

On Hendrickson's New Argument against the Minimalist Theory of Action Individuation

Katarzyna Paprzycka
Department of Philosophy
University of Warsaw
Krakowskie Przedmieście 3
00-927 Warszawa, Poland

kpaprzycka@uw.edu.pl

Abstract

Hendrickson argues that the coarse-grained account of action individuation is unwittingly committed to the metaphysical thesis that all causation is deterministic. I show that the argument does not succeed. On one of the interpretations, all the argument shows is that the minimalists are committed to deterministic causation in a manner of speaking, which is quite compatible with *sui generis* indeterministic causation. On another, the problem is that minimalism is taken to be committed to a necessary identity claim where the view is only committed to a contingent identity claim. I explore other strategies of saving the argument. In particular, I consider whether the argument will succeed if the designators in question are rigid. I argue that there are principled reasons for thinking that such a strategy must fail.

The heyday of the debate on action individuation seems to be over. In fact the debate has satiated philosophical appetites to such an extent that even some participants (notably, Ginet 1990) declared that not much depends on its resolution. Hendrickson (2003) disagrees. He takes the action individuation debate to be significant as it is after all a debate about the nature of action. In his paper, he constructs an interesting novel argument against the coarse-grained theory of action individuation. He argues that the

minimalists¹ are unwittingly committed to the metaphysical thesis that all causation is deterministic. Since Hendrickson holds that we should leave room for indeterministic causation, he takes his argument to be a *reductio ad absurdum* of minimalism.

The aim of the paper is to show that Hendrickson's argument against the coarse-grained account does not succeed. After some conceptual and notational preliminaries (§I) and a brief reminder of the relevant commitments of minimalism (§II), I reconstruct Hendrickson's argument (§III) and argue that it does not show that minimalism is committed to deterministic causation. Although Hendrickson's original argument is invalid (see Appendix), it is possible to offer two valid interpretations of the argument. On one of the interpretations (§III.C), all the argument shows is that the minimalist is committed to deterministic causation in a manner of speaking, which is quite compatible with *sui generis* indeterministic causation. The problem with the other interpretation (§III.B) is that it takes minimalism to be committed to a necessary identity claim where the view is only committed to a contingent identity claim. However, the latter interpretation opens up a possible way of developing Hendrickson's argument. In §IV, I consider the question whether one could employ the argument against the minimalist if both identity terms are rigid designators, in which case the identity claim would indeed be necessary. I argue, however, that the very set-up of Hendrickson's argument precludes this sort of response.

I. PRELIMINARIES AND NOTATION

One of the problems with understanding Hendrickson's original argument is that he adopts a rather cumbersome notation. In addition, he adopts conventions which he does not always keep. As a result, the argument as it is laid out in his paper is invalid (see Appendix). In what

¹ I will refer to the coarse-grained theorists of action individuation also as "minimalists." Hendrickson understands "fine-grained" accounts quite broadly as encompassing such views as Goldman's (1970) maximalism as well as moderationism (e.g. Ginet's 1990; Thalberg 1972 and 1977; Thompson 1977).

follows, I will reconstruct the argument using a different notation but keeping all the points that Hendrickson is careful about in check. In particular, we have to bear in mind the distinction between event tokens and event types as well as the distinction between three types of identity claims.

Hendrickson distinguishes event tokens from event types.² Perfect nominals such as ‘Brutus’s stabbing of Caesar’ or ‘the death of Caesar’ can be used either to refer to particular event tokens or to talk about event types. In order to make clear that an event token is intended, we will use the following notation. We will enclose the description of the event in brackets with a subscript ‘tok’. Thus: ‘[The death of Caesar]_{tok}’ will refer to a particular token of the death of Caesar. It functions as a designator.

Nothing in Hendrickson’s argument turns on the metaphysical question whether types exist. This is as it should be since Davidson, at any rate, is a nominalist. In fact, the argument can be formulated in such a way that the metaphysical commitments are really minimal. There are occasions, however, where Hendrickson wants to pick out some or all event tokens that are of a certain type, e.g. some events that are of the “The death of Caesar” type. In such a case, we are dealing with a quantified phrase where the quantifier ranges over event tokens and the propositional formula is ‘*x* is of the “The death of Caesar” type’. To mark such uses, I will use the expression ‘some/all event tokens of [The death of Caesar] type’.

The second distinction that is important to Hendrickson is the distinction between three types of identity claims. The first two are the regular token identities and type identities. Relatively innocent examples are the following:

- (1) [Brutus’s stabbing of Caesar]_{tok} is identical with [Brutus’s killing of Caesar]_{tok}.
- (2) [Brutus’s causing of Caesar’s death] type is [Brutus’s killing of Caesar] type.

The second claim is arguably not innocent for someone like Davidson since he will shy away from wanting to be committed to the existence of event

² He also distinguishes facts from events but nothing in the argument turns on that distinction.

types. He will take (2) to be a claim about necessary coextension of the two predicates. While the second kind of identity claim is not really used in Hendrickson’s argument, the third kind of identity is important for him. He motivates its introduction in the following way:

[A] coarse-grained theorist would also suppose that the identity between the token events “Brutus’s stabbing of Caesar” and “Brutus’s killing of Caesar” is not unique to this token instance of the two event types . . . In fact, for any [possible] world where Brutus kills Caesar by stabbing him there will be “two” specific token events “Brutus’s stabbing of Caesar” and “Brutus’s killing of Caesar” that are identical (on a coarse-grained account). (Hendrickson 2003: 121)

He claims further that this type of an identity claim is neither a token-identity claim nor a type-identity claim but rather that it pertains to all tokens of a certain type relative to a class of possible worlds. He is interested in particular in the class of worlds where Brutus kills Caesar by stabbing him. For the purposes of his argument, Hendrickson defines the class of possible worlds (“X-worlds,” as he dubs them) in the following way. An X-world is a possible world where: (a) Brutus kills Caesar by stabbing him, (b) there is only one event token of [Brutus’s killing of Caesar] type, (c) there is only one event token of [Brutus’s stabbing of Caesar] type, (d) there is only one event token of [the death of Caesar] type, (e) there is only one event token of [Brutus’s causing of Caesar’s death] type. The third type of identity claim can be formulated thus:

- (3) For every X-world *w*, for every event token *e_x*, if *e_x* is of [Brutus’s causing of Caesar’s death] type in *w* then there exists an event token *e_y* such that *e_y* is of [Brutus’s killing of Caesar] type in *w* and *e_x* = *e_y*.

Hendrickson’s distinction of the third type of identity claim and of the X-worlds in particular introduces the question how to interpret the necessity operator. It can be interpreted in an unrestricted way, i.e. as ranging over all possible worlds, or in a restricted way as ranging over all possible X-worlds. I will consider both possibilities in §III.B-§III.C. In fact, the reason why Hendrickson’s original argument is invalid is that it mixes the two interpretations of the quantifiers (see Appendix).

II. MINIMALISM

Minimalists (e.g. Davidson 1980a) have argued that actions are events (bodily movements). As such they can be described with reference to far reaching consequences. However, minimalists argue that those external events (the action's consequences) do not constitute actions – not even as parts. Brutus killed Caesar by stabbing him. There are many descriptions of what Brutus did: Brutus stabbed Caesar, Brutus stabbed Caesar with a knife, Brutus caused Caesar's death, Brutus killed Caesar, etc. Davidson insists that those descriptions pick out only one agentive event, one action, which is identical with Brutus's bodily movement.

Davidson points out that at the root of some confusion in this area lies the so-called accordion effect (Feinberg 1968). Davidson takes the accordion effect to be a principle for generating descriptions of an action:

(A) If an agent α 's action e causes an event e' , then the action e can be described as " α 's causing of e' ."

It should be noted that this is a controversial rendition of the accordion effect. Someone with moderationist sympathies will object to the formulation of the consequent. In case α 's action e causes an event e' , a moderationist will argue that it is appropriate to say that α caused e' but that it is inappropriate to say that the description ' α 's causing of e' ' picks out the original action e . To the contrary, she will claim that the description picks out a complex entity of which e and e' are but parts.

Let us, however, return to the reconstruction of the minimalist treatment of the example at hand. The minimalists will apply (A) to the above example. Since Brutus's action of stabbing has caused Caesar's death, the original action can be described as "Brutus's causing of Caesar's death." If the action has caused political havoc, (A) licenses the redescription of the action as "Brutus's causing of political havoc." And so on.

In his argument, Hendrickson makes use of the following two general claims by Davidson:

(B1) to kill someone is to cause that person's death ("there is no distinction to be made between causing the death of a person and killing him," Davidson 1980a: 58)

(B2) to kill someone is to do something that causes the person's death. ("Doing something that causes a death is identical with causing a death," Davidson 1980a: 58)

Neither (B1) nor (B2) is uncontroversial. One might object to (B1) on the grounds that it is unclear what 'cause' means in this context. One might object to (B2) on roughly moderationist grounds, one might think that killing is a more complex action, which encompasses the person's death.

However, it is uncontroversial that Davidson adheres to these claims and that he does so in spite of the objections. He would respond to the first objection by suggesting that all he means by (B1) is (B2). He has defended (B2) by suggesting that it is a mistake to think that actions are more complex than bodily movements. His chief argument for this thesis is that after the agent performs an action such as the stabbing, there is nothing left for the agent to do, the action causes the event of the person's death without any further intervention by the agent³ (for some responses, see e.g., Thalberg 1977).

In this scenario, Brutus stabbed Caesar and, as a matter of fact, this action has caused Caesar to die. In other words, the following claims are true:

(α) Brutus stabbed Caesar.

(C) Brutus's stabbing of Caesar causes the death of Caesar.

The minimalist rendition of the accordion effect allows us to redescribe any action as the causing of some of its effects. So, Brutus's action of stabbing Caesar can thus be redescribed as the causing of Caesar's death:

(β) Brutus caused the death of Caesar.

By (B1), there is one further description of the action:

(γ) Brutus killed Caesar.

The minimalist will insist that all these descriptions (α), (β), (γ) can be used as designators to pick out the very same event as an action. In other words:

³ "Is it not absurd to suppose that, after the queen has moved her hand in such a way as to cause the king's death, any deed remains for her to do or to complete? She has done her work; it only remains for the poison to do its" (Davidson 1980a: 57-18).

- (D1) [Brutus's stabbing of Caesar]_{tok} (α) is identical with [Brutus's causing of Caesar's death]_{tok} (β)
 (D2) [Brutus's causing of Caesar's death]_{tok} (β) is identical with [Brutus's killing of Caesar]_{tok} (γ)

Since identity is transitive, Davidson also accepts:

- (D3) [Brutus's stabbing of Caesar]_{tok} (α) is identical with [Brutus's killing of Caesar]_{tok} (γ)

With this reminder of the minimalists' commitments, let us now turn to Hendrickson's argument.

III. HENDRICKSON'S ARGUMENT

In all of the reconstructions of the argument, we will use the following abbreviations:

- '[killing-B-C]_{tok}' abbreviates '[Brutus's killing of Caesar]_{tok}',
 '[stabbing-B-C]_{tok}' abbreviates '[Brutus's stabbing of Caesar]_{tok}',
 '[causing-death-B-C]_{tok}' abbreviates '[Brutus's causing of Caesar's death]_{tok}',
 '[death-C]_{tok}' abbreviates '[Caesar's death]_{tok}'.

Hendrickson's argument is usefully reconstructed with some changes.⁴ We begin with the premise that simply registers the fact that Brutus's action has the deadly effect:

⁴ I consider Hendrickson's complete argument in the Appendix. Here I have preserved the numbering of the premises but I have omitted premises (1)-(4). Premises (1) and (2) (according to which [killing-B-C]_{tok} occurs and [causing-death-B-C]_{tok} occurs) are in fact not used in the argument. The reason for omitting premises (3)-(4) (according to which [stabbing-B-C]_{tok} and [death-C]_{tok} both occur) is that, though they are used, I take them to be implied by premise (7), see also note 6. Aside from changing the notation, which is not very perspicuous in the original argument, I am using the material rather than the formal mode. Hendrickson prefers to talk about certain propositions obtaining. However, the propositions concern the occurrence of events. As I explain in the Appendix, there are two ways of interpreting these propositions: as particular statements about particular events (Interpretations N and X) and as general statements (Interpretation G considered in the Appendix). Nothing substantial depends on the choice between Interpretation G,

- (7) [stabbing-B-C]_{tok} causes [death-C]_{tok}.

Premise (7) is simply claim (C) in our above reconstruction of minimalist claims (§II). The three premises that follow are meant to capture other relevant theoretical commitments of the minimalists:

- (6) Necessarily, [causing-death-B-C]_{tok} occurs iff [stabbing-B-C]_{tok} occurs.
 (5) Necessarily, [killing-B-C]_{tok} occurs iff [causing-death-B-C]_{tok} occurs.
 (8) Necessarily, if [killing-B-C]_{tok} occurs, there occurs some event token of [death-C] type.

Premises (6) and (5) correspond to the identities captured in our (D1) and (D2) (see §II, above) on the added assumption that if two events are identical then they necessarily co-occur. (In §B, I will argue that there is in fact a problem here: the minimalist is not committed to (6) but to a weaker premise.) Premise (8) is an application of the general principle (B2) to the case at hand.⁵ If to kill someone is to do something that causes the person's death, it follows that if a particular killing occurs, the relevant death will occur as well. According to (8), an action can be described as a killing (so is [killing- α - β]_{tok}) only if it causes the death of β at some point. Hendrickson rightly remarks that the temporal argument against minimalism exploits the time-lapse between the two event tokens mentioned in (8) but nothing in Hendrickson's argument trades on there being such a lapse, which is certainly an advantage of his argument.

on the one hand, and Interpretations N and X, on the other. The latter are simpler, more straightforward, and, moreover, open up a possible way of rescuing Hendrickson's argument (§IV).

⁵ In fact, one might otherwise raise the following objection to (8). The antecedent of the conditional mentions an event token while the consequent of the conditional mentions an event token of a certain type. It is clear, however, that the connection between the token event in the antecedent is achieved also only because it is an event token of a particular type, viz. it is a killing. So if (8) is true it is so in virtue of some more general claim. Indeed (B2) provides such a more general claim: necessarily, if some event token of [killing-B-C] type occurs at t , there occurs some event token of [death-C] type at t' (where $t' \geq t$).

Hendrickson then articulates a sufficient condition on deterministic causation, which, applied to the case at hand, gives premise (9):

- (9) Necessarily, [stabbing-B-C]_{tok} causes [death-C]_{tok} deterministically if (i) [stabbing-B-C]_{tok} causes [death-C]_{tok}, and (ii) necessarily if [stabbing-B-C]_{tok} occurs, there occurs some event token of [death-C] type.

The remainder of the argument consists in drawing out the consequences:

- (10) Necessarily, [killing-B-C]_{tok} occurs iff [stabbing-B-C]_{tok} occurs. (5, 6)
(11) Necessarily, if [stabbing-B-C]_{tok} occurs, there occurs some event token of [death-C] type. (8, 10)
(12) Necessarily, [stabbing-B-C]_{tok} causes [death-C]_{tok} deterministically. (9, 7, 11)

Since:

- (13) it is not necessary that [stabbing-B-C]_{tok} causes [death-C]_{tok} deterministically,

the argument is a *reductio ad absurdum* of minimalism.

As it stands, the argument is valid. The power of the argument is proportional to the degree of confidence, with which we are inclined to agree with Hendrickson that the causation in question could be indeterministic. But Hendrickson's argument is of potential interest even to those who are convinced that all causation is deterministic. For if Hendrickson is successful in this argument, he would have pointed out that minimalism might be vulnerable to criticism from as yet unexplored angles.

There are several problems with the argument, however. First, it is not clear that (9) does present a sufficient condition on deterministic causation. In §A, I will reformulate the argument so as to take note of the objection. Quite independently, there is a problem with one of the claims that are attributed to minimalism, couched in premise (6). If the operator 'necessarily' is understood as a general operator ranging over all possible worlds (Interpretation N), the premise is not held by minimalists (§B). Under the alternative interpretation of 'necessarily' as an operator ranging over all X-worlds, the premise can be attributed to the minimalists at the

cost of rendering the argument invalid. The argument can be turned to be valid by interpreting all the necessity operators in such a fashion (Interpretation X, §C), but this once again leads to problems, this time with premise (9).

Hendrickson is aware of the fact that minimalists do not hold premise (6) unrestrictedly. His preliminary comments suggest that at least premises (5) and (6) ought to be construed in such a way that the necessity operator be restricted to X-worlds, in which case it might appear that his intended interpretation is Interpretation X (§C). However, after the preliminary mention of this restriction, he formulates the premises by means of a single operator 'necessarily', in which case Interpretation N fits better (§B). In the Appendix, I show that Hendrickson's original argument is in fact invalid – he changes the interpretation of 'necessarily' in the course of the argument. In the remainder of the text, I will consider the two valid interpretations of the argument. I will argue that on none of the interpretations does the argument show the minimalists to be committed to any objectionable theses about causation. However, Interpretation N opens an additional way of arguing against the minimalist, which I explore in §IV.

A. Deterministic Causation

Hendrickson articulates the following sufficient condition for deterministic causation:

- (d) Necessarily: an event token e_x causes another event token e_y (of type E) in a deterministic way if (i) e_x causes e_y and (ii) necessarily, if e_x occurs then some event token of type E occurs.⁶

⁶ I have simplified Hendrickson's characterization by assuming that the claim that e_x causes e_y implies both that e_x occurs and that e_y occurs. Hendrickson's full statement is given in the following passage: "y *deterministically causes* z if y occurs, z occurs, y causes z, and 'y occurs' entails 'a z-like event occurs'" (p. 123). The above rendition of the principle as (d) avoids a problem, to which Hendrickson does not pay quite enough attention. In his rendition of the sufficient condition, he mixes extensional and intensional contexts. Clearly an entailment relation mentioned in the last conjunct of Hendrickson's formulation will be sensitive to the way in which the events are described.

So, if e_x causes e_y (of type E) indeterministically, then it is possible for e_x to occur while no E -like event occurs.

One might object, however, that this condition is not as innocent as it seems. After all, it places categorially different demands on what happens in the actual and in the other possible worlds: it demands that e_x actually cause e_y but in the remaining possible worlds it merely requires that e_x and e_y co-occur. On some theories of causation (e.g. the counterfactual or the probabilistic theories of causation), this might not amount to much difference. Hendrickson's argument will be the stronger the less committed he is to a specific theory of causation. Since he does not officially endorse any such theory, it will be safer to reformulate the sufficient condition on deterministic causation and his argument in light of this point.

Let us assume that the possible worlds w_1 - w_5 are representative of all relevant⁷ possible worlds (the actual world is a w_1 -world):

w_1 :	a causes b_1 , b_1 is B	c causes d_1 , d_1 is D
w_2 :	a causes b_1 , b_1 is B	c causes d_2 , d_2 is D
w_3 :	a causes b_2 , b_2 is B	c causes d_1 , d_1 is D
w_4 :	a does not cause any B -like event	c causes d_3 , d_3 is D
w_5 :	a does not occur	c does not occur

Event a causes b_1 (of type B) indeterministically because there are possible worlds (w_4) where a occurs but it does not cause any B -like event. By contrast, in all relevant possible worlds where c occurs, it causes some D -like event. We can thus say that c causes d_1 (of type D) deterministically. The reformulation of Hendrickson's sufficient condition will read thus:

⁷ Another worry has to do with the question whether the modal operators have the same meaning in both their occurrences in (d). *Prima facie* the first occurrence of 'necessarily' is most naturally interpreted as a conceptual operator, i.e. as ranging unrestrictedly over all possible worlds. However, the second occurrence of 'necessarily' is most naturally interpreted as a physical necessity, i.e. as ranging over physically possible worlds. However, in view of the fact that Hendrickson intends to formulate only a sufficient condition on deterministic causation, this greater than necessary restriction might not be worrisome. We will see, however, that the meaning of the operators is actually an important issue in the interpretation of the argument (see §III.C).

(D) Necessarily: an event token e_x causes another event token e_y of type E in a deterministic way if (i) e_x causes e_y and (ii) necessarily, if e_x occurs then e_x causes some E -type event token.

The acceptance of (D) in place of (d) forces a reinterpretation of condition (9) which is meant to be an application of the sufficient condition on deterministic causation to the case considered in Hendrickson's argument. However, in order to preserve the argument's validity, other changes have to be made as well. The argument thus becomes:

- (7) [stabbing-B-C]_{tok} causes [death-C]_{tok}.
- (6) Necessarily, [causing-death-B-C]_{tok} occurs iff [stabbing-B-C]_{tok} occurs.
- (5) Necessarily, [killing-B-C]_{tok} occurs iff [causing-death-B-C]_{tok} occurs.
- (8^D) Necessarily, if [killing-B-C]_{tok} occurs, it causes some event token of [death-C] type.⁸
- (9^D) Necessarily, if [stabbing-B-C]_{tok} causes [death-C]_{tok}, and necessarily if [stabbing-B-C]_{tok} occurs, it causes some event token of [death-C] type, then [stabbing-B-C]_{tok} causes [death-C]_{tok} deterministically.
- (10) Necessarily, [killing-B-C]_{tok} occurs iff [stabbing-B-C]_{tok} occurs. (5, 6)
- (11^D) Necessarily, if [stabbing-B-C]_{tok} occurs, then it causes some event token of [death-C] type. (8^D, 10)
- (12) Necessarily, [stabbing-B-C]_{tok} causes [death-C]_{tok} deterministically. (9, 7, 11)
- (13) It is not necessary that [stabbing-B-C]_{tok} causes [death-C]_{tok} deterministically.

It is clear that aside from the change of (9), the only place where the current correction can lead to substantial problems is with premise (8).

⁸ Premise (8^D) is a modification of Hendrickson's premise (8) in light of the point just raised about the sufficient condition on deterministic causation (D). All the steps affected and modified in light of this point are marked with the superscript 'D'.

We have already seen that the minimalists do accept (8): necessarily, if [killing-B-C]_{tok} occurs, there occurs some event token of [death-C] type. This is because the event [killing-B-C]_{tok} will not be describable as a killing of Caesar unless it leads to Caesar's death. This means, however, that minimalists can also accept the stronger claim (8^D) for exactly the same reasons. After all, they do accept that the action token will not be describable as a killing of Caesar unless the action *causes* Caesar's death.

In other words, the proposed correction to condition (9) is in fact only a minor correction, it allows Hendrickson's argument to go through. Let me turn to the more problematic premise (6).

B. Interpretation N: Unrestricted Necessity Operator

According to (6), it is necessarily the case that [causing-death-B-C]_{tok} occurs if and only if [stabbing-B-C]_{tok} occurs. Two things could be thought to be controversial here. First, one could object that stabbing might not lead to death. However, one is rightly then reminded that we are talking about a particular event token [stabbing-B-C]_{tok}, which the minimalists take to be in fact *identical* with the event token [causing-death-B-C]_{tok}. If the "two" event tokens are identical then, of course, one occurs just in case the other occurs, i.e.:

(6') [causing-death-B-C]_{tok} occurs iff [stabbing-B-C]_{tok} occurs.

The first controversial point might be controversial in the debate about action individuation (moderationists will not accept (6')) but it is not controversial that minimalists accept (6').

(6') is not (6), however, which brings us to the second controversial point. One may doubt that the necessity operator is legitimate in (6). Minimalists do not, and need not, deny that there are possible worlds where Brutus stabbed Caesar but did not succeed in killing Caesar. In such worlds, (6') will be false, but this means that (6) is false as well.

In fact, Davidson *explicitly* denies that the identity claim is necessary:

Brutus's stabbing of Caesar did result in Caesar's death; so it was *in fact, though of course not necessarily*, identical with Brutus's killing of Caesar. (Davidson 1980b: 171, emphases added)

In his paper, which was first presented in 1968 and published in 1971, Davidson does not consider Kripke's (1971) famous argument that all identities are necessary. Kripke does not deny, however, that there are contingent *identity claims*. It is necessary that Shakespeare is Shakespeare. Shakespeare *is* (in the actual world) the person who wrote *Hamlet*. But it does not follow that it is necessary that Shakespeare is the person who wrote *Hamlet*. There are presumably possible worlds where somebody else wrote *Hamlet*. There are possible worlds where the person who wrote *Hamlet* in the actual world, i.e. Shakespeare, does not write *Hamlet*. The author of *Hamlet* might not have written *Hamlet*.

Hendrickson says:

[the event token] "Brutus's stabbing of Caesar" is identical to "Brutus's causation of *the death of Caesar*." Since they are identical, two propositions affirming that each occurs will be mutually entailing. (p. 123)

But this is clearly not so. From the fact that the two event tokens are identical what follows at most is that the propositions affirming that each occurs will be materially equivalent. Even if we are talking about one event token, it is possible to make contingent rather than necessary identity claims about it. Consider an analogous reasoning about people (not events). Suppose that the tallest person in the world is the saddest person in the world. Of course, it is true that whenever the tallest person in the world enters a room, the saddest person in the world enters the room as well. But it is false that it is necessary that whenever the tallest person in the world enters a room, the saddest person in the world enters the room as well. In other possible worlds, the descriptions of the tallest person and of the saddest person might not be filled by the same person.

In other words, there are very good reasons to deny that (6) is accepted by the minimalists. Before taking this as an argument that minimalism is not committed to deterministic causation, one should admit that while minimalists do not accept (6), they do also accept a claim that is stronger than (6'). For they do think that in all X-worlds where Brutus kills Caesar by stabbing him, [causing-death-B-C]_{tok} occurs if and only if

[stabbing-B-C]_{tok} occurs.⁹ In other words, minimalists accept claim (6^X), where the operator ‘necessarily^X’ is to be read as ‘it is the case in all X-worlds’:

(6^X) Necessarily^X, [causing-death-B-C]_{tok} occurs iff [stabbing-B-C]_{tok} occur.

In fact, Hendrickson has earlier adopted a convention, according to which:

...whenever “Brutus’s killing Caesar” or “Brutus’s stabbing” Caesar” are used with no reference to “the event type” or “the specific token event,” this indicates all token events of the relevant type that obtain in an X-world. (pp. 121-122)

This suggests that he intends the premise to be read as (6^X), even though he explicitly formulates it with an unrestricted necessity operator – the very same one that appears in all other steps of the argument.¹⁰

It should be clear, however, that the simple replacement of (6) with (6^X) will not save the argument. Premise (6) (alongside with (5)) is crucially used to derive claim (10):

(10) Necessarily, [killing-B-C]_{tok} occurs iff [stabbing-B-C]_{tok} occurs.

If one restricts the necessity operator in (6), one will not be able to arrive at (10). In other words, a mere replacement of (6) with (6^X) will render the argument invalid.

We will proceed to see whether it is possible to construct a valid argument with (6^X) as a premise. The attempt to do so will involve a consistent reinterpretation of all necessity operators as ranging over X-worlds.

⁹ Note that this is like saying: in all possible worlds where one and the same person fit the description of the tallest person in the world and of the saddest person in the world, the saddest person in the world enters the room if and only if the tallest person enters the room.

¹⁰ The premise is formulated as “Necessarily ($q \equiv r$)” (Hendrickson 2003: 122), where ‘ q ’ is said to stand for the proposition “‘Brutus’s causation of the death of Caesar’ obtains” while the ‘ r ’ – for the proposition “‘Brutus’s stabbing of Caesar’ obtains.” It looks as if the premise ought to read: necessarily, “Brutus’s causation of the death of Caesar” obtains iff “Brutus’s stabbing of Caesar” obtains. In view of the convention adopted on pp. 121-122, the premise is much better interpreted as (6^X). See the Appendix for more details.

C. Interpretation X: Necessity Operator Relativized to X-worlds

One might argue on behalf of Hendrickson in the following way. Since he adopts a convention, which would render the necessity operator in some premises as relativized to X-worlds, rather than taking his argument to be invalid, we should charitably read all the necessity operators as relativized to X-worlds. Under such an interpretation, which I will refer to as Interpretation X, the argument looks thus:

(7) [stabbing-B-C]_{tok} causes [death-C]_{tok}.

(6^X) Necessarily^X, [causing-death-B-C]_{tok} occurs iff [stabbing-B-C]_{tok} occurs.

(5^X) Necessarily^X, [killing-B-C]_{tok} occurs iff [causing-death-B-C]_{tok} occurs.

(8^{DX}) Necessarily^X, if [killing-B-C]_{tok} occurs, it causes some event token of [death-C] type.

(9^{DXX}) Necessarily^X, if [stabbing-B-C]_{tok} causes [death-C]_{tok}, and, necessarily^X, if [stabbing-B-C]_{tok} occurs, it causes some event token of [death-C] type, then [stabbing-B-C]_{tok} causes [death-C]_{tok} deterministically.

(10^X) Necessarily^X, [killing-B-C]_{tok} occurs iff [stabbing-B-C]_{tok} occurs. (5, 6^X)

(11^{DX}) Necessarily^X, if [stabbing-B-C]_{tok} occurs, then it causes some event token of [death-C] type. (8^{DX}, 10^X)

(12^X) Necessarily^X, [stabbing-B-C]_{tok} causes [death-C]_{tok} deterministically. (9^{DXX}, 7, 11^{DX})

(13^X) It is not necessary^X that [stabbing-B-C]_{tok} causes [death-C]_{tok} deterministically.

The argument is still valid. What was a problematic premise under Interpretation N can now be ascribed to the minimalists without problems. Minimalists can and do accept (6^X). For they certainly *do* hold that in all possible worlds where Brutus kills Caesar by stabbing him, [causing-death-B-C]_{tok} occurs iff [stabbing-B-C]_{tok} occurs.

This time the problem lies with premise (9^{DXX}). The problem is that the premise crucially relativizes the concept of deterministic causation to X-worlds. According to the premise, the fact that that one event causes

another in all X-worlds is sufficient for the causation to be deterministic. But this is surely not the case. We cannot arbitrarily define a class of possible worlds and expect that the fact that a causal relation is present in all members of the class will suffice for the causation to be deterministic. Such a condition might be sufficient to capture a relativized concept of deterministic causation (causation that is deterministic-relative-to-a-class-of-possible-worlds) but it is not sufficient to capture the usual metaphysically rich concept of deterministic causation.

To see that this is so, consider at least two respects in which the relativized and our usual concept of deterministic causation differ. Usually, we think that causation is either deterministic or indeterministic but it cannot be both. On such a relativized understanding of the concept, causation can be both deterministic and indeterministic. In the above example (§A), we would have to say that *a* causes *b*₁ (of type *B*) deterministically relative to {*w*₁, *w*₂} worlds but *a* causes *b*₁ (of type *B*) indeterministically relative to {*w*₁, *w*₄} worlds. Usually, we think that the mere fact that an event actually causes another is not sufficient for the causation to be deterministic. But on the relativized notion, all actual causation would be deterministic relative to the singleton-class of the actual world. It is clear that this is not how we think of deterministic and indeterministic causation.

In fact, it can be shown that such a relativization could even turn the prime example of quantum-mechanical indeterministic causation to be “deterministic” relative to a properly described class of possible worlds. Consider the double slit experiment. We are told that the cause (*c*, for short) of the emission of a particular photon does not determine the exact path of the photon. It might travel through the left-hand slit, it might travel through the right-hand slit, or it might hit the cardboard, in which the slits are made. In other words, there are possible worlds where *c* causes the photon to travel through the left-hand slit, there are possible worlds (call them R-worlds) where *c* causes the photon to travel through the right-hand slit, and there are possible worlds where *c* causes the photon to travel so as to hit the cardboard. The causation is indeterministic.

Suppose that the photon actually travels through the right-hand slit. The actual world is one of the R-worlds. We can, of course, restrict the universal modal operator to range over R-worlds and formulate a sufficient condition on causation that is deterministic-relative-to-R-worlds thus (analogically to (9^{DXX})):

c causes [the photon’s travelling through the right-hand slit]_{tok} deterministically-relative-to-R-worlds, if (i) *c* causes [the photon’s travelling through the right-hand slit]_{tok} and (ii) necessarily^R (i.e. in all R-worlds), if *c* occurs, it causes some event token of [the photon’s travelling through the right-hand slit] type.

In all R-worlds, *c* does in fact cause an event token of [the photon’s travelling through the right-hand slit] type. Recall that R-worlds were just defined as those worlds where the photon travels through the right-hand slit. So, we are entitled to say that the causation is deterministic-relative-to-R-worlds. However, such a redescription will not change the nature of what is, at roots, an indeterministic process. The causation is indeterministic even though it is deterministic-relative-to-R-worlds.

Another way of putting the point is this. As it stands, Hendrickson’s argument (under interpretation X) shows that [stabbing-B-C]_{tok} causes [death-C]_{tok} in all X-worlds, in all the worlds where Brutus kills Caesar by stabbing him. One can agree that Hendrickson’s argument shows that Brutus’s stabbing of Caesar causes Caesar’s death deterministically-relative-to-X-worlds. But thus far, this is a trivial thesis. For all cases of indeterministic causation can be interpreted as causation that is deterministic-relative-to-some-worlds (at the very least as deterministic-relative-to-the-actual-world). In so far as this is the conclusion of Hendrickson’s argument, it loses all of its metaphysical appeal. As we have seen, even the paradigmatic examples of indeterministic causation can be thought of as deterministic-relative-to-some-worlds.

In sum, the real problem with Hendrickson’s argument lies with premise (6). As it stands, (6) is not accepted by the minimalists, so Hendrickson’s argument does not show that minimalists are committed to the relevant causation being deterministic. Minimalists do accept a weaker

claim (6^X). However, a valid Hendrickson-style argument with (6^X) as a premise only shows that the causation is “deterministic-relative-to-X-worlds.” This does not preclude the causation from being indeterministic. So far then we have seen no reason to think that the argument shows minimalism to be committed to any objectionable claims about causation.

IV. NECESSARY IDENTITY CLAIMS AND RIGID DESIGNATORS

As we have seen, the main problem with Hendrickson’s argument is that the minimalists do not accept premise (6). As we have seen (§III.C), the argument breaks down unless (6) is a necessary identity claim. Yet, minimalists accept only a contingent identity claim instead of (6) (§III.B). One strategy of response on part of Hendrickson would be to try to find such descriptions of an action, for which the minimalists would be committed to a necessary rather than a contingent identity claim.¹¹ In other words, the suggestion is that Hendrickson might have simply picked the descriptions of the action (as a stabbing and as a killing) wrong. Perhaps it is possible to find such descriptions for an action that would allow the argument to go through.

It will be useful to formulate the challenge in terms of Kripke’s claim that if both terms of the identity are rigid designators then the identity claim is necessary. A rigid designator designates the same individual in all possible worlds, in which the individual exists. Proper names are prime examples of rigid designators. Many definite descriptions are paradigmatic examples of non-rigid designators.¹² In other words, the dispute between Hendrickson and the minimalists turns on the question whether one action can be picked out by two rigid designators in Hendrickson’s set-up. I argue, however, that the structure of the minimalist commitments presupposed in the argument is such that one of the designators will be non-rigid (§A).

¹¹ I am grateful to both anonymous reviewers for suggesting this strategy of response.

¹² This is not to say that all definite descriptions are rigid. For example, ‘the successor of 2’ refers to 3 in all possible worlds and is thus a rigid designator.

Even if one changes the designators in such a way that they are rigidified (§C), the argument will break down at other junctures.

A. More Basic Designators to the Rescue

If we look at the identity claim ‘[stabbing-B-C]_{tok} is [causing-death-B-C]_{tok}’, it is clear that the latter term is *not* a rigid designator. The designator ‘[Brutus’s causing of Caesar’s death]_{tok}’ is not rigid because it invokes a contingent causal relation in its descriptive component.¹³ It picks out the action only in worlds where the action (contingently) causes the death of Caesar. According to Davidson, the designator is really a shortcut for ‘Brutus’s action, which causes Caesar’s death’. There are possible worlds where Brutus’s action, which causes Caesar’s death in the actual world, does not cause Caesar’s death (perhaps because Caesar’s wound heals).

One might wonder, however, whether ‘[stabbing-B-C]_{tok}’ is not a rigid designator. If so then it might be possible to construct a Hendrickson-style argument for a different (more basic) pair of descriptions. One would rely on the claim that Brutus’s striking of Caesar [striking-B-C]_{tok} causes a stab wound in Caesar. So, [striking-B-C]_{tok} is [stabbing-B-C]_{tok}. Is ‘[stabbing-B-C]_{tok}’ a rigid designator? The minimalist again will say that it is not. They understand it as a shortcut for ‘Brutus’s action, which causes the stab wound in Caesar’. There are possible worlds where Brutus’s action, which causes Caesar to have a stab wound in the actual world, does not cause Caesar to have a stab wound (perhaps Caesar trips just before the strike hits him). There are possible worlds where the designator does not pick out the action it does in the actual world. It is not rigid.

In general, the very set-up of Hendrickson’s argument guarantees that at least one of the designators will be non-rigid. To see that this is so, let us pause to consider the general structure of the minimalist commitments that the argument presupposes. We are given an action token [ϕ_1 -ing]_{tok}

¹³ Although the minimalists do not explicitly consider the question, it is only natural for them to endorse the view, according to which at least causally non-basic descriptions of actions are not rigid. In fact, some minimalists (such as Hornsby 1980 or Pietroski 2000) would be naturally interpreted as holding that all action designators are non-rigid since they claim that we always refer to actions only via their effects.

(here: stabbing), which causes a certain event $[E]_{tok}$ (here: death). According to the minimalists, $[\varphi_1\text{-ing}]_{tok}$ can thus be redescribed as the causing of E (here: causing of death). There is a conceptual connection between causing-of-E and $\varphi_2\text{-ing}$ (here: killing), which is registered by premise (5), so to describe an action as a $\varphi_2\text{-ing}$ presupposes that the action causes an $[E]$ -type event. Thus the general structure of the first four premises becomes:

- (7) $[\varphi_1\text{-ing}]_{tok}$ causes $[E]_{tok}$.
- (6) Necessarily, $[\text{causing of } E]_{tok}$ occurs iff $[\varphi_1\text{-ing}]_{tok}$ occurs.
- (5) Necessarily, $[\varphi_2\text{-ing}]_{tok}$ occurs iff $[\text{causing of } E]_{tok}$ occurs.
- (8^D) Necessarily, if $[\varphi_2\text{-ing}]_{tok}$ occurs, it causes some $[E]$ -type event token.

The remainder of the argument will follow, if there are such descriptions of the action (as $\varphi_1\text{-ing}$ and as $\varphi_2\text{-ing}$) and of its consequence (E), which will render the four premises true.

To understand the relations between the terms here, let us use Goldman's (1970) terminology of level-generation relations. Goldman's conceptualization can be adapted with the minimalist "correction," according to which such generation relations hold between actions-under-a-description rather than between actions.¹⁴ We can specify the above relations as follows: ' $\varphi_1\text{-ing}$ ' and ' $\varphi_2\text{-ing}$ ' are action descriptions, 'E' is the description of an event (not an action). The action under the description ' $\varphi_1\text{-ing}$ ' causally generates both the action under the description ' $\text{causing of } E$ ' as well as the action under the description ' $\varphi_2\text{-ing}$ '.

Hendrickson's argument will prove its point if the designators in premises (5) and (6) are rigid.¹⁵ The trouble is that given the set-up of the argument, where the action under description ' $\varphi_1\text{-ing}$ ' causally generates the

¹⁴ Since Goldman uses a very fine-grained approach to action individuation, it is *prima facie* difficult to establish an exact correspondence between his and the minimalist conceptual framework. It is a good approximation, however, to think that Davidson's coarse-grained notion of action roughly corresponds to what Goldman calls an "act tree," and that Goldman's concept of an act roughly corresponds to Davidson's concept of an action under a description.

¹⁵ In fact, it suffices that the designators in premise (6) (i.e. ' $[\varphi_1\text{-ing}]_{tok}$ ' and ' $[\text{causing of } E]_{tok}$ ') are rigid. If premise (5) is true, then ' $[\varphi_2\text{-ing}]_{tok}$ ' will be rigid as long as ' $[\text{causing of } E]_{tok}$ ' is rigid.

action under description ' $\text{causing of } E$ ' and so ' $\varphi_2\text{-ing}$ ', the latter designators will be non-rigid. For there will always be possible worlds where the action under description ' $\varphi_1\text{-ing}$ ' does not cause an E-like event. This is guaranteed by the fact that the causal relation between an action and its effects is contingent. It depends on the world's "cooperation." The stabbing will not be a killing unless Caesar's body cooperates in the right way (the stab wound is as deep as it actually is, Caesar's body is as vulnerable, etc.). The striking will not be a stabbing unless Caesar's body cooperates in the right way (Caesar remains in the same position, does not jump forward just after the strike, the dagger is not fake etc.). Moving more inward is unlikely to be of help. Even the trying to move of a body will not be a moving either unless the body cooperates in the right ways.

To see the point more generally, let us suppose that $\varphi_1\text{-ing}$ is a basic action type and, moreover, let us suppose for the purposes of the argument that ' $[\varphi_1\text{-ing}]_{tok}$ ' is a rigid designator, i.e. it picks out action a in all possible worlds. Given the set-up of the argument, and in particular the fact that $[\varphi_1\text{-ing}]_{tok}$ causes $[E]_{tok}$, the minimalists claim that we can pick out a by means of another designator ' $[\text{causing of } E]_{tok}$ '.

However, ' $[\text{causing of } E]_{tok}$ ' will *not* be a rigid designator. Its ability to pick out what ' $[\varphi_1\text{-ing}]_{tok}$ ' picks out, i.e. a , depends on the contingent presence of a causal relation between a and $[E]_{tok}$. So, ' $[\text{causing of } E]_{tok}$ ' picks out the same action as ' $[\varphi_1\text{-ing}]_{tok}$ ' not in all possible worlds but only in those where $[\varphi_1\text{-ing}]_{tok}$ causes $[E]_{tok}$.

The same is true about ' $[\varphi_2\text{-ing}]_{tok}$ '. Premise (5) requires that $[\varphi_2\text{-ing}]_{tok}$ co-occur with $[\text{causing of } E]_{tok}$ in all possible worlds. This means that ' $[\varphi_2\text{-ing}]_{tok}$ ' will likewise not be a rigid designator – it will pick out the same action as ' $[\varphi_1\text{-ing}]_{tok}$ ' not in all possible worlds but only in those where $[\varphi_1\text{-ing}]_{tok}$ causes $[E]_{tok}$.

The suggestion that Hendrickson's argument can show that the minimalist is committed to the causation being deterministic if we can find rigid designators to play the roles of ' $[\varphi_1\text{-ing}]_{tok}$ ' and ' $[\varphi_2\text{-ing}]_{tok}$ ', fails. This is because, as we have seen, the set-up of Hendrickson's argument guarantees that the latter designator is non-rigid. And it is only when both terms of an identity are rigid designators that the identity claim is

guaranteed to be necessary rather than contingent. It follows that the very set-up of Hendrickson's argument precludes the possibility that minimalists will accept (6).

B. Other Types of Generation?

This conclusion crucially depends on there being what Goldman calls the causal generation relation between the action under the description ' φ_1 -ing', on the one hand, and the action under the description ' φ_2 -ing' as well as the action under the description 'causing of E', on the other. It is because the action under the description ' φ_1 -ing' *causally generates*, for example, the action under the description ' φ_2 -ing' that the latter designator is non-rigid. The designator's ' $[\varphi_2\text{-ing}]_{\text{tok}}$ ' ability to pick out the same action as ' $[\varphi_1\text{-ing}]_{\text{tok}}$ ' depends on the presence of an appropriate causal relation between the action *a* and its effect. Since causal relations are contingent, ' $[\varphi_2\text{-ing}]_{\text{tok}}$ ' will be non-rigid.

One might further query whether perhaps in cases of other types of generation relations, one could try to reestablish the necessity claim. One might be skeptical at first because all of Goldman's generation relations depend on the presence of certain circumstances (causal in the case of causal generation, conventional in the case of conventional generation or, broadly, situational in the case of simple and augmentation generation). As long as it is the case that those additional circumstances *might* have been absent, the designator that picks out the generated action under a description will be non-rigid.

The decisive reason why this path of reinstating Hendrickson's argument will not succeed is that the argument is mute in all but cases of causal generation. After all, the conclusion of the argument is that the *causation*, which underlies the causal generation of an action under one description from an action under another description, has the property of being deterministic. But the relevant causal relations are presupposed only in the case of causal generation. There is no causal relation that could be argued to be deterministic by Hendrickson's argument in the cases of conventional, simple or augmentation generation.

C. Turning the Non-Rigid Designators into Rigid Designators

Let me consider one final way of trying to rescue Hendrickson's argument. For many non-rigid designators, it is possible to find their rigidified versions. The designator 'the tallest person in the world' is, as we said, non-rigid. It picks out different individuals in different possible worlds. However, the designator 'the tallest person in the actual world' is rigid. Let us suppose that John Smith is the tallest person in the actual world. There are worlds where John Smith is not the tallest person. In those worlds, the designator 'the tallest person in the world' will not refer to John Smith. However, the designator 'the tallest person in the actual world' *will* refer to John Smith even in worlds where John Smith is the shortest person in the world.¹⁶ In general, an appropriate link to the actual world can turn a non-rigid designator into a rigid designator. This can be done for the designators at work in Hendrickson's argument as well.

Let us suppose that ' $[\varphi_1\text{-ing}]_{\text{tok}}$ ' is a rigid designator and that it picks out action *a*. We have argued that ' $[\text{causing of E}]_{\text{tok}}$ ' will not be a rigid designator because, according to minimalism, it picks out action *a* not in all possible worlds but only in those where premise (7) of the argument is true, i.e., where ' $[\varphi_1\text{-ing}]_{\text{tok}}$ causes $[E]_{\text{tok}}$ '. But what if we rigidify the non-rigid designator ' $[\text{causing of E}]_{\text{tok}}$ ' by an appropriate mention of the actual world? In other words, let us try to replace the designator ' $[\text{causing of E}]_{\text{tok}}$ ' with the designator ' $[\text{causing of E in the actual world}]_{\text{tok}}$ '. Arguably, this new designator is rigid. It will pick out action *a* even in worlds where *a* does not cause $[E]_{\text{tok}}$.

Let us return to the concrete example, so that we can judge whether this rigidification can save the argument. For the sake of the argument, we will assume that the designator '[Brutus's stabbing of Caesar]_{tok}' is rigid, i.e. that it picks action *a* in all possible worlds.¹⁷ It can

¹⁶ On an indexical conception of actuality (Lewis 1973), the rigidified designator would have to include a proper name of the world.

¹⁷ We have seen reasons for thinking that this assumption is false. My reason for making the assumption is, first, that we have not seen a good example of a candidate for a rigid designator. Second, I will show that on the assumption that this designator is rigid, it can be shown that the strategy of forcing the other designators to be rigid by mentioning the actual world in an appropriate way, will not save the argument.

be shown that both premise (5) as well as the problematic premise (6) can be turned into unrestrictedly necessary identity claims.

Consider the reworked premise (6):

(6[@]) Necessarily, [Brutus's causing of Caesar's death in the actual world]_{tok} occurs iff [Brutus's stabbing of Caesar]_{tok} occurs.

Both designators are rigid. We have assumed for the sake of the argument that '[Brutus's stabbing of Caesar]_{tok}' is rigid and that it refers to *a*. Brutus's action *a* causes the death of Caesar in the actual world. According to the minimalists, *a* can be described as "Brutus's causing of Caesar's death" but it can also be described as "Brutus's causing of Caesar's death in the actual world."¹⁸ In fact, the latter designator will pick out *a* in all possible worlds in which *a* exists – it is thus also rigid. This means that in all possible worlds, *a* occurs iff [Brutus's causing of Caesar's death in the actual world]_{tok} occurs. By our assumption that '[Brutus's stabbing of Caesar]_{tok}' is a rigid designator and that it picks out *a* in all possible worlds, we also know that, in all possible worlds, *a* occurs iff [Brutus's stabbing of Caesar]_{tok} occurs. This means, however, that the minimalists are committed to the truth of (6[@]).

A very similar argument can be used to establish that minimalists are also committed to premise (5) with the rigidified designators:

(5[@]) Necessarily, [Brutus's killing of Caesar in the actual world]_{tok} occurs iff [Brutus's causing of Caesar's death in the actual world]_{tok} occurs.

This is because both designators pick out action *a* in all possible worlds, in which *a* exists.

It might thus look as if Hendrickson has finally got what is needed. But this is not so. The rigidification of the above designators will affect premise (8) in such a way that the minimalist will no longer be committed to this version of the premise:

(8^{D@}) In all possible worlds, if [Brutus's killing of Caesar in the actual world]_{tok} occurs, it causes some event token of [Caesar's death] type.

The rigid designator '[Brutus's killing of Caesar in the actual world]_{tok}' picks out action *a* in all possible worlds in which *a* exists. In particular, it picks out *a* even in worlds where *a* does not cause the death of Caesar. So, there are possible worlds where Brutus's action *a*, which is a killing of Caesar in the actual world, does not cause Caesar's death. This means that the minimalists are not committed to (8^{D@}).

In conclusion, this final attempt to force an interpretation of the designators in the argument as rigid, shows that problems appear at yet other junctures in the argument. This failure further supports the view that Hendrickson's argument does not show the minimalist to be committed to the objectionable view about causation.

V. CONCLUSION

Hendrickson has put forward an interesting argument that there is a tension between the minimalist approach to the individuation of actions and the possibility that causal relations are indeterministic rather than deterministic in character.

The problem with the argument (under Interpretation N) is that it attributes to the minimalist a claim that they do not hold, viz. that the controversial identity claims they hold (e.g. that Brutus's stabbing of Caesar is Brutus's killing of Caesar) are necessary rather than contingent. This misattribution turns out to be destructive to the argument. We have investigated two strategies of trying to save it. One strategy is to adopt Interpretation X (§III.C), which consists in weakening the modal operators in such a way that the controversial identity claim could be said to be necessary (in a relevant sense). The consequence of this move, however, is that one weakens the conclusion to such an extent that the commitment to "deterministic" causation loses all of its metaphysical power. Any type of indeterministic causation can be shown to be "deterministic" in the sense engendered by such moves. Another strategy of saving the argument (§IV)

¹⁸ Let us only consider minimalists who would subscribe to possible-world semantics.

is to retain Interpretation N but to try to find such descriptions of an action, for which the minimalist would be committed to a necessary rather than a contingent identity claim. I have argued, however, that the very set-up of Hendrickson's argument prevents the application of this sort of remedy.

Although I have ultimately defended minimalism from Hendrickson-style arguments, my intention was not to offer a defense of minimalism. I have argued that minimalists are not committed to deterministic causation. This in no way changes their dialectical situation vis a vis moderationism in particular. It might look like we have learned nothing from Hendrickson's argument. While it is true that Hendrickson has not succeeded in demonstrating that minimalists are committed to any objectionable theses about causation, his argument is of interest precisely because it tries to extend the debate into yet unexplored territory. Minimalism is a well explored and relatively stable position, but it does conflict with many people's intuitions. The project of trying to explore the theoretical commitments of minimalism, of which Hendrickson's argument is a fragment, is thus clearly valuable. If the objectors to minimalism are right, it will bring forward new positive results in the end.¹⁹

APPENDIX

Hendrickson begins by defining X-worlds in the following way:

- (X) For every possible world w , w is an X-world iff:
- (X1) "Brutus kills Caesar by stabbing him" is true in w
- (X2) there is only one event token of [killing-B-C] type in w
- (X3) there is only one event token of [stabbing-B-C] type in w
- (X4) there is only one event token of [death-C] type in w
- (X5) there is only one event token of [causing-death-B-C] type in w

Hendrickson adopts the following convention:

¹⁹ I want to thank two anonymous reviewers for their insightful and constructive critique of the first draft of the paper. I would also like to thank Prof. M. DePaul for creating such a respectful and dignified publication environment. The work on the project has been supported by an NCN grant (DEC-2012/05/B/HS1/02949).

whenever "Brutus's killing Caesar" or "Brutus's stabbing Caesar" are used with no reference to "the event type" or "the specific token event," this indicates all token events of the relevant type that obtain in an X-world. (pp. 121-122)

There are some problems with understanding this claim. In the same paragraph on p. 121 (above the cited passage), Hendrickson has just defined X-worlds as worlds where *unique* event tokens of the relevant types occur, so the quantifier 'all', which appears in this passage and which is naturally interpreted as ranging over event tokens (since the quantifier phrase is "all token events of the relevant type that obtain in an X-world"), would always pick out just one event. Alternatively, the universal quantifier could be understood as ranging over all X-worlds so that the sentence "'Brutus's stabbing of Caesar' obtains" is an abbreviation of "'Brutus's stabbing of Caesar' obtains in all X-worlds." Interpretation N and X (§III.B-§III.C) are close to the first reading, where one interprets such uses as designating a particular event in the actual world (which is one of the X-worlds). In what follows, I will reconstruct the premises not as particular statements about particular events in the actual world (as I did in case of Interpretation N and X) but as universal statements about all X-worlds (Interpretation G). It should be stressed, however, that Interpretation G does nothing to alleviate the problems with the argument.

Hendrickson emphasizes that:

All identity claims refer *only* to events that obtain in the same X-world. So, if it is said that "'Brutus's killing [of] Caesar" is identical to 'Brutus's stabbing of Caesar,'" then that means every token instance of the event-type "Brutus's killing of Caesar" that obtains in an X-world is identical to the token instance of the event type "Brutus's stabbing of Caesar" that obtains *in that same X-world*. (p. 122)

This claim seems to support Interpretation X. Indeed, as we will see shortly, this is how Hendrickson understands premises (5)-(7), where he intends to be talking about X-worlds. It is with premise (8), and then (9), that he imperceptibly switches from talking about all X-worlds to talking about all possible worlds. All the time he uses the word 'necessarily' as if it had the same meaning.

What follows is a reconstruction of the argument. Claims of the form “(H#)” are quotations from Hendrickson’s paper (pp. 122-123), where ‘#’ should be replaced with the number of the premise. Hendrickson formulates the argument using propositional names p, q, r , etc. I have put the propositions that the propositional names refer to in ordinary parentheses in premises where just a propositional name occurs. Below Hendrickson’s formulation of a premise, I have put forward a reconstruction of the premise in light of Interpretation G.

- (H1) p (“Brutus’s killing of Caesar” obtains)
 G1: For every X-world w , there is an event e_x and e_x is of [killing-B-C] type in w .
- (H2) q (“Brutus’s causation of the death of Caesar” obtains)
 G2: For every X-world w , there is an event e_x and e_x is of [causing-death-B-C] type in w .
- (H3) r (“Brutus’s stabbing of Caesar” obtains)
 G3: For every X-world w , there is an event e_x and e_x is of [stabbing-B-C] type in w .
- (H4) s (“The death of Caesar” obtains)
 G4: For every X-world w , there is an event e_x and e_x is of [death-C] type in w .

It should be noted that under Interpretation G premises (H1)-(H4) simply follow from the definition of an X-world (X). (H1) follows from (X) in virtue of condition (X2), (H2) follows from (X) in virtue of condition (X5), etc. While the first four premises were actually omitted from the interpretations of the argument proposed in the text (see notes 4 and 6, for explanation of the omissions), it may be useful to formulate them here so that it is clear what the contrast between those interpretations and Interpretation G of the premises is:

- (H1)_{N,X} [killing-B-C]_{tok} occurs
 (H2)_{N,X} [causing-death-B-C]_{tok} occurs
 (H3)_{N,X} [stabbing-B-C]_{tok} occurs
 (H4)_{N,X} [death-C]_{tok} occurs

Notably, premises (H1)_{N,X}-(H4)_{N,X} do not follow from the definition of X-worlds. This is one of the reasons why Interpretations N and X are more natural than Interpretation G.

- (H5) Necessarily ($p \equiv q$)
 G5: For every X-world w , for every event e_x , e_x is of [killing-B-C] type in w iff e_x is of [causing-death-B-C] type in w .
- (H6) Necessarily ($q \equiv r$)
 G6: For every X-world w , for every event e_x , e_x is of [causing-death-B-C] type in w iff e_x is of [stabbing-B-C] type in w .
- (H7) t (“Brutus’s stabbing of Caesar” causes “The death of Caesar”)
 G7: For every X-world w , for every event e_x , for every event e_y , if e_x is of [stabbing-B-C] type in w and e_y is of [death-C] type in w then e_x causes e_y in w .
- (H8) Necessarily ($p \rightarrow s^*$) (where s^* is the proposition that an event of the type “the death of Caesar” obtains)
 G8: For every possible world [For every X-world?] w , for every e_x , if e_x is of [killing-B-C] type in w then there is an event e_y such that e_y is of [death-C] type in w .

It is in premise (H8) that Hendrickson’s interpretation of the modal operator seems to waver. He has said that whenever he talks about the proposition “Brutus’ killing of Caesar” obtaining, he means all event tokens of [killing-B-C] type in all X-worlds. However, in the justification of premise (H8), he says:

[(H8)] asserts that the proposition “*Brutus’s killing of Caesar*” obtains entails the proposition *an event of the type “the death of Caesar” obtains* [original emphases]. That just means it is *logically impossible* [emphases added] for Brutus to kill Caesar and Caesar not die. (p. 123)

This is the point where the intention behind (H8) is better captured by Interpretation N of the argument. Since Hendrickson explicitly talks about “logical impossibility,” he thereby drops his own convention. He changes the meaning of the necessity operator: he ceases talking about X-worlds and starts talking about all possible worlds.

He continues to do so in premise (H9):

(H9) Necessarily $[(r \ \& \ s \ \& \ t \ \& \ \text{Necessarily } (r \rightarrow s^*)) \rightarrow u]$
(where u is the proposition that “Brutus’s stabbing of Caesar” deterministically causes “the death of Caesar”)

G9: For every possible world [for every X-world?] w' , if:

[r] for every X-world w , there is an event e_x and e_x is of [stabbing-B-C] type in w ,

[s] for every X-world w , there is an event e_x and e_x is of [death-C] type in w ,

[t] for every X-world w , for every event e_x , for every event e_y , if e_x is of [stabbing-B-C] type in w and e_y is of [death-C] type in w then e_x causes e_y in w ,

[necessarily $(r \rightarrow s^*)$] for every possible world [for every X-world?] w , for every e_x , if e_x is of [stabbing-B-C] type in w then there is an event e_y such that e_y is of [death-C] type in w ,

then:

[u] for every X-world w , for every e_x , if e_x is of [stabbing-B-C] type in w then there is an event e_y such that e_y is of [death-C] type in w and e_x causes e_y deterministically.

Already this rendition of the condition shows that the problem that affected (H8), where the interpretation of the necessity operator was switched from a restricted interpretation to an unrestricted interpretation, also affects premise (H9). Hendrickson takes his formulation of (H9) to be an instantiation of the general condition, which he formulates thus:

y deterministically causes z if y occurs, z occurs, y causes z , and “ y occurs” entails “a z -like event occurs.” (p. 123)

If we read (H9) in light of this general condition then surely there is no reason to restrict the entailment to the class of X-worlds. So again Interpretation N seems to be the closest to Hendrickson’s interpretation of premise (H9). The fact that he finds the premise to be just obvious (he says that it “can be accepted without reservation,” p. 124) supports this interpretation further.

The remainder of the argument consists in working through the formalism, which, as we saw, would be valid if the necessity operator did not change meaning midstream.

BIBLIOGRAPHY

- Davidson, Donald. 1980a [1971]. “Agency.” Reprinted in *Essays on Actions and Events*. Oxford: Clarendon Press, 43-61.
- 1980b [1969]. “The Individuation of Events.” Reprinted in *Essays on Actions and Events*. Oxford: Clarendon Press, 163-180.
- Feinberg, Joel. 1968 [1965]. Action and Responsibility. Reprinted in: *The Philosophy of Action*, ed. A.R. White. Oxford: Oxford University Press, 95-119.
- Ginet, Carl. 1990. *On Action*. Cambridge: Cambridge University Press.
- Goldman, Alvin I. 1970. *A Theory of Human Action*. Englewood Cliffs, NJ: Prentice-Hall.
- Hendrickson, Noel. 2003. “A New Argument for a Fine-Grained Theory of Action.” *American Philosophical Quarterly* 40: 119-130.
- Hornsby, Jennifer. 1980. *Actions*. London: Routledge & Kegan Paul.
- Kripke, Saul. 1971. “Identity and Necessity.” In *Identity and Individuation*, ed. M.K. Munitz. New York: New York University Press, 162-191.
- Lewis, David K. 1973. *Counterfactuals*. Cambridge, MA: Harvard University Press.
- Pietroski, Paul M. 2000. *Causing Actions*. Oxford: Oxford University Press.
- Thalberg, Irving. 1972. *Enigmas of Agency. Studies in the Philosophy of Human Action*. London: George Allen & Unwin.
- 1977. *Perception, Emotion, and Action*. Oxford: Basil Blackwell.
- Thomson, J.J. 1977. *Acts and Other Events*. Ithaca, NY: Cornell University Press.