism. For instance, imagine a world we would want to characterize as random, lawless, and indeterministic. There will still be a trivial generalization of the form $(\forall S_p)(\forall S_q) (L_n \supset (S_p \equiv S_q))$, provided L_n consists of a conjunction of a biconditional between every pair of states of the universe. I.e., suppose L_n is equivalent to $[(S_a \equiv S_b) \cdot (S_b \equiv S_c) \cdot \dots]$, then even this stereotypically indeterministic universe would be considered deterministic on the description of determinism just given. To avoid this problem, we simply impose a restriction on what can be considered a proper law of nature, e.g., by requiring it appear “as a theorem...in each of the true deductive systems that achieves a best combination of simplicity and strength”.⁷

Hoefer claims that we find room for freedom when we understand the full implications of determinism, given that we exist in a block universe and not A-series time. The basic hard determinist argument against free will is that since the past and the laws necessitate the present state of affairs, including any acts of choice, it is impossible for things, including choices, to have gone otherwise, and thus no genuine choice is possible. The past and deterministic laws push us around. Against this, Hoefer points out that this argument implicitly assumes that the past gets priority. We imagine that the past was *real* first, and thus it determines the present state of affairs. The past is fundamental in determining the present. Hoefer claims this is mistaken.

Rather, with as much propriety, we may regard the present as determining the future and the past. After all, the relationship described in 4 above holds between any time slices of the universe, and thus, given the laws, the present implies the future and also the past. We are free to take the present as fundamental in the relationship of determination as much as we are free to take any other time slice as fundamental. In fact, no time slice, no state of the universe at a time, is fundamental.

Hoefer believes this captures one platitude about free will. We are, he says, permitted to consider our actions “*not* as determined by the past...but rather as simply determined... *by ourselves, by our own wills.*”⁸ Just as we are permitted to consider the current time slice,

⁶Hoefer considers types of determinism in which the implication is only from the past forward. He thinks this sort of determinism is not well motivated. I largely agree, since it seems to be based on A-series time or a confusion of determinism with causation. Additionally, most laws of physics are time reversal invariant, thus justifying the two-way description of determinism. Hoefer concludes that one-way determinism is actually more helpful for his thesis that two-way determinism. (See Hoefer 2002, pp. 208–209.)

⁷Lewis, D. (1973). *Counterfactuals* (Cambridge, MA: Harvard University Press), p. 73.

⁸Hoefer 2002, p. 207.

i.e., the time slice designated by the reader's reading of the indexical "now", as the fundamental determiner of the rest of the universe, we can consider our choices now as fundamental. The event of my making a choice, such as to write this sentence, is just a small segment of the time slice occurring in the middle of the block universe. This, Hoefer says, is freedom from the inside out.

By way of analogy, let us compare this to the idea of a canon in classical music. Palle Yourgrau, in discussing the block universe, compares it to a musical score. Music is experienced as flowing in the same way as time. However, it is possible to write a musical score representing the relationship between all of the notes in the music. This "geometricizing" of music corresponds to the geometricizing of time into space-time in the block universe model.⁹ A canon, in classical music, is a composition in which a chord progression is repeated against itself. Some canons are designed by repeating a mathematical relationship between different measures or even entire themes. Bach's "Canon per Tonos", e.g., is written such that every time it is repeated, it changes keys by one note. After six such modulations, it returns to its original key.¹⁰ We might consider, by way of analogy, the rule bringing about such modulation as a "law of nature" with the first repetition (when the work is in C minor) as an "initial state of the universe". The state (key) of the second repetition and each succeeding repetition is determined logically by the modulation rule and the score's initial state. However, since the modulation rule is time-reversal invariant, we are just as free to consider the fourth or fifth repetition as fundamental. It determines the nature of the other repetitions just as much as it is determined by them.

This is an interesting proposal, and perhaps a compelling perspective on the nature of determinism. However, the important question is whether it makes any headway into solving the problem of free will. In the remaining sections, I discuss how the thesis is unsatisfactory.

Asymmetry in Macroscopic Efficacy

One important point to note is that my act of choice is only a small part of any given time slice which I might regard as determining the universe from the inside out. The time slice in which I make a choice, not the choice by itself, together with the laws, logically implies all past and future time slices. However, it seems, at least from our intuitive A-series perspective, that I have strong causal efficacy toward the future but not toward the past. Given that Hoefer's proposal for free will relies upon noting the symmetry in the deterministic relationship between time slices, we would expect that he would explain our freedom in terms of causal symmetry as well. However, Hoefer does not do this, instead claiming that we have little to no causal efficacy toward the past. In this section, I argue that this is problematic for the motivation of his project. First, I argue that his explanation of the lack of causal efficacy toward the past seems to imply a lack of causal efficacy toward the future. In such a case, Hoefer's freedom from the inside out is not freedom to do very much, and does not seem relevant to the issue of free will. Hoefer can avoid this problem by admitting that we have causal efficacy toward the past, thus eliminating the asymmetry.

⁹Yourgrau, P. (1999). *Gödel Meets Einstein* (Chicago: Open Court), pp. 26–28.

¹⁰This is quite famously discussed in Hofstadter, D. (1979) *Gödel, Escher, Bach* (New York: Vintage Books), p. 10.

Alternatively, as he often hints at doing, he could claim that *causation* is a separate notion and problem distinct from determinism (Many philosophers maintain that the issues of universal causation and determinism are separate).¹¹ However, if he takes this line, one could say that all Hoefer has shown us is that causation, rather than determinism, was the real threat to free will all along. If so, Hoefer's solution to the problem is illusory.

The central problem is this. Hoefer has shown us, if he is successful, that the current time slice plus the laws logically determines the past. The big bang is implied by the current state of the universe in conjunction with the laws. (This is probably false, but let us grant it for illustrative purposes.) However, this does not seem to track causation. As of right now, I have the ability to bring about (with very high chances of success) certain macroscopic effects in the future. I can set an alarm clock to ring at 6:00 A.M. tomorrow morning and it will ring at that time. I have no such ability to set an alarm to ring in the past from my current temporal position. (If all of this sounds too A-series-ish, we could say that the time slice of me writing this sentence has no ability to cause effects in that time slice's past, at least not without time travel).

Hoefer acknowledges this asymmetry. He attempts to alleviate worries regarding it by invoking other physical asymmetries: thermodynamic, radiative, etc.¹² These are thought by most to be real asymmetries, not mistakes in our thinking left over from A-series metaphysics. Quite surprisingly, Hoefer suggests that our causal inefficacy toward the past is the result of these asymmetries and our A-series perspective on the world. He admits he finds this issues "puzzling", but contends they are not relevant for the current issue. He says,

What matters is that our free actions, while they may have logical *consequences* about the past because of determinism (of a highly disjunctive nature, and for a trivial amount of time), do not have to be thought of as causally *bringing about* large-scale features of the past, or as explaining them.¹³

When Hoefer says that our actions have logical consequences for a trivial amount of time toward the past, he means that my free choice, as a physically instantiated event occurring in my brain, has a small amount of time both in the future and the past whose happenings are fully determined by that event. For a 10-m event in a representation where $c=1$,¹⁴ this is an area that shrinks at 45-degree angles from 10 m to a point over 33.3×10^{-9} seconds in either direction.¹⁵ For the event of my making a choice, occurring in my (smaller than 10 m) head, there is an even smaller region of full determination. That such a portion of space-time can be fully determined by one 10-m chunk is due to the restriction on the speed of information-bearing signals in special relativity. No signal can get inside this region in that time.

After such a time, however, signals can arrive and interfere with my actions. Though I choose to go to the refrigerator for water, I could be shot on the way in the interval between

¹¹E.g., Earman, J. (1986). *A Primer on Determinism* (Dordrecht: Reidel); Hoefer, C. (2004). Causal Determinism. *Stanford Encyclopedia of Philosophy*. Retrieved December 12, 2005, from <http://plato.stanford.edu/archives/spr2004/entries/determinism-causal/>.

¹²Hoefer 2002, p. 212. See Penrose, R. (1990). *The Emperor's New Mind* (New York: Oxford University Press), chapter 7.

¹³Hoefer 2002, p. 213.

¹⁴Here I use "event" not to mean an idealized point of space-time but rather an instantaneous three-dimensional occurrence in space-time.

¹⁵Hoefer 2002, p. 211.

choosing and arriving at the refrigerator. My success in causing macroscopic effects requires cooperation from the universe, namely that no pre-emption or interference occurs.

However, all of this is in some sense true of the past as well as the future. If we consider the signals in question as simple products of the time reversal invariant physical laws and a given time slice, there is a sense in which the signals go toward both the future and past. Hoefer, remember, is relying on such a view about logical necessitation. As such, if Hoefer says that we have little efficacy in the past, because a free choice indefeasibly determines a small space-time area in the past, it seems he should say that we have little efficacy in the future, because a free choice indefeasibly determines a small space-time area in the future.

Yet, this move buys us freedom at a very steep price. We purchase a small square of space-time fully determined by the physical event of making a choice. Nevertheless, this is not a freedom worth having. It does not address the problem of free will. A basic platitude is that our choices have significant, predictable efficacy toward the future. Hoefer, of course, acknowledges this, which is why he resists positing the sort of symmetric inefficacy I have just discussed. The problem, though, is that Hoefer has not given us good reasons to reject this sort of symmetry, given his basic premises.

Hoefer's response, of course, would be to say that I have been thinking of efficacy in terms of what I can determine with a free choice. It turns out that our free choices determine (have logical consequences for) a trivial amount of time in both the future and the past. However, efficacy is a *causal* notion, not captured by determination. Thus, while there is symmetry in determination of both past and present by my choices, there is asymmetry in *causation*.

This is what Hoefer would have to say and what he in fact says, but I find it to be particularly dangerous for his thesis. The basic motivation of this project was that the problem of free will is not an issue of determinism per se, but rather determinism in A-series time. Once we adopt a block universe perspective and B-series time, we see that determinism is not a problem. The problem, however, is that this demotivates his solution. In essence, Hoefer's argument was that the threat to free will comes from an asymmetry in time and determination, but this asymmetry is unreal. Yet when we see what symmetry we have, it does not seem to have anything to do with the issue of free will. When this point is pressed, Hoefer returns to a remaining asymmetry, that of *causation*, which remains past → future.

As such, Hoefer has not shown us we have freedom from the inside out. For the basic, cartoon argument against free will is this:

1. All of my choices are caused by events in the past.
2. If all of my choices are caused by events, I do not have free will.
3. Therefore, I do not have free will.

Determinism was offered forth as a philosophical rigorization of premise 1. Philosophers have thought that what premise 1 amounts to is the thesis that previous states of the universe plus the laws of nature logically necessitate current and future states. However, since Hoefer has a remaining causal asymmetry despite showing the existence of *determination* from the inside out, it appears that offering forth determinism as a replacement of premise 1 has left something out.¹⁶

Hoefer has a dilemma, then, given that he accepts the causal asymmetry. Either the remaining causal asymmetry is a threat to my free will or not. If the asymmetry is a threat,

¹⁶There are numerous reasons to think this is the case. For one, the attempt of some logical positivists to analyze causation as a material conditional between two events notoriously failed. Secondly, as Hoefer himself has said, we have good reason to think that every event has a cause even if determinism is false.

Hoefer's argument for determinism from the inside out is irrelevant to the free will debate, because causation, not determinism is the problem. If the remaining causal asymmetry is not a threat to my free will, Hoefer needs to say why. After all, Hoefer still only accepts past \rightarrow future causation, and that *prima facie* is problematic for freedom. Philosophers have produced arguments that past \rightarrow future only causation is not a problem for free will (apart from the issue of determinism), but if Hoefer makes a similar argument, his "Freedom from the Inside Out" becomes irrelevant to the problem, since it does not address this issue. If Hoefer instead rejects such arguments, given that determinism and causation are different notions, we still need to know what role our powers of determination (which are symmetric) have to do with eliminating the potential threat to freedom from past \rightarrow future causation. So far, all Hoefer has offered us is the symmetry of determination over all a small region of space-time. Yet, we have already seen why this is not satisfactory, for it does not capture what we mean by free will. In thinking we have free will, we think we have efficacy in bringing about future events through acts of choice. We do not think about microscopic squares of space-time determined symmetrically by acts of choice.

I would like to sketch an alternative for Hoefer, though I am unsure it is sound. Hoefer, I believe, has an insight in recognizing the heretofore unnoticed symmetry in determinism, the symmetry expressed in part 4 of the definition of universal determinism above. One thing Hoefer might do is claim that the efficacy we have in mind vis-à-vis free will is actually symmetric. He could say that we have macroscopic efficacy toward the past as well as the future, and it is our insistence on thinking in A-series terms that has prevented us from noticing this. When I make a choice to Φ at time t , normally the world cooperates such that Φ -ing predictably occurs in the future. There are possible defeaters to my ability to Φ , but these normally do not appear. Thus, when I choose to type this sentence, I can reasonably expect that the sentence will appear on the page, though I know my computer could freeze or I could suffer a freak heart attack before I finish typing. Hoefer claims that we can consider this act free because it can be thought of as fundamental, determining the character of the universe together with the laws from the inside out. When pressed on this, though, he backs off and says the time slice in which the choice takes place determines the universe from the inside out.

Perhaps, though, he should say that given that I choose to Φ at t , this sets macroscopic constraints on what the universe must have been like in the past, just as much as it sets constraints on what the universe must have be like in the future. Previous states of the universe must be such that they do not contradict my choosing to Φ at t . Hoefer elects not to proffer such a thesis because he worries that it entails that we can change the past. I think this is mistaken. We do not change the past anymore than we change the future on this account. Rather, all that the thesis of deterministic macroscopic efficacy toward the past entails is that given the fact of our choices at a given time, the world must have been such a way in the past to allow (and more over imply) our making these choices. For instance, since I choose to write this sentence now, this has "predictable" macroscopic consequences about the past, namely that I had to sit down at my computer with the intention of writing about Hoefer's conception of free will. Similarly, the choice has the forward-looking consequence that the sentence will appear on the screen, at least if there are no defeaters. An important caveat is that we should think of such macroscopic efficacy as deterministic, rather than causal, given that we have reason to think these notions come apart and causation is a past \rightarrow future phenomenon (At least, it is in our world).

I am unsure of the tenability of this suggestion. I need not explore it in much depth here. Given that Hoefer's conception of free will is problematic for the reasons I gave above, this might be one way of escaping some of the posed dilemmas.

The Brute Fact Problem

There is, however, another problem with Hoefer's approach, even if the above criticisms are mistaken or can be addressed in some other way. Hoefer suggests that we should take our choices at any given time as basic and then describe the determination of the universe outward from the time slice in which the choice takes place. However, a platitude about freely willed actions is that the chooser causes the action. There is a remaining question about why the chooser makes that choice. Hoefer wants his theory to explain how we can cause our actions "*ourselves, by our own wills.*"¹⁷ Yet, it seems that he has simply shown that we are permitted to consider any particular time slice of the universe (including an act of choice inside that time slice) as a brute fact, which together with the laws of nature determines the rest of the universe.

This does not add up to a defense of free will. As Kant has argued (and Hoefer repeats), indeterminism would not grant us free will. In certain indeterministic universes, nothing in the past could be considered a sufficient cause of my current actions. They are just things that happen. One could equally well consider them random events or brute facts about that world. They are random in that they are not caused, and brute in that they are not explained by features of that world.¹⁸ (In nearby possible worlds, my actions are different though everything else is the same.) Our actions have to be regarded as caused in some way; otherwise they are not free. Hoefer's suggestion that we view our actions as uncaused causers does not address this problem; it inherits the problems of indeterminism. If our actions and choices are just brute facts or random occurrences from the inside-out perspective, they do not seem to be free in that perspective. Of course, we know, given determinism, that our actions are *not* random occurrences or brute facts. They are, after all, *also* determined from the *outside-in*. Yet, it then becomes unclear what role the inside-out perspective is supposed to play. The perspective invites us to see our actions as uncaused, which makes them seem unfree. When we notice that they are caused, we have left the inside-out perspective.

Hoefer might respond to my criticism that the inside-out perspective requires us to see our actions as uncaused and thereby unfree by saying that our actions are caused—they are caused by *us*, as agents, rather than by previous events. I do not have any deep problem with this response, since I have some attraction to agent causation insofar as I understand what it is. Still, this is not a good theoretical move for Hoefer to make. If he provides an agent causation theoretic response to my objection, then it is unclear what work the inside-out perspective is doing. It seems, rather, that free will is explained by agent causation, and the writing on the block universe and symmetric determinism was *beside the point*. Alternatively, Hoefer could try to argue that agent causation is the solution to free will, but agent causation only is possible once we understand that we inhabit a block universe and A-series time is unreal. That is an interesting thesis worth investigating, but it is not Hoefer's thesis. Hoefer has not given us any link between B-series time and agent causation, so if this is what Hoefer has in mind, his paper "Freedom from the Inside Out" is incomplete.

If Hoefer is uncomfortable with agent causation, he might respond in another way. For instance, he could say that while the inside-out perspective requires us to take our choices

¹⁷Hoefer, p. 207.

¹⁸See, for instance, Williams, C. (1980). *Free Will and Determinism: A Dialogue* (Indianapolis: Hackett Publishing), pp. 35–38.

as brute facts, we know they are caused by previous events, given the deterministic thesis. If free will requires our actions to be caused, as opposed to random or brute, then free will is compatible with causation from the outside-in perspective. However, this does not help Hoefer either. Again, it seems that the inside-out perspective is not doing any work, because this sort of response dissolves into traditional compatibilism of the sort A. J. Ayer or Richard Hobart advocated.

The challenge to Hoefer, then, is to explain why determinism from the inside out implies we have free will (since it makes our actions look brute or random) without invoking agent-causation or traditional compatibilism. Alternatively, it must invoke agent-causation or traditional compatibilism while also explaining how these defenses of free will would only succeed when supplemented by the inside-out perspective. If he cannot do this, his paper has added to our understanding of determinism, since the symmetry of determinism is often overlooked, but it has not yet added to our understanding of volitional freedom.

This problem for Hoefer's freedom from the inside out closely parallels a problem faced by Humean compatibilism. A Humean view of natural laws holds that laws are some subset of contingent generalizations or uniformities that happen to hold between events. Rather than the laws of nature metaphysically making the universe the way it is, a law of nature instead describes whatever connections happen to hold in a given world. As Helen Beebe and Alfred Mele point out, on a Humean view of laws, there is an important sense in which one cannot know whether a universe is deterministic until the entire history of the world has played out.¹⁹ Humean laws supervene on particular facts, but do not metaphysically govern the universe.²⁰

A Humean view of laws would seem, at first glance, to dispel worries about determinism undermining free will. On the Humean view of laws, events come first metaphysically, and laws describe relationships that happen to hold between events. On this view, the laws of nature do not threaten my freedom, because what laws happen to hold in the world *depends* upon my actions. As the world unfolds, it may seem that certain regularities obtain, and these regularities imply that I will, e.g., eat breakfast at 9:00 AM tomorrow. However, I might not eat breakfast, in which it turns out that a different set of regularities obtains in the world than was previously thought. On the Humean view, the laws of nature are made by our actions rather than our actions being made by the laws of nature, even in a deterministic universe. While a Humean determinist agrees that the laws of nature (whatever they are) plus a description of the past state of affairs implies the current state of affairs, the Humean denies that there is "a *metaphysical determination*...of future facts by laws plus past facts."²¹

Humean compatibilism is similar to the freedom from the inside out view because it puts the present and future on equal metaphysical footing with the past. Since on the Humean compatibilist view, my actions make the laws what they are, this would seem to make me free (After all, I am not a slave to the laws). However, the Humean view actually faces problems with free will that more traditional deterministic views, which their more metaphysically robust views of natural laws, do not face. On the Humean view of laws, two worlds with exactly identical histories up until *t* could suddenly diverge. In one world, Barney might decide to go bowling at *t*, whereas in the other world he decides to steal a cake at *t*. This seems to make the decision to bowl an inexplicable brute fact. As Beebe

¹⁹Beebe, H., and Mele, A. (2002). Humean Compatibilism. *Mind* 111, 201–223.

²⁰Lewis, D. (1986). *Philosophical Papers, Vol. II* (New York: Oxford University Press), p. ix.

²¹Beebe and Mele 2002, p. 205.

and Mele say, “Apparently, there is nothing about the powers, capacities, states of minds, moral character, practical reasoning and the like of Barney...that explains the difference in decision, given that the two worlds are exactly the same until t .”²²

Hoefer’s thesis need not rely upon a Humean conception of laws, but the problems are similar for both. Both Hoefer and the Humean compatibilist tell us we may take an “inside-out” perspective on laws, but this inside-out perspective threatens to turn our actions into unexplained brute facts. This perspective does not make our actions appear any more free. For both theories, it seems that either traditional compatibilism or some sort of agent-causation theory are necessary supplements to preserve free will.

Conclusion and Summary

Hoefer has argued that determinism in block universes does not privilege any particular time slice as the fundamental determiner of other time slices. He concludes from this that our actions are free, insofar as they are pieces of time slices we may legitimately regard as fundamental determiners. However, I have argued that Hoefer does not adequately deal with certain remaining problems. For one, there remain pervasive asymmetries in causation and the macroscopic efficacy of our actions. I suggest that what Hoefer may have shown us is that causation, not determinism, was the threat to free will all along. Additionally, Hoefer might avoid the problem of the asymmetry of macroscopic efficacy by noting we have a very small region of space-time completely determined by our choices. However, this move implies our freedom to act is freedom to do very little, given that the region is trivial. I suggested that Hoefer should instead claim that we do have pervasive macroscopic efficacy toward the past, though I am unsure of how well this thesis works. Regardless, there remains a problem that the inside-out perspective requires us to see our choices as brute facts or random occurrences. Attempts to resolve this problem seem to require either a theory of agent causation or a traditional compatibilist argument, making Hoefer’s thesis extraneous, unless he can show us that these require the inside-out perspective. However, Hoefer has not yet shown us this, so there is work to be done.

Acknowledgements Thanks to Richard Healey, Stephen Lenhart, David Glick, Justin Fisher, Patrick Dieveney, the audience at the 2005 *Society for Exact Philosophy* conference at the University of Toronto, and an anonymous referee for helpful comments and suggestions.

²²Beebe and Mele 2002, p. 221.