

Movers and Makers

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PhD Philosophy

I, Vanessa Carr, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

For Gran and Granpino

[C]ould our snark perhaps have been a boojum?

— Baier.¹

¹ Baier 1971, p. 170.

Abstract

Human beings, and various other beings, are agents, such that we can act. We can move things, for example, and we can make things. When we act, changes and states of the world come about, and they come about as a result of our acting. When we move something, a movement comes about, along with new locational states of the moved object. When we make something, an object's coming-into-existence comes about, along with new states of that newly-made object. We bear a particular kind of responsibility for those changes and states that come about in this sort of way. I call the kind of responsibility that we have for those changes and states that come about as a result of our actions: *agential responsibility*.

But what more can be said about what it is to be agentially responsible for a change or states of the world? That is the question that this thesis addresses. It is argued here that, contrary to a favoured view, it is not an essential part of what it is to be agentially responsible for a change or state that the agent causes that change or state. It is put forward that agential responsibility is, instead, a primitive form of responsibility, independent of *causal* responsibility. The concept of *agential responsibility*, along with the concepts of *agency* and *action*, is a primitive concept, not to be elucidated in non-agential terms. What can be said is simply that for a change or state to be such that one is agentially responsible for it is for its coming about to be explained in terms of one's acting. I argue to this conclusion over seven chapters.

Impact Statement

This thesis presents several novel contributions, within a variety of topics in contemporary analytic philosophy. These include the metaphysics of action, causation, and abstracta. In addition, my thesis illustrates how these various topics, which are most usually discussed independently of one another, can, and should, inform one another.

This thesis also engages with work outside of contemporary analytic philosophy, including work in each of the following disciplines: ancient philosophy, medieval philosophy, early modern philosophy, continental philosophy, psychology, neuroscience, physiology, and linguistics. As such, this thesis offers insight that is of significance for a broader audience than simply those academics working in contemporary analytic philosophy.

I hope, then, that this thesis reflects and encourages valuable interdisciplinary engagement, between disparate areas of philosophy, and between philosophy and the human sciences.

Acknowledgements

It is hard to believe that this project has finally come to some kind of completion. As I'm sure is common, there were long stretches when I was doubtful that completion of any kind would ever be reached, and awareness of the commonness of that feeling was cold comfort. That I did manage to reach this point is down to the support of many wonderful people. I was very reluctant to lean on others in the way that I found myself needing to, and I am hugely grateful to those who met this need.

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Introduction

It is a basic fact about man, about his ‘natural history,’ that *he can act*, do various things... Perhaps we should call the fact that men can perform actions a ‘mystery’—in the sense that it is something basic which defies explanation. At least, I cannot imagine what an ‘explanation’ of this fact would conceivably look like. We can wonder at this mystery—as we may wonder at the fact that man *can know* things or that *there is* an external world. It is interesting to note that wonder of this type can be both the starting point and the end station of philosophical inquiry.

— von Wright.²

The Question and Answer

Human beings, and various other beings, are agents, such that we can act. We can do various things. We can move things, for example, and we can make things. When we act, changes and states of the world come about as a result of our acting. We bear a particular kind of responsibility for those changes and states that come about in this sort of way. Consider, for example, the change that is one’s arm moving, when it results from one’s action of moving it. Or the change that is a poem’s coming-into-existence, when it results from one’s action of writing a poem. Each of these changes is a product of one’s *agency*. We can be said to be *agents* of both our actions, and those changes and states that result from our actions. Whatever else we might say about the particular kind of responsibility we have for the results of our action, we can name it: *agential responsibility*. To be an agent of some change or state in the world that results from one’s action just is to be agentially responsible for it.

But what more can be said about what it is to be agentially responsible for such a change or state of the world? This is the question that this thesis addresses. And

² von Wright 1989, p. 809.

the thesis constitutes an argument for one answer to this question, over certain other answers that have been favoured in the literature. It is argued here that it is not an essential part of what it is to be agentially responsible for a change or state that the agent causes that change or state. Agential responsibility is suggested to instead be a primitive form of responsibility, independent of causal responsibility. The concept of *agential responsibility*, along with the concepts of *agency* and *action*, is a primitive concept, not to be elucidated in purely non-agential terms. What can be said is simply that for a change or state to be such that one is agentially responsible for it is for its coming about to be explicable in terms of one's acting.

The Roadmap

I reach the conclusion that agential responsibility is primitive by way of the following stages:

Chapter 1 is a ground-clearing chapter, in which I do two things. First, I say more to clarify the notions of 'action' and 'results of action' that I have employed in characterising the question at the centre of the thesis. This clarification indicates the topic that is here under consideration. And, in clarifying these notions, I defend the proposal that there is a narrow sense of 'action', as well as a broad sense, since the topic that is here under consideration is responsibility for changes and states that are results of actions on a narrow sense of 'action'. Second, I outline the pre-existing nature of the debate in the literature regarding the nature of action and agency. I identify problems with several kinds of theories of action in terms of causation by events or states (event/state-causal theories of action). These problems have prompted a rejection of such theories in favour of theories of action in terms of causation by the agent that does not reduce to causation by either events or states (agent-causal theories of action). I outline the various kinds of agent-causal theories of action in the literature.

The rest of thesis amounts to an evaluation of the prospects of agent-causal theories of action and the theories of agential responsibility that they imply. I argue that agent-causal theories of action fail. And, given the nature of this failure, I propose that *action*, *agency*, and *agential responsibility* are primitive concepts.

However, it is often supposed that agent-causal theories of action cannot be correct on account of their appeal to causation by agents that does not reduce to causation by events or states (irreducible agent-causation); it is supposed that there is no irreducible agent-causation. And, in Chapter 2, I argue that the appeal to irreducible agent-causation is *not* what is defective in agent-causal theories of action. I begin by defending the possibility of causation by *objects* that does not reduce to either causation by events or causation by states. I then go on to defend the possibility of causation by *macrophysical composite objects*, such as *animate agents*, from the charge that if any entities cause effects it is only the entities of fundamental physics, which do not include macrophysical composite objects.

Then, in Chapter 3, I begin one argument for what I take to be the true problem with agent-causal theories of action. Here I make the case, against a number of agent-causal theorists, that actions are events, on a broadly Davidsonian conception of events. As well as presenting the argument for such an ontology of action, I defend both the argument and the ontology itself from various objections that have been put forward by agent-causal theorists and others.

The major significance of the event-ontology of action for agent-causal theories of action is brought out in Chapter 4. Here I maintain that there is no plausible way of combining the event-ontology of action that is defended in Chapter 3 with an account of action as a causing by the agent of its results. Attempts to do so present a picture of action on which the embodied agent is implausibly alienated from the bodily movements and mental experiences that result from their bodily and mental actions. I argue that this alienation is avoided only if *basic* actions are identified with their resulting changes; and this cannot be accommodated by

accounts of actions as causings of results. By contrast, actions whose results are *external* to the body, as well as *non-basic* bodily and mental actions, are not to be identified with their resulting changes. In making my case for this, I defend the existence of basic actions, in some, newly defined, sense of ‘basic’. And I defend my proposal from two kinds of objections.

In Chapter 5, I turn my focus towards arguments for an agent-causal theory of action that have been put forward by Hornsby (2011), and are more widely endorsed. These arguments appeal to the meanings of the transitive verbs that we use to describe action. I oppose the interpretation of such verbs that these arguments appeal to, and suggest that where this alone does not undermine the argument for an agent-causal theory of action, the argument fails elsewhere. I conclude then that agent-causal theories of action are poorly motivated, leaving the view that the concept of *agential responsibility* is primitive a viable and attractive alternative.

Finally, I argue that consideration of kinds of action that are rarely considered in action-theory reveals the full inadequacy of any account of action on which causation of the results of actions is necessary for action. The kinds of action in question are those of creating and changing what I call *abstract artefacts*. These entities are abstract in the sense that they can each have multiple concrete instances and they can exist without having any concrete instances; they are artefacts in the sense that they are created by human agents. And as well as being created by human agents, they can be changed by them. In Chapter 6 I defend the existence of changeable abstract artefacts.

Then, in Chapter 7, I present my argument for the claim that in at least certain acts of creating or changing abstract artefacts, there are action-results that are caused neither by the action nor by the agent, and are instead *non-causally determined* by the agent’s action. In building this argument, I oppose the sufficiency of counterfactual dependence for causation, and put forward a further necessary condition for causation. I maintain that the relationships between

agents and their actions on the one hand, and the results of their creating or changing an abstract artefact on the other hand, do not always satisfy this further necessary condition for causation. And I address the likely response that while I may talk in terms of non-causal determination, we could instead talk in terms of a broader, or distinctive form of causation, as some agent-causal theorists of action do. I maintain that appealing to a broader, or distinctive, form of causation will not rescue agent-causal theories of action or agential responsibility.

I conclude by summarising my argument against understanding agential responsibility just in terms of causation by the agent of the results of their actions. But I also here put forward the suggestion that rather than suppose that there is a disjunctive reductive analysis of agential responsibility to be had, we should conclude that *agential responsibility*, along with *action* and *agency*, is conceptually primitive.

1. The Notions and the Background

In this first, ground-clearing, chapter, I do two things. First, I try to clarify the relevant notions of ‘action’ and ‘results of action’ (§1.1). This clarification should make clear the topic that is under consideration in this thesis. In clarifying the relevant notion of ‘action’, I defend the proposal that there is a narrow sense of ‘action’, as well as a broad sense, since the topic that is here under consideration is responsibility for changes and states that are results of actions on a narrow sense of ‘action’. Second, I outline the pre-existing nature of the debate in the literature regarding the nature of action and agency (§1.2). Here, I identify problems with several kinds of theories of action in terms of causation by events or states (event/state-causal theories of action). These problems have prompted a rejection of such theories in favour of theories of action in terms of causation by the agent that does not reduce to causation by either events or states (agent-causal theories of action). I outline the various kinds of agent-causal theories of action that have been endorsed in the literature.

1.1 The Notions

In this section I seek to make clear the sense of ‘action’ and ‘result of action’ that I have in mind in my concern with regards to what it is to be agentially responsible for the results of our actions. I begin by identifying the sense of ‘action’ that I have in mind, but in identifying that sense I appeal to the notion of action that is intentional under some description. So, I go on to identify some necessary features of action that is intentional under some description, and defend those features as necessary. I then defend the idea that the sense of ‘action’ that is my focus is just one of multiple senses of the term, by way of appealing to what is known as the *Accordion Effect*. I maintain that there is a narrower sense and a broader sense, and that the sense that is my focus is the narrower sense. Having done so, I identify the sense of ‘result of action’ that I have in mind. And, finally,

I defend the claim that the sense of ‘action’ that is my focus, rather than any other, is the narrower sense that corresponds with the Accordion Effect.

1.1.1 The Sense of ‘Action’

Although it may well be trivial, it may, nonetheless, be worth beginning by articulating that an action of agent A takes place just in case A acts. To put this schematically, and more precisely, there is an action of ϕ -ing by A iff A ϕ s. That is, there is an action of writing by Ann iff Ann writes, and there is a completing of her novel by Ann iff Ann completes her novel. We don’t often explicitly talk in terms of actions, outside the philosophy seminar room. We instead talk more commonly just in terms of agents acting: ‘Ann wrote for an hour today’, ‘Ann completed her novel’ are certainly more standard locutions than ‘there was a(n action of) writing (by Ann) today’ and ‘there was a(n action of) completing her novel (by Ann)’.

I won’t, for the moment at least, assume or defend any particular ontology of actions, since the ontology of actions is a contentious issue (see Alvarez and Hyman 1998, pp. 224-8), and one upon which my argument for the independence of agential responsibility from causal responsibility hangs. But it can and should be noted that the options for a plausible ontology of actions are limited to those that make sense of action taking place, or occurring, at particular spatial and temporal locations (allowing that the boundaries of these locations might be only vaguely specifiable; see *ibid.*, p. 219).

Consistent with my currently remaining silent on the particular ontology of actions, I remain silent too, for now, on the precise nature of relationship between actions that take place when an agent acts in some way — they ϕ , let us say — and *by* ϕ -ing the agent acts in some other way: they Ψ . But it should be noted that such actions are commonplace. It would be unremarkable, for example, if

Ann completed her novel by writing every day for six months, if I broke the vase by waving my arms around, or if by saying “I do” Bea completed her marriage rites. In such cases there is an action of ϕ -ing and an action of ψ -ing, where the agent ψ s by ϕ -ing. I remain silent, for now, on whether the actions of ϕ -ing and ψ -ing in such cases must stand in some relation of identity, causation, or something else. The question of what relation is required here is bound up with the question of what kinds of entities actions are.

Despite remaining silent on a couple of matters then, it has at least been clarified that (a) there is an action of ϕ -ing by agent A iff A ϕ s, (b) actions take place at particular spatial and temporal locations, and (c) that there are actions of ϕ -ing where an agent A ψ s by ϕ -ing, such that there is also an action of ψ -ing by A. I add to this now by identifying that I am concerned here with action in the sense that if an agent acts, necessarily there is an *intentional* action by the agent. This is not to maintain that all actions, in the sense of ‘action’ of concern here, are intentional, however. It will be a conclusion reached in a later chapter that in fact all actions are intentional, but it won’t be assumed or argued for just yet. Instead, it is simply maintained here that if an agent A ψ s, then either their action of ψ -ing is intentional, or they ψ by ϕ -ing, and their action of ϕ -ing is intentional. Now, that there is a non-technical sense of ‘action’ on which this is true is controversial; this controversy will be attended to shortly, after first elaborating on the notion of intentionality, and indicating why I stated that I am concerned here with action only in *some sense of* ‘action’.

While I have above spoken of actions as intentional or not, this should, strictly speaking, be understood as loose talk. For on a number of theories of the relation between actions of ϕ -ing and ψ -ing where the the agent ψ s by ϕ -ing, an action may be intentional *under some description(s)* of the action but not under other descriptions (see Davidson 2001b; Anscombe 1979, 2000). Consider the

following example that Davidson presents: he intentionally spills the contents of his cup, mistakenly thinking that it is tea when it is, in fact, coffee (2001b, p. 45). Because of this mistake, it would seem to be inappropriate to hold that Davidson intentionally spilt coffee. Yet, if we suppose that there is one action here that can both be described as Davidson's spilling the contents of his cup, and as his spilling coffee, the action is intentional under the description 'spilling the contents of his cup', although unintentional under the distinct description: 'spilling coffee'. So, rather than speaking of actions as intentional or not, we should, speaking more strictly, speak of actions as intentional under some description or not. Admittedly, this might be otiose on some theories of the relation between actions of ϕ -ing and ψ -ing where the the agent ψ s by ϕ -ing, where such actions are always distinct, so that an action only has a single appropriate description (see Goldman 1970). On such theories what is intentional under some description is intentional under its only appropriate description, and so might be said to be intentional *simpliciter*. Nonetheless, even here the notion of being 'intentional under some description' clearly has application.

In that case then, the claim made above that if an agent acts, necessarily there is an *intentional* action by the agent, should be made more precise as follows: if an agent A ψ s, then either their action of ψ -ing is intentional *under some description*, or they ψ by ϕ -ing, and their action of ϕ -ing is intentional *under some description*. Hereafter, however, I will continue to sometimes speak loosely in terms of actions as intentional, but meaning always 'actions that are intentional under some description'. But what then is it for an action to be intentional under some description?

1.1.2 Action that is Intentional Under Some Description

An action of ϕ -ing by A that is intentional under the description ' ϕ -ing' is, at the very least, one where A ϕ s either for its own sake — for the sake of ϕ -ing — or

for the sake of Ψ -ing, where Φ -ing seems to A to be a way of Ψ -ing, or conducive to Ψ -ing. So, returning to Davidson's case of coffee-spilling, since the action was intentional under the description 'spilling the contents of his cup', Davidson can be said to have spilt the contents of his cup for the sake of something, perhaps for the sake of getting somebody's attention. And that for the sake of which an agent intentionally acts can be said to be the agent's goal in action, and the object of the agent's intention in acting. In that case, getting somebody's attention can then be said to have been Davidson's goal in spilling the contents of his cup.

Acting intentionally then essentially involves a goal-directed agent; it is, in other words, essentially teleological.³ But, intentional action is often itself characterised as goal-directed, rather than simply implicating a goal-directed agent (-insert citation-). And this is, I think, harmless if the goal-directedness of intentional action is understood as derivative of, and therefore requiring, the goal-directedness of the agent, where the goal of the action is the goal of the agent in so acting, and the action can be said to take place *because* the agent is directed towards that goal. It should also be noted that the goal towards which the agent is directed in acting intentionally, is itself action under some intentional description: Φ -ing or Ψ -ing. The goal is then some action undertaken by a goal-directed agent; it is "of a form such that the world can only come to conform to that content insofar as it not only comes *to be* in a certain way, but does so as the outcome of a goal-directed process guided by the agent" (Boyle and Lavin 2010, p. 173).

But more can be said about what it is for an action to be intentional under some description than simply that the agent of such an action is goal-directed in the manner outlined above. In characterising something as done intentionally, one seems to rule out that it was done in ignorance: one knows what one is doing

³ There are, of course, theorists who suppose that such teleology must be reduced to non-teleological efficient causation. But importantly such contentions do not challenge the teleological nature of intentional action, only claims to its irreducibility.

when one is doing something intentionally, and they know at least part of *why* they are doing it. In characterising someone as doing something intentionally one attributes to the agent a control over what they are doing which requires knowledge both of what they are doing, and at least some part of the reason why they are doing that, i.e. some goal for the sake of which they are acting.

So one seems to have some awareness of what one is doing intentionally, and of why one is doing it. We can transform this casual observation into a necessary condition for action that is intentional under some description: if an action of ϕ -ing by A is intentional under the description ' ϕ -ing' then, while A's action of ϕ -ing is underway, A (i) knows they are ϕ -ing; and (ii) knows that ϕ -ing is a goal of theirs (final or instrumental).⁴ But it is left open whether or not the agent has knowledge of further goals for the sake of which they are acting. The knowledge that the agent does have of what they are doing and why is characterised by Anscombe as "practical knowledge" (Anscombe 2001, p. 57).⁵ And it is this knowledge which gives the certain sense of the question "Why?" ("Why did you ϕ ?") such that it has application to all and only intentional actions. Accordingly, the question is refused application when an agent answers it with "I was not aware I was doing that" (ibid. p. 11), and where an agent answers it with "I don't know why I did it", 'the question 'Why?' has and yet has not application; it has application in the sense that it is admitted as an appropriate question; it lacks it in the sense that the answer is that there is no answer' (ibid. p. 26).

However, it has been argued famously by Davidson, that in fact one need not have knowledge that is one is ϕ -ing even when one's action of ϕ -ing is

⁴ Similarly, Hampshire asserted that "doing something ... intentionally ... entails knowing what one is doing." (1959, p. 102). Moreover, Hampshire suggests that one always knows the contents of one's intentions (ibid., pp. 102-3) — a stronger condition than that given above as (ii).

⁵ Anscombe of course also characterises this as knowledge without observation (p. 13), but I will not here go into the complex debate over what this amounts to and whether it is possible (see e.g. Pickard 2004; McDowell 2011a; Haddock 2011; and Setiya 2011).

intentional under the description ‘ ϕ -ing’. Or, as Davidson puts it: “It is a mistake to suppose that if an agent is doing something intentionally, he must know that he is doing it” (2001d, p. 91). Davidson maintains, that instead one need only have knowledge of what one is doing *under some description or other*. Davidson presents the following as a purported counterexample to the stronger knowledge requirement:

[I]n writing heavily on this page I may be intending to produce ten legible carbon copies. I do not know, or believe with any confidence that I am succeeding. But if I am producing ten legible carbon copies, I am certainly doing it intentionally.

(ibid., p. 92).

The thought here seems to be that insofar as one does not know that one is succeeding at producing ten legible carbon copies, one does not know that one is producing ten legible carbon copies at all, even if one is in fact producing ten legible copies (successfully). This, presumably, derives from a more general principle that agent A does not know that they are ϕ -ing if A does not know that they are succeeding at ϕ -ing. This principle is one that we should reject, however. Consider first, that an agent may well be ϕ -ing without succeeding at ϕ -ing. Then, if one can be ϕ -ing while not succeeding at ϕ -ing, why should knowledge that one is ϕ -ing be conditional on knowledge that one is succeeding at ϕ -ing?

That an agent may well be ϕ -ing without succeeding at ϕ -ing can be appreciated by looking to the following example presented by Anscombe:

Someone without eyes may go on writing with a pen that has no more ink in it; or may not realise he is going over the edge of the paper on to the table or overwriting lines already written ...

(Anscombe 2000, p. 53).

In this case, when the relevant agent continues writing without any ink in their pen, they can be said to be writing, although they certainly are not, at this point,

writing successfully. And in this case, it similarly can be said that the agent *knows* that they are writing, although since they are not writing successfully they certainly cannot be said to know that they are writing successfully.

That an agent may well be ϕ -ing without succeeding at ϕ -ing can be understood as an extension of the phenomenon that generates the so-called “imperfective paradox”: that one may be ϕ -ing without it ever being the case that one ϕ -ed; one may, that is, be ϕ -ing without ever successfully *completing* one’s ϕ -ing (for discussion of this and the “imperfective paradox” see e.g. Dowty 1979, p. 133).⁶ The classic example used to illustrate this phenomenon, is that one might be crossing the road and yet never make it to the other side, on account of getting hit by a bus. One might well, then, be crossing the road without it ever being the case that one crossed the road. In such a case it is clear that one can know that one is crossing the road without knowing that one will successfully cross the road.

Returning then to the case of the carbon copier, it should be clear that the agent can be said to know that they are producing ten legible carbon copies even if they do not know that they will end up having successfully produced ten legible carbon copies. Moreover, the agent can be said to know that they are they are

⁶ Perhaps to be succeeding at ϕ -ing is just to be successfully completing one’s ϕ -ing, such that it ends up that one has ϕ -ed. However, it does seem that one can be said to be succeeding at ϕ -ing, while leaving open that one does not end up having ϕ -ed. Ann might be said to be succeeding at crossing the road because she has got herself half way across the road, and yet Ann never ends up getting all the way across the road and so she does not end up having crossed the road.

It may well be the case that when Davidson wrote “I do not know ... that I am succeeding” at producing ten legible carbon copies he had in mind that the agent in the example does not know that they are going to end up having produced ten legible carbon copies. But, it is more understandable that one might reject the claim that one may be ϕ -ing even if one is not succeeding at ϕ -ing, than that one might reject the claim that one may be ϕ -ing even if one does not end up having ϕ -ed (the imperfective paradox). For perhaps one might deny (mistakenly) that the agent who is not succeeding at writing is writing nonetheless, but one will certainly not deny the imperfective paradox. And so, in that case, the principle that if one knows that one is ϕ -ing then one knows that one is succeeding at ϕ -ing has more plausibility if succeeding at ϕ -ing is not taken to imply that one ends up having ϕ -ed.

producing ten legible carbon copies even if they do not know that they are succeeding at all, mid-attempt for example. And so, we can and should hold that insofar as the carbon copier is intentionally producing ten legible carbon copies, they do in fact know that they producing ten legible carbon copies, even if they do not know either that they are going to complete the task, or that they are succeeding. In that case then, Davidson does not succeed in undermining the intuitive position that one knows what one is doing intentionally.⁷ And once again, this should be put more precisely as follows: if an action of ϕ -ing by A is intentional under the description ‘ ϕ -ing’ then A knows they are ϕ -ing while their action of ϕ -ing is underway.

Such knowledge of what one is doing is then, along with knowledge why one is doing it is, and goal-directedness of the agent in acting, a necessary condition for action that is intentional under some description. And these conditions are at least helpful to reveal what the *intentionality* of action that is intentional under some description amounts to. Now, before moving on to consider the matter of there being multiple senses of ‘action’ — which will also help to reveal what the “action-ness” of action that is intentional under some description amounts to — it should be noted that action that is intentional under some description, with the

⁷ My suggestion here was developed from consideration of the response that Thompson has given to Davidson’s purported counter-example:

[T]he more ordinary case is like this: you write on the top sheet, trying to make a good impression to get through all the carbon, then look to see if your impression made it through to all of them. If it did, you stop. If it didn’t, you remove the last properly impressed sheet and begin again. If necessary, you repeat. Even the man who has to go through five stages is all along, from the first feeble impression, making ten copies of the document, and he knows it, all along.

(Thompson 2011, p. 210).

In this version of the case, it is clear that the man who has to go through five stages is, even at the first stage, knowingly producing ten legible carbon copies. And at this stage, if he has only produced one feeble impression, it may well not be appropriate to characterise the man as *succeeding* at producing ten legible carbon copies. It is certainly not appropriate to characterise the man as being such that he will end up having produced ten legible carbon copies, for he may well, for all we know, end up being interrupted and prevented from completing his task.

necessary conditions for this that I have outlined, is not necessarily restricted to human beings. Anscombe plausibly suggests that a cat stalking a bird acts intentionally in doing so, for example (see p. 86-7).⁸ A cat stalking a bird can plausibly be understood as stalking the bird for the sake of catching the bird. Moreover, it seems appropriate to suppose that the cat that is stalking the bird knows what it is up to, in some sense.⁹ In fact, it is difficult to imagine how a cat could be stalking a bird without doing so intentionally and knowingly; ‘stalking’ seems to belong to the list of descriptions that Anscombe identifies as descriptions of happenings that can only be intentional (2000, p. 85). Similarly, it is difficult to imagine how a chimpanzee using a rock as a nut-cracker, or a stick as an insect-probe, might be doing so unintentionally or unknowingly (see DeGrazia 2009, pp. 205-6).

But it is quite plausible that there are at least some animate beings that cannot act intentionally, such as plants and paramecia, perhaps (see Steward 2009a, p. 227; 2012a, pp. 14-5), and action that is intentional under some description is confined to animate beings, excluding possible future products of technology. At the moment, it does not seem to be the case that inanimate objects, or relatively simple animate beings such as plants and paramecia, are appropriately deemed to be capable of knowing what they are doing or why they are doing what they are doing. So, currently, only animate beings can be said to act, or engage in action, in the sense of action that is my concern in this thesis.

⁸ Then again, some, such as Davidson (1982), hold that only a being with a language could engage in intentional action. Alternatively, one might accept that a being without language might be able to engage in intentional action, but deny that that being without concepts is able to do so. And one might then suppose that non-human animals, lacking concepts, are therefore unable to engage in intentional action. One might consider, in either case, that some non-human animals do at least engage in something very close to intentional action, which might also be said to be goal-directed and require some form of awareness of what one is doing.

⁹ Later in this chapter, in 1.1.7, I discuss the idea that knowledge of what one is doing can be non-conceptual knowledge. The idea is discussed there with regards to human agents, but it clearly has application to the idea of non-human animal agents having knowledge of what they are doing. Perhaps the possibility of non-human animal agents having knowledge of what they are doing is only plausible if this could be non-conceptual knowledge.

1.1.3 Multiple Senses of 'Action'

However, it is plausible that there are multiple non-technical senses of 'action', such that while inanimate objects cannot be said to engage in action that requires intentional action, they can be said to engage in action in some other sense. There are at least a couple of notions that are picked out by the term 'action', and some of these apply equally to inanimate and animate objects.¹⁰ For example, we often use 'action' to refer to the exertion of influence, energy, or force, by objects, regardless of whether or not the object is animate, and so whether or not the object is capable of intentional action. So it is said that "[p]otassium hypobromite is formed by the action of bromine on cold dilute aqueous potassium hydroxide"¹¹, and material might be characterised as "churned up by former glacial action"¹². And where there is action there is an agent of the action, and there is acting and activity by that agent. Hyman is correct, then, when he points out that we describe inanimate materials as well as animate beings as agents: "soap is a detergent, i.e. a cleansing agent, cortisone is an anti-inflammatory agent, oxalic acid is a precipitating agent, and so on" (Hyman 2015, p. 30).

Yet, Hyman infers, incorrectly in my view, that philosophers go wrong when they:

commonly claim or assume that ... when a man pumps water from a well or melts some butter, these are genuine examples of agency, but when his heart pumps blood around his body or the sun melts some butter on the kitchen table, these are not.

(ibid.).

For a philosopher who denies that the heart and the sun are not agents may be correct in so far as they have in mind a sense of 'agent' that corresponds to a sense

¹⁰ Some other senses of 'action' correspond to legal notions and notions specific to certain other domains.

¹¹ 1940 G. H. J. Adlam & L. S. Price Higher School Certificate Inorg. Chem. (ed. 2) l. 521. Quote taken from OED entry for 'action' (Third Edition, November 2010).

¹² 2007 Brit. Archaeol. Sept. 9/1. Quote taken from OED entry for 'action' (Third Edition, November 2010).

of ‘action’ on which action requires intentional action. One appropriately denies that the heart and the sun are agents in this sense — and perhaps expresses this by denying that they are *genuine* agents — while allowing that there is some sense of ‘agent’ and ‘action’ on which these objects are agents too. Moreover, it seems wrong to suggest, as Hyman does, that the sense of ‘agency’ that corresponds with action that requires intentional action is “a special, technical sense of the word ‘agency’, with a narrower scope than it has in its usual, non-technical sense” (ibid.). That we sometimes have to use a “special emphasis” in order to indicate that we mean agency, or action, in their narrower senses (see Anscombe 2000, p.10) does not indicate that these narrower senses are technical ones. A special emphasis may simply be a general means of distinguishing a narrow sense of a word from its broader sense.

Hyman argues as follows against the view that there is a non-technical sense of ‘agent’ and ‘action’ which is restricted in its application to those animate beings capable of intentional action:

If action necessarily involved thought or intention, a verb that refers to a kind of action would include the idea of thought or intention in its meaning. For example, ‘build’ would attribute thought or intention to the one who builds, and ‘cook’ would attribute thought or intention to the one who cooks. So these verbs could not be used unambiguously to refer to action, on the one hand, and to the behaviour of animals incapable of thought, or to bodily organs, on the other. But of course they can. ‘Grind’ has exactly the same meaning, whether it refers to a cook grinding meat or a bird’s gizzard grinding seeds; ‘bend’ has the same meaning whether it describes a blacksmith or the wind; and ‘build’ means the same in the sentences ‘The man built a shed’ and ‘The wasps built a nest’.

(Hyman 2015, pp. 30-1).

In fact, however, it is not clear why we should suppose that if there is both a narrower and a broader sense of ‘action’, why action-verbs which apply in cases of action in both the narrower and broader should have two distinct meanings corresponding to the two senses of action. ‘Grind’ could perfectly well have exactly the same meaning whether it refers to a cook grinding meat or a bird’s gizzard grinding seeds, and yet there be a manner in which a cook could grind

meat which corresponds to the narrower sense of action, and which is unavailable to the bird's gizzard.¹³

1.1.4 The Accordion Effect

Moreover, it is also not at all obvious that action-verbs are unambiguous. There is, in fact, a case for ambiguity in these verbs that corresponds roughly to the narrower and broader sense of action at issue here. For, as Davidson (2001b pp. 53-59), following Feinberg (1965), pointed out, there is a distinctive linguistic feature, which Feinberg names “the accordion effect”, and which attaches only to action-verbs when they are used to characterise action that requires intentional action. The full significance of the accordion effect, in the support that it gives to the idea that action-verbs are ambiguous, has not yet been brought out however. In order to bring this out, the accordion effect should be put as follows.¹⁴

ACCORDION EFFECT:

If an agent, A, φ -ed, where their φ -ing involved some action of A's which was intentional under some description, and A thereby caused an E-type event, we may say that A Ψ -ed, where ‘ Ψ -ed’ does not simply amount to ‘caused ...’, but that A Ψ -ed nonetheless implies that an E-type event occurred and A was responsible for this.

Davidson provides the following example to illustrate the effect:

A man moves his finger, let us say intentionally, thus flicking the switching, causing a light to come on, the room to be illuminated, and a prowler to be

¹³ In fact it seems to me that we talk about wasps as if they collectively act intentionally, even it is plausible that they in fact do not. Correspondingly, I think ‘build’ is a verb that always implies intentionality, or “as if” intentionality, and so when we say ‘The wasps built a nest’, we are at least characterising the wasps’ behaviour *as if* it was intentional under some description. The suggestion is then that ‘build’ is a verb that only has one sense which corresponds to the narrower sense of action. Many action-verbs only have one such sense, such as ‘married’ and ‘murdered’ amongst many others, as Hyman acknowledges (*ibid.*, p. 32).

¹⁴ Davidson and Feinberg’s formulations of the accordion effect are slightly different.

alerted. This statement has the following entailments: the man flicked the switch, turned on the light, illuminated the room, and alerted the prowler. Some of these things he did intentionally, some not; beyond the finger movement, intention is irrelevant to the inferences, and even there it is required only in the sense that the movement must be intentional under some description. In brief, once he has done one thing (move a finger), each consequence presents us with a new deed.

(Davidson 2001b, p. 53).

By contrast, if the wind is so strong that it dislodges a stone from ledge, so that the stone then rolls off the ledge and onto some ice, thereby causing the ice to crack, we cannot thereby appropriately say that the wind cracked the ice (see Davidson 2001b, p. 54). So, if an inanimate object, O φ -ed, and O thereby caused an E-type event, it does not follow that O ψ -ed, where if O had ψ -ed, this would have implied that an E-type event occurred and O was responsible for this. When it comes to inanimate objects it would seem to be that one can only legitimately characterise an object, O, as having ψ -ed, where this would have implied that an E-type event occurred, if O was a relatively proximate cause of an E-type event. Although we cannot say that the wind cracked the ice, we can say that the stone — a more proximate cause of the ice's cracking — cracked the ice. To say that action which requires intentional action displays the accordion effect, is really simply to say that this proximity-restriction does not apply in the case of action that requires intentional action. Even if an agent is a very distant cause of some E-type event, we can still legitimately say that A ψ -ed, where this implies that an E-type event occurred.

In that case then, it is plausible that at least a number of action-verbs have at least two senses: one that does not imply intentional action, but does imply proximate causation; and another that does imply intentional action, but does not imply proximate causation. 'Cracked' in 'The stone cracked the ice' does not imply any intentional action by the stone, but does imply proximate causation by the stone of the ice's cracking; 'cracked' in 'Kim cracked the ice' does imply some intentional action by Kim, but does not imply proximate causation of the

cracking by Kim — Kim may have caused the ice's cracking only by throwing a stone at the ice which caused it to crack.¹⁵

In many cases where the accordion effect has application, as in Davidson's example given above, there is a close correspondence between the verb used to characterise the event that the agent causes, and the action-verb used to characterise the agent's action so as to imply that an event of that type occurred, and that the agent was responsible for this. Having caused the light to turn on, the man in the above example is said to have turned the light on; having caused the room to be illuminated, he is said to have illuminated the room; and having caused the prowler to be alerted, he is said to have alerted the prowler. Here, that which the agent causes is characterised with a verb in the passive, and the agent's action is characterised with the same verb in the active: A causes some object, O, to be Ψ -ed, and therefore can be said to have Ψ -ed O.

In other cases, that which the agent causes is characterised with a verb in the intransitive form, where that verb also has a transitive form. 'Move', 'break', and 'roll' are such verbs which have both intransitive and transitive forms, which are, moreover, lexically indistinguishable: we may say both that 'Jan moved the brick from one pile to another' and that 'the brick moved from one pile to another'. Where that which an agent causes is characterised with such a verb in the intransitive form, the agent's action is characterised with the same verb in the active transitive form: A causes some object, O, to Ψ , and therefore can be said to have Ψ -ed O. So, if Jan caused the brick to move from one pile to another, Jan can then be said to have moved the brick from one pile to another.

¹⁵ 'Cracked' may have a human agent as its subject and yet still not imply intentional action by the agent, but instead imply proximate causation the agent of some cracking. It seems that where the subject of the action-verb is a human agent, the alternative sense is the default, but the meaning can be shifted by adding some context that implies merely non-intentional behaviour, e.g. 'Kim cracked the ice when she fell on it.'

In other cases, however, the simple transformation from passive to active, or from intransitive to active transitive, is not appropriate. For example, Atwell highlights that:

We may truly assert “Jenkins caused Murphy to be promoted by informing the corporation head of Murphy’s superior performance record”, but we will deny the action sentence ‘Jenkins promoted Murphy’ for the obvious reason that he is not in a position, i.e. does not have the authority, to make promotions.

(Atwell 1969, pp. 337-8).

Similarly, if I ask Tina to roll a ball over to the corner, and she then does so on account of having been asked to, I cannot be said to have rolled the ball over to the corner, even if I can be said to have caused the ball to be rolled over to the corner. But even in these cases, however, the accordion thesis, as stated above, does have application. To repeat, I put the accordion thesis as follows: if an agent, A, φ -ed, where their φ -ing involved some action of A’s which was intentional under some description, and A thereby caused an E-type event, we may say that A Ψ -ed, where that A Ψ -ed implies that an E-type event occurred and A was responsible for this. In Atwell’s case, while we may not say that Jenkins promoted Murphy, we *can* say that Jenkins *got Murphy (to be) promoted*. And that Jenkins got Murphy promoted implies that Murphy was promoted. If, by contrast, a conker had fallen and hit Murphy’s boss on the head, causing him to suddenly think “Hey, I should promote that Murphy guy”, and act upon the thought by indeed promoting him, we cannot legitimately say that the conker got Murphy promoted. In the ball-rolling case, while we cannot say that I rolled the ball to be rolled over to the corner, we can say that I got the ball to be rolled over to the corner. And, by contrast, a log cannot be said to have got the ball to be rolled over to the corner, if, seeing that the log was beginning to fall perilously close to the ball, I rolled it over to the corner, out of harm’s way.

Such cases do not, then, undermine the accordion thesis as I have presented it, but they may nonetheless be thought to cast doubt on the claim that action-verbs

such as ‘promoted’ and ‘rolled’ have a sense on which they imply intentional action but do not imply proximate causation. In fact, however, it remains very plausible that these verbs do have a sense on which they do not imply proximate causation. A sentence of the form ‘A rolled O’ does not imply that A is a particularly proximate cause of O’s rolling. One might cause a ball to roll by pre-programming some very complicated machine designed to roll that ball, and in having successfully done so be said to have rolled the ball.

However, on this sense these action-verbs do instead seem to imply *proximate agency* (where such agency requires some intentional action). What I mean by this is that a sentence of the form ‘A rolled O’ implies that O was not rolled simply because A got someone else — some more proximate agent — to roll O, and that A instead simply rolled O by themselves, or as part of some rolling group. A is amongst the most proximate agents of O’s rolling. More generally, it is plausible that ‘A φ -ed O’ implies that O was not φ -ed simply because A got some distinct, and more proximate, agent(s) to φ O, and that A instead simply φ -ed O by themselves, or as part of some φ -ing group.

1.1.5 A Narrower Sense of ‘Action’

Altogether then, it seems in fact quite plausible that action-verbs such as ‘promoted’, ‘rolled’, ‘moved’, and ‘cracked’ do have more than one sense, one corresponding to proximate agency which requires intentional action but does not require proximate causation, and another corresponding to proximate causation which does not require intentional action. But I suggested earlier that the two senses of ‘action’ can be seen as related as narrower sense — that on which intentional action is required — to broader sense — that on which intentional action is not required. In that case then, the two senses of ‘action’ cannot be said to line up precisely with the two senses of action-verbs. For on each of the two senses of an action-verb there is a requirement that is not had on

the other sense of the action-verb: intentional action on the one hand, and proximate causation on the other. Moreover, on the sense on which intentional action is required, not only this is required, but also proximate agency.

Nonetheless, I think it is appropriate to suppose that there are two senses of 'action' that are related narrower-to-broader. And these two senses are used to explain the two senses of action-verbs. How then, should we understand the broader sense of 'action', so that the distinct sense is appropriately understood as merely narrower? An agent acts, on the broader sense of 'act' and 'agent' that corresponds to the broader sense of 'action', just when there is a change in the world, and some state(s) for which the agent is responsible, in some sense or other. Such a change or state can be said to result from the agent's action. A stone that cracks some ice, for example, can be said to be *causally* responsible for the cracking of the ice, and its newly cracked state. And it is on account of this that the stone can be said to have acted in causing the ice to crack. Moreover, the ice's cracking can be said to have resulted from the stone's action of cracking it.

But what is distinctive, then, with regards to the narrower sense of action, is the distinctive form of responsibility that the agent has for the change and state(s) that result from this form of action. And that distinctive form of responsibility arises only when the agent acts intentionally. When Kim cracks some ice by throwing a stone at it, she is responsible for the cracking of the ice, and its newly cracked state in a very distinctive way, which stems from the fact that when Kim threw the stone she was doing something intentionally: perhaps she threw the stone intentionally, or perhaps she merely moved her arm intentionally, not realising that the movement would result in the stone flying out of her grasp. It is this distinctive form of responsibility that I call *agential responsibility*.

1.1.6 Action-Results

The question towards which this thesis is directed then is the question of how we should understand *agential responsibility*, the distinctive form of responsibility that an agent has for changes and states in the world that result from the agent's actions, on the narrower sense of term 'action'. But I have so far used the term 'result' in characterising those changes and states that we are agentially responsible for, without any clarification. And clarification is needed. So I specify now that when I speak of results of actions (intentional or otherwise), this talk should be understood as follows.

ACTION-RESULTS: x (a change-event or state) is a result of an actually occurring action, y , iff x occurs (or obtains) because y occurs, and x is a token of a non-action type (of change-event or state), X , and y is a token of an action type, Y , such that a token of Y occurs only if a token of X occurs (or obtains).¹⁶

To illustrate, the results of an action of cracking some ice are the change in the ice that is its cracking, and the new state of the ice's being cracked: both the change and the state occurred because the action of cracking some ice occurred, and a cracking of ice only occurs if some ice cracks and becomes cracked. But now, importantly, the 'because' in the above definition of action-results expresses an explanatory order between an action and its results, but it leaves open precisely what the underlying metaphysical relationship between the action and its result is. The relationship may be a causal one, but it need not be if we allow, as we should, that there can be explanatory relationships between entities that are not causally

¹⁶ To suppose that one can talk of states as tokens of types of states is not to deny that states are not re-describable particulars, or that the relationship between token state and type of state is not simply the relationship between a property-instance and the property that it is an instance of (see Steward 1997, pp. 105-134). The state that is a ball's being red is a token of the type: something's being red. The state of the ball's being red can be said to have the property of being a state of something's being red. By contrast, the ball's being red is an instance of the property *redness*. I discuss further the notion of particularity and states in chapter 2, and the type-token relation in chapter 6.

related. Indeed, this definition of action-results allows that an action's result-change — an event — might be identifiable with the action, if actions are events, as I argue that they are in Chapter 3.¹⁷

Hopefully then, some clarity has been gained on the question that this thesis addresses, as it was put at the outset: what it is to be agentially responsible for a change or state of the world that is a result of one's action?

1.1.7 An Alternative Narrower Sense of 'Action'?

We should, however, address one more dissenting view with regards to the suggestion that there is a narrower non-technical sense of 'action' on which action requires intentional action. On this dissenting view, it is agreed that there is a non-technical sense of action that is restricted in its application to animate beings, but it is denied that what is required for its application is intentional

¹⁷ To leave open the precise metaphysical relationship between an action and its results is particularly appropriate since philosophers of action commonly talk of results of actions, seemingly understanding what each other mean in such talk, despite the fact that they have different views with regards to that metaphysical relationship. Von Wright, generally noted as having first introduced the relevant technical term 'result', similarly kept the precise metaphysical relationship open in his characterisation:

To every act (of the kind we are here considering) there corresponds a change or an event in the world. ... This correspondence between act and change is an *intrinsic* or logical tie. The act is, as it were, 'defined' as the act of effecting such and such a change. For example: the act of opening a certain window is, logically, the act of changing or transforming a world in which this window is closed to a world in which it is open.

By the *result* of an act we can understand either the change corresponding to this act or alternatively, the end-state of this change. Thus, by the result of the act of opening a certain window we can understand either the fact that the window is opening (changes from closed to open) or the fact that it is open. On either way of understanding the notion of a result of action the tie between the act and its result is intrinsic. The act cannot be truly described as being an act of the category in question unless it effects a change or ends in a state of affairs of the kind in question, which we call its result.

(Von Wright 1963, p. 39; emphasis author's own).

Often, however, the notion of a result of an action is introduced in such a way that does specify some particular metaphysical relationship between an action and its result. For example, Alvarez and Hyman introduce the notion by stating that "[a]n action ... is a causing of an event by an agent; the result of an action is that very event" (1998, p. 233).

action. This view has been defended not merely by making the case that non-human animals not capable of intentional action can nonetheless be said to act in a sense on which inanimate beings cannot be said to act. It has, moreover, been argued that human agents quite often engage in action that does not involve intentional action at all, but yet is distinct from the kind of action that inanimate objects can engage in. Such action has been labelled as ‘sub-intentional action’, following O’Shaughnessy (1980, p. 61). Examples of such action that were given by O’Shaughnessy are tapping one’s feet to some music, and idly moving one’s tongue in one’s mouth.¹⁸ These are argued to be actions, in a sense of ‘action’ distinctive of animate beings, but the occurrence of which does not imply any action that is intentional under some description. The thought is that one might be tapping one’s feet to some music completely unintentionally, not even intentionally moving one’s foot. The case is made for a possible lack of intentionality here by maintaining that one might be tapping one’s feet to some music completely *unaware* that one is doing so, or that one is moving one’s foot at all. And that such tapping might still be an action in some sense distinctive of animate beings is encouraged by the suggestion that despite its non-intentionality it is done as a result of a desire to tap one’s feet to the music.

Insofar as behaviour occurs on account of one’s desire to do something, that behaviour can be said to involve a goal-directed agent, and so be teleological in much the way that I characterised action that is intentional under some description. In that case then, it might be thought that O’Shaughnessy points to a class of behaviours that are teleological but not intentional. Moreover, it might be agreed that such a class is captured by a non-technical sense of ‘action’ on which action is distinctive of animate beings: where action is teleological behaviour, and may or may not be intentional under some description. Indeed, this is how Pink understands and characterises the meaning of ‘action’ (2016, p. 174). And accordingly, Pink endorses the possibility of sub-intentional action, describing such cases in terms of goal-directed action of which the agent is unaware:

¹⁸ O’Shaughnessy later (2008, pp. 349-362) renounces sub-intentional actions.

Take, then, some simple goal-directed action, such as scratching in order to remove an itch. Here one is doing something, scratching, that is directed at a goal which one wants or is motivated to attain — getting rid of the itch. And then goal-direction makes the scratching as clear a case of action as any.

But the scratching, though a perfectly good goal-directed action, might still be wholly unintentional. ... First, one might be entirely unaware of one's scratching. Indeed, one might be quite surprised to discover oneself doing it. Indeed one might be quite surprised to discover oneself doing it. The scratching might be something one simply finds oneself doing, one might well become very embarrassed, and immediately stop doing it. Scratching *there* at this rather public moment — in an important meeting, say — may be a particularly bad idea, as one can have been perfectly well aware all along. But, unfortunately, at least until one does become aware of what one is doing, one's unimpeachable grasp of the scratching's overall practical wisdom has had no effect whatsoever.

(*ibid.*, pp. 188-9).

In order to make plausible the proposal that one might act without any awareness of what one is doing in so acting, Pink points here to the phenomena of surprise at what one is doing, and embarrassment, given that, as one knew all along, doing something of that kind is quite inappropriate in the circumstances that one is in. The reasoning is then that one would not be surprised at what one was doing if one had been aware of what one was doing all along. And one would stop oneself from doing something that one knows to be inappropriate if one did such a thing with awareness of one's so doing.

However, such surprise and embarrassment at the inappropriateness at what one is doing can be well explained without supposing that one is completely unaware of what one is doing. Indeed, I think the entire episode is better explained without supposing this. For consider that it is hardly plausible that one might have an itch and not to be aware of that itch, and where the itch is. An itch, in this sense, is like pain. Moreover, it is hard to make of sense of one's motivation to ride oneself of an itch, if that itch was not something that one was aware of. And insofar as this is the case, it is similarly hardly plausible that one might fail to be aware of one's itch passing, or being relieved, and of where that itch was such that it has now passed. This, surely, is what motivates one to *stop* scratching. Yet when

one's itch passes because one has scratched it, and not simply of its own accord, one cannot be simply aware of the itch and its passing; one is also aware of one's own role in having made it pass. I think it is most plausible that one is, then, necessarily aware of one's scratching one's itch at one's crotch.

One might wonder, though, how this might be compatible with the surprise one might feel at what seems appropriately described as the *discovery* that one is scratching an itch at one's crotch. But I think what I have suggested so far can be seen to be compatible with this, for we need not suppose that the awareness that one has of one's scratching the itch at one's crotch at the time of acting is a kind of *conceptual* awareness — awareness with conceptual content.¹⁹ Or, at least, it might not be the kind of awareness that one has when one is *thinking* about something; it might be said to instead be a *non-cognitive* form of awareness. In that case, one might still appropriately react with surprise if one does turn one's cognitive awareness to something that one had previously only been non-cognitively aware of. In other words, one might have been scratching an itch at one's crotch without *thinking* of oneself as doing this, while also aware, in some sense, that one was. Indeed when we characterise such actions, we often characterise ourselves as doing something *unthinkingly*. The moment of surprise and discovery is a moment in which one thinks about what one had before been only unthinkingly aware of.

Then again, we might suppose that insofar as we scratch an itch because one wants to get rid of the itch, one must have some kind of thought of what one is doing — what might be called a *practical thought* — as scratching an itch, or getting rid of an itch. What one does is a product of some kind of practical reasoning, after all, from the desire to get rid of an itch.²⁰ This, though, is also compatible with one *lacking* the thought that one is not only scratching an itch,

¹⁹ Peacocke (2006) suggests that agents might have nonconceptual awareness of what they are doing.

²⁰ Perhaps this practical thought and reasoning can also be non-conceptual, however, if it is present in non-human animals.

but scratching an itch *at one's crotch*. Accordingly, one can imagine, and make sense of, an exchange of the following sort:

“What are you doing?!” cried Lena, pointing at Dan’s hand on his crotch.

“I’m just getting an itch” replies Dan, not seeing her pointing hands, caught up in a daydream. Snapping out it, though, he looks down and exclaims “Oh man! Sorry! I didn’t realise I was itching *there!*”

That we can imagine such an exchange, and find Dan’s behaviour intelligible, does suggest a recognition of the fact that we can be aware that we are doing something, and yet not be aware, at least non-cognitively, of the location of what we are doing. And there may well be other dimensions on which we lack cognitive awareness of what we are doing.

There is a further challenge, however, to the thesis that we have a non-technical concept of action distinctive of animate beings on which action requires intentional action. This further challenge has been put forward by Steward (2009b). Steward suggests that while we do have a non-technical concept of action distinctive of animate beings, on this concept, action may not only occur without the awareness of the agent, it may also come about without being the product of any desires, “or desire-like phenomena” (2009b, p. 303). Steward presents the following example in order to illustrate and defend her claim:

I do not *want* to be fiddling with my jewellery; indeed, I may positively not want to be doing so – I may be aware that it is a rather bad habit of mine, which others find irritating. We might try saying, I suppose, that the desire in question is unconscious, or speak of subliminal urges – but there would seem to be no real justification for this stipulation, other than the hope of preserving the thought that it is distinctive of actions that they have psychological causes of a desire-like sort. And the question is, why must we suppose this? Why must we be able to trace the production of a movement to a mental or psychic event or property if it is to be an action?

(*ibid.*).

So fiddling with one's jewellery is presented here as something that might be done despite no desire to do it, and where one's doing it without any such desire would still qualify as action in a sense restricted to animate beings — it is “an exercise of the power of bodily control by an animal” (ibid., p. 309). And now, even if we deny, contra Steward (ibid., pp. 298-9), that such fiddling could take place without the agent being at all aware of what she is doing, her characterisation of the fiddling with the jewellery as something that she does not want to be doing suggests that we may be wrong to think that the agent's action here is goal-directed (where the goal is the contents of the agent's intention in acting).

In fact, however, I think that insofar as an agent can truly be said to be fiddling with their jewellery, the agent can also be said to be engaged in goal-directed action, and without stipulating any unconscious goals. The goal that the agent is directed towards here is plausibly the action under a description, where she is aware, even cognitively aware, that she is engaged in an action of that description, namely fiddling, moving something around between her fingers, or moving her hands. And now she may be fiddling (or moving something around between her fingers etc.) just for its own sake, or for some further goal, other than fiddling with her jewellery. So, this proposal is compatible with her *not* wanting to be fiddling with her jewellery (and even her wanting to *not* be fiddling with her jewellery). The agent may well be cognitively aware that she is fiddling, or moving her hands, while not at all aware that she is fiddling with her jewellery. We can imagine, and make sense of, another exchange between Lena and Dan, which illustrates the suggestion:

“What are you doing?” Lena asks Dan, pointing at Dan's hands caught up in his jewellery.

“Oh, I'm just fiddling...” says Dan, again caught up in his daydream. Snapping out of it, and looking down, Dan exclaims “Goddammit! I'm fiddling with my jewellery again! I hate how I'm always doing that!”

The proposal that we have a non-technical concept of action which is restricted in its application to animate beings, and whose application implies intentional action by the agent, is not then undermined by these challenges intended to indicate that our non-technical concept of action restricted to animate beings does not carry this implication.

1.2 The Background

Having indicated the concept of action that I am concerned with here in this thesis, and defended it as a non-technical concept, we can now go about considering how to answer the central question of this thesis: what is it to be agentially responsible for a change or state of the world that is a result of one's action? In this section, I indicate various theories of action that have been put forward in the literature, and which, if correct, would deliver an answer to that question. I begin by briefly outlining one kind of theory of action, which is now widely acknowledged as a dead-end street. I present the reasons for supposing this kind of theory to be a dead-end street. I then go on to indicate the kinds of alternative theories that have been, and are currently being pursued.

1.2.1 Reductive Event/State-Causal Theories of Action

The kind of theory which I have characterised as now widely acknowledged as a dead-end street, is one which purports to provide a reductive analysis of action in terms of causation by certain mental states and/or events. Theories that purport to provide a reductive analysis of action in such terms take the following form, and can be referred to as reductive event-causal and state-causal theories of action:

x is an action of agent A 's iff x is of kind K_1 , and some mental state/event of A 's, y , of kind K_2 , causes x in manner M (where K_1 , K_2 , and M are specified in non-action terms).

This approach is often characterised in very different terms however, as “the standard story of action” (e.g. Hornsby 2004), or “the standard model of agency” (e.g. Mayr 2011).²¹ Such characterisations are, I think, deeply misleading, since those who have actually put forward an analysis of the form given above are few and far between (Armstrong 1973; Brand 1984; Bishop 1990).²² Certainly, very few, if any, such analyses have been defended since the 1980s. Far more often action-theorists have taken aim at the “the standard story of action”, appealing to the deficiencies of this approach to motivate their own alternative.

The presentation of the approach as “standard” or “orthodox” can also be understood as stemming from an association of the approach with hugely influential figures, such as Hobbes (*Leviathan*, part I, ch. 6, p. 28) and Davidson.²³ But it should be remembered that neither of these writers in fact themselves offered a reductive analysis of the form outlined above. Indeed, Davidson explicitly expresses scepticism with regards to the possibility of providing such an analysis; he is particularly sceptical about the prospects of specifying the manner of causation (*M* above) in non-action terms in such a way that captures our intuitions with regards to cases of action:

²¹ Other labels for the approach include: “the causal theory of action”, “causalism”, “event-causalism”, and “the event-causalist standard model of agency”. All these labels are misleading in their own way too. It is misleading, first, to suggest that there is a single theory here, rather than a family of related theories. Moreover, characterisations of these theories simply as *causal* theories is misleading, since there are a number of other causal theories of action not of this form. And finally, it is misleading to suggest that all theories of the form given above are *event-causal* theories, since some such proposals are given in terms of causation by mental *states*, rather than events. Furthermore, there are various views on the metaphysics of events, some of which treat events as a sub-class of states (see e.g. Kim 1993b).

²² Others have put forward analogous analyses of *intentional* action, but in terms of action (e.g. Goldman 1970, pp. 51-62). And yet others have expressed faith that some sort of analysis of action of the form given above must be possible, without themselves having provided their own proposal for such an analysis (e.g. Mele 2003).

²³ It is likely also relevant that the approach is in line with reductive causal tendencies prevalent in mid-20th century analytic philosophy.

Beliefs and desires that would rationalise an action if they caused it in the *right* way — through a course of practical reasoning, as we might try saying — may cause it in other ways. If so, the action was not performed with the intention that we could have read off from the attitudes that caused it. What I despair of spelling out is *the way in which attitudes must cause actions* if they are to rationalise the action.

(Davidson 2001c, p. 79; second set of italics are mine)

For Davidson, this amounts to despair with regards to a reductive event/state causal theory of action, since he takes actions to be distinguished as events that are intentional under some description (events that are characterisable as someone doing something with some intention). I will outline, shortly, Davidson's basis for despair, and indicate the ultimately unsuccessful attempts that have been made to defy that despair. However, let us first briefly consider what might tempt one towards a reductive event/state causal theory of action, and how, if successful, such a theory would provide an answer to the question of what it is to be agentially responsible for a change or state of the world that is a result of one's action.

I take it that much of the appeal of a reductive event/state-causal theory of action lies in its promise of accounting for the teleological component of action that is intentional under some description (and any consequential action) in terms of causation (efficient causation, rather than final causation) by intensional mental states/events. Suspicion of teleology that is not accounted for in terms of such causation as "non-naturalistic" is widespread, and legitimately associated with Hobbes, as well as, more generally, early modern reactions against Aristotelian metaphysics. Moreover, causation by an agent's intensional mental states/events, at least in the appropriately specified manner, might be thought to plausibly entail the agent's bearing a distinctive form of responsibility for that which is so caused. Accordingly, a successful reductive event/state causal theory of action would allow for an account of agential responsibility on which an agent is agentially responsible for some change or state of the world iff that change or state is identical to an action of that agent's, or a causal consequence of an action of that agent's.

A reductive event/state-causal theory of action does not present an explanation of an agent's knowledge of either their own actions that are intentional under some description, or the goals for the sake of which they act, however. But such a theory also does not make such knowledge look wholly implausible, and nor does it obviously rule out that such an explanation can be given.

1.2.2 Deviant Causal Chains

Now to return to the basis of Davidson's despair for a reductive event/state-causal theory of action. This, as we saw, concerned the fact that the following is not sufficient for an action that is intentional under some description to have occurred: that an event of some kind was caused by mental states which would, in some circumstances, rationalise an action that comes about by an event of that kind being caused by those mental states. The problem is that there is only an action that is intentional under some description if mental states both cause *and* rationalise. But one must then specify "the way in which attitudes must cause actions if they are to rationalise the action".

Davidson illustrates the point with the following, now classic, example:

A climber might want to rid himself of the weight and danger of holding another man on a rope, and he might know that by loosening his hold on the rope he could rid himself of the weight and danger. This belief and want might so nerve him as to cause him to loosen his hold, and yet it might be the case that he never *chose* to loosen his hold, nor did he do it intentionally. It will not help, I think, to add that the belief and the want must combine to cause him to want to loosen his hold, for there will remain the *two* questions *how* the belief and the want caused the second want, and *how* wanting to loosen his hold caused him to loosen his hold.

(Davidson 2001c, p. 79).

In this case, the climber's desire to rid himself of the weight of the other man, belief that by loosening his hold we could rid himself of that weight, and desire to loosen his hold, all caused the climber's grip to loosen. And in other

circumstances, these mental states would rationalise an action of loosening one's grip that is caused by those mental states. But, nonetheless, here the event of the climber's grip loosening is not an intentional action; it does not look to be intentional under any description.

While Davidson then expresses despair at specifying "the way in which attitudes must cause actions if they are to rationalise the action", others have been less despairing. Attempts to specify the manner of appropriate causation have largely fallen into the following two camps:

- Specification in terms of proximate or direct causation of an action by an intention of the agent's (e.g. Brand 1984).
- Specification in terms of counterfactual sensitivity of the action to the agent's intentions, plus causal chains from the agent's intentions to the action that do not run through the intentions of another person (e.g. Peacocke 1979; Bishop 1990).

The first of these two options can be quickly seen to be unsatisfactory. First, it is clearly highly implausible to suppose that in every case of action, an intention is the action's immediate causal antecedent, such that there are no causal intermediaries. And if one then relaxes the requirement of causal proximity to some relative degree of causal proximity, one faces the challenge of specifying the appropriate degree of causal proximity which captures all and only actions. Second, even if this option does succeed in capturing all and only actions, it does not seem to capture the idea that it is just because an intention renders an action of some kind appropriate that it causes an action of that kind. The second option would seem to hold more promise for capturing this idea.

The thought underlying the second option is that where an agent genuinely acts, if the agent had had different intentions from those that she in fact had, in otherwise the same situation, an action of a different kind would have occurred.

And in the case of genuine action, this counterfactual sensitivity to the agent's intentions is not a product of some distinct interfering agent (some scheming neurophysiologist, or evil demon).

Yet, as has been pointed out (Bishop 1990; Ruben 1991; Steward 2012a, p. 28), there may well be cases of genuine action where the causal chains from the agent's intentions to their action do run through the intentions of other agents. Suppose Gill has a prosthetic neural replacement in her arm which is briefly non-functional on account of a broken wire. While it is being repaired, a second agent, Phil, carefully holds together the two ends of the broken wire, watching Gill's movements all the while, so as to keep the ends always in contact. During this procedure, Gill successfully gives Phil the thumbs-up to show that everything is going well. In this case, Gill seems to genuinely act in giving Phil the thumbs-up, even though the causal chain from her intentions to the action run through Phil's intentions to hold together the two ends of the broken wire.

The goal of specifying conditions that rule out cases where the counterfactual sensitivity of an agent's behaviour to their intentions is merely a product of some distinct interfering agent, but rule in cases such as that above involving Gill and Phil, has not been achieved. Indeed, by and large theorists are no longer engaged in the project of attempting to achieve it and there is growing scepticism that it ever could be achieved. Steward suggests, very plausibly, that even if the goal is achieved, the conditions will fail to be *illuminating* conditions for action that unpack our common-sense concept of action (2012a, pp. 60-61). Accordingly, it is plausible that even if someone were to succeed in specifying appropriate conditions that capture all and only cases of action, such conditions would not provide an illuminating answer to the question of what it is for an agent to be agentially responsible for the results of their actions. We would only obtain an answer to the question of *when* an agent is agentially responsible for the result of their actions.

1.2.3 Disappearance of the Agent

Closely related to the suggestion that an elaborate reductive event/state-causal theory of action would not succeed in providing illuminating conditions for agential responsibility, is the rather flatfooted concern that no mere sum of causally-related passive events/states and appropriate contexts could ever amount to, or account for, *activity by an agent* (see Schroeter 2004; Hornsby 2004, 2008; Steward 2012a, 2016).²⁴ This concern has come to be characterised as a concern that the agent *disappears* from reductive event/state-causal theories (see e.g. Steward 2012a, pp. 62-6). Velleman is often cited as having elicited the concern, with the following claim:

[T]he [standard] story fails to include an agent — or, more precisely, fails to cast the agent in his proper role. In this story, reasons cause an intention, and an intention causes bodily movements, but nobody — that is, no person, *does* anything. Psychological and physiological events take place inside a person, but the person serves merely as the arena for these events: he takes no active part.

(Velleman 1992, p. 461).

However, Velleman himself does not take the “proper role” of the agent, which the “standard story” misses out, to be one that the agent plays in all action — even where action is understood as requiring intentional action. It is only in so-called “full-blooded” action that he takes the agent to play an active part which is not accounted for by the “standard story”. “Full-blooded” actions make up only a

²⁴ While the objection from deviant causal chains is an objection on the basis of cases of certain kinds that serve to illustrate the inadequacy of reductive event/state-causal theories of action, the disappearance of the agent objection is not an objection on the basis of certain cases. Instead, the disappearance of the agent objection would seem to simply amount to the objection that no such reductive theory could succeed, given the nature of the phenomenon being theorised, and the nature of the entities appealed to in reductive theories of that phenomenon.

Insofar as any purported theory of action fails, one could say that the given purported theory is subject to the disappearance of the agent objection: such a theory “fails to cast the agent in his proper role”, to use Velleman’s terms. Then again, the problem of the disappearance of the agent may be understood as the distinctive problem of failing to allow for the possibility of any active agent. And now, a theory of action may avoid this problem by building in the idea of an active agent, but yet still fail to cast the agent in their proper role in actions generally. Such a theory can then be said to face the problem of the disappearance of the agent only in *some* sense.

sub-class of intentional actions, and even many human actions fail to be full-blooded, according to Velleman. Human actions that fail to be “full-blooded” are said to occur when the human agent acts “half-heartedly, or unwittingly, or in some equally defective way” (ibid., p. 462). Those who take there to be a much wider problem of disappearing agency for reductive event/state causal theories of action have indicated and critiqued Velleman’s conception of the problem as more restricted. Steward, for example, responds as follows:

[I]t seems possible to have a much more basic version of the disappearing agent worry, one which questions the capacity of the standard story to deliver an account even of actions that clearly fail to be “full-blooded” in anything like Velleman’s sense, including: tedious actions which are part of one’s daily routine, say, carried out with a minimum of deliberation, thought and attention, such as making a sandwich for lunch, or cleaning one’s teeth; actions which are done because of desires one would prefer not to have, such as taking a drug one wishes one were not addicted to; and even what might be called “absent-minded” actions or activities, such as walking up and down aimlessly whilst waiting for someone, or scratching one’s chin.

(Steward 2016, pp. 110-1).

Now while I sympathise with the opposition to reductive event/state causal theories of action that is voiced here, its flatfooted nature must be acknowledged — and it all too often is not. The opposition voiced here in effect simply expresses disbelief at the possibility of a reductive event/state causal theories of action. Such disbelief is, however, bolstered by the lack of a successful response to the problem of deviant causal chains however.

1.2.4 Circularity

The final reason to be sceptical of the prospects of a reductive event/state-causal theory of action, is one which Boyle and Lavin (2010, pp. 170-4) have pointed out, and which has been indicated earlier in this chapter. Boyle and Lavin point out that the mental states that one must appeal to in a reductive event/state-causal theory of action include mental states that have intentional action as their objects. Our goals in intentional action, which are the objects of our intentions in acting,

are *to do certain things*, and to do them *intentionally* — to φ intentionally. We aim not just at a certain kind of change, or state, coming about, we aim to bring that change, or state, about ourselves, and not merely accidentally. In that case, a theory of action in terms of causation by intentions, even if one succeeds in specifying conditions for such causation so as to capture all and only actions, gives only the illusion of a reductive theory of action, unless one provides also a reductive theory of intentions to act.²⁵

1.2.5 Non-Reductive Event-Causal Theories of Action

In reaction to the various sources of opposition to reductive event/state-causal theories of action that we have seen, one is liable to consider whether some alternative approach is to be favoured. One such alternative approach rejects the idea of providing a *reductive* theory of action in terms of causation by events or states, but, nonetheless, avoids appealing to causation by entities of other kinds. Rather, on this approach, the existence of primitive actions is admitted, where the status of an event as a primitive action is not fully explained, or, at least not fully explained in terms of causation. The existence of non-primitive actions is then explained in terms of causation by those primitive actions. As a result, I call theories that fall under this approach: non-reductive event-causal theories of action.

These theories have their roots in accounts of action that far precede the above disputes with regards to reductive event/state-causal theories of action; accounts of *voluntary* action that fall under the label ‘volitionism’.²⁶ Volitionist accounts of voluntary action take there to be primitive mental acts, referred to as volitions, or acts of willing, which precede and cause all worldly changes and states that we are said to have produced by acting, and to thereby be agentially responsible for.

²⁵ See also O’Brien 2017, pp. 270-1.

²⁶ I do not here go into the question of what makes for a voluntary action, as such an enquiry would be orthogonal to my purposes here, which is simply to illustrate the sources both of more contemporary theories of action, and of the objections that are put to these.

Volitionism goes back at least to Descartes (2015, §17-18), and Locke is often presented as providing the classic volitionist account of voluntary action (see Locke 1979, IV, ch. x, §19; II, ch. xxi).

As is well known, volitionism came under severe attack however in the early 20th century, principally from Wittgenstein (see 1958, p. 151) and Ryle. Ryle in particular made a significant impact with the following barrage of objections to the volitionist account of voluntary action:

- (i) No-one ever describes their own action in terms of willing or volitions, and it is not clear how volitions are to be legitimately characterised. But yet, according to the volitionist, volitions should accompany all our actions (Ryle 1949, pp. 64-5).
- (ii) One can never observe another's volitions, and so one can only infer from observed overt behaviour that such behaviour is a result of voluntary action (ibid., pp. 65-6).
- (iii) The connection between volitions and bodily movements is mysterious, at least insofar as a volition is a merely mental phenomenon (ibid., p. 65).
- (iv) Causation by volition is appealed to in order to explain when bodily movements are voluntary, but unless volitions are themselves voluntary then they cannot successfully provide such an explanation. But then the voluntary nature of a volition should itself be explained by a causally prior volition, and one faces an infinite regress (ibid., p. 67).

Indeed these objections should be understood as an important part of the context of endeavours to provide instead reductionist event/state-causal theory of action, which do not appeal to, or entail, unobservable, and seemingly both unfamiliar and mysterious mental acts of will, thought to prompt an infinite regress. However, non-reductionist event-causal theories of action that bear a strong resemblance to volitionism have been put forward even subsequent to Ryle's attack (see Prichard 1949; McCann 1974; Hornsby 1980; O'Shaughnessy 1980;

Ginet 1990; Lowe 2008). And such theories may well seem somewhat attractive, having considered the objections to reductive event/state-causal theories of action.

As indicated above, these non-reductive event-causal theories of action are united by their admitting the existence of primitive actions, where the status of events as primitive actions is unexplained, or, at least not explained in terms of causation. And the existence of non-primitive actions is then explained in terms of causation by those primitive actions. These primitive actions are mental phenomena and so are seen as analogous, at least to some extent, to the volitions of old volitionism. Indeed, on Prichard's theory, the primitive action is specified as an act of willing, on McCann's it is specified as a volition, and Lowe uses the terms 'act of willing' and 'volition' interchangeably to refer to the primitive action. Hornsby and O'Shaughnessy, by contrast, both characterise primitive actions instead as acts of *trying* or *striving*, and Ginet simply characterises primitive actions as mental occurrences that have "the actish phenomenal quality" (1990, p. 15). As well as avoiding the problem of the disappearing agent, and embracing circularity, these non-reductive theories of action avoid the problem of deviant causal chains that haunts reductive theories.²⁷ The non-reductive event-causal theories of action deliver the acceptable verdict that if (and only if) bodily behaviour results from some primitive action, then there can be said to have been a bodily action by the agent: the agent moved some part of their body, and this amounted to an action by the agent.

In avoiding the language of 'willing' and 'volitions', and opting instead for 'trying' and 'striving', Hornsby and O'Shaughnessy manage to avoid some of the sting of Ryle's first objection to volitionism. We do, at least sometimes, talk about our own actions in terms of trying, and we know that certain characterisations and not others are appropriate for one's trying. Hornsby and O'Shaughnessy also

²⁷ At least, the problem of the disappearing agent is avoided in *some* sense. By admitting primitive actions, an active agent is built into the picture of action. However, insofar as the agent's role in action more generally is misrepresented, these non-reductive theories may still be said to face a problem of the agent disappearing *from their proper role* (see n. 24 for the relevant distinction).

attempt to distance themselves from the old volitionists by emphasising that they do not take primitive acts of trying to be *purely* mental phenomena (see Hornsby 1996, pp. 85-6; O'Shaughnessy 1980, ch. 12). In this way, it is also hoped that Ryle's objection (iii) to volitionism fails to apply to these non-reductive event-causal theories of action.

Furthermore, the theories offered by Hornsby and O'Shaughnessy stand in contrast to old volitionism, in maintaining that only *successful* tryings are to be identified as primitive actions; where successful tryings are those which result in changes and states in the world that the trying is directed towards. The two theories then both offer accounts — albeit different accounts — of the metaphysical relation between the primitive act of trying and the change in the world that results in the case of success. While Hornsby (1980) takes the relation to be one of causation, O'Shaughnessy takes the relation to be one of “encompassing”: the result is a part of the successful trying (see O'Shaughnessy 1980, ch. 12). Both these accounts of the relationship between primitive actions and bodily movements should render the relationship unmysterious, removing the theories yet further from the remit of Ryle's objection (iii).

In addition, Ryle's regress objection, (iv), is avoided by these theories, which offer a principled basis for supposing that tryings are primitive actions, while accounting for non-primitive actions in terms of causation by those primitive actions. On these theories it is not supposed that non-primitive actions are actions on the basis of themselves being caused, or encompassed, by primitive actions; instead it is maintained that non-primitive actions simply require that primitive actions cause, or encompass, their results. In this way, it is not required that tryings themselves must be caused, or encompassed, by prior actions (see Hornsby 1980, pp. 48-50; O'Shaughnessy 2008, pp. 372-9).

Yet, these non-reductive event-causal theories of action do continue to face concerns regarding the observability of actions, analogous to Ryle's objection (ii) to volitionism. The concern is that even if primitive actions are not *purely* mental

phenomena, as at least partially mental causes, or encompassers, of bodily behaviour in bodily actions, that an agent is acting is something that an observer can only infer from the bodily behaviour, rather than fully observe directly (see Alvarez and Hyman 1998; Steward 2000; Haddock 2005). Moreover, this concern has been added to with the further concern that these theories present a picture of bodily agency where the embodied agent is implausibly alienated from their bodies (Haddock 2005). These are concerns that I will return to in Chapter 4 of this thesis, where I argue that the alienation-based concern is a particularly significant one that applies equally to other theories of action.

There is, however, a non-reductive event-causal theory of action, not widely acknowledged as such, on which at least some primitive actions are identified with bodily behaviour. This is the theory of action put forward by Davidson (2001b). On the theory put forward here, every action is identical to a primitive action, which is multiply describable, and describable in terms of its various effects. And with regards to the primitive action itself, Davidson writes here that:

[W]e have discovered no analysis of this relation [between a person and an event, when it is his action] that does not appeal to the concept of intention. Whether intention can be understood in terms of more basic or simple ideas is a question with which I have not tried to cope in this paper.

(Davidson 2001b, p. 61).

The “analysis” of this relation in terms of intention that is given in the paper earlier is that “a person does, as agent, whatever he does intentionally under some description” (ibid., p. 46).

Such a theory of action promises a theory of agent-responsibility where for an agent to be agentially responsible for some change in the world is for such a change to either be identical to an action of the agent’s, or caused by such an action. And for an agent to be agentially responsible for some state in the world is for such a state to either be a culminating state of an action of the agent’s, or to be the caused by such an action. I will in fact come to defend a theory of agent-

responsibility along these lines, arguing that only such a theory avoids the alienation-based concern, as well as objections that I will raise for any theory that presents causation by the agent, or some state or action of the agent's, of the results of their action as necessary for action.

1.2.6 Agent-Causal Theories of Action

Before I outline how I intend to go about defending such a theory, let us consider one final set of theories of action, which will be the principal target of the rest of thesis. These are theories of action in terms of causation by the agent. That is, according to these theories action necessarily involves causation by the agent that does not reduce to causation by events or states. Let us then call these theories 'agent-causal theories of action'.

While there are significant differences between the various agent-causal theories that have been put forward — and which I will go on to indicate — these theories are in general thought to avoid the numerous objections that have been put to reductive event/state-causal theories of action and non-reductive event-causal theories. That is not to say that agent-causal theories have been deemed *unproblematic*; far from it. But the problems that these theories are thought to face are distinctive, turning on the appeal to causation by agents that does not reduce to causation by events or states. Ultimately, however, I will argue in this thesis that this appeal is not in itself problematic. Rather, I will argue that there are problems with these agent-causal theories that are shared with the other theories that I have outlined above. In particular, I take the problem of alienation to be one facing a certain popular kind of agent-causal theory. Moreover, I argue that there are actions whose results are not caused either by the agent, their actions, or by mental events or states.

Let us consider, then, the variations of agent-causal theories of action. First off, it should be noted that by and large, agent-causal theories of action maintain not

only that causation by the agent is necessary for action, but that it also features in a set of sufficient conditions for action (where action understood as requiring intentional action). Some, however, — such as Hornsby (2011, 2012), after renouncing her (1980) view — have defended the idea that action must involve causation by the agent, without putting forward a set of sufficient conditions for action. I include these views of action under the umbrella category of agent-causal theories of action.

Another key difference between agent-causal theorist of action concerns that which they take the agent to cause in action. Older agent-causal theorists hold that the agent causes their *actions* (Chisholm 1966, 1971, 1976a, 1976b; Taylor 1966, 1992),²⁸ while later agent-causal theorists — as well as Bishop (1983) — have opposed this, maintaining instead that the agent only causes results of their actions. These later theorists hold that the agent's causing those results is what their action consists in, so that *an action is an agent's causing something*. It is maintained that if an agent caused some event and their causing of that event did not itself constitute an action, then the event that is so caused could not be said to be an action either. It is thought that only causing by the agent that is itself an action could account for an event that is caused by the agent being an action. Yet, it is also acknowledged that if every action were to be caused by an agent, where the agent's causing of it is a further action, then every action prompts a regress of actions. As a result, it is held that actions are only causings by the agent, rather than events that are caused by the agent (see Alvarez and Hyman 1998, pp. 222-3).²⁹

Steward adds to this opposition by suggesting that while we could decide to call the events that are caused by agents their actions, this would be an inappropriate stipulation:

²⁸ see also Reid (1853).

²⁹ This line of objection echoes that voiced by opponents of agent-causal theories of action in general, e.g. by Davidson (2001b, p. 52; 2004) and Hornsby (1980, p. 101).

[A]ctions would no longer be *doings*; they would no longer, in fact, be the *locus* of agency at all. The *activeness* of actions would be lost; actions and *acting* would (confusingly) come apart. ‘Action’ would no longer be the term for an exercise of agency and all our philosophical interest in such exercises would therefore simply have to be recentred on the *actings* by means of which what we are now calling ‘actions’ are produced. But what would be the point of such a confusing stipulation?

(Steward 2012a, p. 200, n. 5, emphasis author’s own).

However, there are further differences even amongst these agent-causal theorists who hold that the agent only causes results of their actions. Some maintain that the agent causes *events* that are results of their actions (Bishop 1983; Alvarez and Hyman 1998; Alvarez 1999; Nida-Rümelin 2007; Steward 2012a; Hyman 2015; O’Connor 1995, 2000; Mayr 2011; Brent 2017), while others hold that the agent only causes *states* that are results of their actions (Stout 2010; Hornsby 2011, 2012).³⁰ Furthermore, these theorists differ in their ontologies of actions as causings. Some take such actions to be events (O’Connor 1995, 2000; Nida-Rümelin 2007; Mayr 2011),³¹ while others offer alternative ontologies (Bishop 1983; Alvarez and Hyman 1998; Alvarez 1999; Stout 2010; Steward 2012a; Hyman 2015).³²

The final key difference between agent-causal theories of action largely lines up with the difference between those that present agents as causes of their actions, and those that present actions as causings by their agents. Those that present agents as causes of their actions also present the form of causation that this involves as uniquely occurring as causation by agents. By contrast, those who present actions as causings and address this question (Alvarez and Hyman 1998; Steward 2012a; Hyman 2015) present the form of causation here as more

³⁰ Coope (2007) argues that it is Aristotle’s view that actions involve causation by the agent of the states that are the results of their actions.

³¹ Mayr distinguishes between “coarse-grained” and “fine-grained” conceptions of events as “coarse-grained” and as “fine-grained”, maintaining that actions are fine-grained events (2011, pp. 255-6).

³² Brent (2017) advocates an agent-causal theory of action, but does not specify the ontology of actions.

widespread than simply occurring as causation by agents; other entities are said to cause effects in just the same sense of 'cause'.

Regardless of these various differences, these theories all offer accounts of agential responsibility in terms of causation by the agent. On these theories, when an agent is agentially responsible for some change in the world, either the change is caused by the agent, or it has a culminating state that is caused by the agent. And when an agent is agentially responsible for some state in the world, the state is caused by the agent.

In what follows, I will argue against such agent-causal theories of agential responsibility. I put forward instead that when an agent is agentially responsible for a change in the world, the change is either identical to the agent's action, caused by the agent's action, a causal pre-requisite of the agent's action, or non-causally determined by the agent's action. And when an agent is agentially responsible for a new state in the world, the state is the culminating state of a change that the agent is agentially responsible for. However, the proposal is not a disjunctive reductive analysis of agential responsibility. I suggest, rather, that *agential responsibility* is a primitive concept, i.e. not susceptible to reductive analysis.

2. Agent-Causation

In this chapter I make the case that the problem regarding agent-causal theories of action does not derive from their appeal to causation by agents (hereafter: agent-causation), or even their appeal to agent-causation that does not reduce to causation by events or states, contrary to much opposition to these theories (see e.g. Thalberg 1976). The opposition to irreducible agent-causation turns on agents being a species of objects, which are, at least in the case of animate agents, macrophysical composite objects.

It has been argued that it is not part of our conception of causation that objects are causes, despite the fact that we quite commonly talk in terms of causation by objects. It is put forward, by those of this view, that our ordinary talk in terms of such causation should not be straightforwardly interpreted as expressing a commitment to there really being causation by objects themselves, rather than other entities. I present and address three bases for such a proposal found in the literature (§§2.2-2.4). First, I address the idea that our talk in terms of causation by objects is merely elliptical for talk in terms of causation by entities of other kinds (§2.2). Second, I address claims that imply that the idea of objects causing effects is incoherent (§2.3). Third, I address claims that we take causation by objects to be “screened off” by causation by entities of other kinds (§2.4). I argue that all these various claims are implausible, and I conclude that we should, then, take our talk in terms of causation by objects at face value.

However, it has also been suggested that insofar as our conception of causation does allow for causation by objects, such causation *reduces to* causation by events or states. On this suggestion, it is supposed that object-causation can be fully explained in terms of event/state-causation. I consider what seems to be the most plausible basis for such a suggestion, and argue that this still fails to adequately motivate the reductionist position (§2.5). Moreover, I indicate reason to

positively suppose that object-causation in fact does not reduce to event/state-causation.

And, finally, I present and oppose the argument that causation by *macrophysical composite* objects is *excluded* by causation by the entities of fundamental physics (§2.6). This argument is a generalisation of Kim's (1998, 2005) well-known causal exclusion argument against mental causation on a non-reductive physicalist account of the mental. The implication of the generalised argument is that causation by animate agents, such as human agents, at the very least, is not possible.

In that case, I conclude that insofar as agent-causal theories of action faces difficulties, those difficulties do not derive from the assumption that human agents can cause effects.

But before I address these various arguments against the possibility of agent-causation (or, at least, causation by animate agents), I outline how we naturally distinguish the category of objects from other categories of entities (§2.1). I do this in part in order to get clear on what kind of entity it is that we are committed to as causing effects, insofar as we are committed to causation by objects, and in part because some of the objections against the possibility of causation by objects turns on our concept of objects.

2.1 Objects

While there is a sense of 'object' that is ontologically quite neutral, applying to any entity that is signified either by a proper name or a definite description (following Frege 1951), there is also a sense of 'object' that is not so ontologically neutral. On this less ontologically neutral sense, human beings, cats, plants, tables, computers, rocks, and molecules, are objects, but parties, concerts, and dances are not. Neither is redness an object on this sense, nor the situation of a

dancer holding a rose between their teeth. This chapter considers the nature of our commitment to causation by objects, on the less ontologically neutral sense. And hereafter, I'll only use 'object' in this sense. But what is the nature of our conception of objects, such that we take human beings as objects, but do not take parties, redness or the situation of a dancer holding a rose between their teeth to be objects?

The first thing to be said in answering this, is that we think of objects as unrepeatable particulars. That is, we take objects to be the kinds of entities that cannot be instantiated, or realised, by other entities, by contrast to such entities as properties. But objects are not the only entities that we conceive of as unrepeatable particulars. As Davidson encouraged us to see, we think of such things as parties, concerts, and births as unrepeatable particulars too, and these are not objects, but instead, particular events (see Davidson 2001, p. 181).³³ A party, for example, might be described as 'Jo's birthday celebration', or 'the party where Ben broke the vase' for example. So then, what do we take to be distinctive of objects amongst unrepeatable particulars? We naturally distinguish objects from other unrepeatable particulars in terms of the way that they are present in time.³⁴ Objects, as we naturally think of them, are distinctive in being *wholly* present at each moment in time at which they are present, so that, if an object is present throughout a period of time, we think of that object as being wholly

³³ The term 'event' is often used, for example by Kim (1966, 1993a, 1993b) for entities that are not particular events as Davidson conceives of them. On this alternative use of the term, 'event' picks out exemplifications of properties by objects at times. See Steward (1997, pp. 21-7) for discussion of events, as defined by Kim, being fact-like entities.

³⁴ That is not to say that those entities that we distinguish as objects are, as a matter of fact, present in time in a way that is distinctive among unrepeatable particulars — that is a matter of on-going debate, which won't be entered into here. What is being suggested is just that we conceive of objects as being distinctive among unrepeatable particulars in this way. And this just implies that those who hold that objects are not in fact present in time in a distinctive way hold a *revisionary* metaphysical thesis, a thesis that stands in conflict with how we naturally think about the world. Those who deny that objects are present in time in a distinctive way include Russell (1927), Sider (2001), and Lewis (2002). Russell acknowledges that this denial runs counter to the common conception of the world (see p. 152), but Sider and Lewis are more ambivalent on whether this is so (see Sider 2001, p. 218; Lewis 2002, p. 1).

present at each moment of this period.³⁵ This way of being present throughout a period of time is referred to as *enduring* through time, and those unrepeatable particulars that endure through periods of time throughout which they are present are referred to as *continuants*.³⁶ Using this terminology, we can then say that we distinguish objects from other unrepeatable particulars in that we take objects to be continuants.

The way in which we think of objects as present in time can be contrasted with the way in which we think of objects as being present in space.³⁷ If an object is present throughout a region of space, we do not think of the object as being wholly present at every location within that region of space; instead we think of the object as being “somehow ‘stretched out’” (Fine 2006, p. 1) across the region, with only a proper part of it present at any sub-region. This difference between the way that we think of objects as being present in time and the way that we think of objects as being present in space is marked by our describing objects as *occupying* space, but not time, and describing objects as instead *persisting through*

³⁵ For discussion elsewhere of our conception of objects as being present in time in this way, see Wiggins (1980, p. 25); Simons (2000, pp. 59-60); Fine (2006); Steward (2015, pp. 112-3).

³⁶ The term ‘endurance’ was introduced by Lewis, defined in this way (1986a, p. 202). The term ‘continuant’ was introduced by Johnson (1924, p. xviii), with a related, but somewhat vague definition. For the now dominant use of the term ‘continuant’ given above, see Steward (2015, pp. 111-2), Wiggins (1980, p. 25), Simons (2000, p. 59; 2009, p. 581). I follow this dominant usage of the term here. It should be noted, however, that some use the term ‘continuant’ differently. Sider, for example uses ‘continuant’ just to mean ‘object’, as I use ‘object’ here (see 2001, p. 64). So, on Sider’s usage of ‘continuant’, one cannot intelligibly question whether objects are in fact continuants, but one can instead ask whether continuants endure.

Stout (2016, pp. 43-9), on the other hand, puts forward that the defining feature of continuants is that continuants primarily have their properties at a time, but suggests that, in virtue of this feature, continuants are distinctive in being wholly present at each moment in time at which they are present. It is then argued by Stout that there are particular entities besides objects that we think of as primarily having their properties at a time, and so concludes that objects are not the only particular entities that we conceive of as continuants. However, Steward (2015, pp. 119-123) is convincing in showing, in a response to Stout, that we can conceive of particular entities that primarily have their properties at a time, but which are not wholly present at each moment in time at which they are present. In that case, Stout’s argument does not establish that there are particular entities besides objects that we conceive of as continuants, on the dominant sense of the term ‘continuant’ at least.

³⁷ It is at least not obvious that our conception of objects excludes the possibility of objects that are not present in space at all, however.

time (see Wiggins 1980, p. 25). To illustrate the contrast here, suppose that I went to a party yesterday evening at a friend's flat. If I was at the party from its beginning to its end, then we suppose that at any moment during the party the whole of me was there. By contrast, we suppose that at any given moment I was only wholly present at the region that the whole of me occupied; I was not wholly present at the region occupied just by my left hand at any time.

When it comes to other kinds of unrepeatable particulars that are present in time, such as particular events, we take these instead to be present in time at least somewhat analogously to the way that objects are present in space: "somehow 'stretched out'" across any period of time throughout which they are present. For an event that is present throughout a period of time, we take it that only a proper part of it is present at each period, or moment, within the whole period. This way of being present throughout a period of time is referred to as *perduring* through time.³⁸ Take the party that we imagined I was present at yesterday evening; intuitively, the party (an event) as a whole was not present at any moment of time during the evening, there was only some stretch of the party, such as the cutting of the cake. We think of the party as stretching out across the evening, analogously to the way that it stretched out across my friend's flat.³⁹

In what follows, I consider the nature of our commitment to causation by objects: those entities that we distinguish as unrepeatable particulars that are wholly present at each moment at which they are present.

³⁸ Like the term 'endurance', 'perdurance' was introduced by Lewis (1986a, p. 202). Note that it may be, as Fine maintains, that "[t]hese two forms of presence are not to be understood as restrictions on a more generic form of presence but as independent forms of presence in their own right" (2006, p. 3).

³⁹ See Fine (2006) for further support of the proposal that we conceive of objects as being present in time in a distinctive way, from consideration of practices in our ordinary language.

2.2 Ellipsis

In the philosophy of causation literature, causation by objects does not get much of a look in. Indeed, the Stanford Encyclopaedia of Philosophy article on ‘The Metaphysics of Causation’ does not even include the view that objects are causes in its list of a variety of views on the ontology of causes (Schaffer 2016, §1). The list includes only: events, facts, features, tropes, states of affairs, situations, and aspects. This stands somewhat at odds with our causal talk. It is clear that we do often talk quite naturally and easily about objects, of various kinds, including human beings and other animals, as well as inanimate artefacts and inanimate natural objects, causing various effects. In English, for example, we talk this way quite frequently, as evidenced by the following statements in the media:

‘A woman teacher from Britain caused a major security alert at a Moscow airport.’⁴⁰

‘Bengal tiger causes mass panic in Sicily.’⁴¹

‘A two-ton red ball stationed outside a Target store caused thousands of dollars’ worth of damage.’⁴²

‘Russian ‘runaway robot’ causes traffic jam.’⁴³

‘It didn’t take long for them to discover the new planet Neptune that was causing the perturbation.’⁴⁴

‘Chicxulub asteroid caused a global winter.’⁴⁵

⁴⁰ <http://www.dailymail.co.uk/news/article-5208145/Brit-woman-causes-Moscow-security-alert-fake-grenade.html>.

⁴¹ <https://www.thesun.co.uk/news/2728574/bengal-tiger-causes-mass-panic-in-sicily-by-roaming-the-streets-after-escaping-from-travelling-circus/>.

⁴² <http://www.dailymail.co.uk/news/article-4187708/Two-ton-ball-Target-sign-pinballs-cars.html>.

⁴³ <http://www.bbc.co.uk/news/blogs-news-from-elsewhere-36547139>.

⁴⁴ <http://education.seattlepi.com/causes-perturbations-discovered-orbit-planet-uranus-5564.html>.

⁴⁵ <http://www.newsweek.com/extinction-asteroid-wiped-out-dinosaurs-catastrophic-global-winter-699009>.

Each of these statements has the form of an assertion, that some object causes/caused/was causing some effect. Moreover, each statement is grammatically acceptable, and perfectly intelligible, having been written with the intention of being easily understood, and of being accepted, by its readers. This, on the face of it, suggests a common commitment to there being causation by objects. Appearances can sometimes be deceiving however. And numerous writers have maintained that this is a case where appearances are indeed deceiving. These writers have put forward that statements that have the form of an assertion of causation by some object are merely elliptical for statements that assert causation by an entity of some other kind. After providing a selection of such claims from the literature, I'll unpack the notion of an elliptical statement, so as to indicate how the claim that talk in terms of causation by objects is merely elliptical challenges the idea that this talk shows us to be committed to there being causation by objects. However, I will then go on to question the plausibility of the claim that talk in terms of causation by objects is merely elliptical.

Below are a selection of claims in the literature, from across the last century, putting forward, in some way or other, that statements that have the form of an assertion of causation by some object are in fact elliptical for statements that assert causation by some other entity.

Statements of the form 'Thing or person S causes event E' are to be understood as elliptical for statements of the form '($\exists A$) (A is an activity by S and A causes E)'.
(Aune 1977, p. 2)

[W]e constantly use phrases, describing causal transactions, in which a continuant is named as the cause and no event in that continuant is mentioned. ... But it is quite evident that all such phrases are elliptical.
(Broad 2016, p. 45)

[A]lthough we say the agent caused the death of the victim, that is, that he killed him, this is an elliptical way of saying that some act of the agent—something he did, such as put poison in the grapefruit—caused the death of the victim.

(Davidson 2001, pp. 48-9)

We do indeed allow that inanimate objects cause or bring about various things ...
However this is ... only the ellipsis of event causality.

(ibid., p. 54)

We do in fact regularly speak of things or substance causing occurrences. "The stone caused the breaking of the window." "The cat caused the lamp to fall." But these statements are recognized as being elliptical. It is the stone's moving, and its striking the window, that caused the breaking, the cat's leaping that caused the lamp's falling. Causation of occurrences by substances can usually be interpreted as causation of occurrences by other occurrences.

(Kane 1985, p. 71)

A sentence such as 'The building caused the shadow', in which the noun phrases in the cause and effect positions refer to physical objects, is grammatically well-formed. So, ordinary language clearly recognises *physical objects* as causal relata. But this sentence is most naturally interpreted as elliptical for a more complex sentence such as "The building's obstructing the light caused the shadow to form", in which the noun phrases denoting cause and effect are both quasi-sentential in form.

(Menzies 1989, pp. 59-60).

[M]any causal propositions cite particular objects rather than events as causes and effects. For example, it would not be unusual to come across a causal proposition to the effect that a particular gene caused a certain polypeptide molecule. The conventional response is to say that such propositions are elliptical for more complete propositions that mention events that involve the corresponding objects. So, for example, the proposition above is elliptical for a proposition such as the functioning of the particular gene caused the synthesis of the polypeptide molecule.

(Menzies 2009, *Oxford Handbook of Causation*, p. 336)

'The sun caused the wax to melt' is elliptical for 'something the sun did caused the wax to melt'.

(Maslen et al. 2009, *Oxford Handbook of Causation*, p. 521).

Several of the claims above are put in terms of causation by objects, or physical objects, but a number of them are put in slightly different terms. The first of Davidson's listed claims, for example, refers just to causation by agents, and

Maslen's claim is very specifically about one statement about the sun. Then Aune, instead, puts his claim in terms of *things* and *persons*, while Kane opts for *things* and *substances*, and Broad puts his in terms of *continuants*. However, Aune, Kane, and Broad are most naturally interpreted as each using the terms 'thing', 'substance' or 'continuant' to refer to just those same things that we commonly use 'object' to refer to.⁴⁶ And regarding Davidson and Maslen, it is clear from the context that their claims about specific objects are made on the basis of some wider principle regarding causation by objects in general: some principle that statements that seem to assert causation by some object are in fact elliptical for statements asserting causation by some other related entity.

But what exactly does a principle of this kind amount to, such that it challenges the idea that our common talk of causation by objects reveals a common commitment to causation by objects? Strictly speaking, to claim that some statement is elliptical is to claim that the statement includes an ellipsis, where an ellipsis is an omission of one or more words that would be needed to complete the grammatical construction and to fully express its sense, in order to avoid redundancy in expression.⁴⁷ What this means is that when a statement is elliptical, it is grammatically *incomplete*, despite being grammatically legitimate, in the sense that there is one, and only one, way of completing the grammatical construction so as to transparently represent the meaning of the sentence. Moreover, this single completion of the grammatical construction must be

⁴⁶ It is not uncommon to see 'thing' be used in this way; Mellor (1995), Lowe (2002), and Fine (2006) all use the term 'thing' to mean what is meant here by 'object'. Similarly, the term 'substance' is used this way elsewhere; Ehring (2009), Steward (2012a) and Whittle (2016) seem to use the term in this way, for example. But the term 'substance' also has a long Aristotelian history of being differently used, in such a way that it is reserved for entities that have a certain unity, or ontological independence. When used in this Aristotelian sort of way, typically a number of entities that we think of as objects, in that they are conceived of as enduring unrepeatable particulars, are not taken to be substances. Lowe (2002, p. 15), for example, suggests that such objects as heaps of sand and bundles of sticks are not substances. As was indicated in §1, the term 'continuant' is generally used in such a way that we conceive of all and only objects as continuants.

⁴⁷ See OED entries for 'elliptical' (<http://www.oed.com/view/Entry/60534?redirectedFrom=elliptical#eid>) and 'ellipsis' (<http://www.oed.com/view/Entry/60527?redirectedFrom=ellipsis#eid>); and Quirk et al. 1985, pp. 883-890.

obvious enough to the reader, or audience, that to state the grammatical completion rather than the elliptical statement would not convey anything that is not already conveyed. In other words, the reader, or audience, would gain no further information from the statement of the grammatical completion over the elliptical form. In this respect, the additional words in the grammatical completion are semantically redundant.

Clear examples of elliptical statements, and their completions, include the following:

Elliptical Statement	Grammatical Completion
Jan plays the cello, Anna too.	Jan plays the cello, and Anna plays the cello too.
I stole it, not Sam.	I stole it, Sam did not steal it.
The group that wanted to go swimming did.	The group that wanted to go swimming did go swimming
I will feed the cats today, if you promise to tomorrow.	I will feed the cats today, if you promise to feed the cats tomorrow.
When exactly, I don't know, but this rain will definitely stop soon.	I don't know when exactly this rain will stop, but this rain will definitely stop soon.
Did you go to the exhibition? I went yesterday.	Did you go to the exhibition? I went to the exhibition yesterday.

In each of these cases it is both obvious how the elliptical statement is to be grammatically completed, and clear that no information would be gained by being told one of the grammatical completions, rather than its elliptical form.

With this in mind, a proposal that statements that seem to assert causation by some object are in fact strictly elliptical for statements asserting causation by some other related entity, can be said to entail a commitment of the following form.

ELLIPSIS:

If a statement, S, is of the form 'O caused E', where 'O' picks out some object, S is a grammatically incomplete sentence, with a grammatical completion of the form '[clause including O] caused E', that more transparently expresses the meaning of S, and where '[clause including O]' specifies some non-object entity related to the object picked out by 'O'.⁴⁸

And now, if ELLIPSIS is correct, then we cannot simply take statements of the form 'O caused E' to assert that some object caused some effect. Instead, these statements express, albeit incompletely, rather more complex causal propositions that assert that some non-object entity, related to the object picked out by 'O', caused some effect. As a result, if ELLIPSIS is correct, then our talk in terms of causation by objects cannot be said to express our commitment to causation by objects. Insofar as we can take this talk to express a commitment to some kind of causation at all, we can only take it to reveal a commitment to causation by entities of other kinds that are related to objects in a certain way.

So how does ELLIPSIS stand up as a proposal? On the face of it, ELLIPSIS is not particularly plausible. That is, it is hard to believe that the condition given in ELLIPSIS is satisfied by any ordinary statement of the form 'O caused E'. Consider the purportedly elliptical sentence that Maslen refers to: 'The sun caused the wax to melt'. Should we really countenance that this is a grammatically incomplete sentence, in the way that the examples of elliptical statements listed above are? It tells against doing so that Maslen's proposed grammatical completion, 'Something that the sun did caused the wax to melt.', does not obviously stand in any more privileged relationship to 'The sun caused the wax to melt', than the following semantically distinct sentences: 'The sun's heat caused the wax to melt.', 'The sun's rays caused the wax melt.', 'The intensity of the sun's rays caused the wax to melt.', 'Something about the sun caused the

⁴⁸ The proposal that statements that seem to assert causation by some object are in fact elliptical for statements asserting causation by some other related entity, clearly also entail analogous commitments regarding statements of the form 'O causes E', 'O was causing E', etc.

wax to melt.’⁴⁹ In this way, it is not particularly plausible that ‘Something that the sun did caused the wax to melt’, rather than any of these other sentences amounts to the grammatical completion of ‘The sun caused the wax to melt’. And indeed none of the sentences that I’ve listed here obviously stand in any privileged relationship to ‘The sun caused the wax to melt’, so as to stand as make for a plausible grammatical completion of the statement. The lack of a clear candidate for a grammatical completion for the sentence ‘The sun caused the wax to melt.’ makes it really quite implausible that this is a sentence that involves an ellipsis.

And now while consideration of this one statement of the form ‘O caused E’ by itself shows ELLIPSIS to be implausible, it is worth also noting that the lack of any clear candidate for a grammatical completion is not something that is unique to the sentence ‘The sun caused the wax to melt’. For each of the example statements of the form ‘O caused E’ listed at the outset of this section — ‘A woman teacher from Britain caused a major security alert at a Moscow airport.’; ‘A two-ton red ball stationed outside a Target store caused thousands of dollars’ worth of damage.’; ‘Chicxulub asteroid caused a global winter.’ — there is similarly no clear candidate for a grammatical completion. So, contra ELLIPSIS, it would seem to be rather implausible that for any statement of the form ‘O caused E’, where ‘O’ picks out some object, its meaning can be more transparently expressed in terms of causation by some non-object entity. And in that case, the challenge to straightforwardly interpreting our talk of causation by objects as expressing a commitment to causation by objects, on the basis of the appeal to ELLIPSIS, cannot be said to succeed.

But insofar as it is claimed that talk of causation by objects is merely elliptical for talk of causation by other entities, is this intended in terms of strict ellipsis, as defined above? Some theorists who endorse ELLIPSIS flit between talking in terms of ellipsis and talking in terms of the reduction of statements that seem to

⁴⁹ I have underlined the component of the sentence that is being considered as completing the purportedly elliptical sentence, i.e. the component that is being considered as corresponding to ‘[clause including O]’ in ELLIPSIS.

assert causation by objects (see Aune 1933, p. 5). And some other theorists do not explicitly assert that talk in terms of causation by objects is elliptical, but do put forward that such talk can be *reduced to*, or *analysed in terms of*, talk of causation by entities of other kinds (see Hornsby 1980, p. 132; Merricks 2001, p. 68).⁵⁰ And now, proposals that sentences of one form, *F* sentences, can be reductively analysed in terms of sentences of some other form, *G* sentences, are largely taken as proposals that the *F* sentences can be translated without loss of meaning into *G* sentences that more transparently express the meaning of the *F* sentences.⁵¹ Perhaps, then, when it is claimed that causation by objects is elliptical, what is meant is that statements of the form ‘O caused E’, where O is an object, can be reductively analysed in term of sentences asserting causation by other entities.

But is this reductive claim properly distinct from that expressed by ELLIPSIS? Whenever a proposed reductive analysis puts forward analysans sentences that are more grammatically complex than the analysanda sentences, and that involve no *replacement* of any of the terms in the analysanda sentences, the proposed reductive analysis essentially presents the analysandum sentence as incompletely expressing a statement that has a more complete expression: the analysans sentence. Is this not simply to say that the analysandum sentence is strictly elliptical for the analysans sentence? Perhaps the difference here is simply the thought that the analysandum of an analysans sentence may not be obvious. But, then, if it is being proposed that statements that seem to assert causation by objects really assert causation by other entities, despite the fact that what is really

⁵⁰ Rosen puts forward that “If we say that the rock—an object—caused the window to break, what we mean is that some event or state (or fact or condition) *involving* the rock caused the breaking” (2012, §3.2). This would seem to amount to a proposal that a statement that seems to assert causation by an object can be reductively analysed in terms of a statement that asserts causation by some event, state, fact, or condition.

⁵¹ Chisholm characterises the question of whether causation by agents reduces to causation by events in terms of translation of sentences. He asks “[c]an we, for example, express ‘Jones killed his uncle’ without loss of meaning into a set of statements in which only events are said to be causes and no one of which presupposes that there is anything of which Jones may be said to be the cause?” (1979, p. 199).

asserted is not obvious, then we must be given reasons for thinking that the statements really assert this, rather than what they seem to assert.

2.3 Possible Bases for Reductive Analysis

In this section, I address some possible challenges to the idea that we are committed to objects causing effects that derive from considerations regarding our conception of causation. If these challenges succeed, then these give us reasons for thinking that our statements that seem to assert causation by objects really instead assert causation by other entities, even though this may not be obvious; they give us reason to endorse some kind of reductive analysis. However, I will argue that the challenges in question do not stand up to scrutiny. As a result, we have no good reason for doubting that our statements that seem to assert causation by objects really do assert this. We have no reason to suppose that statements of the form ‘O caused E’, where O is an object, can be reductively analysed in terms of sentences asserting causation by other entities.

2.3.1 Incoherence

In this section, I address the possibility that the idea of objects causing effects is incoherent, and, therefore, that our talk in terms of causation by objects cannot be said to express a commitment to there being causation by objects. But why might someone hold that the idea of objects causing effects is incoherent? Some seem to have thought that, given the kinds of entities that we take objects to be, objects cannot play the explanatory role that we take to be essentially played by causes. And this thought would seem to imply that there is something incoherent about the idea of objects causing effects. The explanatory role that is supposed to be essentially played by causes, and unable to be played by objects, can, I think, be put as follows:

TIMING:

If C is a cause of some effect, E, of type T, then C is present at some time t_C , and E begins at some time, t_E , and the presence of C at t_C explains why an effect of type T begins at t_E .

Now, it is important to note that this condition does not specify that a cause must itself be an explanation of why an effect of some type begins at some time. Indeed, I do not suppose that opposition to the coherence of causation by objects derives from a requirement that causes must themselves explain anything. I presuppose, then, an acceptance of the distinction between causation and explanation (following many, e.g. Strawson 1992, but *contra* some, e.g. Scriven 1975), while acknowledging deep and important connections between causation and explanation. I do not suppose that causes must themselves explain anything, since such a requirement turns on a prior assumption that all causes have a structure that corresponds to that of a proposition; only causes with such a structure could themselves serve as explanations (see Steward 1997). And there is no reason to accept that all causes have a structure that corresponds to that of a proposition unless one already denies that objects could be causes, since objects clearly do not have such a structure.

The idea that objects cannot play the explanatory role of causes that is given by TIMING seems to be underlying the following objection to the idea of objects

causing effects, which is put forward by Ehring, but which, as he indicates, has been gestured towards elsewhere.⁵²

The main objection to objects-as-causes concerns the timing of the effect. If it is John ... that deterministically caused his ears to move today, then his ears should have moved yesterday, if he existed then too ... A substance ... that exists before and after an effect begins cannot account for why that event begins at that time, but a cause can and does ...

(Ehring 2009, p. 371).⁵³

Ehring's claims suggest that his view that objects cannot be said to cause effects derives from considerations of when and how objects exist, or, in other words, when and how they are present in time. But, more specifically, the thinking seems to be that from consideration of when and how objects are present in time, one can infer that objects cannot play the explanatory role that is played by causes, as given by TIMING. For what Ehring proposes here, as the main basis for his view that objects cannot be said to cause effects, is that the presence of an object at

⁵² Thalberg (1976, p. 217), Aune (1977, p. 6), Fales (1990, p. 54) and Ginet (1990, p. 13) also make claims where this idea seems to be underlying, although the relationship between this idea and their claims is a little more complex. The following passage from Broad seems to have been influential in the genesis of the idea that objects cannot play the role given by TIMING, although the passage argues only that insofar as an event is deterministically caused, it cannot be caused *only* by objects:

If the beginning of a certain process at a certain time is determined at all, its total cause *must* contain as an essential factor another event or process which *enters into* the moment from which the determined event or process *issues*. ... [I]n so far as an event *is* determined, an essential factor in its total cause must be other *events*. How could an event possibly be determined to happen at a certain date if its total cause contained no factor to which the notion of date has any application? And how can the notion of date have any application to anything that is not an event?

(Broad 2016, pp. 44-5; author's italics).

Clarke (2003, pp. 197-199), Steward (2012a, pp. 216-221), and Whittle (2016 pp. 15-16) discuss Broad's claims, and related concerns for the notion of causation by objects. These authors do not, however, address the precise objection to the idea of causation by objects that Ehring puts forward. Steward (1997, p. 142) briefly addresses the related objection that is put forward by Fales.

⁵³ The last sentence of this extract continues with '(or, in the indeterministic case, a cause explains why that event begins at that time to have a certain objective chance)'. However, at the time that an event begins there surely is no chance of it not happening. In that case, it is difficult to see what Ehring means to suggest here.

some time cannot explain why an effect of some type begins when it does, if the object is present not only shortly before the effect begins to occur, but also long before or after, and no other effects of the same type begin to occur long before or after.⁵⁴ However, once we spell out the assumptions that underpin both Ehring's proposal and his inference, it will be clear that the idea that objects cannot play the explanatory role of causes that is given by TIMING rests on some very shaky foundations.

Let us consider, first, the assumption that underpins Ehring's central proposal: the presence of an object at some time cannot explain why an effect of some type begins when it does, if the object is present not only shortly before the effect begins to occur, but also long before or after, and no other effects of the same type begin to occur long before or after. Presumably, what is taken to motivate this proposal is the assumption that the presence of an object at some time could only explain why an effect of some type occurs when it does if it were sufficient for an effect of that type to occur some particular duration of time later. And, in that case, effects of that type would begin to occur for at least as long as the duration of the object's presence.

It is specifically causation by objects that is challenged here, since it is only objects that we conceive of as always *wholly* present at each moment at which they are present. As outlined earlier, an event, by contrast, if present throughout a period of time, is *not* wholly present at each moment within that period, only some *proper part* of it is present at each such moment. In that case, the presence of some *proper part* of an event might be sufficient for an effect of some type to occur some particular duration of time later, while the presence of any other proper part of that event is not similarly sufficient for such an effect. Alternatively,

⁵⁴ While Ehring states that “[a] substance ... that exists before *and* after an effect begins cannot account for why that event begins at that time” (my italics), the illustration of the idea in terms of whether John could have caused his ears to move appeals only to John's presence *before* his ears moved. As a result, it seems appropriate to interpret Ehring as holding that whether the presence of an object at a time explains why an effect of some type begins when it does depends on whether the object was present before *or* after the effect begins.

perhaps only the presence of the whole event, across the entire period of its duration, is sufficient for an effect of some type to occur some particular duration of time later. In either case, that the presence of an event at some time is sufficient for an effect of some type to begin some particular duration of time later does not imply that the presence of that event at any other time is similarly sufficient for such an effect. Given the sufficiency assumption regarding explanation then, and the explanatory requirement for causation asserted by TIMING, it is only causation by objects that is threatened.

And now, if the sufficiency assumption is correct, then it does follow that an object that is present not only shortly before, but also either long before or after, an effect of some type begins to occur, where no other effect of the same type begins to occur long before or after, does not play the explanatory role of a cause, as given by TIMING, relative to that effect. It does not follow just from this, however, that no object at all can play the role of a cause as given by TIMING. To reach this conclusion, one must also assume that no object is present for a period of time, such that it has effects of a particular type that begin throughout a period of corresponding length.

I think that both of these outlined assumptions should be rejected, and I'll indicate why, beginning with the latter assumption, that no object is present for a period of time, such that it has effects of a particular type that begin throughout a period of corresponding length. There are two considerations that prompt rejection of this assumption, which are the following. First, there is no reason to deny that an object could be present merely for an instant. While it was indicated in §1 that it is part of our conception of objects that *insofar as* they are present at multiple times (across a period of time), they are wholly present at each of those times, it was not suggested that it is part of our conception of objects that they are necessarily present at multiple times. In that case, contrary to Ehring's assumption, it would seem to be possible for an effect of some type to begin at just the instant at which an object is present. The second consideration that weighs against Ehring's assumption is that there is no reason to deny that an

object could be present across a period of time, where an effect of some particular type begins to occur at each instant in that period. As a result, Ehring does not succeed in ruling out that some objects could play the role of a cause as given by TIMING. And so we have not, in fact, been given sufficient reason to suppose that the idea of objects causing effects is simply incoherent.

On the other hand, of course it is true that generally when we make statements of the form ‘O caused E’, effects of the same type as that picked out by ‘E’ do not begin to occur at every instant for which the object picked out by ‘O’ is present. Consider, for example, the statement ‘The sun caused the wax to melt’. Clearly, it is not the case that for as long as the sun has been around some wax has begun to melt. Ehring’s line of reasoning, if it were otherwise sound, could then still pose a challenge to the idea that we should interpret our talk in terms of causation by objects as reflecting a commitment to causation by objects. For, if Ehring is otherwise correct, then an interpretation of our ordinary statements of the form ‘O caused E’ as asserting that some object caused some effect would present us as quite often expressing something incoherent.

It is not clear that Ehring’s line of reasoning is otherwise sound however. In particular, we can question the first assumption that I identified as underpinning Ehring’s thinking. This was the assumption that the presence of an object at a time could only explain why an effect of some type occurs when it does, rather than at some other time, if it were sufficient for an effect of that type to occur. To assume that only a sufficient condition for some phenomenon could explain why that phenomenon occurred is, surely, to assume far too stringent an account of explanation. There is undoubtedly a form of explanation in which an explanans is sufficient for its explanandum, and the classic ‘deductive-nomological’ or ‘D-N’ model of explanation that Hempel (1965, §2) puts forward is a model of such a form of explanation. However, it is nowhere suggested that in all cases an explanans is sufficient for its explanandum. Hempel (*ibid.*, §§3.3, 4.2) himself discusses forms of explanation where the explanans is not sufficient for its explanandum. Regarding some of these cases — and, notably, not regarding all —

Hempel (ibid., §§4.2.2) describes the explanans as providing only *a partial* explanation of its explanandum, but a partial explanation is, of course, an explanation nonetheless. A partial explanation is just an explanation that fails to include such information that would *fully* account for the explanandum.⁵⁵ A partial causal explanation of some phenomenon may simply identify *some* feature of its causal history (see Lewis 1986d, p. 217).

In that case, if an explanans can be insufficient for its explanandum, it is hard to see why we should accept the proposal that Ehring puts forward: that the presence of an object at some time cannot explain why an effect of some type begins when it does, if the object is present not only while the effect begins to occur, but also before or after, and no other effects of the same type begin to occur before or after. If some wax is left outside at midday, and begins to melt, the presence of the sun at the time that the wax begins to melt does offer some explanation of why the wax begins to melt when it does, regardless of the fact that the sun is present before and after the wax begins to melt. The explanation of the wax beginning to melt when it does in terms of the presence of the sun at that time is, presumably, a case of merely partial explanation, since we expect there to be more that can be said regarding why the wax begins to melt then, but it is a case of explanation nonetheless.

Perhaps it will be objected here, that even if the presence of an object at a time can provide a partial explanation of why some effect begins to occur when it does, this may not be enough for an object to play the explanatory role of a cause, as given by TIMING. Perhaps it will be suggested that TIMING should really be read as relating causation to *full* explanation, and therefore as equivalent to the following:

⁵⁵ Ruben (1990, pp. 19-20) discusses the partial vs full explanation contrast. Note that something's being a partial explanation does not imply that there is a sufficient condition for the explanandum of which the partial explanation is a part.

TIMING*:

If C is a cause of some effect, E, of type T, then C is present at some time t_C , and E begins at some time, t_E , and the presence of C at t_C fully explains why an effect of type T begins at t_E .

However, if TIMING is to be read as equivalent to TIMING*, then TIMING turns out to be a highly stringent explanatory requirement on what it takes to be a cause, and certainly far more stringent than anything that our intuitive conception of causation obviously requires. When we take ourselves to have identified a cause of some effect, we certainly do not take ourselves to have identified *everything* that can be said regarding why that effect begins to occur when it does. But it is uncontroversial that our conception of causation is intimately related to our conception of explanation. Insofar as we are concerned with identifying causal relationships, we are concerned with identifying relationships of dependence between discrete elements of the world that offer explanations of the dependent elements. So it is plausible that when we take ourselves to have identified a cause of some effect, we take ourselves to have identified *something* that can be said regarding why that effect begins to occur when it does. And so TIMING, when read as non-equivalent to TIMING*, in terms of explanation that may be either partial or full, is quite plausible. As we have seen however, when TIMING is understood in this way, *contra* Ehring, it identifies an essential role for causes that objects are perfectly well-suited to play.

Then again, while TIMING very plausibly ought not be read in terms of *full* explanation, might there be some other restriction on partial explanation, such that it ought to be read in terms of this instead? One perhaps seemingly more plausible restriction would be in terms of *proportionality*, as follows:

TIMING**:

If C is a cause of some effect, E, of type T, then C is present at some time t_C , and E begins at some time, t_E , and the presence of C at t_C proportionally explains why an effect of type T begins at t_E .

The notion of proportionality that I have in mind here is one derivative of the notion introduced by Yablo (1992, pp. 274-7), who proposed that *causes* can be proportional or disproportional to their *effects*. Applied to explanations, the notion can be roughly characterised as follows: an explanation that is proportional to its explanandum is one that includes neither too much (irrelevant) detail, nor too little detail to account for the explanandum. A proportional explanation can be said to be one that is neither too broad, nor too narrow. And a *dis*proportional explanation is simply an explanation that is not proportional to its explanandum, including either too much or too little detail. What “including too much/little detail to account for the explanandum” amounts to can be clarified as follows:

- Fact F includes more detail than fact G iff F implies G, but G does not imply F: $\Box(F \rightarrow G) \wedge \Diamond(G \wedge \neg F)$.
- Fact F includes too much detail to account for fact E iff there is a fact that includes less detail than F, fact G, and were G to hold without F holding, then E would still hold: $(F \wedge \neg G) \Box \rightarrow E$.
- Fact G includes too little detail to account for fact E iff there is a fact that includes more detail than G, fact F, and were G to hold without F holding, then E would not hold: $(G \wedge \neg F) \Box \rightarrow \neg E$.⁵⁶

In that case, TIMING** should be understood as asserting that the presence of a cause at some time must be a fact that neither includes too little, nor too much detail to account for the fact that its effect begins when it does. This is very much

⁵⁶ I am indebted to unpublished work by Rory Madden and Nicholas Jones for this way of clarifying the notion of proportionality.

along the lines of proposals, following Yablo (1992) that causes must be proportional to their effects (see List and Menzies 2009; Menzies and List 2010; Zhong 2014). However, such proposals have been put forward only in the context of responding to the charge that mental causes are “screened off” by physical causes. It is argued that at least some mental phenomena are proportional to some effects to which no physical phenomenon is proportional, and so these mental phenomena are causes of those effects, while no physical phenomenon is. As I will argue in the next section, I think another response is available to “screening off” challenges, such that the possibility of mental causation provides no motivation to accept the proportionality requirement for causation. And no further motivation has been provided. Certainly, proportional explanation can be said to be *better qua explanation* than disproportional explanation, but this, in itself, does not motivate the proportionality requirement for causation, or TIMING** (see Weslake 2013).⁵⁷

The appeal to TIMING does not, then, succeed in establishing that our talk in terms of causation by objects does not express a commitment to there being causation by objects. There are, however, a couple of other objections to the coherency of causation by objects that have been raised — albeit only to be shown as far from definitive — that I will briefly address here.⁵⁸ Like the objection from Ehring that I have addressed, each of these objections amount to a proposal that there is some role that is essentially played by causes, and which cannot be played by objects. Clarke (2003, pp. 203-4), Steward (2012a, p. 221), and Whittle (2016, p. 17) all consider the proposal that causes essentially raise the probabilities of their effects, which objects cannot do. The presence of an object at a time might raise the probability of some effect, but the object itself is not the kind of entity that can affect probabilities. As Steward puts it, “we need propositional structures to express such [probability-raising]

⁵⁷ As a requirement for causation, TIMING** would also need to be amended so as to allow for non-deterministic causation.

⁵⁸ See Clarke (2003, pp. 196-209), Steward (2012a, pp. 216-225), and Whittle (2016, pp. 17-18).

relationships” (2012a, p. 221), and while the presence of an object at a time can be expressed by a propositional structure, ‘O is present at t ’, the object itself cannot be expressed by a propositional structure, it can only be named, ‘O’, or described, ‘the F’. Clarke (2003, p. 197) and Steward (2012a, p. 216) then also briefly consider the proposal that causes essentially serve as the antecedents of conditionals in which their effects are the consequents, which objects cannot do. Again, objects are just not the kind of entity that can play this role, since we again need propositional structures to express such lawful and conditional relationships (see *ibid.* p. 216).

While both these proposals, unlike Ehring’s, do indeed identify roles that objects cannot play, the roles that they identify are far more controversial as roles that are essentially played by causes than that given by TIMING. First, these proposals clearly turn on a prior assumption that all causes have a structure that corresponds to that of a proposition, which there is no reason to accept, unless one already denies that objects could be causes. But moreover, even if one did assume that all causes have a propositional structure, it is controversial both that all such causes raise the probabilities of their effects, and that there are no such causes whose effects are not conditional upon them.⁵⁹ What is far less controversial is that there are some important connections between causation, probability-raising, and conditionals, but this is something that is not at all incompatible with objects being causes of effects.

So the various challenges to the coherency of the idea of objects causing effects do not succeed. And, in that case, these challenges do not succeed in undermining the idea that our talk in terms of causation by objects expresses a commitment to there being causation by objects.

⁵⁹ Regarding dissent on the issue of whether causes (with propositional structure) raise the probabilities of their effects, see Beebe (1998) for discussion. In cases of pre-emption and over-determination, effects are at least not straightforwardly conditional on their causes that are propositional in structure. See Hall and Paul (2013, ch. 3) for discussion of pre-emption and over-determination.

2.4 “Screening Off”

There is, however, another challenge to the idea that we are really committed to there being causation by objects that does not turn on a proposal that the idea of objects causing effects is incoherent as such. This challenge turns, instead, on the proposal that we take causation by objects to be “screened off” by causation by entities of other kinds. The challenge might be put in terms of screening off by causation by particular events, entities that are discussed briefly in §2.1, or it might be put in terms of screening off by causation by instantiations of properties by objects at times (states of affairs, or states) — entities which are sometimes referred to as facts (see Steward 1997, pp. 26-7), property instances, and sometimes, instead, as events (see Kim 1993a, 1993b), although these are not particular events in the sense given in §2.1.⁶⁰ The proposal that we take causation by objects to be “screened off” by causation by states, is something that is in fact gestured towards by Ehring, after he presents the objection to the idea of causation by objects that was the focus of the previous section.⁶¹ He states that:⁶²

The difficulty for those of us who do not reject non-object causes is that the event (or property instance or fact) of that substance’s having that property will also be a cause of that effect, leaving no room for the efficacy of the substance per se.

(Ehring 2009, p. 371)

Note that Ehring here uses the terms ‘facts’, ‘property instances’ and ‘events’ to refer to states, and so does not put the challenge in terms of causation by events that are particulars. Ehring’s claim that causation by a state — an instantiation of

⁶⁰ See n. 1 above. Kim does describe his events as particulars, but he takes particularity to just be a matter of having a spatiotemporal location (see Kim 1993b, p. 40).

⁶¹ This sort of challenge is also suggested by Velleman, who states that “our scientific view of the world regards all events and states of affairs as caused, and hence explained, by other events and states, or by nothing at all. And this view would seem to leave no room for agents in the explanatory order.” (1992, p. 467).

⁶² Whittle (2016, pp. 8-10) opposes the related concern that causation by objects is screened off by causation by events that are particulars.

a property by a substance (object) — leaves “no room for the efficacy of the substance per se” amounts to the claim that causation by states “screens off” causation by objects. This idea can be spelt out as the idea that if an object were to cause an effect, then a state of that object at some time would also cause that effect, rendering the causation by the object redundant, so that it is implausible that objects cause the effect at all. And the idea can similarly be put in terms of *overdetermination*: if an object were to cause an effect, then, given that a state of that object would also cause that effect, the effect would be overdetermined. And since it is implausible that objects overdetermine all their effects, it is implausible that objects cause effects at all. It should be clear, then, that this challenge to the efficacy of objects has the same form as the well-known challenge to the efficacy of the mental, on the assumption of the supervenience of the mental on the physical, and the causal completeness of the physical (see Kim 1998, 2005).

Now, while Ehring’s challenge is specifically that causation by states screens off causation by objects, an analogous challenge could be put in terms of causation by particular events. And in this section, I consider the plausibility of both these challenges. First, I discuss the plausibility of the idea that we naturally assume that if an object were to cause an effect, then a state of that object would also cause that effect. I then consider the idea that we naturally assume if an object were to cause an effect, then a particular event would also cause that effect. I will suggest that while it is plausible that if an object were to cause an effect, then a state of that object would also cause that effect, it is not similarly plausible that if an object were to cause an effect, then a particular event would also cause that effect. In that case, if we take either causation by states or particular events to screen off causation by objects, then it is causation by states that we take to do so. However, I then make the case that we nonetheless do not take causation by states to screen off causation by objects.

So why, then, might one hold that we naturally assume that if an object were to cause an effect, then a state of the object would also cause that effect? The supposition derives, I think, from the explanatory role that is essentially played by

causes, and that is given by the condition that I called TIMING in §3. TIMING, recall, went as follows.

TIMING:

If C is a cause of some effect, E, of type T, then C is present at some time t_C , and E begins at some time, t_E , and the presence of C at t_C explains why an effect of type, T, begins at t_E .

Let us consider just what it means for the presence of an object at some time to explain why an effect of some type begins when it does. It is extremely intuitive, I think, that if the presence of some particular object at some time t_O explains why an effect of some type, T, begins at t_E , then there is some way that the particular object is, some property that it has, such that the object's having that property at t_O explains why an effect of type T begins at t_E .⁶³ The property in question may be a temporary property that it has only at t_O , but it may also be a property that it has at other, or even all, times of its existence.

Consider how it was suggested that the presence of the sun at the time when some wax starts to melt could explain why the wax starts to melt at that time. We surely only countenance that the presence of the sun at the time when the wax starts to melt explains why the wax starts to melt then, because we take the sun to have some property, such as being extremely hot, or, some more complex property, such that the sun's having that property at that time explains why the

⁶³ This is in conformity with the widespread and highly intuitive idea that there is a generality requirement on singular causation, such that singular causation entails a general causal relationship between some property of the cause and some property of the effect, which at least partially explains the instance of that singular causal relation. While the term 'singularism' has been used to describe views of causation that stand opposed to this generality requirement (see Whittle 2003), the singularist position, so characterised, would seem to be something of a straw-man position, without any actual defenders. Anscombe (1971), for instance is sometimes referred to as such a singularist (see again Whittle 2003), but she does not go so far as to oppose this generality requirement. (I thank Dawa Ometto for indicating this to me.) It should be noted that the generality requirement does not at all assert that properties of causes and effects are related by causal laws of nature, and so is compatible with a whole variety of views on laws of nature, and the relationship between singular causation and laws of nature.

wax starts to melt at that time. It was acknowledged earlier that the explanation of the wax beginning to melt when it does, just in terms of the presence of the sun at that time, looks like it is a merely partial explanation. The proposal being put forward here affirms that this is indeed a merely partial explanation, and points to one particular way in which we expect there to be more to be said regarding why the wax begins to melt when it does.

Going back to the general suggestion, this is that the presence of an object at some time t_O explains why an effect of some type, T, begins at t_E , only if there is some property that the object has, such that the object's having that property at t_O explains why an effect of type T begins at t_E . And an object's having some property at some time just amounts to a state of the object. In that case then, if the suggestion put forward here is correct, along with TIMING, the following would seem to be entailed:

TIMING₂:

If some object, O is a cause of some effect, E, of type T, then O is present at some time t_O , and E begins at some time, t_E , and an instantiation of some property, P, by O at t_O explains why an effect of type, T, begins at t_E .⁶⁴

But now, insofar as TIMING₂ is correct, it looks quite plausible that we naturally assume that if an object were to cause some effect, an instantiation of some property by that object — i.e. a token state of the object — would also cause that effect. The instantiation of some property by an object, which explains why that object's effect begins when it does, looks well-placed to qualify as a cause of that effect, insofar as the object itself qualifies as a cause. The instantiation of a property by an object at a time is something that is part of the world, and has, at the very least, a single temporal location: the time at which the object instantiates

⁶⁴ TIMING₂ is related to, but distinct from, the claim that objects cause their effects in virtue of their properties. Clarke, for example, states that "If a substance causes an event, it does so in virtue of having some causally relevant property. The substance causes the effect to occur at a certain time at least partly in virtue of having that property at a certain time." (2003, p. 202).

the property. And insofar as the object that instantiates a property has a spatial location, the instantiation of a property by that object will also have some single spatial location, inherited from the object (see Kim 1993, p. 40). It seems then, that states of objects are entities of a kind that we are prepared to think of as causes of effects.⁶⁵ And the explanation of the timing of an effect in terms of the state of an object that causes the effect would provide more information directly regarding the objective causal structure of the specific worldly situation in which the effect occurs. This is in contrast to entities of other kinds, such as laws of nature or the properties that are instantiated, which we may accept as also partially explaining why effects of certain types happen when they do, but which we do not think of as *causes* of those effects. Laws of nature and properties, unlike states, may not have spatial or temporal locations at all, and, at the very least, do not have either single spatial locations or single temporal locations. Moreover, explanations in terms of laws and properties, unlike explanations in terms of states, do not directly provide information regarding specific situations, but rather general patterns of types of occurrences.⁶⁶

There is, then, reason to hold that we naturally assume that if an object were to cause some effect, then a state of that object would also cause that effect. Are there similar reasons to suppose that we assume that if an object were to cause some effect, then a particular event would also cause that effect? I haven't yet said

⁶⁵ One might worry that insofar as states are referred to by sentences, causation by states is challenged by so-called "slingshot" arguments, which are typically presented as targeting causation by facts. Slingshot arguments purport to show that if causation links any facts, then it links all facts, on the basis of certain principles regarding the correspondences between sentences and facts (see Davidson 2001f, pp. 152-3; Neale 2001, p. 177-190, 216-220). As Neale (*ibid.*, p. 220) argues, however, on a Russellian theory of descriptions one can reasonably deny one of the crucial principles that slingshot arguments rely upon. This principle can be put as follows: a sentence that includes a definite description refers to the same fact as a sentence that differs only in that the definite description is replaced with a singular term for the entity that satisfies the definite description. Insofar as one takes states to be referred to by sentences then, one should similarly endorse a Russellian theory of descriptions, and deny the analogous principle: a sentence that includes a definite description refers to the state as a sentence that differs only in that the definite description is replaced with a singular term for the entity that satisfies the definite description.

⁶⁶ See Whittle (2016, p. 14) for discussion of an analogy between properties and laws of nature, as entities in virtue of which objects cause effects, but which do not themselves cause effects.

much about the nature of particular events that would indicate how prevalent they are, however. In §1, I merely reported that Davidson encouraged us to see that we think of such things as parties, concerts, and dances as particular events. But Davidson encouraged us to see that we think of all changes as particular events (see 2001h, p. 181). If that is so, and our conception of changes is accurate, then particular events are ubiquitous. However, despite their ubiquity, it is not clear that we have good reason to suppose that in all cases where an object causes an effect, some particular event causes it too. For example, there is no sound basis, analogous to that presented for the case of states, for the supposition that we assume that if the presence of an object at some time t_O explains why an effect of some type, T, begins at t_E , then there is some change in the object, such that the change in the object also explains why an effect of type T begins at t_E . Consider again the example of the explanation of why some wax begins to melt when it does in terms of the presence of the sun. We do not obviously only countenance that this explanation holds if we suppose that some change in the sun also explains why the wax begins to melt then. In that case, reflection on the explanatory role played by causes does not support the idea that we take it to be the case that whenever an object causes an effect, a change in that object also causes that effect.⁶⁷

Perhaps, however, it will be thought that while we accept that an object may cause some effect without some change in that very object also causing the effect, we assume that some sort of particular event, which might be a change in some other object, must also cause the effect. This thought may well be tempting insofar as it is thought that all effects are particular events, and that all such effects are fully determined by prior causes; Broad asserts, for example, that “in so far as an event *is* determined, an essential factor in its total cause must be other *events*” (2016, p. 44), and the total cause that Broad has in mind here is a conjunction of its causes, which together *fully* determine the occurrence of the determined event. Then

⁶⁷ I here stand in opposition to Lowe (2008, p. 146), who asserts that at least whenever an object causes an event, there is an event of the object “acting” in some manner — which, presumably, amounts to a change in the object — such that this event causes the effect-event.

again, it's not at all obvious that we intuitively assume either (a) that all effects are particular events, or (b) that all events that are effects are fully determined by a conjunction of its causes. Regarding (a) first, we may well allow that something like a balloon's being a certain size at some time — a state, rather than a particular event — is an effect of some cause, for example. If we take there to be effects that are states, rather than particular events, then it's left open that we allow that such effects could be caused by objects, without also being caused by particular events. Perhaps we do naturally suppose that insofar as the balloon *changed* to *become* the certain size that it is, some event must have caused that change, and thereby causes the balloon's being the resulting size thereafter, but we can also conceive of a balloon existing eternally at a certain size. In contemplating such a situation, we might well take the balloon's being that size at each moment, as, in each case, being caused by the preceding level of air pressure inside the balloon, but not caused by any event at all. And regarding (b), we do seem to allow that an event could be merely indeterministically caused. Suppose that the emission of a particle from a radium atom (a change in the particle) is not fully determined by prior causes, so that its occurrence is partly a matter of mere chance. We do not take this to rule out that it was indeterministically caused; the radium atom's nucleus having a certain weight at a certain time might be taken as a cause that merely makes the emission of the particle quite likely. And it is not ruled out that we take the emission to be caused by some object, such as the atom's nucleus, along with its having a certain weight, but without any particular event also causing it.⁶⁸

In that case, while it looks fairly plausible that we naturally hold that if an object were to cause some effect, then some state of that object would also cause that effect, there seems to be little reason to hold that if an object were to cause some effect, then a particular event would also cause that effect. So, if we take causation by objects to be made redundant by causation by entities of other kinds, causation by states is the only real candidate here.

⁶⁸ Steward makes the point that the emission of a particle from some radioactive material might occur without any “trigger”, by which she means an event that causes it to occur (2012a, p. 209).

However, it does not simply follow from the fact that if an object were to cause an effect, then a state of that object would cause that effect too, that causation by objects is screened off by causation by states. Effects can certainly have multiple causes after all, without any of the causes being redundant. Why would we not suppose, then, that objects simply cause effects *with* those states that cause the same effects? The quote from Ehring given earlier, offers no insight, stating simply that “the event (or property instance or fact) of that substance’s having that property will also be a cause of that effect, leaving no room for the efficacy of the substance *per se*”.

Perhaps the thinking here could be captured as follows: if both an object and a state of that object cause some effect, the case is not like one of joint causation by two distinct objects (or states of two distinct objects), where each can be said to be causally contributing something distinctive, as it were. Consider as an example of such joint causation, a case where an individual is struggling to move a boulder that is close to a cliff-edge; another individual helps, and together they move the boulder and end up pushing it over the cliff-edge. Each individual causally contributes something distinctive to the effect of the boulder falling over the cliff-edge. Moreover, if both an object and a state of that object cause some effect, the case is not one of a causal chain to some effect, since the object cannot be said to cause its own state, and the state cannot be said to cause the object. However, if causation by multiple entities is not a matter either of joint causation or a causal chain, then it is instead a matter of overdetermination, where at least one of the causes is redundant.

This line of thinking should be resisted by reflecting on just in what sense the case of causation by an object and a state of that object is unlike joint causation by distinct objects and causal chains. In so reflecting, one sees the plausibility of such a case not, in fact, amounting to a case of overdetermination. In the case of joint causation by distinct objects, the causes are clearly separable, in that it is possible for each object to exist without the other(s) existing. And this is an important

point of contrast with the case of causation by an object and a state of that object; it is very clearly not possible for an instantiation of a property by some object to exist, without that object existing. On account of this difference, while in the case of joint causation by two distinct objects, the following two counterfactuals are false, in the case of causation by an object and a state of that object, at least one of them is vacuously true.

- (1) If c_1 had been present without c_2 , then the probability of an effect of the same type as e (an E event) occurring at t , when e does in fact occur, would have been just as it in fact is, at all times $x < t$.
- (2) If c_2 had been present without c_1 , then the probability of an effect of the same type as e (an E event) occurring at t , when e does in fact occur, would have been just as it in fact is, at all times $x < t$.

These are adaptations of Bennett's (2003, p. 476) two counterfactual conditions, where the *non-vacuous* truth of both is argued to be necessary for overdetermination of some effect by two causes.⁶⁹ The adaptation takes into account the possibility of overdetermination by entities other than events, as well as the possibility of overdetermination of an indeterministic event, where the multiplicity of causes does not affect the probability of an event of that type occurring when it does.⁷⁰ This adaptation therefore makes for a more plausible proposal for a necessary condition for overdetermination of some effect, e , by two causes, c_1 and c_2 : e is overdetermined by c_1 and c_2 only if (1) and (2) are both non-vacuously true. And this condition is not satisfied in a case where the two causes are an object and a state of that same object, since at least one of (1) or (2) will be

⁶⁹ Lewis (1986c, p. 193; 2004, p. 80), Schaffer (2003b, p. 23) and Kroedel (2008, pp. 128-9) suggest similar necessary conditions for overdetermination.

⁷⁰ The possibility of such overdetermination is often tacitly acknowledged, since it is often indicated that the challenge to the efficacy of the mental remains even if one endorses a variation of the causal completeness of physics principle that allows for indeterminism, such as the following: "All physical effects are determined or have their chances determined by prior physical causes according to physical law" (Crane 1995, p. 6).

vacuously true (both are vacuously true if the instantiated property in question is an *essential* property of the object that instantiates it).

A little more can and should be said about why we should accept this proposed necessary condition for overdetermination, however. What speaks in favour of this proposal is that it corresponds to a natural understanding of the way in which overdetermining causes render one another causally redundant. That two overdetermining causes of an effect render one another redundant in the causation of that effect, seems to suggest that the causes can be taken separately, and that when they are taken separately the likelihood of the effect's occurrence is not affected. And while there might be the thought that since a state of a some object incorporates the presence of that object, the presence of the object cannot itself "do any distinctive causal work", this obscures the fact that the presence of the object may be causally necessary for some effect precisely in its being an irremovable component of a state of the object that causes that effect. In consequence, then, cases where both an object and a state of that object cause the same effect do not seem to be cases that we take to be ones of overdetermination. Perhaps it is inappropriate to classify such cases as ones of joint causation, and they are clearly not cases of causal chains, but nonetheless it does not seem that we classify them instead as cases of overdetermination.

Moreover, while it has been argued, by Aimar (2011) and Won (2014), that the non-vacuous truth of Bennett's two counterfactual conditions is not, in fact, necessary for overdetermination, these arguments can be shown to not succeed. These authors provide structurally analogous cases purported to be counterexamples to the necessity claim, which, as I will briefly outline, do not, ultimately, serve as counterexamples. Consider, first, the case that Aimar presents, dubbed 'GLASS':

There are two gunwomen and a victim. If gunwoman-₁ does not shoot, a device detects this and raises a bullet-proof glass in front of the victim. Otherwise, the device does nothing. Both gunwomen shoot simultaneously. The device does nothing. Two bullets get to the victim. The victim dies.

Aimar then asserts that GLASS is a case of overdetermination, and that Bennett's necessary condition for overdetermination of the death by the two shootings of gunman-1 and gunman-2 is not satisfied however. And, now, Aimar is certainly correct that the necessary condition for overdetermination of the death by the two shootings of gunman-1 and gunman-2 is not satisfied. For if gunman-2 were to shoot and gunman-1 were not to shoot, the bullet-proof glass would rise, saving the victim from death. Yet, it seems *entirely appropriate* to classify the victim's death as not overdetermined *by the two shootings*. One of the shootings — that by gunman-1 — is *necessary*, after all, for the victim's death, given that “[i]f gunman-1 does not shoot, a device detects this and raises a bullet-proof glass in front of the victim”.

It may well, however, be the case that the victim's death is nonetheless overdetermined (it is only overdetermined if there is nothing to favour one bullet rather than the other as causing the death). But, in that case, the death is overdetermined by events that do not include gunman-1's shooting. The death may instead be overdetermined by gunman-2's shooting (or the bullet from her gun flying through the air towards the victim, or this bullet hitting the victim etc.) and gunman-1's bullet flying through the air towards the victim (or this bullet hitting the victim etc.). And Bennett's necessary condition for overdetermination of the death by these events *is* satisfied, if we avoid backtracking counterfactuals, as we are told we ought to (see Bennett 2003, p. 478). If gunman-2 shoots, but gunman-1's bullet does not fly through the air towards the victim, despite having shot too, then the bullet-proof glass does not rise, and the victim still dies. Similarly, if gunman-2 does not shoot, but gunman-1's bullet does fly through the air towards the victim, then the victim still dies. So the Bennett's two counterfactual conditions are non-vacuously true here, and her necessary condition for overdetermination is satisfied.

As indicated, Won's purported counterexample is simply a structurally analogous case to Aimar's, in response to which much the same can be said. In Won's case,

Billy and Suzy both throw a rock at a bottle at precisely the same time, with the rock's hitting the bottle at precisely the same time, such that the bottle smashes. However, there is a third agent, Charlie, in the vicinity, who would have intervened to block Suzy's rock from hitting the bottle, if she alone had thrown a rock at the bottle (Won 2014, p. 213). In this case, while the bottle's smashing is *not* overdetermined by Suzy's throw and Billy's throw, it may well be overdetermined by Suzy's throw and Billy's rock flying through the air towards the bottle.⁷¹

Altogether, then, the proposed necessary condition for overdetermination stands up to scrutiny, and is not satisfied in all cases of causation by objects and causation by their states. In that case, it does not seem correct to suppose that we take causation by objects to be screened off by causation by states, or, indeed, by causation by any other entities. Given the failure of this objection, and the incoherence objection, there seems to be no reason to suppose that are not committed to there being at least some causation by objects.

2.5 The Reducibility of Object-Causation

But while we have seen that there is no good basis for denying our commitment to the existence of causation by objects, we have not yet addressed the view that object-causation, though possible, merely *reduces to* event-causation or state-causation. Now, the proposal that statements asserting causation by objects can be

⁷¹ Admittedly, Won also provides the following purported counterexample:

Imagine that the laws of magic are such that what happens at noon must match the latest spell cast on the previous day. At six o'clock, Merlin and Morgana cast prince-to-frog spells at the same time, and the prince turns into a frog at noon the next day. But if either of Merlin and Morgana had not cast the spell, Mordred would have cast a prince-to-goat spell at nine o'clock. Here the prince's becoming a frog is overdetermined, yet there is not a time at which it has two causes such that either alone would have caused it.

(Won 2014, p. 219).

However, *contra* Won, this simply does not seem to be a case of overdetermination at all.

reduced to (reductively analysed in terms of) statements asserting causation by events/states *has been* (and is being) addressed, but there is a notion of reduction as relating *facts* rather than *statements* asserting facts and which might well be thought to have application with regards to object-causation. I argue here that object-causation does not reduce to either event-causation or state-causation on this distinct notion of reduction.

The relation of reduction that relates facts should be understood as an *explanatory* relation that relates classes of facts: if the F-facts reduce to the G-facts, then the G-facts fully explain the F-facts. While the explanatory notion of reduction is often referred to simply as reduction (see Fodor 1974), it is sometimes referred to instead as reductive explanation (see Kim 2008), so as to distinguish this relation from others that are also referred to as reduction (such as identity, in the literature regarding the relationship between the mental and the physical, see Kim 2008).⁷² I think it is plausible that when agent-causal theorists of action oppose the idea that agent-causation in action reduces to causation by events or states, they are opposing not only the idea that statements asserting causation by agents can be reductively analysed in terms of statements asserting causation by events or states, but also the idea that facts regarding causation by agents can be fully explained in terms of facts regarding causation by events or states. For agent-causal theorists of action are often particularly animated by the concern that reductive event/state-causal theories of action involve a disappearance of the agent. The idea seems to be that only by asserting the necessity of causation by the agent, rather than some event or state, does one ensure the proper place of the agent in an account of action (see Hornsby 2011, p. 108). If such agent-causal theorists of action took agent-causation to be explanatorily reducible to event/state-causation, then it should be allowed that there is some event/state-causal theory of action that

⁷² This explanatory reduction also seems to line up with at least certain conceptions of grounding as an explanatory relation (see Fine 2001, 2012; Rosen 2010; Kment 2014, ch. 6). But I avoid referring to the relation as a grounding relation, given both that there are significant disputes regarding the nature of grounding, and that action-theorists talk only in terms of the reducibility of agent-causation, rather than in terms of whether agent-causation is grounded by event/state-causation.

avoids the disappearance of the agent problem.

Whether agent-causation is explanatorily reducible to event/state-causation is a matter of whether causation by objects, albeit of a certain distinctive kind, is explanatorily reducible to event/state-causation. Since, as we have seen, it is much more plausible that whenever there is causation by an object, there is causation of its effect by a state, than that whenever there is causation by an object, there is causation of its effect an event, it is more plausible that causation by objects reduces to causation by states rather than causation by events. Facts regarding causation by objects cannot be fully explained by facts regarding causation by events if causation by an object might occur without causation by any events. But what would be the basis for supposing that not only is object-causation always accompanied by state-causation, but object-causation also explanatorily reduces to state-causation?

Theorists have not put forward arguments specifically for this conclusion, so we must simply consider why someone might be attracted to the idea that object-causation is explanatorily reducible in this way. I imagine that consideration of the “screening off” objection to object-causation might lead one to suppose that while object-causation might take place without resulting in overdetermination, even if it is always accompanied by state-causation, this can only be so if either object-causation reduces to state-causation, or vice versa. For it might well be supposed that causation of some effect by two entities that does not amount to joint-causation, a causal chain, or overdetermination is only possible if causation of that effect by one of the entities is explained by causation of that effect by the other entity. Consideration of the proportionality of state-causation, rather than object-causation, might then lead one to suppose that it is object-causation that reduces to state-causation rather than vice versa. If an object’s being in some state proportionally explains why an effect of some type occurs when it does, while the object’s existence does not, then one might reason that causation of an effect of that type by that object is explained by its also being caused by that state, rather than vice versa. And indeed, it seems legitimate to say, for example, that the sun

caused the wax to melt because it was so hot — one explains the sun's causing the wax to melt in terms of its state of being extremely hot.

I think it should be agreed that one can legitimately explain an object's causing some effect in terms of the object being in some state, and do so on account of that state, rather than the mere presence of the object, proportionally explaining the occurrence of an effect of that type. However, I do not think that it should be inferred from this that object-causation is explanatorily *reducible* to state-causation. For one can equally legitimately explain a state of some object's causing some effect in terms of the object causing an effect of that type when in that state: the sun's being very hot caused the wax to melt because the sun causes wax to melt when it is very hot. This might be bolstered by an account of causation in terms of causal powers of objects, which manifest in certain circumstances (see Harré and Madden 1975; Cartwright 1989; Mumford and Anjum 2011). But even without such bolstering, once it is allowed that objects do cause effects, it should be acknowledged that there is an inter-dependence between object-causation and state-causation.⁷³ Neither can occur without the other, and each explains, to some extent, the other. But this, then, does not amount to explanatory reduction of one to the other, since explanatory reduction is a strictly *asymmetric* relation between classes of facts.

2.6 Causation by Macro-Physical Composite Objects

There remains one threat to the possibility of causation by agents — or, at least, *animate* agents — that remains to be addressed. This is the threat posed by the argument that causation by the entities of fundamental physics screens off causation by all other entities, while animate agents are not entities of

⁷³ This is similar, but not quite the same as Hyman's suggestion that there is an interdependence between agent-causation and event-causation, which he defends by way of arguing that the manifestation of causal powers of an agent is explained in terms of causation by events inside the agent, which is, in turn explained in terms of the manifestation of causal powers of constitutive agents and so on (2015, pp. 41-42). I suggest that even if an object is simple, there is an interdependence between causation by that object and causation by some state of the object.

fundamental physics. Such an argument is structurally analogous to the well-known argument that causation by mental entities, insofar as they cannot be identified with physical entities, is screened off by causation by physical entities (see Kim 1998, 2005). And, it is widely acknowledged that insofar as this argument is successful, it can be generalised so as to undermine all causation by all “higher-level” entities that are not in the domain of fundamental physics (see Baker 1993; van Gulick 1993; Noordhof 1999; Bontly 2002; Block 2003; and Walter 2008).⁷⁴

Let us consider, then, the structure of Kim’s well-known argument. The argument puts forward that if no mental entities are identifiable with physical entities, but mental phenomena supervene on physical phenomena, and the physical domain is causally closed — i.e. if the view that is commonly referred to as non-reductive physicalism is true — then mental entities can only be causally redundant. The distinctness of mental entities claim amounts to the ‘non-reductive’ part of ‘non-reductive physicalism’, while the supervenience and causal closure claims together amount to the ‘physicalism’ part of ‘non-reductive physicalism’. For, these two claims together entail that all mental and physical facts are fixed by physical facts.

I won’t here explicitly address Kim’s argument for the exclusion of mental causation. Instead, I will simply address an adaptation of the argument, with analogous structure, for the exclusion of causation by any instance of a property that is not a fundamental physical property, which I refer to simply as a “higher-level” property. Since no instance of a property by an animate composite object is a fundamental physical property, instances of properties by animate composite objects are instances of higher-level properties. And since, as I have argued earlier in this chapter, an animate composite object only causes an effect if some state of it — some instance of a property by it — causes that effect, the argument against causation by instances of higher-level properties, amounts also to an argument against causation by animate composite objects.

⁷⁴ Merricks (2001) defends an argument, modelled on Kim’s, against all causation by non-fundamental inanimate objects.

Kim's precise argument has been varyingly presented (2000, pp. 38-47; 2005, pp. 33-45), and indeed in one discussion Kim (2005) offers two alternative completions. The second completion is presented as an improvement upon the first however, with the second lacking one of the more contentious premises of the first completion, and so this is the version that I adapt such that it is causation by instances of higher-level properties, rather than mental properties, that are argued to be excluded by causation by instances of fundamental physical properties, rather than physical properties in general. The adapted argument goes as follows.

Exclusion of Higher-Level Causation:

- (1) (*For reductio*) An instance of higher-level property H at t_1 is a cause of an instance of higher-level property H* at t_2 '.
- (2) *Supervenience*: Higher-level property instances supervene on fundamental physical property instances. That is, if a higher level property H is instantiated at a time, t , there necessarily exists a fundamental physical property F (presumably some complex property of some collective of many fundamental physical entities) —the 'supervenience base' of H — such that if F is instantiated at t , necessarily H is instantiated at t .⁷⁵
- (3) (From 1 & 2) H* supervenes on some instance of a fundamental physical property, F*, such that F* is instantiated at t_2 , rendering it necessary that H* is instantiated at t_2 .
- (4) An entity, x , causes a supervenient property to be instanced at a time, t , only if x causes its supervenience base property to be instanced at t .
- (5) (From 1, 3 & 4) The instantiation of H at t_1 causes the instance of F* at t_2 .
- (6) *Causal Closure*: If a fundamental physical property instance occurs at t and has a cause that occurs at $t-n$, there is a fundamental physical property instance at $t-n$ that

⁷⁵ We can and should reject Kim's (2005, p. 57) suggestion that instances of properties by distinct objects cannot be related to one another by supervenience (see Walters 2008, pp. 684-6).

determines the chance of such a property instance occurring at t for all times x , where $t-n \leq x < t$.⁷⁶

- (7) (From 5 & 6) There is an instance of a fundamental physical property, F, at t_1 , which determines the chance of an instance of F* occurring at t_2 for all times x , where $t_1 \leq x < t_2$.
- (8) (From 5 & 7) The instance of F at t_1 determines the chance of an instance of F* occurring at t_2 for all times x , where $t_1 \leq x < t_2$, and the instance of H at t_1 is also a cause of the instance of F* at t_2 .
- (9) *Distinctness*: Higher-level properties are not identical with fundamental physical properties.
- (10) (From 9) The instance of H at t_1 is not identical to the instance of F at t_1 .
- (11) *Causal Exclusion*: If the chance of some effect, e , which occurs at t , is determined for all times x , where $t-n \leq x < t$, by some property instance, c_1 , which occurs at $t-n$, then e only has some cause c_2 , which is distinct from c_1 , but which also occurs at $t-n$, if e is overdetermined by c_1 and c_2 .
- (12) The instance of F* at t_2 , is not overdetermined by the instance of H at t_1 and the instance of F at t_1 .
- (13) (From 8, 10, 11 & 12) \perp .

Having derived a contradiction, the proposal would be that *Causal Exclusion*, along with premises (4) and (12), *Supervenience*, *Causal Closure* and *Distinctness* are not to be rejected, so that premise (1) must be rejected: no higher-level property instance causes higher-level effects. And, given *Causal Closure*, *Distinctness* and *Causal Exclusion*, it would seem that no higher-level property instance causes any fundamental physical effects either, such that it can be concluded that higher-level property instances, insofar as they are distinct from fundamental physical property instances, do not cause any effects at all.

⁷⁶ I have adapted Kim's principle of *Causal Closure*, so as to also allow for the possibility of fundamental indeterminism. It is often acknowledged that the argument for the exclusion of mental causation can be adapted so as to include a merely probabilistic version of the causal closure principle. Crane (1995, p. 6), for example, suggests that the causal closure principle could be adapted to the following: "All physical effects are determined or have their chances determined by prior physical causes according to physical law".

Let us now assess the merits of the argument for exclusion of higher level causation. It should be clear that the earlier discussion of the “screening-off” objection to object-causation has a significant bearing on our assessment of *Causal Exclusion*. The discussion there gives a reason to suppose that *Causal Exclusion* is in fact false. For according to the necessary condition for overdetermination presented there, if c_1 could not have occurred without c_2 then it will not be the case that e is overdetermined by c_1 and c_2 , even if the chance of e , which occurs at t , is determined for all times x , where $t-n \leq x < t$, by c_1 , which occurs at $t-n$, and c_2 is a cause of e , distinct from c_1 , but which also occurs at $t-n$.

The necessary condition for overdetermination, recall, is the following.

c_1 and c_2 overdetermine e only if both of the following counterfactuals are non-vacuously true:

- (1) If c_1 had been present without c_2 , then the probability of an effect of the same type as e (an E event) occurring at t , when e does in fact occur, would have been just as it in fact is, at all times $x < t$.
- (2) If c_2 had been present without c_1 , then the probability of an effect of the same type as e (an E event) occurring at t , when e does in fact occur, would have been just as it in fact is, at all times $x < t$.

And, if *Supervenience* is correct, then F could not have occurred without H; that is, a fundamental physical property instance that is the supervenience base of a higher-level property instance could not have occurred without that higher-level property instance. So, in that case, given the basis of the falsity of *Causal Exclusion*, the argument for exclusion of higher-level causation can be seen to fail.

Moreover, there will certainly be cases where causation of an effect by higher-level property instances is proportional. Consider a case where a scientist presses a button to turn on a proton-beamer that beams a stream of protons at some target. The button's being pressed at that particular time is a proportional explanation of those protons streaming through the air when and how they do. There is no fact that includes more detail than the fact that the button was pressed at that time, such that if the fact were to hold without that more detailed fact holding, it would not be the case that those protons stream through the air when and how they do. For, the button's being pressed at that time is compatible with any number of fundamental physical situations, where each of these implies the button's being pressed, but not vice versa. And, as long as the button is pressed at that time, whatever the fundamental physical situation, the fact remains that the protons stream through the air when and how they do. In that case, causation by higher-level property instances cannot even be said to be explanatorily reducible to causation by fundamental property instances. This surely must dash all expectations of some successful argument for the exclusion of higher-level causation by fundamental physical causation, even if *Supervenience* and *Causal Closure* ought to be accepted.

Then again, while the rejection of *Causal Exclusion* is sufficient to resist the conclusion of the argument for the exclusion of higher-level causation, I think it is worth briefly considering the relative merits of *Supervenience* and *Causal Closure* as well. This is particularly since, *Supervenience* and *Causal Closure* — put in terms of *fundamental* physical properties and *higher-level* properties — have not received as much attention as their analogues put in terms of physical and mental properties. The first thing that ought to be acknowledged is the inevitable problem of identifying what exactly is to be included as an entity of fundamental physics, and what is not. We might suppose that only simple, non-composite physical entities, and their properties, be included in this category, but it is far from established that such entities exist (see Schaffer 2003a). Then again, it might be argued, following Block (2003), that insofar as there are no simple physical entities, the conclusion to be drawn from an argument such as the argument for

the exclusion of higher-level causation is that *all* causation is excluded by “lower-level” causation.

However, there is also the problem that it is not clear on what basis we should suppose that the realm of simple entities and their properties — or, indeed, causation by any entities that we take to qualify, on some basis or other, as within the domain of fundamental physics, and their properties — is causally closed in the manner asserted by *Causal Closure*. Such a thesis is certainly not one that is *empirically* established. Then again, it should be noted that insofar as one does accept that the chances of effects are somehow fixed (by fundamental physical property instances *or* higher level property instances, say) in advance of their occurrence, and one accepts *Supervenience*, then one must also accept *Causal Closure*. That said, one might oppose both *Supervenience* and *Causal Closure*, or indeed, simply *Supervenience*. This has not been a popular option however, and some agent-causal theorists of action have in fact emphasised their acceptance of something much like *Supervenience* (see Steward 2012a).

Anyhow, whatever the verdict with regards to *Supervenience* and *Causal Closure*, given the falsity of *Causal Exclusion*, the threat posed to causation by animate agents, as entities that are not in the domain of fundamental physics, is extinguished. In that case, given the failure of challenges to our commitment to the existence of causation of objects, there is no good reason to think that our talk in terms of causation by objects, including animate agents, does not assert what it seems to assert. There is no good reason for thinking that we do not hold that agents cause effects, and there is no good reason for thinking that are *wrong* in holding that agents can cause effects. Moreover, there is no good reason for denying that there is causation by agents that does not reduce to causation by other entities. So, that agent-causal theories of action appeal to irreducible agent-causation is not itself problematic. Subsequent chapters argue that these theories instead face distinct problems.

3. Actions as Events

In this chapter I argue that actions are events, on a Davidsonian conception of events. This is in line with Davidson's account of events, but in opposition to a number of action-theorists who maintain that actions are causings by agents of results of their actions. Such action-theorists include Bishop (1983), Alvarez and Hyman (1998), Alvarez (1999), Stout (2010), Steward (2012a), and Hyman (2015). Some of these action-theorists hold that actions are processes, where processes are entities of a distinct kind from events (Stout 2010; Steward 2012a), while others hold that actions are relations that hold between the agent and the results of their actions (Bishop 1983). And yet others hold that actions are *sui generis* entities (Alvarez and Hyman 1998; Alvarez 1999; Hyman 2015).

In the following chapter I argue that, given that actions are events, actions cannot be causings of all their result-events or result-states. Here, however, I focus just on defending the idea that actions are events. To this end, after briefly identifying the distinctive features of Davidsonian events, I outline the semantical argument in favour of the account of actions as Davidsonian events, as well as the simple approach to individuating actions that this account of actions allows for (§3.1). I then go on to defend the account and the semantical argument in favour of it from numerous challenges that have been put to it, or might be put to it.

The semantical argument in favour of the account of actions as Davidsonian events puts forward that the only feasible semantics for a number of our sentences that report action (action-sentences) is one which involves quantification over action-events. Yet, it has been objected that the proposed semantics in fact delivers some unacceptable results in certain cases. Indeed, one such difficulty, associated with the use of adverbs known as *attributive* adverbs, was acknowledged by Davidson himself as he put forward his proposal. Further difficulties have been thought to arise from the use of *instrumental clauses*, specifically *comparative* attributive adverbs, and verbs in the *imperfective aspect*. I

argue, in response to the objections, that the Davidsonian action-event semantics of action-sentences can, in fact, deliver the appropriate results, even in these various “difficult” cases (§§3.2-3.4).

Then again, it has also been argued that even if the Davidsonian action-event semantics of action-sentences can deliver the appropriate results in all cases, this does not establish this semantics as correct. For, it has suggested that an alternative semantics of action-sentences is available, which does not involve quantification over action-events themselves, but instead involves quantification over the *result-events of actions*. I argue that this proposed alternative does not in fact succeed in capturing the meanings of all action-sentences (§3.5).

3.1 The Argument for Actions as Davidsonian Events

3.1.1 Davidsonian Events

As indicated in the previous chapter, Davidson (2000g; 2001h pp. 181-7; 2001j) encouraged us to acknowledge the existence of particular events that are *unrepeatable particulars*. Such events include parties, concerts, births and deaths. They are unrepeatable particulars in the sense that they are entities that cannot be instantiated, or realised, by other entities, by contrast to such entities as properties. Moreover, the unrepeatable particulars that are events, according to Davidson, are multi-faceted, such that they can be described in a whole variety of ways, in terms of their multiple facets. A party, for example, might be described both as ‘Jo’s birthday celebration’, and as ‘the party where Ben broke the vase’, for example.

Now this conception of events is not universally accepted, and other conceptions of events have been put forward. Perhaps the most prominent alternative conception of events is that put forward by Kim (1966, 1993a, 1993b), on which

events are exemplifications of properties by objects at times.⁷⁷ Events, on Kim's conception of them, are not really distinguishable from what I have referred to here as token states, and are elsewhere referred to as concrete facts, or property-instances. As Steward (1997, pp. 21-7) has argued, Kimian events, like token states, concrete facts, and property-instances, are not multi-faceted in the way that Davidsonian events are. And as such, Kimian events are *not* describable in a whole variety of ways. Consider for example, the case of Jo's birthday celebration, i.e. the exemplification of the property of celebrating Jo's birthday by Jo and the fellow party-attendees between 9pm and 2am, when understood as a Kimian event. This Kimian event, could perhaps be redescribed in terms of an alternative description of Jo and the fellow party attendees, but it is not redescribable as the party where Ben broke the vase. "The party where Ben broke the vase" would seem to be a description to be interpreted as picking out something like the exemplification of the property of socially gathering by some group of people at a time and place where Ben exemplified the property of breaking the vase. Since the property of socially gathering is distinct from the property of collectively celebrating Jo's birthday, the exemplifications of these properties are distinct from one another.

Davidson's defence of the existence of particular events that are multiply-faceted, and so multiply describable, largely consists in the argument that such events offer the best analysis of a number of our sentences that report action (action sentences). I will now outline and defend this argument.

3.1.2 The Semantical Argument

Davidson argued that actions are Davidsonian events (hereafter simply: events) principally on the basis that the only feasible semantics of many of our action sentences interprets those sentences as involving existential quantification over

⁷⁷ Other conceptions of events, more or less similar to Kim's and Davidson's conceptions, are defended by Lombard (1986), Lewis (1986e), and Bennett (1988).

events that are actions. I lay out here how this argument goes, and indicate how the argument relates to our understanding of other action sentences and the matter of the individuation of actions.

A feasible semantics of action sentences is a semantics that explains how the meanings of these sentences depend upon their structures, in such a way that makes sense of the entailment relations between more and less complex action sentences. Such entailment relations are to be accounted for by a semantics that identifies the logical form of action sentences. It is proposed, then, that certain entailments from action sentences that include action verbs and adverbs, or adverbial clauses — entailments that we may call ‘adverbial eliminations’, following Taylor (1985, p. 12) — are only adequately accounted for when the logical form of those action sentences is taken to involve existentially quantification over events that are actions. The action verbs in these sentences are interpreted as implicitly introducing predicates that contain a place for an event (the action), as well as one for the agent, while the adverbs, or adverbial clauses, in those sentences are treated as introducing further predicates of the action-events.

Davidson (2001g, pp. 166; 2001h, p. 186) provides the following sentences to illustrate the proposal.

- (1) ‘Sebastian strolled through the streets of Bologna at 2am.’
- (2) ‘Sebastian strolled through the streets of Bologna.’

Sentence (2) is entailed by sentence (1), and the entailment here is a clear case of adverbial elimination: the adverbial clause ‘at 2am’ in sentence (1) is eliminated in sentence (2). But now, from the surface grammatical form of these sentences, one might take sentence (2) to assert that Sebastian stands in a certain two-place relation, ‘___strolled through___’, to the streets of Bologna. And one might take sentence (1) to assert either (a) that Sebastian stands in a certain three-place

relation, ‘___strolled through___at___’ to the streets of Bologna and the time of 2am; or (b) that Sebastian stand in a distinct two place relation, ‘___strolled through___at 2am’. These interpretations of sentences (1) and (2) offer no explanation of the entailment of (2) from (1) however.

The suggestion is, then, that in order to account for the entailment of (2) from (1), we must take (1) to in fact have the following logical form:

(L1) ‘There is an event x such that Sebastian strolled x , x took place in the streets of Bologna, and x was going on at 2am.’ (2001g, p. 167; 2001h, p. 186).

And, similarly, we must take (2) to have the following logical form:

(L2) ‘There is an event x such that Sebastian strolled x , and x took place in the streets of Bologna.’

On these interpretations, (1) clearly entails (2), via conjunction elimination. And the posited logical forms of (1) and (2) that explain this entailment include quantification over events that are actions. The action here is Sebastian’s stroll: an event that Sebastian strolls, as it is somewhat awkwardly characterised above.⁷⁸ On Davidson’s account of the entailment from (1) to (2), Sebastian’s stroll is something whose description can be increasingly embellished with the addition of further adverbs or adverbial clauses. Each added adverb or adverbial clause is interpreted as introducing an additional predicate of the event that is Sebastian’s stroll.

⁷⁸ We should not, however, read too much into this awkward phrasing. There is no suggestion that strolling is something that one does to an event. ‘There is an event x such that Sebastian strolled x ’ can be understood as meaning ‘There is an event x such that x is a stroll taken by Sebastian’. Davidson elsewhere characterises the relationship between an agent and their action somewhat differently; his proposal for the logical form of ‘Shem Kicked Shaun’ is: ‘There is an event x such that x is a kicking of Shaun by Shem’ (2001e, p. 118).

By understanding action sentences as having the logical form of existentially quantified sentences, quantifying over events that are actions, with both verbs of action and modifying adverbs and adverbial clauses interpreted as introducing predicates of those events, we then have an explanation of adverbial eliminations. In that case, unless there is a better explanation of adverbial eliminations available, it seems that we have good reason to suppose that we *think* of actions as events. On Davidson's interpretation of action sentences, we implicitly talk in terms of events that are actions all the time.⁷⁹ It seems inevitable to conclude that such talk is a reflection of our conceptualisation of action.

We also, sometimes at least, seem to talk explicitly in terms of actions, and it is very plausible to interpret this talk in terms of events too. While we might more often characterise action using verbs, rather than nouns, talking in terms of what someone did, or is doing, we do sometimes also seem to refer to actions with nouns. A sports commentator, in her commentary of a football match might exclaim "That was an extraordinary kick!", or "Pickford's save was fantastic!". It is natural to take these exclamations to involve explicit reference to certain actions, a kick and a save, which occur at particular times and places, and which take some time to occur. It is very plausible then that the exclamations should be interpreted as referring to particular *events* that are actions. But while this is an attractive interpretation of such exclamations, without the support of independent argument for the view that actions are events, alternative interpretations of the exclamations would not be ruled out. In that case then, the view that actions are events is really primarily supported by consideration of the logical form of those action sentences that involve action verbs rather than action nouns.

⁷⁹ For further defence of an action-event semantics of actions sentence see Higginbotham (1985), Parsons (1990), Larson and Segal (1995), and Pianesi and Varzi (2000). For a review of these defences, as well as Davidson's, see Pietroski (2003).

3.1.3 Action Individuation

If, on the basis of this consideration, we accept that actions are events, we allow that actions can be given more or less embellished descriptions, and that they can even be described in quite radically different ways. For events can be described in multiple radically different ways, as indicated above in §1. In light of this, as Davidson maintains, following Anscombe (1979, 2000), an attractively straightforward view on the relationship between actions that are means-end related presents itself: where someone ϕ s by ψ -ing, there is a single action that can be described both as their ϕ -ing and as their ψ -ing.⁸⁰ For example, if someone shoots a victim by pulling the trigger of a gun, then there is a single action that can be described both as a shooting of a victim, and as a pulling of a trigger (see Davidson p. 109; pp. 57-9). While this view on the individuation of actions as events has been objected to by some (see Thomson 1971), the objections have been met with a compelling response.

The objection to the proposed individuation of actions concerns the *timings* of actions. The objection turns on the idea that when someone ϕ s by ψ -ing, the result-event of their ϕ -ing might take place long after their ψ -ing is complete. A result-event of an action, recall, is defined here as follows:

ACTION-RESULT-EVENTS: x (a change-event) is a result of an actually occurring action, y , iff x occurs because y occurs, and x is a token of a non-

⁸⁰ see Anscombe 1979; 2000, especially p. 46. Note that the identity is only taken to hold when one's ψ -ing is not some componential part of some more complex action, such that one can be said to ϕ by ψ -ing and ψ_2 -ing (and ...). In such a case one's ϕ -ing is re-describable in conjunctive terms as one's ψ -ing and ψ_2 -ing (and ...). For example, one might be said to make an omelette by breaking eggs, but breaking eggs is just one componential part of the more complex action of making an omelette. One makes an omelette by breaking eggs, and then whisking them, and then cooking the whisked eggs in a pan. The action of making an omelette is then re-describable in conjunctive terms as the action of breaking eggs, and then whisking them, and then cooking the whisked eggs in a pan. So the Davidsonian thesis regarding the individuation of action-events is not at odds with the nature of such complex actions.

action type, X , and y is a token of an action type, Y , such that a token of Y occurs only if a token of X occurs.

So, for example, Ann's killing Derek has as its result-event Derek's death. And if Ann kills Derek by poisoning his drink, then Derek's death might take place long after Ann's poisoning Derek's drink is complete. Then, according to the Davidsonian view on action-individuation, since Ann's killing Derek is to be identified with her poisoning him, Derek's death might also take place long after Ann's killing Derek. It is maintained that this is an unacceptable consequence of the Davidsonian view on action-individuation; it is supposed that an action's result-event cannot take place long after the action is complete. Davidson considers an objection along these lines, illustrating both the objection and his response by means of the following example:

Suppose Arthur places a time bomb in a suitcase, and puts the suitcase on an aeroplane. The aeroplane is subsequently destroyed by the explosion. When did Arthur destroy the plane? Let us imagine Arthur placed his time bomb just once, that the aeroplane was destroyed just once, and Arthur destroyed the aeroplane just once. We have, then, three events:

- (1) Arthur's placing the bomb
- (2) The destruction of the aeroplane
- (3) Arthur's destroying the aeroplane.

Clearly enough, (1) caused (2), and clearly enough, that is why there was such an event as (3). Arthur's act of placing the bomb caused the destruction of the aeroplane, and that is why it is true that Arthur destroyed the aeroplane. But what is the relation between events (1) and (3), Arthur's placing the bomb and Arthur's destroying the aeroplane?

(Davidson 2001i, p. 299)

Davidson maintains that Arthur's placing the bomb and his destroying the aeroplane are one and the same action under two descriptions — the latter description characterising the action in terms of its effect. Davidson's opponent however denies the identity on the basis that the destruction of the aeroplane occurs long after Arthur's placing of the bomb. It is argued that Davidson's proposed identity implies, highly counterintuitively, that Arthur destroys the aeroplane long before it is destroyed.

The response then offered by Davidson (ibid. pp. 299-300) is that while it is right that immediately after Arthur has placed the bomb the statement ‘Arthur has destroyed the aeroplane’ is not clearly true, this is simply because the action is not appropriately described in terms of its effect before the effect has come to pass. It is pointed out that the situation is much the same as that in which a man only comes to be appropriately described as a grandfather once a grandchild of theirs has been born. Only at this point may the man be appropriately referred to as a grandfather, and when he is so referred to he is simply being referred to in terms of his extrinsic properties. Moreover, the man may be dead by the time he is appropriately referred to as a grandfather. And similarly, Arthur may be dead by the time he is appropriately described as having destroyed the aeroplane.⁸¹

So, the Davidsonian view on the individuation of action-events — that where someone ϕ s by ψ -ing, there is a single action that can be described both as someone’s ϕ -ing and as their ψ -ing — would seem to stand up against the timings-based objection.⁸² In that case, the availability of this simple view of the relationship between means-end related actions on the event-ontology of action significantly bolsters this ontology.

3.2 Attributive Adverbs and Instrumental Clauses

Davidson’s proposed action-event semantics for action sentences has come under challenge however. One challenge is that, given Davidson’s view on the individuation of action-events, his action-event semantics, although proposed as an explanation of adverbial elimination entailments, also seems to generate some illicit entailments. And although such a challenge might simply be met by renouncing Davidson’s view on the individuation of action-events, the

⁸¹ See also Anscombe (1979, p. 228) for this same response to the challenge regarding the timings of actions.

⁸² This conclusion is also defended by Bennett (1973) and Hornsby (1979).

requirement to do so would significantly weaken the support for the proposal that actions are events. An alternative, and inevitably less straightforward, account of the relationship between actions that are means-end related would have to be given. As I argue here, however, the challenge can also be met without renouncing Davidson's view on the individuation of action-events.

Davidson himself acknowledges such a challenge might be thought to arise with such adverbs as 'slowly', 'noisily', and 'violently', known as *attributive* adverbs (pp. 106-7). I'll run through the apparent problem associated with these attributive adverbs before turning to a similar problem purportedly associated with certain other adverbs and adverbial phrases. The apparent problem associated with attributive adverbs can be illustrated as follows. Consider the following three sentences:

- (4) 'Jones buttered the toast slowly, in the bathroom, at midnight.'
- (5) 'Jones buttered the toast slowly.'
- (6) 'Jones buttered the toast at midnight.'

Sentence (4) entails both sentence (5) and sentence (6). These entailments are cases of adverbial elimination, like the entailment of (2) from (1) considered previously: in each case, the entailed sentence simply lacks some of the adverb(s) and/or adverbial clause(s) in the sentence from which it is entailed. If one then explains (4)'s entailment of (5) and (6) in just the same way as Davidson proposed we explain (1)'s entailment of (2), then (4) will be taken to have the following logical form:

- (L4) 'There is an event x such that x is a buttering of toast by Jones, x was slow, x was in the bathroom, and x was at midnight.'

Suppose, however, that Jones' buttering was slow just because he was buttering his toast in the dark, and so had difficulty seeing what he was doing. Suppose further, that as a result, Jones buttered the toast by swiping his knife back and forth rather

quickly, but frequently missed the toast, or failed to transfer butter onto the toast with his swipes. In such a scenario, since Jones buttered the toast by swiping his knife back and forth, there is, according to Davidson's approach to the individuation of action events, a single action that can be described both as a buttering of toast by Jones and as a swiping back and forth of a knife by Jones. But then, if the logical form of sentence (4) is as given above in (L4), it will follow that Jones' swiping back and forth of knife is slow too:

(L7) 'There is an event x such that x is a swiping back and forth of a knife by Jones, x was slow, x was in the bathroom, and x was at midnight.'

This sentence does not seem to be correct with regard to the given scenario however. In that case, as Davidson indicates (pp. 106-7), the adverb 'slowly' should not be treated in quite the same way as the adverbial clauses in sentence (1), and so the logical form of sentence (4) is not correctly represented above.

Instead, sentence (4) requires an interpretation that coheres with the idea that an action may be slow for a buttering of toast, but not slow for a swiping of a knife back and forth. In fact, herein lies the basis of the label 'attributive adverb' for such verbs as 'slowly': these adverbs require treatment analogous to the attributive adjectives, such as 'tall', 'good', and 'clever'. Just as an action may be slow for a buttering of toast, but not slow for a swiping of a knife back and forth, Selena may be tall for a woman, but not tall for a basketball player. And so, just as it does not follow from the fact that an action that is a slow buttering of toast is also an action of swiping a knife back and forth, that the swiping is slow, it does not follow from the fact that a tall woman is a basketball player that that woman is a tall basketball player. Attributive adjectives are just those adjectives that do not licence inferences of the form: 'X is an FA and a B' to 'X is an FB', where 'F' is the adjective, and 'A' and 'B' are nouns.⁸³

⁸³ See Geach (1956, p.33).

Davidson does not himself present an account of attributive adverbs that treats them as analogous to attributive adjectives.⁸⁴ But, one can, in fact, adequately account for attributive adverbs in this way, without undermining Davidson's key proposal that action verbs should be interpreted as introducing predicates of events that are actions, and without giving up his view on the individuation of actions. Moreover, one can do so in such a way that makes sense of adverbial eliminations from (4) to (5) and (6).

One can handle attributive adjectives by simply interpreting them as more complex predicates than they initially appear to be: 'tall' in 'Selena is a tall woman' is interpreted as meaning 'tall for a woman', rather than simply 'tall' (see Parsons 1990, pp. 43-4). The logical form of the whole sentence 'Selena is a tall woman' is then given as 'Selena is a woman, and she is tall for a woman'. Likewise, one should handle attributive adverbs by interpreting them as introducing complex predicates of events. In general, an attributive adverb 'F-ly', in a sentence of the form 'A ϕ ed F-ly' should be interpreted as meaning 'was F for a ϕ -ing'. 'Slowly' in 'Jones buttered the toast slowly' should then be interpreted as meaning 'was slow for a buttering of toast', rather than simply 'was slow' (see *ibid.*, pp. 44-5). The logical form of sentence (4), is then properly represented as follows:

(L4') 'There is an event x such that x is a buttering of toast by Jones, x was slow for a buttering of toast, x was in the bathroom, and x was at midnight.'

Thus interpreted, with 'slowly' in sentences (5) and (6) similarly interpreted as meaning 'was slow for a buttering of toast', we have an account of (4)'s entailment of sentences (5) and (6), which does not predict the entailment of false sentences from (4) on the basis of the redescrivability of Jones' action. We have, then, a way

⁸⁴ Davidson (2001i, pp. 303-4) opposes accounts that interpret attributive adverbs as functional expressions mapping classes or properties on to properties or classes.

to deal with attributive adverbs that remains in line with Davidson's key proposals regarding the logical forms of action sentences and the individuation of action-events.

There turn out to be, however, a range of other adverbs and adverbial phrases that have been highlighted as generating similar problems to the attributive adverbs just considered (see Taylor 1985, p. 26; Wiggins 1985, pp. 296-9; Alvarez 1999, pp. 228-9; Steward 2012b, pp. 375-6). In particular, adverbial clauses formed by specifying instruments with which the agent does something (let us call these 'instrumental clauses') have been noted as creating the same kind of problem that is generated by the attributive adverbs.⁸⁵ Consider the following example sentence.⁸⁶

(7) 'Oswald killed Kennedy with a rifle.'

This sentence, on the straightforward interpretation on which it introduces an event, with the instrumental clause 'with a rifle' interpreted as a predicate of the event, is taken to have the following logical form.

(L7) 'There is an event x such that x is a killing of Kennedy by Oswald, and x was with a rifle.'

⁸⁵ Other adverbs, such as 'deliberately', 'intentionally', and 'clumsily', insofar as they are treated as introducing predicates of events, can also generate similar problems. However, to treat such adverbs as always introducing predicates of events would also generate illicit adverbial elimination entailments quite generally (consider that 'Jones buttered the toast slowly, deliberately.' does not entail 'Jones buttered the toast deliberately.'). and so treating these adverbs differently does not challenge the argument for interpreting action sentences as implicitly introducing existential quantification over events that are actions. Adverbs that require different treatment are distinguished as those that permit rewording of the sentences that they feature in, of the form ' x ϕ -ed M-ly', either as 'it was M that x ϕ -ed', or as 'it was M of x that x ϕ -ed' (see Taylor 1985, pp. 20-2). And as the possible rewording suggests, it is natural to interpret these adverbs as introducing operators, rather than predicates. Davidson suggests a treatment of this kind for 'intentionally' (2001e, p. 122).

⁸⁶ The example develops one given by Taylor (1985, p. 26), which is attributed to Christopher Arnold.

However, Oswald killed Kennedy by pulling the trigger of a rifle, such that, given Davidson's view that if someone ϕ s by ψ -ing, there is a single action that can be described both as someone's ϕ -ing and as someone ψ -ing, there is a single action here that can be described both as Oswald's killing of Kennedy, and as Oswald's pulling the trigger. In that case, given the supposed logical form of sentence (7), it will follow that Oswald's pulling the trigger was with a rifle. This clearly is an unacceptable entailment.

Then again, the problem can be resolved simply by treating the instrumental clause 'with a rifle' in a similar sort of way to that which was outlined above for attributive adverbs.⁸⁷ 'with a rifle' in sentence (7) can be taken to mean 'was a killing with a rifle', rather than simply 'was with a rifle'. (7) should then be taken to in fact have the following logical form:

(L7') 'There is an event x such that x is a killing of Kennedy by Oswald, and x was a killing with a rifle.'

The treatment here is similar, but not just the same as that given for attributive adverbs, since 'was a killing with a rifle' is not equivalent to 'was with a rifle, for a killing', which is difficult to make sense of. Nonetheless, this treatment avoids the conclusion that Oswald's pulling the trigger was with a rifle, and results, instead, in the acceptable conclusion that Oswald's pulling the trigger was a killing with a rifle. And so, by treating these instrumental clauses as at least analogous to attributive adverbs, these can be dealt with without undermining the proposal that action sentences quantify over action-events, and without forcing a non-Davidsonian view on the individuation of actions.

This sort of solution to the problem generated by instrumental clauses is one that both Taylor (1985) and Alvarez (1999) quickly dismiss however, both on the basis

⁸⁷ Wiggins (1985, pp. 296-9) advocates this sort of solution.

of the dissimilarity between the given instrumental clauses and attributive adverbs. Both, however, seem to hold that in treating instrumental clauses analogously to attributive adverbs (as I proposed we do above), one takes those instrumental clauses *to be* attributive adverbs. Taylor then suggests that taking instrumental clauses to be attributive adverbs results in a “motley crew” of attributive adverbs, where the inclusion of instrumental clauses in that motley crew has ‘no motive ... save the *ad hoc* demands of theory’ (1985, p. 26). Alvarez, putting much the same point in different terms, states that instrumental clauses should not qualify as attributive adverbs, on the basis that they lack certain features that uncontroversial attributive adverbs possess: having comparative and superlative forms (1999, pp. 228-9).

But in treating instrumental clauses analogously to how attributive adverbs are treated, in the manner given above, it is not the case that one thereby takes those instrumental clauses to be attributive adverbs. It is then unclear why it should be problematic to suppose that instrumental clauses are similar to attributive adverbs in some ways, though lacking certain of their features. Moreover, even if it is decided, on the basis of their analogous treatment to such attributive adverbs as ‘slowly’, ‘angrily’, and the like, that instrumental clauses also warrant the label ‘attributive adverbs’, it is unclear why this should be either problematically *ad hoc*, or a problematic diversification of the category of attributive adverbs. Instrumental clauses do really seem to be very similar in function to such attributive adverbs as ‘slowly’ and ‘angrily’: both describe *how* we intentionally do the things that we intentionally do. Moreover, it is, to an extent, merely a terminological issue how widely we apply the label ‘attributive adverb’.

3.3 Comparative Attributive Adverbs

It has been put forward, by Steward (2012b), that resolving the apparent entailment problems generated by attributive adverbs, and instrumental clauses, does not rid Davidson’s proposal regarding the logical form of action sentences of

all of its problems. Steward suggests, in fact, that the attributive adverbs bring with them another significant difficulty. Moreover, the difficulty that is suggested is one that does not turn on the question of how to individuate actions. The proposed difficulty derives instead from the fact that attributive adverbs, such as ‘slowly’, ‘angrily’, ‘frenetically’, have comparative forms: ‘more and more slowly’, ‘increasingly angrily’, ‘less frenetically’ (p. 377); and it is argued that these comparative forms of attributive adverbs are not appropriately interpreted as predicates of events. This is argued on the basis that interpreting attributive adverbs of this form as predicates of events inappropriately represents events as changing over time. Steward presents her argument as follows:

[I]f these sentences of the form ‘S φ -ed more and more/ less and less F-ly’ are to be represented as quantifications over actions, the action in each case has to be represented as *changing* over time in respect of the degree to which it is F. But there are very good reasons, which have been often rehearsed and carefully defended, for thinking that events do not change—or at any rate, not in respect of their *intrinsic* properties.

(Steward 2012b, p. 377).

To illustrate the line of reasoning here, consider the following sentence.

(8) ‘Smith waved more and more frenetically.’

According to the manner of interpreting attributive adverbs as predicates of action-events that I suggested in §2, the logical form of sentence (8) would be said to be the following:

(L8) ‘There is an event x such that x is a waving by Smith, and x was more and more frenetic over time, for a waving.’

And we can take ‘ x was more and more frenetic over time, for a waving’ to be equivalent to ‘ x became more and more frenetic, for a waving’. But, if Steward is correct in the proposal given above, then the interpretation of sentence (8) that I have offered represents the event that is Smith’s waving as changing over time,

with respect of the degree to which it is frenetic, for a waving. Moreover, according to Steward, an event is not something that changes its intrinsic properties over time, including with respect to the degree to which it is frenetic, for a waving.

Steward goes on to present the following argument for the claim that events do not change over time in respect of their intrinsic properties (*ibid.*).⁸⁸ First, it is maintained that change is a matter of some entity, present throughout a period of time, having different intrinsic properties at different times within that period. Then, it is maintained that events do not themselves have different intrinsic properties at different times within the period throughout which they are present. This is because, as was outlined in Chapter 2, if an event is present throughout a period of time, then at any time within that period, only a proper part (a proper *temporal* part) of the event is present. The event is only wholly present across the whole period throughout which it is present. As a result, an event cannot itself have different intrinsic properties at different times; it can only, instead, have distinct temporal parts with different intrinsic properties — and this, Steward states, is “mere succession”, rather than “true change” (*ibid.*).

Mellor (1998, pp. 89-90), who similarly argues that events do not change, on the basis of the same conception of change, states that an event’s having distinct temporal parts with different intrinsic properties is simply analogous to an object’s having distinct spatial parts with different intrinsic properties. Mellor provides the classic example here (from McTaggart 1921) of a poker that is hot at one end and cold at the other. It is said that just as this difference between distinct spatial parts does not constitute a change in the poker, nor does a

⁸⁸ Dretske (1967), Mellor (1981), Hacker (1982), Simons (1987), and Galton and Mizoguchi (2009) are all cited as arguing along the same lines that events do not change. In fact, however, Hacker argues that the sense in which events change is different from the sense in which objects change: “A change of an object consists in it first having a given attribute and later not having that attribute (or vice versa) ... [I]f we are to talk of changes in events, we must ... be speaking of transformations within the event from one phase to another” (1982, p. 18).

difference between distinct temporal parts of an event constitute a change in the event.

Steward's argument for the conclusion that comparative forms of attributive adverbs are not appropriately interpreted as predicates of events can, and should, be resisted however. For while it must be accepted that events do not change over time, on the conception of change that Steward presents, there is in fact little reason to suppose that interpreting the comparative forms of attributive adverbs as predicates of events amounts to representing events as changing over time, on Steward's conception of change. The predication here can instead be legitimately understood as representing variation in the temporal parts of the predicated event.

Let us return to the suggested logical form of sentence (8), (L8), in order to lay out the details of this proposal. In (L8), the predicate 'became more and more frenetic, for a waving' is applied to an event of waving. How is this to be understood as a representation of variation in the temporal parts of the waving event? One available option is to suppose that for an event to become more and more frenetic, for a waving, is for its later temporal parts to be frenetic as waving events, and for those temporal parts to be more frenetic than the earlier temporal parts.

This possible understanding of the representational commitment of such predicates as 'became more and more frenetic, for a waving' does not rule out that there is some sense of 'change', distinct from that spelt out by Steward, on which the application of these predicates to events does also represent some change in events over time. This distinct sense of 'change' would be one on which variation between distinct temporal parts of an entity does amount to change in that

entity.⁸⁹ Alternatively, however, it might just be accepted that there is no sense of ‘change’ distinct from that given by Steward, such that the application of such predicates as ‘became more and more frenetic, for a waving’ to events does not represent change over time. It is left open then that the predication here merely represents variation in temporal parts of events, without this amounting to change.

Anticipating these sort of responses, Steward presents four objections, which I’ll address in turn. To begin with, Steward counters that these responses conflict with our intuitions that actions can, quite literally, get angrier, more frenetic, less gentle, and so on, since “such transformations, where they occur, represent genuine changes in the properties of the [actions] in question” (2012b, p. 378). But in fact the intuition that actions can literally get angrier, or more frenetic etc., is not at all undermined by the proposals under consideration; indeed the proposals offer an account of just what it is for an action to literally get angrier, or more frenetic etc. The proposal is that such transformations are a matter of variation in the temporal parts of actions, and that this does not amount to actions undergoing change, in the sense of ‘change’ given by Steward. And while we may have strong intuitions that actions can literally get angrier, or more frenetic etc., it is not at all obvious that we similarly have strong intuitions that these transformations do amount to change over time, on Steward’s conception of change.

Steward’s second objection is that one cannot account for action sentences in the present tense imperfective, if one takes action sentences to introduce actions that are events which do not undergo change, in Steward’s sense of ‘change’ (see *ibid.*, pp. 378-9). This objection turns on the supposition that insofar as one takes action sentences to introduce actions that are events, one must hold that present

⁸⁹ This is, in effect, Hacker’s (1982, p. 18) suggestion, as outlined above in n. 18. It should also be noted that perdurantists, such as Sider (2001, pp. 212-6), hold that change, understood as a difference between distinct temporal parts of an entity, is the only form of change that there is in the world.

imperfective action sentences are to be interpreted in much the same way as perfective action sentences. Consider the following example sentence:

(9) 'Jones is buttering some toast angrily.'

On this supposition, insofar as the present imperfective sentence (9) is taken to introduce an action that is an event, it must be taken to do so in much the same way that the following past perfective sentence is taken to.

(10) 'Jones buttered some toast angrily.'

And in that case, if (10) is taken to introduce an event that is an action of buttering, which is angry, for a buttering, then (9) must also be taken to introduce such an event.

Steward argues that such an interpretation of sentence (9) cannot be correct however, on the basis that there is no event of buttering that the speaker of the sentence can be said to have singled out as the target for the predication 'is angry, for a buttering'. It is suggested that, on the one hand, the speaker cannot be said to have singled out an event of buttering that continues for as long as Jones butters, for the speaker's sentence may be true, given the nature of the buttering at the time of utterance, while the whole of the buttering event turns out to not be angry, for a buttering — the buttering may become less angry. It is then suggested, on the other hand, that the speaker cannot be said to have singled out one of the shorter events of buttering which simply forms a part of the event of buttering that continues for as long as Jones butters. Of these events, Steward asks: "how could any one of these really make out its case to be the unique object of my thought when there seems to be nothing to elevate its candidacy about that of any of the others?" (ibid., p. 379).

But Steward's opposition to the interpretation of the present imperfective sentence (9) as introducing an event that is an action of buttering, which is angry,

for a buttering, does not cohere with the manner in which such an event is introduced on this interpretation. For insofar as (9) is interpreted as introducing an event that is an action of buttering, analogously to (10), this introduction takes the form of existential quantification over events. The opposed interpretation then gives something like the following as the logical form of (9):

(L9) ‘There is an event x such that x is a buttering of some toast by Jones, and x is angry for a buttering.’

In stating a sentence with this form, the speaker cannot be said to be singling out, or referring to, any particular event, and then characterising it as a buttering that is angry for a buttering. The speaker is instead asserting that there is some — i.e. at least one — event that is a buttering, and which is angry, for a buttering. In that case, the speaker of sentence (9) can be said to be expressing the thought that there is at least one event of buttering, shorter than the event of buttering that continues for as long as Jones butters, that is a buttering, and which is angry, for a buttering.

Moreover, and perhaps more importantly, it is not clear that we ought to accept Steward’s supposition underlying this objection, that insofar as one takes action sentences to introduce actions that are events, one must hold that present imperfective action sentences are to be interpreted in much the same way as perfective action sentences. It may, in fact, be quite appropriate to hold that while a past perfective sentence of the form ‘A ϕ ed’ introduces an event that is a ϕ ing by A, a present imperfective sentence of the form ‘A is ϕ ing’ does not. I’ll return to this idea in the following section, §4, where I’ll specifically discuss the logical form of imperfective action sentences.

Let us consider, then, Steward’s third objection to the view that comparative forms of attributive adverbs are to be understood as predicates of events that do not change, on Steward’s sense of ‘change’. Here it is maintained that this view

cannot accommodate the existence of actions that smoothly and continuously become more firm, angry, slow, and so on (see *ibid.*, p. 379). It is suggested that where the application of comparative forms of attributive adverbs to actions is understood as merely representing variation in the temporal parts of those actions, this cannot be said to represent smooth and continuous increases in firmness, anger, slowness and so on. Steward claims that instead of this smooth and continuous increase, variation in the temporal parts of actions can only amount to stepwise increase, constituted by repeated discrete increases.

The problem with this objection is that entities with temporal parts are typically held to have *instantaneous* temporal parts, or *time-slices* (see Sider 2001, p. 59; Hawley 2015). And as a result, variation in the temporal parts of actions can be a matter of variation between these instantaneous temporal parts. At this finest-level of grain, the distinction between continuous increase and stepwise increase collapses. Or, at the very least, it seems that by appealing to variation between instantaneous temporal parts of an action we can capture the degree of smoothness in the increase in firmness of an action that we intuitively take to be possible.

What, then, of Steward's fourth and final objection? Here, Steward puts forward that there is a conflict between the view that actions are events and the modal profiles of actions. It is said to be intuitive that, at least in some cases, a particular action could have lasted longer than it in fact did. That is, supposing that Brown pushes at a door for three seconds, it is thought to be intuitive that there is an action of Brown's pushing at the door, and this very action could have lasted longer than it in fact did (three seconds). On the other hand, it is maintained that no event occurs which is such that that very event could have been longer than it in fact was. It is said to be part of the nature of events that they "have all their temporal parts essentially" (Steward 2012b, p. 380). And, as such, in every possible world that includes some particular event, that event has precisely the same temporal parts, and is, therefore, precisely the same length in each of those possible worlds.

As Steward acknowledges, however, in reaction to this objection, the defender of the view that actions are events is likely to question the thesis that events have all their temporal parts essentially. Steward does not provide a positive argument for the thesis, and the cited literature similarly does not provide a positive argument for this precise thesis.⁹⁰ We might, then, suppose that, given the motivation for taking actions to be events, this in fact provides reason to deny that events have all their temporal parts essentially, precisely in virtue of Steward's intuitive case for there being at least some actions that could have lasted longer than they in fact did.

3.4 The Imperfective Aspect

The imperfective aspect presents a distinctive challenge to the proposal that the logical form of action sentences involves quantification over action-events. Aspect is one dimension of the grammatical form that verbs take, relating to time, where another such dimension is tense (e.g. past, present, future). The imperfective aspect is to be contrasted with the perfective aspect: while the perfective represents some occurrence as complete, the imperfective aspect does not, and instead represents some occurrence as ongoing, whether in the past (past imperfective), at present (present imperfective), or in the future (future imperfective). Consider the following sentences as an illustration of the imperfective-perfective contrast.

- (1) Deb was building a house. (*Past Imperfective*)
- (2) Deb is building a house. (*Present Imperfective*)
- (3) Deb built a house. (*Past Perfective*)

⁹⁰ Steward cites Lombard (1986), Simons (1987), and Neale (1993) as having defended the view that events have their temporal parts essentially. However, none of these authors present an argument specifically in favour of this view. Simons (pp. 281-3) and Neale (p. 162, n.33) both simply oppose some reasoning towards its denial, while Lombard (pp. 212-6) argues that an event cannot occur at a time wholly distinct from the time at which it actually occurs.

(4) N/A. (*Present Perfective*)

The imperfective aspect presents a challenge to the interpretation of action sentences as implicitly involving quantification over action-events, since certainly no *straightforward* such interpretation is available for imperfective action sentences. Neither sentence (1) nor sentence (2) imply that there is an event of building a house by Deb, and, in fact, both sentences are compatible with there never being such an event, contrary to an early proposal for an analysis of imperfective sentences by Montague (1974, p. 125).⁹¹ On this proposal, a simple sentence in the imperfective is true at a given time t only if the corresponding perfective sentence is true at t . So, on this proposal, ‘Deb is building a house’ is true at t only if ‘Deb built a house’ is true. Clearly, this is an inappropriate result. The generation of this inappropriate result has come to be known as the “imperfective paradox” (see Dowty 1979, p. 133).

One might suppose then, on the basis of this “imperfective paradox” that *no* interpretation of imperfective action sentences as implicitly introducing action-events is viable. And indeed, it has been put forward that such action sentences should instead be interpreted as only implicating *processes* (see Mourelatos 1978; Stout 1997; Steward 2012b, 2013; Hornsby 2012). But if no interpretation of imperfective action sentences as implicitly involving quantification over action-events is viable, then this also seriously threatens the interpretation of perfective action sentences as doing so. We should expect that the implicit structural role played by action verbs to be at least roughly uniform — either all action verbs implicitly introduce an action-event, or none do. That is, we should expect this, unless we are given some convincing explanation as to why perfective action-verb

⁹¹ It is fairly widely maintained that certain imperfective sentences, which are characterised as involving *activity-verbs*, rather than *accomplishment-verbs* (see Vendler 1967), do entail sentences in the perfective. For example, it is held that ‘John was pushing a cart’ entails ‘John pushed a cart’ (see Dowty 1977, p. 45). I dispute this however, as I take it that it can be true that John was pushing a cart if John simply got up from his seat in order to push a cart, and then was interrupted, and so never managed to push the cart at all (see Anscombe 2000, pp. 39-40). But I discuss here only cases that are not controversial, e.g. ‘Deb is building a house’ is universally accepted as not entailing either ‘Deb built a house’, or ‘Deb will have built a house’.

implicitly introduce an action-event, while imperfective action-verbs do not, as well as an account of the relationship between the interpretation of imperfective action-sentences and their perfective counterparts.

Several attempts have been made to offer less straightforward analyses of imperfective action sentences on which these implicitly involve quantification over action-events, while avoiding the imperfective paradox. Two approaches here have been particularly prominent, however neither of these approaches is particularly promising. I briefly outline both, and the problems they face, before putting forward my proposed alternative, which, I argue, is promising. If my proposed alternative is indeed plausible, then the threat to the interpretation of perfective action sentences as implicitly introducing action-events is quashed.

3.4.1 The First Approach

On the first approach, imperfective sentences are taken to involve a modal element. Dowty (1977, 1979) is a particularly influential representative of this approach. On his proposed analysis, a present imperfective sentence is true at a given time, t , iff the corresponding perfective sentence is true in all “inertia worlds”, where an inertia world is a possible world exactly like the actual world up until t , and things proceed from t in a *normal*, and *natural* manner, with no interruptions that are unexpected (from an external perspective; see Dowty, 1979, p. 148). So, ‘Deb is building a house’ is true now iff ‘Deb built a house’ is true in all inertia worlds, where things proceed from now without any unexpected interruptions. A past imperfective sentence is then true at a given time, t , just if the corresponding present imperfective sentence had been true at some early time ($<t$).

This sort of approach faces at least one significant challenge however. It would seem that on at least some occasions, for things to proceed normally and naturally from some t , at which time some present imperfective sentence is true, is for the

corresponding perfective sentence to never be true. Suppose, for example, that Bert steps out into a road as a truck is powering down the road directly towards him, and is not far from him at the moment of his stepping out. In such a case, if Bert does not realise his impending doom, as he steps out into the road, and takes himself to be crossing the street in doing so, then that is precisely what he is doing. However, it would seem that in inertia worlds Bert does not succeed in crossing the road, seeing as, if things were to proceed naturally from the moment at which he steps out into the road, the truck will hit him. And so it is not the case that ‘Bert crossed the road’ is true in all “inertia worlds”. From an external perspective, Bert’s being hit by the truck is not an unexpected interruption, quite the contrary, even though for Bert this very much is an unexpected interruption. This difference between the external perspective and the agent’s own perspective, is significant, and it is something that I will argue should be exploited in a semantics of imperfective action sentences.

3.4.2 The Second Approach

On the second prominent approach to analysing imperfective action sentences as implicitly involving quantification over action-events, there is no modal element, and the action-events quantified over are events that are *incomplete actions*. This approach has been defended by Parsons (1989) who asserts that the action-events that are quantified over in imperfective action sentences are specified as “holding”, and are not specified as “culminating” — indeed, they may not ever culminate. By contrast, action-events that are quantified over in perfective actions are specified as culminating. On Parson’s analysis, ‘Deb was building a house’ has the following logical form (see Parsons 1989, p. 222):

$$(\exists t) [t < \text{now} \wedge (\exists e) [\text{building}(e) \wedge \text{Subject}(e, \text{Deb}) \wedge \text{Object}(e, \text{a house}) \wedge \text{Hold}(e, t)]]$$

Whereas ‘Deb built a house’ is said to instead have the following logical form (see *ibid.*):

$$(\exists t) [t < \text{now} \wedge (\exists e) [\text{building}(e) \wedge \text{Subject}(e, \text{Deb}) \wedge \text{Object}(e, \text{a house}) \wedge \text{Cul}(e, t)]]$$

And the two-place predicates ‘Hold(x, y)’ and ‘Cul(x, y)’ are lexical primitives, to be interpreted respectively as ‘ x holds at y ’ and ‘ x culminates at y ’. It is clear enough what it is for an event to culminate at some time — it is for the event to end at that time — but what is it for an event to *hold* at some time? The idea seems to be that the event is *ongoing* at that time. We are simply told by Parsons that to specify that an event *holds* is to treat the relevant event verb as a state verb (*ibid.*, p. 222), so that an event of Φ -ing holding at t is a matter of something Φ -ing at t (being in a state of Φ -ing at t , as it were). Moreover, an event’s holding at t is not compatible with the event culminating at t , and it is compatible with the event never culminating. An event that is characterised as an event of Φ -ing that holds at t is then characterised as being an incomplete Φ -ing at t .

There are, however, two significant concerns with this sort of approach. First, there is the matter of treating ‘Hold(x, y)’ as a lexical primitive, which characterises x as an incomplete Φ -ing at y . With no account of what it is for an event to be an incomplete Φ -ing at t , it is difficult to evaluate the proposal. What is sought is an account of the relationship between incomplete events of Φ -ing and complete events of Φ -ing. The following questions regarding the relationship between incomplete and complete events of Φ -ing are particularly pertinent, and left unanswered by Parson’s proposal: Does an incomplete event of Φ -ing *become* a complete event of Φ -ing, if it develops appropriately? Is so, how? If not, then what is the relationship instead?

Moreover, an incomplete event of φ -ing is treated as an actual event of φ -ing. That is, 'incomplete' is not introduced as a privative adjective, when applied to events of φ -ing, by contrast to adjectives such as *fake*. Kamp (1975) defines a privative adjective as one for which, given adjective *A* and any noun *X*, the claim 'No *AX* is an *X*' is true. For example, 'fake' is a privative because 'No fake *X* is an *X*' is true in all cases, e.g. 'No fake gun is a gun'. In that case, if 'incomplete' is not treated as a private adjective, we require an account of how there could be events of φ -ing that are incomplete, as well as events of φ -ing that are complete. We might also demand an account of what makes for an incomplete event of φ -ing.

The second concern regarding Parson's approach to imperfective action sentences is the implication that any entity that is specified as the object of a transitive imperfective action verb is interpreted as existing. For example, given the analysis put forward for 'Deb was building a house', the implication is that there was a house that Deb was building at the time at which she was building it. This requires that there exist radically incomplete objects, where, again, 'incomplete' is a non-privative adjective. Consider that it may be true that Deb was building a house, while she never got very far at all: she only collected together the requisite materials before she gave up. Parson's analysis implies that even in such a case there was an object that can be said to be a house, which Deb was building.

Now, Parsons defends this implication as appropriate, maintaining that we are often very willing to refer to radically incomplete houses as houses, and other incomplete *S*-objects as *Ss*. He asserts that "In Northern California there is a state park — Jack London State Park. One can go there and see the house that Jack London was building when he dies. At least this is what the tourists say. It isn't much of a house — only a foundation and parts of some walls." (Parsons 1989, p.

225).⁹² However, even if we do accept that this indicates that language users are prepared to refer to some radically incomplete houses as houses, the example does not at all establish that language users are prepared to refer to all radically incomplete houses as houses (i.e. even more radically incomplete houses than Jack London's incomplete house). *A fortiori*, the example does not at all establish that language users are prepared to refer to all radically complete S-objects as Ss. And is it really plausible that in the case where Deb was building a house, but only got as far as collecting together the requisite materials, language users would be prepared to say that there was a house, which Deb was building? Or suppose that Minn was drawing a circle, but only got as far as putting her pencil in a compass, and putting the pencil and compass to paper — is it really plausible that language users would be prepared to say that there was a circle that Minn was drawing?⁹³ The answer to both these questions strikes me as, quite obviously, no, contrary to the implications of Parson's proposed analysis of imperfective action sentences.⁹⁴

3.4.3 My Proposed Alternative

Altogether, the two prominent approaches to analysing imperfective action sentences as implicitly involving quantification over action-events have been seen to be inadequate. One might then suppose that any such endeavour is futile. I do not think that this is the conclusion that we should draw, however. For there is a promising alternative approach that ought to be considered. This is an approach that treats characterisation of the action-kind in an imperfective action sentences

⁹² In fact, it has been pointed out that “[a]ccording to the web-site of the park, ... the house was nearly finished when it burned down in 1913” (Szabo 2008, p. 520, n.1). See <http://jacklondonpark.com/jack-london-biography.html>

⁹³ This example is adapted from one put forward by Owen (1978, p. 17), to make the same point. See also McDowell (2011b, p. 9) and Thompson (2008, p. 135) for analogous examples, used to make this point.

⁹⁴ Szabó has argued that “when we build a house, cook dinner, or write an article, there is always an object in existence right from the beginning of the process”, but he maintains that “[i]nitially it is not a house, a dinner, an article—only a house in progress, a dinner in progress, an article in progress.” (2008, p. 520). His conclusion is not, then, in tension with my response to Parsons. In effect, Szabó maintains that there are incomplete S-objects, where ‘incomplete’ is a privative adjective.

as expressing the agent's perspective on the nature of the action that is ongoing. On this approach, a sentence of the form 'A is φ -ing', where A is an agent, is not interpreted as asserting the existence of an event that is a φ -ing, whether an incomplete φ -ing, or a complete φ -ing in some other possible world. Instead, the sentence is interpreted as asserting the existence of an event of which A is the agent and that, *for all A knows*, is an action of φ -ing (we might also say: as far as A knows, or given what A knows, is an intentional action φ -ing). 'Deb is building a house' is then analysed as follows:

There is an event e , of which Deb is the agent, and, for all Deb knows, e is a building of a house.

'For all ___ knows, ___ is a house-building' is a two-place predicate, with one place for an agent, and another for the agent's action-event. This predicate expresses that from the agent's perspective, nothing that they know rules out that there is a good chance (at the time of acting) that the ongoing action-event is a house-building. In other words, nothing the agent rules out they have a good chance of succeeding at house-building, such that the action that they are currently engaged in (speaking tenselessly; will be, speaking in tensed form) a house-building event.

This proposed analysis does not have the result that 'Deb is building a house.' implies either 'Deb built a house.' or 'Deb will have built a house.', and so does not produce the imperfective paradox. Moreover, the analysis avoids the various problems facing the previously addressed two proposals. Clearly, by incorporating the agent's perspective, rather than external perspectives, my analysis avoids the problem that faced Dowty's analysis. Recall the case of Bert crossing a road, when, unknown to Bert, a truck is hurtling towards him. From an external perspective it is expected that Bert will be interrupted by his being hit by the truck, such that Bert does not cross the road. But, from Bert's perspective, he stands a good

chance of continuing uninterrupted, such that he will succeed in crossing the road: for all Bert knows there is an action of crossing the road.

Moreover, my analysis does not imply that all incomplete φ -ings are φ -ings (although it leaves open that at least some might be), and so it does not demand an answer to the question of how there can be both φ -ings that incomplete, and φ -ings that are complete, and how these φ -ings are related. Instead, it can be said that an incomplete φ -ing is an action-event that is, for all the agent knows, a φ -ing (it is an action-event that will, for the agent knows, end up being a complete φ -ing). In that case, we have a clear understanding of what incomplete φ -ings are, and how they relate to complete φ -ings.

In addition, my proposal avoids the implication that there are radically incomplete S-objects that are S-objects. 'Deb is building a house.', for example, does not imply that there is a house that Deb is building. In that case, Deb might be building a house, but quickly give up, such that no radically incomplete house, which is nonetheless a house, ever comes into existence.

Now, in order for this proposal to be firmly established as a viable analysis of imperfective action sentences, more would need to be said regarding the idea of there being nothing that an agent knows which rules out that there is a good chance (at the time of acting) that their ongoing action-event is a φ -ing. Moreover, more would need to be said regarding various cases, in order to reassure that the proposal does capture all and only cases appropriately characterised in terms of imperfective action sentences. I do not undertake this endeavour here, and hope merely to indicate that there are promising avenues for analyses of imperfective action sentences as introducing action-events, which have not yet been explored. Unless such avenues are shown to be dead-ends, it

should not be presumed that there could be no correct analysis of imperfective action sentences as introducing action-events.

3.5 An Alternative Semantics?

So far, I've addressed several challenges to the view that action sentences implicitly involving existential quantification over action-events. Each of these challenges has put forward that the view faces difficulties with certain kinds of action sentences. And, in each case, I have presented viable ways to meet these difficulties. I now address a challenge to the view of quite a different nature: the challenge presented by Alvarez' (1999) claim that adverbial eliminations can be explained by the logical form of those action sentences, without it being supposed that the logical form involves existential quantification over action-events. That is, Alvarez offers an alternative semantics for action sentences. The availability of an alternative semantics for action sentences threatens to leave the view that actions are events under-motivated. For, as was indicated in §1, this view is motivated by a semantics for action sentences that it is taken to be unique in being able to explain adverbial eliminations. Moreover, Alvarez's particular alternative semantics, if successful, serves to positively motivate the view that actions are causings of results, where these causings are not events.

Alvarez's (1999) proposal is that although action sentences do implicitly involve existential quantification over events, these events are not actions, but rather the results of actions. Alvarez offers a definition of 'action-results' in terms of her account of actions; Alvarez holds that an action is a causing of an event, and she then defines the result of an action as the event that the action is a causing of (see *ibid.* p. 217). However, we could, consistently with the rest of Alvarez's proposal, take result-events to be defined as I here earlier proposed they should be:

ACTION-RESULT-EVENTS: x (a change-event) is a result of an actually occurring action, y , iff x occurs because y occurs, and x is a token of a non-

action type, X , and y is a token of an action type, Y , such that a token of Y occurs only if a token of X occurs.

Alvarez proposes, then, that the logical form of each simple action sentence of the form 'A ϕ ed' follows this schema:

'There is an event x , such that x is an f -ing and A is the agent of x .'

And ' f -ing' here designates a non-action event-type, while 'A' designates an agent. The two-place predicate ' $_$ is the agent of $_$ ' is said to express the relation between an agent and an event that they cause, which "could also be expressed by 'Is the causer of', 'Is the author of', 'Makes happen', 'Produces', 'Brings about', etc." (ibid., p. 219). The event that is thereby characterised as being caused by an agent is the result of that agent's action, which is the causing of that result. But, the agent's action — the causing of the result — is not represented in the logical form of an action sentence as a particular at all. In that case, while the adverbs and adverbial clauses in action sentences are understood as introducing further predicates, these are interpreted as predicates of the event-results of actions, rather than of the actions themselves.

A further predicate is also taken to be implicitly introduced when the action verb in an action sentence is transitive, and so has an object as well as a subject. It is suggested that as well as introducing a predicate giving the event-type of the event-result of the agent's action, and the two-place predicate ' $_$ is the agent of $_$ ', transitive action verbs introduce the two-place predicate ' $_$ is the patient of $_$ '. This predicate is said to express the relation between an event and an object which "could also be expressed by 'Undergoes', 'Is the object of', 'Suffers', etc." (ibid.). As a result, the logical form of an action sentence of the form 'A ϕ ed B' follows this schema:

‘There is an event x , such that x is an f -ing, A is the agent of x , and B is the patient of x .’

It is claimed, then, that interpreting action sentences in this way allows for an alternative explanation of adverbial eliminations to that put forward by Davidson. Consider the following sentences.

(11) ‘I broke the vase.’

(12) ‘I broke the vase in the bathroom.’

Sentence (12) entails sentence (11), as a case of adverbial elimination, and Alvarez provides the following interpretations of each of these sentences, which can be seen to account for this entailment. The logical form of (11) is said to be:

(L11) ‘There is an event x such that x was a breaking of which I was the agent and the vase was the patient.’ (see *ibid.* p. 219).

Importantly, the predicate ‘was a breaking’ here does not characterise the event that it is applied to as a breaking action. ‘breaking’ has both a transitive (‘breaking_[trans]’) and intransitive (‘breaking_[intrans]’) form. ‘Breaking’ in (L11) should be understood as taking the intransitive form, which, unlike the transitive form, does not characterise the event that it describes as an action. ‘Breaking’ here then is a predicate of the result of the agent’s action, rather than a predicate of the action itself. And so (L11) does not involve any quantification over action-events.

The logical form of (L12), instead, is said to be:

(L12) ‘There is an event x such that x was a breaking of which I was the agent and the vase was the patient and x was caused in the bathroom.’ (see *ibid.* pp. 231-2).

And, again, here the predicate ‘was a breaking’ does not characterise the event it is applied to as a breaking action, since ‘breaking’ here takes the intransitive form. As a result, (L12), like (L11), does not involve quantification over action-events. Nonetheless, insofar as (L11) and (L12) correctly represent the logical forms of sentences (11) and (12), the entailment of (11) from (12) is explained as a case of conjunction elimination.

I won’t here directly take issue with the interpretations of sentences (11) and (12) given by (L11) and (L12). However, I will suggest that there are other action sentences where it is not plausible that the action verb implicitly introduces only a result-event rather than an action-event. In these sentences, insofar as the action verb implicitly introduces events at all, it is only plausible that an action-event is introduced. But since we should expect that the implicit structural role played by action verbs is at least roughly uniform in this respect — either all action verbs implicitly introduce an action-event, or none do — we are then led to also question the interpretations of sentences (11) and (12) given by (L11) and (L12).

Action verbs that do not plausibly introduce only non-action events include the following, amongst many others: ‘eat’, ‘run’, ‘walk’, and ‘read’. These verbs, unlike ‘break_[trans]’, are either intransitive, or transitive but with no corresponding intransitive form. And whereas there is an obvious candidate for a non-action-designating event predicate that a transitive verb with an intransitive form might be said to implicitly introduce — ‘is a ϕ ing_[intrans]’ — there is no such obvious candidate for a non-action-designating event predicate that other action verbs

might be said to introduce.⁹⁵ Predicates formed from the nominalisations of the action verbs themselves, ‘is an eating’, ‘is a run’, ‘is a walk’, ‘is a reading’, are naturally understood as action-designating.

Now, this in itself may not present an insuperable problem, however. Alvarez, in recognition of the disparity between transitive action verbs that have intransitive forms on the one hand, and other action verbs on the other, proposes that we can take some action verbs to introduce non-action-designating event predicates that we do not currently have terms for. And in light of the lack of appropriate terminology, Alvarez suggests that we can simply use the nominalisations of these action verbs and *stipulate* new meanings for them such that they describe events that are merely the results of actions, rather than actions themselves. It is put forward, for example, that a new meaning for the nominalisation ‘walk’ can be stipulated, so that it describes events that are results of actions of walking, rather than the actions themselves: “there is no reason why we should not use the very word that is used to describe an action itself — e.g. ‘walk’ ... — to describe its results” (ibid., p. 126). And the appropriate stipulated meaning of ‘walk’ is suggested to be something along the lines of ‘a body’s traversing across space as a result of some leg movements’ (ibid., pp. 126-7). On this stipulated meaning, the predicate ‘was a walk’ can be said to designate an event that is not an action, and the action verb ‘walk’ can be said to implicitly introduce this non-action-designating event predicate.

⁹⁵ Davidson raises a related point as a challenge to the Chisholm’s theory of action:

The cases I would ... worry about are ... ‘He walked to the corner’, ‘He carved the roast’, ‘He fell down’, or the ‘The doctor removed the patient’s appendix’. In each of these examples I find I am puzzled as to what the agent makes happen. My problem isn’t that I can’t imagine that there is some bodily movement that the agent might be said to make happen, but that I see no way *automatically* to produce the right description from the original sentence. No doubt each time a man walks to the corner there is some way he makes his body move; but of course it does not follow that there is some one way he makes his body move every time he walks to the corner.

(2001e, p. 128).

It can be granted that we may stipulate new meanings for nominalisations in order to characterise non-action-designating event predicates introduced by action verbs. The challenge, however, when it comes to such action verbs as ‘eat’, ‘run’, ‘walk’ and ‘read’, is that these verbs cannot be taken to *only* introduce non-action-designating event predicates. Any purported representation of the logical form of an action sentence that involves the action verb ‘eat’, ‘run’, ‘walk’ or ‘read’, and that is not implausibly far removed from the surface form, will fail to be semantically equivalent to the given action sentence, if the only event predicates it includes are non-action-designating. And an accurate representation of the logical form of some sentence must be semantically equivalent to that sentence.

Consider Alvarez’s (ibid., p. 126) proposal for the logical form of the following action sentence, featuring the intransitive action verb ‘walked’:

(15) ‘Jeff walked.’

The proposed logical form of this sentence is this:

(L15) ‘There is an event x such that x was a walk of which Jeff was the agent.’

Naturally, ‘walk’ here is to be understood according to a stipulated meaning along the lines of that given above: ‘a body’s traversing across space as a result of some leg movements’, for example. ‘Was a walk’ is then a non-action-designating event predicate. And (L15) then includes no action-designating event predicates, following Alvarez’ proposed general schema for the logical form of simple action sentences.

No stipulated meaning of ‘walk’ along the lines of ‘a body’s traversing across space as a result of some leg movements’ will render (L15) semantically equivalent to sentence (15) however. Regardless of the precise stipulated meaning of ‘walk’,

(L15) does not have the same truth conditions as sentence (15). If it is stipulated that ‘walk’ means precisely ‘a body’s traversing across space as a result of some leg movements’, for example, then (L15) can be true when Jeff has not walked, but has instead skipped, swum, danced, or run. In each case, Jeff would have caused, and would therefore have been the agent of, an event that was a body’s traversing across space as a result of some leg movements.

Although this outcome might prompt the reaction that the stipulated meaning of ‘walk’ must simply be improved so as to specify more precisely the nature of leg movements that result from walking actions, such efforts will not yield a resolution to the problem here. Even if we could specify the nature of leg movements that result from walking actions more precisely — and it is difficult to see how one could do without excluding some more unusual cases of walking — the stipulated meaning of ‘walk’ that we would then devise will still fail to render (L15) semantically equivalent to (15). It will nonetheless remain the case that (L15) does not have the same truth conditions as (15). With the newly stipulated meaning, (L15) will be true if Jeff has not walked, but has instead instructed *someone else* to move his legs in precisely the relevant way, and those instructions are followed. In such a situation, Jeff has caused his body to traverse across space in just the way that would result from walking, and yet Jeff has not walked. It does not seem that there is any viable alternative stipulated meaning for ‘walk’ which avoids this difficulty, and so renders (L15) semantically equivalent to (15).

We might say that there is more *information* packed into the term ‘walked’ than can be captured by identifying some result and identifying some individual as the agent of that result. For in characterising an agent as having walked, we indicate not only that a certain kind of bodily movement takes place, and that an agent is responsible for this, but also the manner in which the bodily movement comes about — and this is the manner in which the agent *acts*. There is a *directness* to

the agent's relation to their bodily movements when they walk, which cannot be captured on Alvarez's approach to interpreting action sentences.⁹⁶

The same difficulty can be seen to hold in action sentences involving action verbs that are transitive, but have no corresponding intransitive form. Take the following sentence for example:

(16) 'Joan ate the cake.'

Following Alvarez's schema for the logical form of transitive action sentences, we would take the following to represent (16)'s logical form:

(L16) 'There is an event x such that x was an eating of which Joan was the agent and the cake was the patient.'

As with 'walk', the meaning of 'eating' here will be stipulated so that it does not characterise an event as an action. 'Was an eating' is then a non-action-designating event predicate. However, there is no viable such stipulated meaning of 'eating' which renders (L16) semantically equivalent to (16). An event of maceration of cake by some teeth, for example, might occur on account of assistance from someone else, or technological intervention, which Joan has requested, precisely on account of her *not being able to eat cake*. As with walking, there is a *directness* to the agent's relation to their bodily movements and interaction with food, when they eat, which cannot be captured on Alvarez's approach to interpreting action sentences.

Altogether then, there are action verbs that do not plausibly implicitly introduce result-events without introducing an action-event. And, as indicated above, this suggests that action verbs in general should not be taken to implicitly introduce

⁹⁶ Baier also asserts that "I cannot tell you what walking is. I know it is not just getting from one place to another by using a particular leg movement, since if I use that movement to activate a moving sidewalk, I am not walking." (1970, p. 654).

result-events without introducing action-events. In that case, adverbial elimination cannot be explained by those action sentences implicitly involving existential quantification over result-events, rather than action-events. The proposal that action sentences implicitly involve existential quantification over action-events remains the only viable explanation of adverbial elimination. As was argued earlier in this chapter, the argument for the action-event semantics for action sentences stands up to scrutiny. And so there is no viable semantics of action sentences that motivates an account of actions as causings of results, where causings are not events.

4. Basic Actions

I argued in the previous chapter that actions are Davidsonian events, such that when someone ϕ s by ψ -ing, there is a single action that can be described both as their ϕ -ing and as their ψ -ing. Here, I argue that there are apt descriptions of action-events that can be characterised as *basic action descriptions* (§4.1). These are descriptions of action-events as changes by the agent of the agent, i.e. *self-changes*. Indeed, I put forward that all actions by us finite embodied agents have basic action descriptions as self-changes. Moreover, I argue that our self-changing actions should not be understood as causings of events of change in oneself, or new states of oneself, that are results of those actions.

I first make the case that for some of our actions, their basic action descriptions describe them as self-changes that are *bodily changes* (§4.2.1). And these actions, I argue, should not be understood as causings of their bodily results; they are neither causings of their bodily result-events (§4.2.2), nor causings of their bodily result-states (§4.2.4). Instead, such action-events are to be understood as identifiable with their bodily result-events (§4.2.3). In addition, I put forward that there could be some such action-events that also have results that I call *causal pre-requisites* for the action itself (§4.3). Such actions are not causings of these causal pre-requisite results either.

I go on, then, to argue that some of our actions do not have basic action descriptions in terms of bodily change, but instead have basic action descriptions in terms of mental change (§4.4). I reason that all of our actions have basic action descriptions in terms of some kind of self-change — either bodily or mental — and that each of these can be identified with their self-change results. These actions cannot be characterised either as causings of the resulting changes to the agent, or causings of the resulting new states of the agent.

I end by defending the bipartite division of action descriptions that my proposal entails. This is a bipartite division between descriptions of actions in terms of self-change, with result-events that are identified with the action, on the one hand, and all other descriptions of actions, with result-events that are distinct from the action, on the other hand. In particular, I defend this bipartite division from the objection that it is unwarranted and *ad hoc* (§4.5).

4.1 Basic Action Descriptions

It would seem to be intuitive that there is some sense in which, for us embodied agents at least, there are some things that we *can just do*, while there are a number of other things that we *cannot just do*, but which require us to do something else. Moreover, the things that we finite embodied beings cannot just do, in this sense, include actions of changing objects that are wholly distinct from oneself: one can only change an object distinct from oneself if one changes oneself. And all the things that we embodied finite beings can just do are actions of changing oneself. Ideas along these lines are often expressed in action-theory, with the distinction between things that we just do and things that we do not just do characterised as a distinction between *basic* and *non-basic* actions or action-descriptions. Since I assume here the Davidsonian conception of actions as events, as well as the Davidsonian conception of how such action-events are individuated, if we are to follow the tradition of characterising the distinction in terms of basicness, then the distinction must be one between basic and non-basic *action-descriptions*.

But it has proved hard to pin down the relevant notion of basicness, which captures the above intuitive idea. Attempts to pin down the relevant notion of basicness largely appeal either only to teleological relations or to causal relations. I argue that the relevant notion of basicness is not captured in terms of only one or other of these relations. Others who have come to the same evaluation have renounced the idea of basic action descriptions altogether (see Baier 1971). I, on the other hand, propose an alternative analysis of basic action descriptions, in

terms of *both* teleological and causal relations, as well as other kinds of relations. After indicating why both purely teleological analyses and purely causal analyses of basic action description fail to capture the relevant notion, I defend my proposal that a successful analysis of basic action description in terms of causality *and* teleology is available.

4.1.1 Purely Teleological Analyses of Basic Action Description

Purely teleological analyses of basic action description that have been put forward are generally along the following lines (see Chisholm 1969; Hornsby 1980):

TELEOLOGICALLY MORE BASIC ACTION: 'A's φ -ing' is a teleologically more basic action description of action a than 'A's ψ -ing' iff A φ -ed intentionally and ψ -ed by φ -ing, such that a can be described both as 'A's φ -ing' and as 'A's ψ -ing', but A did not φ by ψ -ing.

TELEOLOGICALLY BASIC ACTION: 'A's φ -ing' is a teleologically basic action description of action a iff A φ -ed intentionally such that a can be described as 'A's φ -ing', and A did not φ by ψ -ing, such that there is no apt description of a as 'A's ψ -ing'.

And 'by' here is to be understood teleologically, such that if A φ -ed by ψ -ing, then A intentionally ψ -ed *in order to* φ . The proposal that actions are aptly described with teleologically basic action descriptions can then be understood, more roughly, as the idea that when we act, there is something that we do intentionally without doing it *by means* of doing something else, such that it is not the end, or goal, of something else that we are doing (see Lavin 2013, p. 273). The claim, then, that the things that we cannot "just do" include

intentional actions of changing objects distinct from oneself, and that all the things that we can “just do” are actions of changing oneself, would be understood as follows: an agent can only intentionally change objects that are distinct from themselves by means of changing themselves, but an agent can change themselves without doing it by means of doing something else.

Let us consider the basis then for supposing that actions do have teleologically basic action descriptions. The grounds that have been put forward have been that to suppose otherwise is to permit a vicious regress of practical knowledge and action kinds. Why a regress of practical knowledge as well as of action kinds? As defended in Chapter 1, that which is done intentionally by an agent is knowingly done by the agent, but, moreover, the agent must know *how* to do that which is done intentionally. Knowing how to do something that can only be done non-teleologically-basically is a matter of knowing the means by which it is done, and knowing how to employ those means. Knowing how to do something that can be done teleologically basically, on the other hand, does not require knowing how to do anything else. In that case, if all apt action descriptions were non-teleologically-basic, each intentional action would implicate knowledge of how to do an infinite regress of things. This regress is taken to be a vicious one, so as indicate the necessity of teleologically basic action descriptions:

‘Among the things a person knows how to do [intentionally], some of them he must know how to do “just like that”, on pain of needing to ascribe to him indefinitely many distinct pieces of knowledge to account for his ability.’ This ... shows that there must be teleologically basic ... descriptions.

(Hornsby 1980, p. 88).

It is not obvious, however, that the regress is in fact a vicious one. The practical knowledge that is implicated in intentional action does not, after all, require the agent to consciously think about all the means to be employed in achieving their goal. And so, while having to consciously thinking through infinite means would surely be impossible for a finite being, and so would introduce a vicious regress,

without this requirement, why should it be supposed that knowledge of infinite means is similarly impossible? As Lavin points out:

When thinking about the operation of means-end reason and the applicability of teleological explanation, what interests us is not what crosses the mind (of course, yes, there must be a limit to this) but, as Anscombe puts it “an order that is there” — whose existence is constituted by various instrumental-rational connections that the agent presupposes, and which he presumably could articulate for himself if he reflected.

(Lavin 2013, p. 283)

What, then, about the implied infinite regress of action kinds tokened by the agent if all apt action descriptions are teleologically non-basic? This too is thought to be a vicious regress. But, again, it is not clear that it should be thought to be so. Hornsby asserts that “[o]ne could never get started if one had always to do something *else* in order to do something. There must always be something that one can get to perform or to execute *just like that*” (2013, p. 14; emphasis authors own).⁹⁷ However, if teleological (non)basicness is simply a feature of action *descriptions*, then the infinite regress is simply a regress of action descriptions for each single action. And it is not clear why an infinite regress of action descriptions should pose an impediment to an agent getting started with acting. Why would an action need to have a teleologically basic action description for the agent to be able to get started with it?

Indeed, it has been argued by Lavin (2013) that not only is it unproblematic for there not to be any teleologically basic action descriptions, it must be the case that there are no teleologically basic action descriptions, at least when it comes to non-instantaneous actions (see Lavin 2013, n. 35). Following Thompson (2008, pp. 106-12), Lavin argues that non-instantaneous actions can be infinitely re-

⁹⁷ The same idea seems to be the basis of the claim that there must be basic action descriptions in Hornsby (2005) and Small (forthcoming).

describable in terms of more teleologically basic action descriptions.⁹⁸ The argument can be summarised as follows: Given the density of time and space, any non-instantaneous action can be infinitely divided into shorter and shorter temporal, or spatial, stages of the action. Suppose, then, that an agent acts, so that they can be said to have φ -ed where their φ -ing took time. The agent, then, can be said to have φ -ed by completing the first half (quarter, eighth, sixteenth, etc.) of the φ -ing, and then the second (plus third and fourth, etc.) half (quarter, eighth, sixteenth, etc.):

Finite agents must implement practical knowledge in particular circumstances, the particularity of which is known to the agent. We act self-consciously on other objects (not just other kinds but other ones) and in space and time (not in l and at t , but here and now). These are continuous magnitudes. And a subject who moves self-consciously through space, or does things that take time time, grasps this at least intuitively. If I know that I am walking to school, then I know that I need to traverse the entire, continuous distance from where I am now to school. I understand the idea of going halfway there, and halfway to halfway there, and so on. And this sort of understanding supplies a basis for the unlimitedness of rational teleology.

(Lavin 2013, p. 287).

Now, this is compatible with it also being true that, at least in some cases, an agent, A , only completes the first half of their φ -ing, followed by the second half, by φ -ing. In such a case, then, it will be supposed that the agent, A , completes the first half of their φ -ing, followed by the second half, by φ -ing, but also φ -s by completing the first half of their φ -ing, followed by the second half. It might be thought, for example that if an agent walks from point α to point ω , they do

⁹⁸ Thompson argues that “[a]cts of moving something somewhere intentionally always have an initial segment that is also an act of moving something somewhere intentionally” (2008, p. 111), but his argument is extended by Lavin so as to reach the broader conclusion that all non-instantaneous actions can be infinitely redescribable in terms of more teleologically basic action action descriptions.

Rödl (2002) and Small (2012) have also pointed out that temporality is the basis of Thompson’s “initial segment” argument.

so by walking halfway and then halfway again, but similarly they walk halfway and then halfway again by walking from α to ω . 'A's φ -ing' — A's walking from α to ω , for example — is not classified as a teleologically basic description of A's action in such a case of teleological circularity.

The argument has, however, been opposed by Bishop (2011, pp. 215-6); Setiya (2012, p. 289); Hornsby (2013, p. 11); Frost (2016, p. 42-3); Wolfson (2016, pp. 57-8), who claim that an agent might intentionally walk from point α to point ω , and in doing so walk halfway and then halfway again, but without this being an intentional means to an end: it might, instead be simply a foreseen consequence, towards which the agent is indifferent. This strikes me as a mischaracterisation of intentional movement however. One might be indifferent to the particular route that one takes from one point to another, but that is a different matter from being indifferent to moving halfway and then halfway again, since this does not specify any particular route. When one intentionally walks from α to ω , one is not indifferent to walking halfway and then halfway again.

Small (forthcoming) similarly suggests that one might intentionally walk from α to ω , and in doing so walk halfway and then halfway again, without this being an intentional means to an end. But Small does not present this as instead merely a foreseen consequence; it is instead presented as the "constitutive means" of walking from α to ω (see especially Small forthcoming, p. 29). This suggestion from Small comes from a recognition of the possibility of teleological circularity noted above. I think that this circularity is best characterised in terms of a lack of any single teleologically basic action description however, rather than in terms of teleologically basic action description that is describable also in terms of constitutive means. I take Lavin to have presented a convincing argument, then,

against the aptness of any teleologically basic action descriptions, as defined by the analysis given above.

One might suppose then that the problem lies with the particular analysis that was offered for teleologically basic action description. Perhaps an appropriate analysis should provide space for multiple teleologically basic action descriptions, where there is a circularity in the teleological order, so that if an agent A Φ -s by Ψ -ing, and Ψ -s by Φ -ing, both 'A's Φ -ing' and 'A's Ψ -ing' may qualify as teleologically basic action descriptions. An alternative purely teleological analysis of basic action description that allows for this is the following:

TELEOLOGICALLY BASIC ACTION*: 'A's Φ -ing' is a teleologically basic action description of action a iff A Φ -ed intentionally such that a can be described as 'A's Φ -ing', and there is no teleologically more basic action description of a than 'A's Φ -ing'.

On this analysis, if the teleological order of action descriptions reaches a point at which it becomes circular, so that A Φ -s by Ψ -ing, and Ψ -s by Φ -ing, and does Φ by any other means, or Ψ by any other means, *both* 'A's Φ -ing' and 'A's Ψ -ing' are classified as teleologically basic action descriptions. And now while an infinite regress of action descriptions, no single one of which is teleologically most basic, is not a vicious regress, I suggest that an infinite regress of action descriptions without any teleologically basic action descriptions, as defined here, might be a vicious regress. Perhaps, at some point in the teleological order there must be an action description that explains the *unity* of the action in the face of all its temporal divisions. The description, ' Φ -ing', of an action that does explain the unity of the action is such that while the agent might be said to have Φ -ed by

doing an infinite number of other things (corresponding to the infinite temporal divisions of the action), each of those other things are themselves done by φ -ing.

Then again, consider the following case, presented by Davidson (2001b, p. 51): I tie my shoelaces by moving my hands in a certain way. But since, I only know how to move my hands in that way by tying my shoelaces, I can be said to move my hands in that way by tying my shoelaces. This is a case of the kind of teleological circularity outlined above. Yet, there is a pull to say that here ‘moving my hands’ is really the more basic action description; moving my hands is the thing I *just do*. It seems relevant to this intuition that my hands’ moving is causally prior to my shoelaces being tied (*pace* Hornsby 2011 and Small forthcoming, who will be addressed in the following chapter). In that case then, it would seem that we should perhaps consider a *causal* conception of basicness in order to capture the relevant sense corresponding to things that we *just do*.

4.1.2 Purely Causal Analyses of Basic Action Description

An alternative to the purely teleological conception of basicness, is a purely *causal* conception. Indeed, Danto (1963, p. 435) introduced the notion of basic actions with the following purely causal analysis:

B is a *basic action* of *a* if and only (i) *B* is an action and (ii) whenever *a* performs *B*, there is no other action *A* performed by *a* such that *B* is caused by *A*.

Subsequent proponents have largely dropped this particular analysis of causally basic action. For one thing, as indicated at the outset of this section, on the Davidsonian ontology and individuation of actions, basicness needs to be treated as a feature of action descriptions, rather than actions. But moreover, Danto’s actions in his analysis are action *kinds* rather than particular actions, as evidenced by the talk of “whenever *a* performs *B*” where *B* is an action. It is not clear that it

is even appropriate to suppose that there are more or less causally basic action kinds. And, finally, Danto's analysis would seem to characterise too many action kinds as causally basic: many action kinds are such that the agent can perform an action of that kind without a prior action of theirs causing them to do so (see Stoutland 1968; Brand 1968; Danto 1973; Hornsby 1980).

I take the following to offer an appropriate analysis of causally basic action descriptions, which is very much along the same lines as that presented by Hornsby (1980, pp. 70-72).

CAUSALLY MORE BASIC ACTION: 'A's φ -ing' is a causally more basic action description of action a than 'A's ψ -ing' iff both 'A's φ -ing' and 'A's ψ -ing' describe a , and some result-event of A's φ -ing causes the result-event(s) of A's ψ -ing.

CAUSALLY BASIC ACTION: 'A's φ -ing' is a causally basic action description of action a iff a can be described as 'A's φ -ing' and there is no apt description of a as 'A's ψ -ing' such that some result-event of A's ψ -ing causes the result-event(s) of A's φ -ing.

But now it would seem to be an empirical matter whether all actions do indeed have causally basic action descriptions. While a lack of any such causal basic action description implies an infinite regress of action kinds, and result-events (on the assumption of there being no causal loops), as has already been indicated it is not at all obvious that such a regress should be taken to be a *vicious* regress.

Then again, one might suppose that an action, as an event, has an action description that implies a result-event that can be identified with the action-event itself. And, one might then reason that any such action description is a causally

basic action description. Now, I agree that an action, as an event, has an action description that implies a result-event that can be identified with the action-event itself, as I will argue later in this chapter. However, an action description that implies a result-event that can be identified with the action-event itself may well still fail to be a causally basic action description. An action might also have an action description that implies a result-event that is a causal-prerequisite for the action — that is, a result-event of a kind that is needed as a cause to bring about the action — and so is causally prior to the action-event. One might suppose, as Davidson does, for example, that many actions can be described as an action of the agent moving their body, which implies the result-event of the agent's body moving, where that bodily movement can be identified with the agent's action of moving their body. But one might also suppose that an agent's action of moving their body could be also described as an action of tensing their muscles, even though this implies the result-event of their muscles tensing, which is causally prior — and a causal pre-requisite for — the agent's action of moving their body. And now an action description that implies a result-event that is a causal pre-requisite for the action is a causally more basic action description than an action description that implies a result-event that can be identified with the action-event itself.

Moreover, given that a causally basic action description might be one that implies a result-event that is a causal pre-requisite for the action, it does not seem that the assertion that actions have causally basic action descriptions captures the idea that there are some things that we can, and do, *just do*, and which do not require us to do anything else. For if Davidson is correct in holding that there are actions that can be described as an agent's moving their body, which can be identified with an event of the agent's body's moving, then while there might be descriptions of those actions that imply result-events that are causal pre-requisites for the actions — the agent's tensing of their muscles, for example — this would not seem to show that moving our bodies is something that we cannot just do. When one moves one's body, the causal pre-requisites for one's action — one's muscles tensing — of course must come about first, and one can then describe one's

action in terms that imply the occurrence of such pre-requisites, but since they are merely *pre-requisites*, as an agent, one need not concern oneself with those, as it were. One can simply move one's body — wiggle one's toes, shake one's arm around, or nod, for example — and be reassured that insofar as one moves one's body, those pre-requisites — their muscles tensing — will have come about as needed.

What is more, suppose that it turns out that actions of moving one's body do in fact have causally basic action descriptions. But suppose also that these causally basic descriptions are in terms of the agent activating certain areas of their brain.⁹⁹ The activation of certain areas of one's brain is then the causal pre-requisite for the action of moving one's body that comes first in the causal order of the results of the action. This does not seem to warrant the conclusion that we *just can* activate certain areas of our brains, *just like that*, in the sense at issue. It would still seem to be appropriate to hold that activating one's brain areas is something that requires one to do something else, which one *can just do*. *By* doing that other thing, one activates certain areas of one's brain, since the activation of such areas is a causal pre-requisite for one's doing that other thing.

There is one final additional concern with the purely causal analysis of basic action description that I will identify. This is that if one permits that, in some cases at least, there are relations of *non-causal determination* between result-events implied by action-descriptions — as I will argue there are — the analysis will classify action descriptions that imply result-events that are *only non-causally determined* by other result-events as basic. But, now, it may well seem that such

⁹⁹ Such action descriptions might even be descriptions under which the action is intentional, as Davidson points out:

A man who raises his arm both intends to do with his body whatever is needed to make his arm go up and knows that he is doing so. And of course the cerebral events and the movements of the muscles are just what is needed. So, though the agent may not know the names or locations of the relevant muscles, nor even know that he has a brain, what he makes happen in his brain and muscles when moves his arm is, under one natural description, something he intends and knows about.

(Davidson 2001b, p. 50).

action descriptions are no more basic than action descriptions that imply result-events that are *caused* by other result-events. Suppose, for example, that I create a poem by thinking of several lines and deciding that those lines should constitute a poem. And suppose, moreover, that the coming into existence of the poem (the result-event of my creating a poem) is only non-causally determined by my having the idea of the several lines (the result-event of my thinking of several lines), and my having the idea that they should constitute a poem (the result-event of my decision), as I will argue could be the case. My thinking of several lines and deciding that those lines should constitute a poem would seem to be more basic than my creating a poem, but my creating a poem is classified as a causally basic action.

We might then adapt the causal analysis of basic action description in light of this, by simply swapping ‘causes’ for ‘causes or non-causally determines’, to produce one could be called a ‘determinational analysis of basic action description’:

DETERMINATIONALLY BASIC ACTION: ‘*A*’s Φ -ing’ is a determinationally basic action description of action *a* iff *a* can be described as ‘*A*’s Φ -ing’ and there is no apt description of *a* as ‘*A*’s Ψ -ing’ such that some result-event of *A*’s Ψ -ing causes, or non-causally determines, the result-event(s) of *A*’s Φ -ing.

However, given the other significant concern about the analysis not providing a sense of basicness that truly captures the idea that there are some things that we can, and do, *just do*, this adaptation of the analysis is clearly not sufficient.

4.1.3 My Proposed Alternative Analysis of Basic Action Description

At this point, while we have not yet met with success, we should not simply give up on the idea of providing an analysis of basic action description that provides a sense of basicness that truly captures the idea that there are some things that we can, and do, *just do*. The solution that I propose is to not restrict ourselves to either a purely teleological, or causal (or determinational) analysis of basic action description. Instead, an analysis of basic action description should be given in terms of both teleological and determinational relations. My proposal is essentially that a basic action description of some action, *a*, is one of the “determinationally most basic” of *a*’s teleologically basic action descriptions. More formally, the proposal is as follows:

DETERMINATION-TELEOLOGICAL (DT) BASIC ACTION:

‘*A*’s Φ -ing’ is a DT basic action description of action *a* iff ‘*A*’s Φ -ing’ is a teleologically basic action description of *a* and there is no other apt teleological basic description of *a* as ‘*A*’s Ψ -ing’ such that some result-event of *A*’s Ψ -ing causes, or non-causally determines the result-event(s) of *A*’s Φ -ing.

This analysis then relies on both TELEOLOGICALLY BASIC ACTION*, and DETERMINATIONALLY BASIC ACTION. And the analysis, like TELEOLOGICALLY BASIC ACTION*, and DETERMINATIONALLY BASIC ACTION, allows that there might be more than one basic action description.

According to this analysis, ‘my tensing my muscles’, insofar as it describes an action of unintentionally tensing my muscles when I raise my arm in order to push something high-up, is *not* a DT basic action description since it is not amongst the action’s teleologically basic action descriptions. By contrast, ‘raising

my arm' *is* plausibly a DT basic action description, since it is one of the determinationally most basic descriptions of the action's teleologically basic action descriptions. And, supposing that I raise my arm in a very specific way that I only achieve by pushing something that is high-up, then although 'pushing something high-up' may be one of the action's teleologically basic action descriptions, it is *not* a DT basic action description since it is not one of the determinationally most basic descriptions of the action's teleologically basic action descriptions. The result-event that is some distinct high-up object's moving is caused by the result-event of my arm's moving.

I think that this DT analysis of basic action description offers a sense of basicness on which it is very intuitive that all of our actions — the actions of us finite beings — have some basic action description(s): corresponding to the intuitive idea that whenever we act there is something that we *just do*. But the basis for this is not avoidance of a vicious regress. The basis is instead simply the idea that, when it comes to our actions, there are teleologically most basic action descriptions of those actions, and of those, there are some that describe the action in terms of agent changing themselves. These action descriptions in terms of self-change imply result-events that can be identified with the action-event itself. These are DT basic action descriptions, since any action description that implies a distinct result-event will be DT less basic: either teleologically or determinationally less basic. But this is a conclusion that I will argue for in subsequent sections, where I argue that all our actions have DT basic action descriptions either in terms of bodily self-change or mental self-change. I argue that these actions cannot be aptly described as causings of their bodily or mental result-events, they are instead to be *identified* with their bodily or mental result-events.

4.2 Basic Bodily Actions

In this section, I put forward first that there are actions with DT basic action descriptions in terms of the agent changing their bodies (hereafter: basic bodily action descriptions, and actions that are so described: basic bodily actions). I then argue that these basic bodily actions cannot be aptly described as causings of their bodily result-events, or bodily result-states, and are instead to be *identified* with their bodily result-events.

4.2.1 The Existence of Basic Bodily Actions

The proposal to be defended here is that, at least usually, when an able-bodied embodied agent moves their body, changing the body's position, the agent does not move their body by means of doing something some determinationally more basic. In such cases, no equally teleologically basic description of the action of moving one's body is determinationally more basic. Perhaps one moves one's body for time t by moving it for half of t , and then the rest of t , but this does not present a determinationally more basic action description. Similarly, perhaps some bodily movements are executed by focusing on interacting with some extra-bodily object: an agent might move her hands in a particular way by tying their shoelaces, but again, this does not present a determinationally more basic action description. And so in both cases, descriptions of the action in terms of the agent moving, and so changing their body, are DT basic. Moving one's one body is something that an able-bodied embodied agent can *just do*.

This outcome is, I think, intuitive. It allows for the intuitive distinction between "direct" bodily movements, such as raising one's left arm "just like that", and "indirect bodily movements", such as that characterised by Davidson as follows: "If I rig up a pulley and rope, I can raise my paralyzed left arm by pulling on the rope with my right arm" ('Problems in the Explanation of Action', p. 103). In Davidson's imagined case, "I do, of course, raise my left arm by doing something

else” (ibid.). So, as Davidson asserts, “[r]aising an arm is usually done without doing anything else, but not always” (ibid.). Raising one’s arm, for an able-bodied human agent is usually a basic bodily action, but not always.

When it comes to those “direct” bodily movements, such as raising one’s left arm “just like that” — wiggling one’s toes, nodding one’s head, and, in some cases wiggling one’s ears — the agent of those actions cannot say *how* they do what they do. The agent can acknowledge that they raise their left arm from their side to up in the air, by moving it halfway and then halfway again, and so on, but they have nothing to say with regards to how they get raising it at all. I, for example, can wiggle my left ear, but not my right ear. I do not have any kind of *method* for wiggling my left ear, such that I could apply it to my right ear, and thereby wiggle that too. Wiggling my left ear is simply something that I can, and do, do, although I cannot say *how* I do it. This is most plausibly because when I wiggle my left ear, it is a basic bodily action. Similarly, when it comes to those who temporarily lose the ability to “directly” move some part of their body, on account of some injury, and then regain that ability, this is not reported as a matter of losing and then regaining the knowledge of *how* to move it. Oliver Sacks, for example, characterised the occasion on which he regained the ability to “directly” move his leg, after an accident which resulted in a temporary complete loss of sensation in the leg, as follows: “suddenly, spontaneously, not knowing (or caring) how, I found myself walking” (Sacks, 1982). Again, this is most plausibly because one’s direct movement of one’s leg is a basic bodily action.¹⁰⁰

¹⁰⁰ In line with this, Armstrong remarks appropriately:

Some people waggle their ears, or raise only one eyebrow, while others cannot. In some cases people acquire new powers. That is to say, they bring bodily movements that were previously not potential immediate acts of their will under its sway. Presumably this can only occur where potential ‘circuits’ already exist between the brain the part of the body to be moved. How these powers develop — whether they grow up spontaneously, or are brought into existence as a result of deliberately going through certain procedures — experience alone can decide.

(Armstrong 1968, p. 146).

We are related to our own bodies in an utterly distinctive way, such that our own bodies are the *only* physical objects that we can and do change “directly”. That is, all apt DT basic action descriptions that describe actions by embodied agents in terms of the agent changing some physical object, describe actions in terms of the agent changing their own body. This distinctive way in which we, at least typically, relate to our own bodies, as opposed to other physical objects is captured by Descartes’ famous remark that “I am not in my body like a pilot in a ship” (1998, Part V: VI 59, HR1 118).¹⁰¹ Those parts of our bodies that we can move directly, such as our limbs, eyelids, head, and so on, do not figure for us as the parts of a ship figure for its pilot. A pilot *controls* its ship by interacting with its parts, changing them by moving themselves: the pilot can be said to *act upon* the ship’s parts. Just so, we embodied agents act upon distinct physical objects whenever we change them through our actions. But we do not act upon parts of our own bodies when we move those parts directly, we act only *with* them.

This idea has been expressed in a wide number of somewhat evocative ways. Evans, for example, states that “I manifest self-conscious thought not in knowing which object to act upon, but in acting. (I do not move, myself; I, myself, move.)” (1982, p. 240). Wong, on the other hand, expresses this idea as follows:

In acting with one’s body, it is the immediate effector of action. It is what one acts through. We don’t have to target it first in order to act directly with it. Thus, in acting with the body the role of the body is not as a target object, even in a proximal sense. ... We can see this by contrasting how we act with our bodies as opposed to the way we act with tools, even the most familiar ones, like cutlery. In both cases, ordinary bodily action can be skilled and fluid. In such cases, tools can be thought of as ‘body extensions’ of some sort (Maravita and Iriki 2004). But when one uses a tool, one still has to target it initially in order to act with it. We

¹⁰¹ Williams (2005, p. 266) suggests that Descartes is here positioning himself against Plato, following Aquinas who asserts (wrongly, according to Williams) that “Plato said that the soul is in the body “as a sailor in a ship”” (1976, ii 57). Aristotle, by contrast, does explicitly present the question of whether the soul is related to the body as the sailor is to the ship, but presents the question only as unanswered: “we have no light on the problem whether the soul may not be the actuality of its body in the sense in which the sailor is the actuality of the ship.” (1984, *De Anima*, 413^a8–9)

have to pick up the cutlery in order to eat with it. This is not the case when we act with our bodies; there is no such targeting needed as the body is the effector itself.

(Wong 2018, p. 5).

Sartre too seems to be getting at something along these lines, albeit in somewhat more elusive language, when he asserts the following (making clear in the context that the instruments that we are are our bodies):

[W]e seem to find ourselves faced with a twofold contradictory necessity: as it is possible to use — and even to grasp — each instrument only through the medium of another instrument, the universe is an objective, indeterminate reference from tool to tool. In this sense the world's structure implies that we can only insert ourselves within the field of equipmentality by being ourselves an implement, that we cannot *act* without *being acted on*. On the other hand, however, a structure of equipment can only be disclosed by determining one cardinal meaning of this structure, and this determination is itself practical and active — to plant a nail, to sow some seeds. In this case, the structure's very existence refers immediately to a centre. In this way this centre is at the same time a tool that is objectively defined by the instrumental field that refers to it and the tool that we are unable to *utilise* because we would be referred *ad infinitum*. We do not employ this instrument; we *are it*.

(Sartre 2018, p. 434).

Any account of action that fails to respect the distinction between the way in which able-bodied human agents change their bodies, and the way in which they change other physical objects, which these various authors have sought to capture, presents us able-bodied human agents either as alienated from our bodies (treating the able-bodied agent's relationship to their body as too much like the pilot's relationship to their ship), or as telekinetics (treating the pilot's relationship to their ship as too much like the able-bodied agent's relationship to their body). And in order for an account of action to respect the relevant distinction between the way in which able-bodied human agents change their bodies, and the way in which they change other physical objects, the account must hold the following: there are apt DT basic action descriptions that describe actions by able-bodied agents in terms of the agent changing some physical object, and in all such cases the physical object in question is the agent's own body.

There would seem to be, however, some human agents for whom their limbs do figure as parts of a ship figure to its pilot. Cole and Paillard (1995) describe patients who, as a result of infection, have lost all sensations of touch and muscular proprioception from below the mouth (see Cole and Paillard 1995, p. 247). Moreover, these patients are described as being unable to move any part of their body below the neck without sustained concentration on the desired movement, and visual attention on the part of their body that they would like to move (see *ibid.*, pp. 250-1).¹⁰² If these descriptions are accurate, then for these patients, there are no apt DT basic action descriptions that describe their actions in terms of movement of the body below the neck. When these patients do manage to move some part of the body below the neck the DT basic action descriptions will be in terms of mental concentration, or directed visual attention. The significant distinction between these patients and able-bodied human agents is one that ought to be captured. And the distinction is appropriately captured in terms of the capacity to engage in basic bodily action.

4.2.2 Basic Bodily Actions and their Bodily Result-Events

That at least some human agents have the capacity to engage in basic bodily action is, however, contrary to certain theories of action, such as, most obviously, volitionist theories. On volitionist theories of action, all apt DT basic action descriptions are in terms of willing that something happen or be the case; there are no apt DT basic bodily action descriptions, and so there are no basic bodily actions. On volitionist theories of action, when one does move one's body intentionally, one wills one's body to move, and one's action of so willing — and, therefore, the result-event of willing, since this, as simply a mental episode, is

¹⁰² See also Cole (1991); Ingram et al. (2000); Balslev et al. (2007). Wong says of one these patients: "IW is like a pilot in his body vessel. Whilst his body remains the unique and immediate respondent of his motor commands, he acts using conscious visual control." (2018, p. 9).

identical with the action-event — causes one's body to move as willed. And this is in fact one of the most unattractive features of volitionist theories.¹⁰³

Yet, volitionist theories of action are not the only theories of action on which no human agents have the capacity to engage in basic bodily action. Theories of action on which an action is a causing by the agent of the result(s) of their action are also in tension with the idea that at least some human agents have the capacity to engage in basic bodily action. At least, there is a tension insofar as causings that are actions are events, as I have argued in the previous chapter they must be, contrary to the views of a number of agent-causal theorists. I'll start by addressing theories on which an action is a causing by the agent of result-event(s) of their action (see Hornsby 1980, Bishop 1983; Alvarez and Hyman 1998; Alvarez 1999; Nida-Rümelin 2007; Steward 2012a; Hyman 2015; O'Connor 1995, 2000; Mayr 2011; Brent 2017).¹⁰⁴ It should be noted first, however, that insofar as causings that are actions are events, and all actions are causings, then an action is an event that is describable as a causing of something by the agent. And such an event either is, or incorporates, an event that is a cause of that which it is a causing of. As such, an action that is a causing of some effect, in fact, has a causal event — an event that causes that effect — as a result-event. Recall that an action's result-event is defined as follows.

RESULT-EVENTS: x (a change-event) is a result of an actually occurring action, y , iff x occurs because y occurs, and x is a token of a non-action type, X , and y is a token of an action type, Y , such that a token of Y occurs only if a token of X occurs.

¹⁰³ Indeed, is this, in view, rather than any of Ryle's objections that I outlined in Chapter 1, that renders volitionist theories of action truly untenable.

¹⁰⁴ Hornsby (1980) offers a non-reductive event-causal theory of action, while the other works listed here do not, and instead offer agent-causal theories of action. Hornsby's theory analyses action as a causing of its result-event(s) by the agent, but presents causation by the agent as reducible to causation by an action of the agent, namely a successful trying by the agent.

A causing action-event only occurs if some causal event occurs, and if a causing action-event occurs then, because of this, a causal event occurs. So, we see that an action that is a causing of something is classified as having a causal event as a result-event. But here the result-event, the causal event, is either to be identified with the causing action-event, or is part of the causing action-event. In that case then, it should be noted that if one maintains that an action is an agent's causing of the action's result-event(s), while accepting that actions are events, then it follows *just from this* that one cannot maintain that an action is a causing of *all* of its result-events. Action-events cannot be, after all, causings of themselves or parts of themselves.

So, insofar as it is accepted that actions are events, it cannot be coherently maintained that actions are causings of *all* their result-events. At most, it can only be maintained that actions are causings of all their result-events excluding the causal event identifiable with, or part of, the causing action-event. But insofar as one seeks to provide an account of agentic responsibility, which an agent has for every result of their actions, one cannot assert that to be agentially responsible for some occurrence is to cause it, where one's causing of it was one's acting. One must allow that there are occurrences that one is agentially responsible for that are identifiable with, or part of, one's causing further occurrences. Nonetheless, an account of agentic responsibility in terms of causation is still on the cards: to be agentially responsible for some occurrence is either (a) to cause it, where one's causing of it was one's acting; or (b) for that occurrence to be identifiable with, or part of, one's causing further occurrences. And this is compatible with any theory on which an action is a causing by the agent of *some* result-event(s) of their action, including its bodily result-events. Such a theory, however, still faces the significant problem that it is in conflict with the idea that at least some human agents have the capacity to engage in basic bodily action.

The basis for this conflict is that the description of an action as a causing of some event implies, as a result, the causal event which is either identifiable with, or part of, the action-event. And for any action that is a causing of some event, the

description of that action as a causing of some event is its DT basic action description. Whatever else the agent does when they intentionally cause some event, they do so *by* causing that event. And the result that is the causal event is determinationally prior to any result-events that the agent causes in acting: the causal event itself causes those results. So, on the agent-causal theories of action in question, since a bodily movement action *is* said to be a causing by the agent of its bodily movement result-event (see e.g. Steward 2012a, p. 200), when an agent moves their body in some way or other, then the agent does so by causing some movement of their body. On these theories, then, no bodily action is a *basic* bodily action: a bodily action will have, like all other actions, a DT basic action description in terms of causing some event.

Haddock, then, was correct when he characterised Hornsby's (1980) account of action as one on which "people are alienated from the movements of their bodies" (Haddock 2005, p. 161). On Hornsby's (1980) account, the able-bodied agent's relationship to their body is treated as too much like the pilot's relationship to their ship.¹⁰⁵ But it turns out that, in fact, given that actions are events, *any* account of bodily actions as causings by agents of the bodily result-events of their actions is an account on which people are alienated from the movements of their bodies, with the relationships of able-bodied agents to their bodies being treated as too much like the pilot's relationship to their ship.

Now, it has also been argued against Hornsby's (1980) account (Alvarez and Hyman 1998; Haddock 2005; Steward 2000) that on this account all bodily actions are, contrary to intuitions, internal to the agent's body, and thereby imperceptible from the outside of the body. It might be supposed that this objection should be put also to all other accounts of bodily actions as causings by agents of the bodily result-events of their actions. But while it is certainly right that we would not be able to directly perceive bodily action if it occurred inside the agent's body, it does not strike me as *obvious* either that we perceive any events

¹⁰⁵ Watson (1982) expresses this idea in his criticism of Hornsby's (1980) account, stating that "it implies that I stand to my body as a captain to his ship" (p. 467).

at all, rather than simply the objects involved in events, or that, on these accounts of action, bodily action must be internal to the agent's body.

With regards to the question of the perceptibility of events, as Hornsby points out: "What we commonly say is 'I saw him do it', not 'I saw his doing it'. That is, we say that we see people acting — see people who are acting and that they are — and not that we see their actions" (1980, p. 102).¹⁰⁶ And while Steward puts forward that "when a proposition of the form "S saw O ϕ -ing" or "S saw O ϕ " is true, a proposition of the form "S saw a ϕ -ing of O" is always true" (2000, p. 111), Steward offers no reason for someone sceptical of event-perception to accept this principle. And, with regards to the internality of bodily actions, although Hornsby (1980, p. 14) herself explicitly maintains that actions are internal to the agent's body, this view is not required for an account of action on which actions are causings by agents of the result-events of their actions. On these accounts, bodily actions are not identifiable with bodily movement result-events, and are instead identifiable with events that cause those bodily movement result-events, but it does not follow from this that bodily actions occur internally to the agent's body. It is perfectly consistent with these accounts that bodily actions simply take place where the agent is, and are no more *internal* to the agent than the bodily movement events that they cause.¹⁰⁷

I take, then, the key objection to accounts of bodily actions as causings by agents of the bodily result-events of their actions to be that they present the able-bodied agent as alienated from their bodily movements, rather than that they present bodily actions as internal to the agent's body and imperceptible from the outside.

¹⁰⁶ For more from Hornsby by way of a response to the imperceptibility challenge see Hornsby (1980, pp. 103-4; 1996, ch. 6).

¹⁰⁷ See Steward (2013b, pp. 623-6), for argument that her position on which actions (conceived of as processes, rather than events) are causings of bodily movements is compatible with bodily actions being perceptible.

4.2.3 Identity of Basic Bodily Actions with their Bodily Result Events

But what then *is* the relationship between a bodily action and its bodily result-event, if the bodily action is neither a cause nor a causing by the agent of its bodily result-event(s)? Well, in order for a bodily action to be a *basic* bodily action, its bodily result-event must be identifiable with the bodily action. If the bodily action-event and its bodily result-event are instead distinct, then it would be possible for there to be a more DT basic action description of the bodily action than its description as a bodily action. So, in order for an account of action to avoid presenting able-bodied agents as alienated from their bodily movements, the account must be compatible with there being some bodily actions that are identifiable with their bodily result-events. When an agent raises their arm “just like that”, their arm-raising action-event is identifiable with the event of their arm’s rising, for example. Any account of action that conflicts with this faces the bodily-alienation objection, as McDowell in fact suggests in the following passage of *Mind and World*:

This withdrawal of agency from nature, at any rate from the ordinary nature in which the movement of our bodies occur, strains our hold on the idea that the natural powers that are actualised in the movements of our bodies are powers that belong to us as agents. ... [O]ur bodies with the powers whose seat they are — ... their actualisations are not doings of ours but at best effects of such doings — take on the aspect of alien objects. It comes to seem that what we do, even in those actions that we think of as bodily, is at best to direct our wills, as it were from a distance, at changes of state in those alien objects. And this is surely not a satisfactory picture of our active relation to our bodies.

(McDowell 1994, p. 91).

We must, in order to preserve a satisfactory picture of our active relation to our bodies, suppose that there are basic bodily actions that are identifiable with their bodily result-events. To suppose otherwise, along with those who take all bodily actions to be causings of their bodily result-events, is take up an unsatisfactory picture of us as related to our bodies in the same way that we are to other, “alien”, objects.

Some action-theorists, such as Hornsby (1997, 2008) and Steward (2000), have, however, balked at the idea that there are bodily actions that are identifiable with changes in the agent's body. The basis for balking here would seem to be the thought that a change in an agent's body, such as their arm rising, is something that might take place without an agent acting: changing their body. It seems to be thought that a change in an agent's body is then an essentially *passive* event. A change in an agent's body is, to use a term common to discussion of the disappearance of the agent problem, a "mere happening", in a series of "mere happenings" (see Hornsby 2008). In that case, there could not be an *active* change in an agent's body, which is what an action identifiable with a change in an agent's body would have to be. The objection is, then, that one cannot be said to have captured the "activeness" of bodily action, if one supposes that bodily actions are identifiable with change in bodies.

This objection can, in fact, be understood as an alternative form of the "disappearance of the agent" objection, which is put to reductive event/state-causal theories of action (and which was discussed here in Chapter 1). And indeed it originates with a discussion of action by Nagel, in which he voices concern over reconciling agency with any "objective" standpoint.

[*M*y *doing* of an act — or the doing of an act by someone else — seems to disappear when we think of the world objectively. There seems no room for agency in a world of neural impulses, chemical reactions, and bone and muscle movements. Even if we add sensations, perceptions, and feelings we don't get action, or doing — there is only what happens.

(Nagel 1986, p. 111).

Another way of putting the concern is in terms adopted by Hornsby (1997), who suggests that actions are not identifiable from an *impersonal* point of view.¹⁰⁸ That is, according to Hornsby (1997), the events that are actions cannot be described or singled out in purely impersonal terms: terms that do not include reference to

¹⁰⁸ Steward (2000) also endorses this suggestion.

agents. If, however, bodily actions can be described as changes in bodies — we need not mention that those bodies are bodies of agents — then bodily actions are identifiable from the impersonal point of view.

But we can, and should, question the concern over actions being identifiable from the impersonal point of view. The concern seems to derive from the thought that an event that is identifiable from the impersonal point of view is one which could have occurred without the presence of agents, since Hornsby (1996) is keen to emphasise that the events that are actions can only occur in world with conscious agents:

The idea that actions are ‘components of the flux of events of the world of which the agent is a part’ combines with the idea that the flux of events in nature constitutes how things objectively are to make it seem that an impersonal view of actions is not only possible but appropriate. But we need to consider carefully this thought that persons and their actions are part of nature. It seems right when we point out that nothing supernatural needed to happen for human beings to evolve, and that it is a natural fact about people that, for instance, they have the abilities they do, and thus a natural fact that there are actions. Such considerations ensure that a naturalistic view of ourselves is in order, and indeed that the personal point of view is itself a naturalistic one. But they do not help to place our actions into a world of ‘nature’ if a world ‘of nature’ is to be thought of as constituted independent of the conscious beings that occupy it.

(Hornsby 1996, pp. 148-9).

The reasoning from the identifiability of events from the impersonal point of view to the conclusion that those events could occur without the presence of agent, is analogous to the reasoning from the fact that a change in an agent’s body might occur without the agent having changed their body to the conclusion that a change in an agent’s body is essentially passive. In both cases the reasoning is faulty: the conclusions do not follow from their respective premises. A bodily action may be identifiable as a change in a body and yet it not be possible for that particular bodily change-event to have occurred without being a bodily action.

That bodily actions are identifiable as changes in bodies, and yet are essentially bodily actions has been argued by Haddock (2005, 2010) who calls the view a

form of disjunctivism with regard to bodily movements: there are movements of the body that are bodily actions, and essentially so, while there are movements of the body that are *mere* movements.¹⁰⁹ As Haddock suggests, on this form of disjunctivism, the event-kinds: bodily movement actions and mere bodily movements, are conceived of as determinates of the more determinable event-kind: bodily movement. All bodily movements are either bodily movement actions or mere bodily movements, and none are both. Hornsby (1997) herself, in fact, adopts a form of disjunctivism with regards to bodily movements, albeit a distinct form. Although she does not take any movements of the body to be bodily actions, she does take those that are results of bodily actions to differ intrinsically from those those that are not results of bodily actions. Yet, if we are prepared to permit a disjunctive conception of bodily movements however, given the argument for the identification of bodily actions with changes in the agent's body, we ought to adopt the Haddockian disjunctivist position, rather than the Hornsbian alternative.¹¹⁰

There is, perhaps, a further worry for the view on which some actions are identified with their bodily result-events, which ought to be addressed however. The worry is that the fact that one has acted ought to *explain* why the results of one's actions have occurred. But, in that case, the view that some actions are identifiable with their bodily result-events implies that the occurrence of an action explains the occurrence of an event that is identifiable with itself. This might initially strike one as an inappropriate implication. I do not think that there is anything inappropriate about this at all, however. It is plausibly very common that an occurrence of an event under some description explains its occurrence under another description. The occurrence of John's becoming single explains the occurrence of the numerically identical event of John's becoming a

¹⁰⁹ Ruben (2003, pp. 174-181) argues for a slightly different form of disjunctivism with regards to bodily movements.

¹¹⁰ Hornsby later does seem to opt for the Haddockian disjunctivist position, when she maintains that an agent's action of raising her arm may be identified with the event of her arm rising (see Hornsby 2011, p. 114; 2012, p. 235).

bachelor, for example. We would explain the fact that John has become a bachelor in terms of his becoming single, in the same way that we would explain John's arm going up in terms of his raising it.¹¹¹ Indeed, plausibly, whenever the occurrence of an event involves an F, and to be F is to be G (being G explains one's being F), the occurrence of such an event explains the occurrence of the numerically identical event involving a G.¹¹²

We can then, and should, hold on to the view that basic bodily actions are identifiable with their bodily result-events. These actions cannot then be understood as causing of their bodily result-events.

4.2.4 Basic Bodily Actions and their Bodily Result-States

There are, however, agent-causal theories of action on which bodily actions are not causings of bodily result-events, but are instead causings of bodily result-*states*. Stout (2010) and Hornsby (2011, 2012) express support for such theories, while Coope (2007) has argued that this was Aristotle's theory of bodily action. For Stout, a bodily action is an agent's causing of the series of bodily result-states that occur through the course of a bodily action:

[M]y raising my arm ... is the realization of a potentiality for the arm to be in a series of states characteristic of arm rising ... In raising my arm and realising that potentiality I am causing my arm to be in that characteristic series of states.

(Stout 2010, pp. 112-3).

Whereas, for Hornsby and Coope's Aristotle, a bodily action is an agent's causing of at least the action's bodily end result-state. Hornsby, for example, asserts that "a person who is raising her arm is causing what she has caused when she stops

¹¹¹ Haddock suggests this account of the relationship between basic bodily action and its bodily result-events.

¹¹² See Dorr (2016) for discussion of the relation between being F and being G when to be F is to be G.

raising it, namely her arm's being up" (2011, p. 114).¹¹³ And similarly, Coope claims that "[o]n [Aristotle's] view, my action of raising my arm ... is a causing of my arm's being up (not of my arm's going up)" (2007, p. 112).

All three of these theorists in fact maintain that a bodily action-event can be identified with its bodily result-event, and yet still be a causing by the agent of the action's bodily result state(s). Indeed, the full version of the above quote from Coope reads as follows: "On [Aristotle's] view, my action of raising my arm is the same change as my arm's going up; but my action is a causing of my arm's being up (not of my arm's going up)" (ibid.; see also Stout 2010, pp. 111-2; Hornsby 2012, p. 235). If this is indeed a coherent position, then it would seem that the problem of bodily alienation is avoided, while it is still maintained that a bodily action is a causing by the agent of some bodily result. I do not believe that this is a coherent position however, as I will argue here.

First, consider that an event of change is a change from one state of affairs (property-instance) to another (a distinct property being instanced). In that case, it is hard to conceive of how some entity might cause some new state of affairs without causing a change to that state of affairs from a prior distinct state of affairs that had been in place. If we are to cite some entity, say me, as causally responsible for some new state of affairs, say my arm's being up, we surely also then implicate that entity, me, as also causally responsible for a change to that new state of affairs: my arm's *going* up. If my arm was previously down, and then was up, then it could not have become up without having *gone up*. So, in causing one's arm to be up, when it had been down, one brings about a state of affairs that requires there to be a change to that state of affairs.

¹¹³ It would seem, from other claims by Hornsby, such as that "her arm's going up is what she is causing at any moment at which she is raising it" (2012, p. 235) and her characterisation of process (2012, see especially n. 10, 17), that Hornsby also takes the agent of bodily action to cause some bodily process, such as some process of their arm going up.

Are matters different if one allows the causing of some state of affairs to be identified with the change to that state of affairs? As has been indicated already, a causing of some effect cannot be identified with that effect, and so this pushes us to the conclusion that insofar as the causing of some state of affairs is identifiable with the change to that state of affairs, it cannot also be a causing of that change. But might there also be a distinct event which is the causing of that change? If that is so, then it is hard to see why the causing of some state of affairs by an agent might amount to an action, while the agent's causing's of the change to that state of affairs does not amount to an action. Then again, clearly if the causing of the change also amounts to an action then, the view under consideration has collapsed into one where when I raise my arm there is an action of my causing my arm's going up as well as an action of my causing my arm's being up. Moreover the action of my causing my arm's going up cannot be identified with the event of my arm's going up, so again we are faced with the problem of bodily alienation.¹¹⁴

It should be noted that it is the impossibility of an entity causing some state of affairs without causing the change to that state of affairs that is the key problem with the proposed view. No problem is generated by the fact that if an action-event is a causing by an agent of the event's own end-state, then there is pressure to classify the action-event as itself incorporating a cause of its own end-state, and to deny that it incorporates a cause of its own end-state. This pressure derives from the fact that as indicated earlier, an action that is describable as a causing of something by the agent either is, or incorporates, an event that is a cause of that which it is a causing of. And since the end-state of an event is a limit part of the event, it is rather plausible that the part of the event that amounts to the event *minus* this end-state part causes the end-state, rather than that the whole event causes its own end-state. This causal relationship is a rather plausible one, and one

¹¹⁴ On the Aristotelian conception of change, there is in fact an additional source of the problem of bodily alienation: the agent of a change is a distinct object from the patient of change, such that the change in a patient does not also amount to a change in the agent (see Coope 2007). What is more, as Coope highlights (2007, pp. 131-2), for Aristotle an agent's action is *in all cases* identifiable with its result-event, and so he may be guilty of treating the pilot's relationship to their ship as too much like the able-bodied agent's relationship to their body.

for which there is no obvious opposite pressure to deny. Perhaps here, then, we see an exception to the rule that if an entity is a cause of some state of affairs then that entity is a cause of a change to that state of affairs: part of an event of change to some state of affairs might cause the end-state of that change without causing a change to that state. But these are murky waters indeed. Nevertheless, consideration of these particular cases does not, prompt denial of the claim that for all other entities, such as *agents*, whenever an entity causes some state of affairs, it causes a change to that state of affairs.

4.3 Causal Pre-Requisites for Actions

Altogether then, I have so far argued that it is not the case that all bodily actions are causings of bodily results, whether bodily events, or bodily states. And since the bodily results of bodily actions are occurrences in the world that are products of the agent's agency, these are occurrences that the agent has agentic responsibility for. An agent's agentic responsibility for the bodily results of their actions cannot be understood then as a matter of the agent causing those results where their causing is their acting. But what has been argued so far remains compatible with the idea that one's agentic responsibility for an occurrence can be analysed disjunctively as a matter of either (a) causing that occurrence, where one's causing of it is one's acting; or (b) the occurrence being identifiable with, or part of, one's causing some further occurrence, where one's causing this is one's acting. Perhaps the bodily results of one's actions can be said to be, in the case of basic bodily action, identifiable with, or part of, one's causing some further occurrence.

I will not oppose this account of bodily results of basic bodily actions. Indeed, I accept that it may be the case that "movement proper to a human body, and therefore to a human being, essentially involves extra-corporeal objects" (Ford 2018, p. 13), so that in moving one's body one necessarily causes changes in extra-corporeal objects: movements of particles around one's body, for example.

Then again, it might be questioned whether the appeal to causation really contributes to an *explanation* of why an agent is agentively responsible for the bodily results of their basic bodily actions: it is surely not because the movement of one's body causes further occurrences that one has agentive responsibility for the bodily movement. What I focus on here, is pointing out that there may be further results of basic bodily actions which are not either (a) caused by the agent, where their causing is their acting, or (b) identifiable with, or part of, the agent's causing some further occurrence, where their causing is their acting. These further results are the causal pre-requisites for basic bodily action that were discussed previously. The tensing of certain muscles, or activation of a certain part of one's brain, might be causal pre-requisites for an agent's raising their right arm "just like that". These events may then be results of the agent's basic bodily action which is redescribable as the agent's tensing those muscles, or as the agent's activating a certain part of their brain. An agent can be said to be as much agentively responsible for these results, as they are for those results that they cause. These results, however, are neither caused by the agent, where their causing is their acting, nor are they identifiable with, or part of, the agent's causing some further occurrence, where their causing is their acting.

One might perhaps respond to this by concluding that our agent-causal account of agentive responsibility simply needs a further disjunct, so that it should come to the following: for one to be agentially responsible for some occurrence is for either (a) one to cause that occurrence, where one's causing of it is one's acting; (b) the occurrence to be identifiable with, or part of, one's causing some further occurrence, where one's causing this is one's acting; or (c) the occurrence to be a causal pre-requisite for one's causing some further occurrence, where one's causing this is one's acting. However, this simple disjunction conflicts with the fact that we are certainly not agentially responsible for *all* causal pre-requisites for our actions. If I raise my arm, then I could not have done this if I had not physically developed the capacity to raise my arm. The physical development of my capacity to raise my arm would then seem to be a causal pre-requisite for any action of my raising my arm. But this physical development is not something that I am

agentially responsible for. We are only agentially responsible for those causal pre-requisite for action that can be said to have occurred *because* we acted as we did.

The fact that we can be, but are not always, agentially responsible for causal pre-requisites for actions then not only presents a challenge for non-disjunctive agent-causal theories of action; it also presents a challenge for any attempt to provide a disjunctive agent-causal theory of action of the kind indicated above. Moreover, I go on to argue, in Chapter 6, that there are also results of certain actions that are neither causal pre-requisites, nor identifiable with, nor parts of, nor causal effects of actions; nor are the results of those actions caused by the actions' agents.

4.4 Basic Mental Actions

In this section, I argue that not only are there actions that are describable with DT basic action descriptions in terms of bodily self-change, there are also actions that are describable with DT basic action description in terms of *mental* self-change (basic mental actions). Moreover, just as basic bodily actions are identifiable with their bodily result-events, basic mental actions are identifiable with their mental result-events, and are not aptly characterised as causings of those mental result-events. I reason then that DT basic action description of actions by finite embodied agents are always either in terms of mental self-change or bodily self-change. In other words, for finite embodied agents, there are basic actions, all of which are basic mental actions or basic bodily actions, and so all our basic actions are basic *self-change* actions. These basic actions are not characterisable as causings of change in oneself.

That discussion of basic action has focused on the question of basic bodily action, rather than basic mental action, may be a product of the general priority of bodily action in contemporary action-theory literature, or perhaps it is simply taken for granted that if there are basic bodily actions, and there are mental actions, then

there are also basic mental actions.¹¹⁵ And indeed we should accept that there are mental actions — actions with mental result-events — as well as bodily actions, and we should also suppose that at least some of those mental actions are basic mental actions. Mental events that should be acknowledged as mental actions include at least: conscious decidings, judgings, acceptings, attendings to something or other, calculatings, reasonings, tryings, and imaginings.¹¹⁶

Why, though, should we accept that at least some of these mental actions are basic mental actions? Well, just as able-bodied agents are not alienated from the bodily changes that result from their bodily actions, agents are (at least typically) also not alienated from the mental changes that result from their mental actions. Just as we are typically not related to our bodies as pilots are related to their ships, we are also typically not related to our minds as pilots are related to their ships. At least a number of us can imagine certain things — a pink elephant, perhaps — “just like that”. Similarly, we can calculate two plus two “just like that”, try to think of a rhyme for ‘Sydney’ “just like that”, and decide to go for a walk “just like that”. In these cases, it is not the case that we mentally act by doing something something determinationally more basic: something with a result that causes or non-causally determines the mental event-result of our mental action. These are mental actions that we can “just do”. There are, then, basic mental actions as well as basic bodily actions.

And, just as basic bodily actions are identifiable with their bodily result-events, basic mental actions are identifiable with their mental result-events. Again, the argument here parallels the argument for the identification of basic bodily actions with their bodily result-events. If the mental action-event and its mental result-event were distinct, then it would be possible for there to be a more DT basic action description of the mental action than its description as a mental action. So,

¹¹⁵ The existence of basic mental actions is assumed by Ruben (2003, p. 147), for example.

¹¹⁶ For defence of the existence of mental actions, including those of types listed here, see Peacocke (2006).

if we accept that there are basic mental actions, then we must accept that basic mental actions are identifiable with their mental result-events.

Moreover, just as basic bodily actions cannot be construed as causings of their bodily result-events or result-states, basic mental actions cannot be construed as causing of their mental result-events or result-states. A causing of a mental event has, as a result, an event that is a cause of the mental event. Consequently, 'causing of a mental event' is a DT more basic action description of an action than any purely mental action description. And a causing of mental state cannot be a basic mental action identifiable with the mental event that is a change to that mental state, for the same reason that a causing of a bodily state cannot be a basic bodily action identifiable with the bodily state that is a change to that bodily state.

For finite embodied agents such as ourselves, I suggest that all basic actions are either basic mental actions or basic bodily actions. Everything that we finite embodied agents do, we do by means of changing our minds, or by changing our bodies. It is on the basis of the distinction between the manner in which we can change our minds and bodies on the one hand, and other objects on the other, that the disanalogy of the agent's relationship with their mind and body, and the pilot's relationship with their ship, has application. We are not alienated from changes in our minds and bodies in the way that we *are* from changes in other objects. While divine beings might be able to change features of the world without doing so by changing their minds or bodies (insofar as they have bodies to change at all), this is not the way of us finite embodied agents.¹¹⁷ We must start with our mental and bodily capacities for change, and any further change that we hope to achieve, we must learn to achieve by means of exercising our mental and bodily capacities for change. And since both mental and bodily actions are actions of the agent changing themselves — either mentally or bodily — all basic action actions are basic *self-change* actions. Everything that we finite

¹¹⁷ Lavin (2013, n. 2) discusses the matter of divine agency in relation to basic action.

embodied agents do, we do by means of changing ourselves, either mentally or bodily. This corresponds with the intuition that the only things we can “just do” are changes to ourselves. And those things that we can just do are not aptly characterised as causings of changes in ourselves.

4.5 The Bipartite Division of Action Descriptions

Altogether then, in this chapter I have argued that actions are events that are always describable with a DT basic action description in terms of self-change. And those actions that are describable with DT basic action description in terms of self-change are identifiable with their self-change result-events.

It would seem, then, that any action that is describable with some non-basic action description, ϕ -ing, has result-events that the ϕ -ing action is not identifiable with. These result-events might instead be causal pre-requisites of the ϕ -ing action, or consequences of it, but they are not identifiable with the action since to suppose otherwise would be to go against the Davidsonian conception of action-event-individuation that I defended in Chapter 3. On this conception of action-event-individuation, if an agent ϕ s by ψ -ing, there is a single action-event that can be described both as their ϕ -ing and as their ψ -ing. In that case any action of ϕ -ing where the agent ϕ -s by changing themselves is describable as a changing of themselves. And if the action of changing themselves is identifiable with a change in the agent, it cannot also be identified with any distinct result-event(s) implied by the non-basic description of the action as a ϕ -ing.

This produces a picture on which there is a bipartite division of action descriptions: between those in terms of self-change that imply result-events with which the described action is identifiable, and those that imply result-events distinct from the described action. This sort of division has been opposed by

Hornsby (2011) and Ford (2018), however. Moreover, the division is in conflict with Ford's construal of Anscombe's well-known assertion that "I *do* what *happens*" (2000, p. 52). I will not here address Hornsby's basis for opposing this bipartite division of action descriptions. That is better placed in the subsequent chapter, where I address the causal interpretation of action-verbs that motivates agent-causal theories of action as well as Hornsby's opposition to this division. But I will here address Ford's opposition, and then present a case for a construal of Anscombe's assertion that is not in conflict with the bipartite division of action descriptions that I have put forward.

Ford (2018) maintains, in effect, *contra* my proposal, that *every* event that is a result of an intentional action can be identified with the action of which it is a result. So, "[w]hen in fact I do move a matchbox, *its* moving is *my* doing" (Ford 2018, p. 10). Ford maintains that it is unwarranted, and *ad hoc*, to hold that our actions stand in a different relationship to their result-events within the bounds of our bodies, from the relationship that they stand in to their result-events beyond those bounds.¹¹⁸ Ford maintains that the distinction is particularly unwarranted and *ad hoc* since all our movements involve interaction with extra-corporeal objects, and interaction with extra-corporeal objects is prior, in our practical thought, to bodily movement (see especially pp. 10-14).¹¹⁹ Moreover, we are similarly fallible with regards to the success of our bodily actions as we are with regards to the success of our extra-corporal actions: I can be wrong in thinking that I have succeeded in raising my arm, if I suffer a sudden paralysis, just as I can be wrong in thinking that I have succeeded in writing a sentence on a piece of paper, if the ink runs out mid-sentence and I am not watching what I am doing.

¹¹⁸ This proposal is also endorsed by Small (2016, pp. 193-5). But it does seem to stand in tension with Ford's earlier proposal that "[i]f a human agent is embodied, she does not stand to her body as other. ... So her body is not a patient in relation to which she is an agent: [usually,] she does not transact with it, as she might with an external object" (2014, p. 37).

¹¹⁹ This is also suggested earlier by Ford (2013).

However, I contend that Ford's points about the significance of interaction with extra-corporeal objects and the similarities between extra-corporeal action and bodily action are not enough to show that the distinction between the action of self-change and extra-corporeal actions that I have argued for to be unwarranted and *ad hoc*. All of Ford's claims regarding the significance of interaction with extra-corporeal objects and the similarities between extra-corporeal action and bodily action can be accommodated while still allowing for basic bodily and mental actions that are identifiable with their result-events, and denying that any actions are identifiable with their extra-corporeal result-events. And what warrants the distinction between the action of self-change and extra-corporeal action is the argument that I have offered through the course of the earlier sections in this chapter, which Ford does not address.¹²⁰ Ford does not offer us then good reason to suppose that, *contra* my proposal, *every* event that is a result of an intentional action can be identified with the action of which it is a result.

Elsewhere, Ford (2014) suggests that the identification of result-events with the intentional actions that they are results of “accords with a striking feature of our pre-theoretical thought about action”.¹²¹ This feature of our pre-theoretical thought is reflected in the fact that often, the question of what someone did is answered by the statement that the person interacted with some object distinct from themselves. Moreover, it is claimed that in these statements:

we find no distinction between what is done and what happens. A simple transactional sentence, like “Isabelle turned the doorknob,” mentions two individuals (Isabelle and the doorknob), but uses only a single verb to say what has transpired—as though it were a single thing that had gone on between them, a single adventure that was, at once, what she did and what happened to it: a turning ‘of’ it ‘by’ her. In the ordinary transitive descriptions under which we act, and under which we see others as acting, there is no suggestion of anything but a simple seamless episode in the history of the world.

(Ford 2014, p. 17)

¹²⁰ Similarly, Small (2016) does not address the argument that I put forward in favour of the distinction between the action of self-change and extra-corporeal action.

¹²¹ Ford (2018, pp. 13-5) suggests that not only is this Anscombe's position, but it is also Aristotle's position, citing *Categories*, 1a24 ff, and *Metaphysics* 1020b26 ff (see Aristotle 1984).

Does Ford here provide good reason to suppose that *every* event that is a result of an intentional action can be identified with the action of which it is a result? He does not, since the fact that we use transactional sentences, with “only a single verb to say what has transpired” does not itself suggest that we pre-theoretically identify result-events with the intentional actions that they are results of. It may well reflect only the fact that we have a straightforward means of expressing the fact that there are some events that agents are responsible for.

Ford (2014, 2018), however, maintains that Anscombe expresses support for the view that *every* event that is a result of an intentional action can be identified with the action of which it is a result, when she asserts that “I *do* what *happens*”.¹²² Ford takes the “what happens” here is taken to pick out all the result-events of our intentional actions. He claims that “[i]f it is read literally, the formula appears to state that what the agent does in acting on a patient *is* what the patient suffers, this being “what happens.” Thus, it appears to assert the identity of the agent’s action and the patient’s passion.” (2014, p. 16). But, I do not think that this captures what Anscombe is getting at when she asserts that “I *do* what *happens*”. I would like to put forward an alternative construal of this statement.

I think it is important, when seeking to interpret this statement, as with others made by Anscombe, by paying close heed to the context in which they are made. In the case of the statement in question, the context is a section (§29) of *Intention* which begins with the following questions: “What can opening the window be except making such-and-such movements with such-and-such a result? And in that case what can knowing one is opening the window be except knowing that that is taking place?” (2000, p. 51). I suggest that we should construe “I *do* what *happens*” as an answer to the first, given along with an account of how this could be so, while knowing one is opening a window is not knowing that one is making such-and-such movements with such-and-such a result. For that one is opening a

¹²² Again, this is endorsed by Small (2016, p. 193).

window can be said to be known without observation, while that such-and-such a result is taking place is known only with observation. And Anscombe's fleshing out of the claim "I *do* what *happens*" offers the beginning of an explanation of how this might be compatible with the above epistemological claims: "That is to say, when the description of what happens is the very thing which I should have said I was doing, then there is not distinction between my doing and the thing's happening." (pp. 52-3). In other words, when one successfully opens a window, then one's opening that window is identical with making such-and-such movements with such-and-such a result, i.e. with the result that the window opens. One's opening the window may then be identical with one's making such-and-such movements, rather than the window's opening: the result of those movements.

But, since one might be opening a window, without ever succeeding, one might be opening a window without there ever being the result that the window is opening. In that case, that one has non-observational knowledge of the fact that one is opening a window, but only observational knowledge of the fact that the window is opening, is compatible with Anscombe's assertion that "I *do* what *happens*", understood as asserting that when one successfully opens a window, then one's opening that window is identical with making such-and-such movements with such-and-such a result, i.e. with the result that the window opens.

In fact, it would seem to be rather odd to construe Anscombe's assertion that "I *do* what *happens*" in the way that Ford does, since, as is well known, Anscombe also asserts the following of a man who intentionally moves his arm, and, in so doing, operates the pump, replenishes the water-supply, and poisons the inhabitants:

[M]oving his arm up and down with his fingers round the pump handle *is*, in these circumstances, operating the pump; and, in these circumstances, it *is* replenishing the hour water-supply; and, in these circumstances, it *is* poisoning the household.

(2000, p. 46)

And it is made clear that the 'is' here is the 'is' of identity between particular action-events. But the identity between these particular action-events cannot hold if *every* event that is a result of an intentional action can be identified with the action of which it is a result. There cannot be a single action-event that is identified with each of: the arm-movement, the pump-movement, the water-replenishment, and the household's becoming poisoned.

We should, as I have argued, agree with Anscombe's proposal for the identity of action-events here. And we should oppose the view that *every* event that is a result of an intentional action can be identified with the action of which it is a result. Instead, we should hold that only those bodily or mental events that are results of our intentional actions, and implied by their DT basic action descriptions, are identifiable with the actions of which they are results. As such, these actions have various results that they cannot be said to be causings of: the result-events with which they are identified, and their end-states, and any causal pre-requisite result-events. This suggests that we cannot understand agentive responsibility in terms of causing where one's causing is one's acting. I will continue to argue for this conclusion, by arguing in Chapter 6 that there are result-events of actions that are neither identifiable with the agent's action nor causally related to the agent at all. First, however, I argue in Chapter 5 that agent-causal theories of action are undermotivated.

5. Transitive Action Verbs

It would seem to be a widely accepted starting point in action-theory that a great many of the transitive verbs that we use to describe action have causal meanings, reflecting some essentially causal aspect of action. It is also increasingly commonly suggested that the purported essentially causal aspect of action can only be accounted for by a theory of action as the agent's causing the results of their action, where the agent's causing is not an event that causes those results.¹²³ While the suggestion is often made without much defence, Hornsby (2011) offers two arguments for it. Both arguments start with the causal interpretation of transitive action verbs, and conclude that action involves the agent causing result-states, where no action-event of the agent causes those result-states, or the result-events that end with those result-states.

In this chapter, I address these two arguments. I first present the widespread causal interpretation of transitive action verbs, and Hornsby's (2011) particular causal interpretation (§5.1). I then present Hornsby's (2011) two arguments. The first of these focuses on the case of basic bodily movement action (§5.2). The second of these focuses on the case of what Hornsby (2011) calls *non-mediate action* (§5.3). I then develop my response to these two arguments. First, I argue that insofar as causality is implied in the case of extra-corporeal non-mediate action, this can be accommodated in terms of causation by an action-event (§5.4). Second, I argue against the causal interpretation of transitive action verbs, presenting certain uses of transitive action verbs that plausibly do not have causal meanings (§5.5). Finally, I offer an alternative interpretation of transitive action verbs (§5.6).

¹²³ This suggestion is made by Alvarez and Hyman (1998), Hyman (2015), Hornsby (2011, 2012), and Steward (2012a), with an appeal to the causal interpretation of transitive action verbs. Others, such as Nida-Rümelin (2007), Stout (2010), Mayr (2011) and Brent (2017), have suggested that there is such an essentially causal aspect of action, but they do not explicitly appeal to out transitive action verbs.

5.1 The Causal Interpretation of Transitive Action Verbs

5.1.1 Patientive Ambitransitives

A number of the verbs that we use to describe actions are not only transitive verbs, but are transitive forms of *patientive ambitransitives*: transitive forms of verbs that also have *intransitive* forms, where the use of the transitive form licenses an inference to a proposition expressed with the intransitive form.¹²⁴ Examples include ‘move’, ‘change’, ‘wiggle’, ‘break’, ‘sink’, ‘open’, ‘close’, ‘melt’, ‘burn’, ‘sink’, ‘lower’, and ‘raise’. A number of these patientive ambitransitives, such as ‘move’ and ‘change’, have identical transitive and intransitive forms, and so in what follows I will adopt Hornsby’s (2011) convention of using the subscripts ‘_[trans]’ and ‘_[intrans]’ to disambiguate the transitive and intransitive forms.¹²⁵ To put the relationship between the transitive and intransitive forms of patientive ambitransitives more precisely, these are verbs that conform to the following conditions.¹²⁶

¹²⁴ Patientive ambitransitives are generally labelled as ‘causatives’ by those appealing to them in defence of an agent-causal account of action. This is in keeping with many linguists (see e.g. Levin 1993; Schäfer 2009), but it is clearly a loaded term that strongly suggests that the verbs labelled as causatives have causal meanings. And in fact the idea that these verbs express *causation*, as it is commonly understood, is not really the matter of interest in linguists’ discussions of them. Indeed, it has been commented that the concept ‘cause’ used in the linguist’s analysis of so-called causatives need not be thought of as the usual concept of causation (see Hall 1965, p. 28; Dowty 1979, p. 99; Parsons 1990, pp. 112-3). As I will later indicate, that which is a real matter of interest to these linguists can be accommodated without supposing that these verbs have causal meanings. And since I argue here against the view that these verbs unambiguously have causal meanings, it does not seem appropriate to use the loaded label ‘causative’. The more neutral term, ‘patientive ambitransitive’, is also used by linguists, e.g. Mithun (2000).

¹²⁵ Another popular convention for disambiguation of these forms, and one used earlier by Hornsby (1980), is to use subscripts ‘_T’ and ‘_I’.

¹²⁶ Patientive ambitransitives are to be contrasted with *agentive* ambitransitives: verbs that also take both the transitive and intransitive form, but where one can instead only infer from a proposition of the form ‘*a* $\Phi_{[trans]-s}$ *o*’, the proposition that ‘*a* $\Phi_{[intrans]-s}$ ’ (see Mithun 2000, pp. 87-8). For example, one can only infer from the proposition ‘Ann eats cake’ that Ann eats.

PATIENTIVE AMBITRANSITIVES:

Present Simple: $a \phi_{[\text{trans}]-\text{S}} o$ ONLY IF $o \phi_{[\text{intrans}]-\text{S}}$.

Past Simple: $a \phi_{[\text{trans}]-\text{d}} o$ ONLY IF $o \phi_{[\text{intrans}]-\text{d}}$.

Past Perfect: a has $\phi_{[\text{trans}]-\text{d}} o$ ONLY IF o has $\phi_{[\text{intrans}]-\text{d}}$.

So, one can infer from the present simple proposition ‘Ann moves_[trans] her arm’ that Ann’s arm moves_[intrans]. Similarly, with the past simple tense, one can infer from the proposition ‘Ann moved_[trans] her arm’ that Ann’s arm moved_[intrans]. And, with the past perfect tense, one can infer from the proposition ‘Ann has moved_[trans] her arm’ that Ann’s arm has moved_[intrans].

It is widely held that the best explanation of the above conditions is that the transitive forms of patientive ambitransitives have causal meanings, expressing the causation of some occurrence characterisable with the intransitive form (e.g. Levin 1993; Schäfer 2009). In line with this, Hornsby (2011, p. 113) puts forward that as well as conforming to the above three conditions, patientive ambitransitives conform to the following two causal principles, cast both in the present progressive tense and the past perfect tense:

(**T_[present progressive]**) a is $\phi_{[\text{trans}]-\text{ing}} o$ ONLY IF a is causing o ’s $\phi_{[\text{intrans}]-\text{ing}}$.
(ibid., p. 115)

(**T_[past perfect]**) a has $\phi_{[\text{trans}]-\text{d}} o$ ONLY IF a has caused o ’s $\phi_{[\text{intrans}]-\text{ing}}$.
(ibid.)¹²⁷

To illustrate these two principles, the first, (**T_[present progressive]**), implies that if Ann is moving_[trans] her arm, then Ann is causing her arm’s moving_[intrans]. The second

¹²⁷ Hornsby does not label the second of these two principles, so the label ‘(T_[past perfect])’ is my own. Moreover, Hornsby’s (2011) label for what I label ‘(T_[present progressive])’ is simply ‘(T)’, on account of her lack of labels for the other variants.

principle, ($\mathbf{T}_{[\text{past perfect}]}$), on the other hand, implies that if Ann has moved_[trans] her arm then Ann has caused her arm's moving_[intrans]. But, if ($\mathbf{T}_{[\text{present progressive}]}$) is correct, then presumably the following additional condition for patientive ambitransitives is correct too:

Present Progressive: a is $\phi_{[\text{trans}]}-\text{ing}$ o ONLY IF o is $\phi_{[\text{intrans}]}-\text{ing}$.

So, if Ann is moving_[trans] her arm, then Ann's arm is moving_[intrans]. Moreover, given the listed conditions for patientive ambitransitives, insofar as one takes the transitive form of patientive ambitransitives to have causal meanings, such that patientive ambitransitives conform to the above two (T) principles, one also takes them to conform to the following two:

($\mathbf{T}_{[\text{present simple}]}$) a $\phi_{[\text{trans}]}-\text{s}$ o ONLY IF a causes o 's $\phi_{[\text{intrans}]}-\text{ing}$.

($\mathbf{T}_{[\text{past simple}]}$) a $\phi_{[\text{trans}]}-\text{d}$ o ONLY IF a caused o 's $\phi_{[\text{intrans}]}-\text{ing}$.

So, if Ann moves_[trans] her arm, then Ann causes her arm's moving_[intrans], and if Ann moved_[trans] her arm, then Ann caused her arm's moving_[intrans].

The general underlying idea here is that if the transitive forms of patientive ambitransitives have these causal meanings, then this would explain why one can infer from the proposition ' a $\phi_{[\text{trans}]}-\text{s}$ o ' (' a $\phi_{[\text{trans}]}-\text{d}$ o '; ' a has $\phi_{[\text{trans}]}-\text{d}$ o '; or ' a is $\phi_{[\text{trans}]}-\text{ing}$ o ') that o $\phi_{[\text{intrans}]}-\text{s}$ (that o $\phi_{[\text{intrans}]}-\text{d}$; o has $\phi_{[\text{intrans}]}-\text{d}$; or that o is $\phi_{[\text{intrans}]}-\text{ing}$). So, if the verb 'moves' in the proposition 'Ann moves_[trans] her arm' has a causal meaning, such that the proposition means 'Ann causes her arm's moving_[intrans]', then this would explain why one can infer from 'Ann moves_[trans] her arm' that Ann's arm moves_[intrans]: if Ann causes her arm's moving_[intrans], then Ann's arm moves_[intrans].

Hornsby (1980, p. 13) once claimed that this sort of explanation of the relationship between the transitive and intransitive forms of patientive ambitransitive verbs (in the present simple, at least) is over three hundred years old, citing Wilkins (1668), and that it had not, to her knowledge, ever been questioned. While the view that all instances of patientive ambitransitive verbs in the transitive form have causal meanings has, at least since, been questioned (see Parsons 1990, pp. 116-7), it is nonetheless a very popular view in linguistics as well as philosophy. Both Hyman (2015, pp. 37-8) and Steward (2012a, pp. 200-1) defend the view that causal meanings of transitive forms offer the best explanation of the relationship between the two forms of patientive ambitransitives, and similarly use this to motivate their accounts of action as causing by the agent.¹²⁸

It should be noted, however, that while Hyman (2015), Steward (2012a), and others, take that which is caused by the agent in action, and which is characterised with the intransitive form of a patientive ambitransitive, to be an event (a Davidsonian event) of change (in intrinsic properties or location) in the object of action, Hornsby does not. For Hornsby, at least when an agent *completes* an action, there is an event that can be described with the intransitive form of a patientive ambitransitive, but this event is not caused by the agent. Instead, this event is to be identified with the agent's action (which the agent does not cause): "a person's raising her arm (when she raises it) is indeed the same as her arm's rising (then)" (Hornsby 2011, p. 114). And Hornsby later asserts the following fuller picture of what she takes to be going on in such a case:

[O]nce the agent's role in her arm's coming to be up is acknowledged, she will be seen as having been engaged in activity; and an event of her raising her arm and an event of her arm's rising can then be seen as alike comprised from a bit of activity — a bit of the type of activity that someone engages in for just so long as she is raising her arm and her arm is going up. The duration of any such bit of activity is the duration of an event which be described equally as 'her raising her arm' or as

¹²⁸ Alvarez and Hyman (1998) assume that patientive ambitransitives have causal meanings without defence (p. 223 n. 9).

'her arm's going up'. There are not two events here, inasmuch as her's going up is what she is causing at any moment at which she is raising it.

(Hornsby 2012, p. 235)

So, it would seem that, for Hornsby, while the agent causes her arm's going up while she raises her arm, this does not amount to the agent causing the event of her arm's rising.¹²⁹ The agent causes an object's changing while she acts, without causing the event of the object's change.

5.1.2 Patientive Telics

There are also a number of transitive verbs used to describe action that are not patientive ambitransitives, and so do not have corresponding intransitive forms. These include the following, listed by Hornsby: "*scrape, push, wet, carry, eat, knock over, keep off, squash, make* (e.g. noises, paper boats), *hurt*" (2011, p. 106).¹³⁰ Hornsby suggests that there are analogous causal principles to the (T) principles which apply to some wider class of transitive verbs. And she is not alone in suggesting that these transitive verbs, as well as the transitive patientive ambitransitives, have causal implications. Steward, for example, asserts that:

Many other transitive verbs [besides patientive ambitransitives] also admit of causal analyses, though of somewhat different sorts. 'Knock', 'push', 'lift', and a range of other verbs occur in combination with objective complements in such a way that the objective complement phrase describes the state of the object that results from the action performed. Thus we have, for example, 'John knocked the book on the floor', 'Sue pushed me downstairs', 'Chloe lifted the bowl onto the table'. These, too, have causative implications, though in these cases what is caused is sometimes a state rather than an event, e.g. 'John knocked the book on the floor' implies 'John caused the book to be (or to fall) on the floor'; 'Sue pushed me downstairs' entails 'Sue caused me to be (or to move) downstairs', etc.

(Steward 2012a, p. 201).

¹²⁹ Given the position presented by Hornsby (2012), it would seem that Hornsby takes the arm's going up, which the agent does cause while raising it, to be some process.

¹³⁰ Hornsby quotes this list from Anscombe (1981, p. 137).

Hornsby, however, puts forward a specific causal principle for present progressive transitive action verbs:

(C_[present progressive]) *a* is Φ -ing *o* [e.g., *a* is carrying *o*, is pushing *o* to location L, . . .] ONLY IF *a* is causing something characteristic of *o*'s being Φ -d [*a* is causing *o*'s being carried, *o*'s being pushed to L, . . .]. (ibid.; square brackets included by author).¹³¹

Moreover, Hornsby suggests that we are more familiar with versions of the principle “saying something about what it is to *do*, or to *have done*, such-and-such” (ibid.), which can be put as follows.

(C_[present simple]) *a* Φ -s *o* [e.g., *a* carries *o*, pushes *o* to location L, . . .] ONLY IF *a* causes something characteristic of *o*'s being Φ -d [*a* causes *o*'s being carried, *o*'s being pushed to L, . . .].

(C_[past perfect]) *a* has Φ -ed *o* [e.g., *a* has carried *o*, has pushed *o* to location L, . . .] ONLY IF *a* has caused something characteristic of *o*'s being Φ -d [*a* has caused *o*'s being carried, *o*'s being pushed to L, . . .].

And, presumably if these principles hold true, so too does the past simple version:

(C_[past simple]) *a* Φ -ed *o* [e.g., *a* carried *o*, pushed *o* to location L, . . .] ONLY IF *a* caused something characteristic of *o*'s being Φ -d [*a* caused *o*'s being carried, *o*'s being pushed to L, . . .].

¹³¹ Similarly to (T_[present progressive]), Hornsby's label for what I label '(C_[present progressive])' is simply '(C)', on account of her lack of labels for the other variants of the principle.

But, now, Hornsby does not spell out what is permitted as “something characteristic of *o*’s being Φ -d” in any case where principle ($C_{[\text{present progressive}]}$) applies. Nor does she state a particular range of transitive verbs to which the principle applies. In fact, Hornsby proposes that “[t]here will be no need here either to define the category of [verbs to which the principle applies] or to attempt any taxonomy of them” (ibid., n. 2). Yet, since Hornsby makes use of principle ($C_{[\text{present progressive}]}$) in order to make the case that action necessarily has a causal aspect, we need to know both when exactly the principle has application, and the content of the principle.

Let us consider first, then, what is most plausibly captured as “something characteristic of *o*’s being Φ -d”. It would seem that Hornsby has in mind that the something characteristic of *o*’s being Φ -d caused by *a* when *a* Φ -s *o*, is a *state* rather than an event. When Hornsby presents an application of ($C_{[\text{present progressive}]}$), to a case of Ann’s carrying a suitcase, Hornsby asserts that: “when Ann *has* carried the suitcase, she has caused a characteristic state of something that been carried, which is to say that the suitcase will be in some new location. But what she has caused is evidently not an event.” (2011, p. 107; emphasis author’s own). Moreover, as I will outline in §3, Hornsby takes the event that is the change in the suitcase’s location, which results from the Ann’s carrying it, to be identifiable with the Ann’s action of carrying the suitcase. Since Ann need not cause her own action of carrying the suitcase, she similarly need not cause the change in the suitcase’s location, if this is identifiable with Ann’s action.¹³²

There is also good reason, I think, to suppose that the kind of state that Hornsby has in mind as the “something characteristic of *o*’s being Φ -d” is an intrinsic or

¹³² It can be noted, however, that if one does suppose that when an agent acts, the agent causes a change in the object of the action, one should also then suppose that the agent causes the end-state of that change, which is a state of the object of the action. Steward, for example, indicates in the quote provided at the outset of this sub-section, that she takes the causation implied by transitive action verbs that are not patientive ambitransitives to include causation of states in objects of action, as well as the changes to those states.

locational state of o , that is, some state of o being at some location, l relative to other objects. Something characteristic of o 's being Φ -d is some new state of o , where this new state is a product of o 's undergoing, in being Φ -d, some kind of *real* change in its intrinsic properties, or location.

First, consider that the state which Ann is said to cause when she carries a suitcase is said to be “a characteristic state of something that been carried, which is to say that the suitcase will be in some new location” (ibid.). So the state that Ann causes in carrying her suitcase is said to be a new locational state of the suitcase, where this new state is a product of the suitcase undergoing, in being carried, a change in its location.

Second, and more importantly, if that which is characteristic of o 's being Φ -d is permitted to be any old state of o , however wildly extrinsic, then principle ($C_{[\text{present progressive}]}$) is too weak to do the work to which Hornsby (2011) puts it. Recall that Hornsby reasons from ($C_{[\text{present progressive}]}$) to the conclusion that there are actions where the agent causes some state that is not caused by an action of the agent's. And if a is Φ -ing o , then there is an action that a is engaged in, and this will inevitably have various causal consequences, including various (perhaps wildly extrinsic) states of o , that a can be said to cause too. As a result, if that which is characteristic of o 's being Φ -d is unrestricted to any state of o that is caused when o is being Φ -d, the application of ($C_{[\text{present progressive}]}$) to a particular case could not, in itself, indicate that there is a state that is caused by the agent that is not also caused by an action of the agent's. Moreover, if there is no restriction to the kind of state that a is said to be causing when Φ -ing, then ($C_{[\text{present progressive}]}$) would be no more informative than the banal principle that whenever we do something, what we do has causal consequences that include wildly extrinsic states of all objects.

However, the restriction of states that a is said to be causing when Φ -ing must go further than the restriction to intrinsic or locational states of the o that is being Φ -d. The relevant intrinsic or locational states of o are said to be “characteristic of o ’s being Φ -d”. And o might acquire a number of states at the same time that it acquires some state that is characteristic of its being Φ -d, where not all of these simultaneously acquired states will be similarly characteristic of this. For example, a suitcase that is being carried to location l might become dirty just when it comes to be newly located at l . But the something’s being dirty is not characteristic of something being carried to location l .

Most plausibly, the intrinsic or locational states of o that are characteristic of o ’s being Φ -d which Hornsby has in mind, are the states of o that are *of the same kind as those that would be results of someone’s successfully Φ -ing o* . If one succeeded in Φ -ing o , then a state of that kind would necessarily obtain. One result-state of someone’s carrying a suitcase to location l is the suitcase being at l , and a suitcase must be (at some time) at l if it has been carried to l . By contrast, being dirty is not a result-state of someone’s carrying a suitcase to location l , and a suitcase need not ever be dirty if it has been carried to l .

This fleshing out of the content of principle ($C_{[\text{present progressive}]}$) also helps to direct our selection of a particular range of transitive verbs to which it applies. For, not all transitive verbs satisfy the following condition:

PATIENTIVE TELICS: If a has Φ -d o , then there is some intrinsic/locational state of o that necessarily obtains/has obtained.

For example, if Ann has photographed her suitcase, then, although ‘photographed’ is transitive here, there is no intrinsic/locational state of her suitcase that necessarily obtains/has obtained. We can call the transitive verbs that

obey the above condition: the *patientive telic* transitive verbs. The *telos* of the action that a patientive telic verb describes, i.e. the state which is necessary for *completion* of that action, is a state in the object of the verb: the patient of the agent, i.e. the object that is acted upon by the agent. Transitive verbs that are not patientive telic include those that express an agent's representing an object, rather than their really changing object itself, such as 'photograph'.

And now, principle (C_[present progressive]), understood in terms of intrinsic and locational action-result-states, and in application to all and only transitive patientive telic verbs is, *prima facie*, attractive, without being obvious. It is at least as attractive as (T_[present progressive]).¹³³ The (C) principles together could be taken to explain the PATIENTIVE TELICS condition, in much the way that the various (T) principles are taken to explain the relationship between the transitive and intransitive forms of patientive ambitransitives.

5.2 The Argument from Bodily Movement

We can now turn to Hornsby's (2011) two arguments for the view that there is a causal aspect of action that can only be accounted for by a theory of action as the agent's causing the results of their action, where the agent's causing is not an event that causes those results. In this section, I address Hornsby's (2011) argument that focuses on the case of bodily movement action. Here, Hornsby appeals to her (T) principles, and reaches the conclusion that there are bodily movement actions that involve causation by the agent of their body's moving_[intrans] which is not caused by the agent's action of moving_[trans] their body.

Hornsby begins by maintaining that if an agent's causing something that happens were always an action-event that causes that something to happen, this would lead to a vicious regress:

¹³³ It is worth noting that it seems to be the case that all patientive ambitransitives are patientive telics.

If one's causing what happens were always an event causally prior to what happens, then in order to cause something to happen, one would need to cause causing-what-happens to happen, and in order to cause *that*, one would need to cause causing-what-happens-to-happen to happen, and so on, regressively.

(Hornsby 2011, p. 112).

In order to avoid the supposed vicious regress then, it is suggested that there must be some cases where one's causing what happens is not an event causally prior to what happens: some cases where one's acting is one's causing something's happening, while one's so acting is not an event that causes that something's happening.

Hornsby then highlights, in line with the proposal here in Chapter 4, that while it is sometimes the case that an action of the agent's causes their body's moving_[intrans] — such as when one's left arm is rigged up to a pulley and rope, and one raises that left arm by pulling on the rope with one's right arm (see Davidson 2004, p. 103) — it is implausible to suppose that this occurs in all cases where an agent moves_[trans] their body (Hornsby 2011, p. 113, n. 11). In cases where one's bodily movement action is a *basic* action — “the usual case, in which an agent moves a part of her body *directly*, as we find ourselves saying” (ibid.) — the agent does not cause their body's moving_[intrans] by performing a prior action that causes it. While Hornsby (1980) did once endorse the view that whenever *a* moves_[trans] their body, there is some action of *a*'s that causes their body's moving_[intrans], she indicates that she has now rejected this view precisely on the basis of the counterintuitive picture of bodily action that it provides (2011, p. 114, n. 13). As I argued here in Chapter 4, following Haddock (2005), Hornsby's (1980) account, and any account where whenever an agent changes_[trans] their body, an action of theirs causes their body's changing_[intrans], is one where able-bodied agents are implausibly alienated from their bodies.

But, given the (T) principles, when an agent moves_[trans] their body, they cause their body's moving_[intrans]. And so it is concluded that in cases of basic bodily movement action, the agent causes their body's moving_[intrans], while no action of

theirs causes their body's moving_[intrans]. Hornsby defends the possibility of such cases by emphasising that “there is no valid transition from “*a* has caused so-and-so” to “the event of *a*'s Φ _[trans]-ing *o* has caused so-and-so”” (2011, p. 113). Moreover, Hornsby claims that to suppose that in cases of basic bodily movement action, where an agent moves_[trans] their body, implying that their body moves_[intrans], the agent does not cause their body's moving_[intrans], is to suppose an implausible and ad hoc exception to the (T) principles (ibid.). Hornsby also points out that insofar as an exception is allowed for the verb ‘move’ in these cases, so too must an exception be allowed for the verbs ‘raise’, ‘lower’, ‘bend’, ‘clench’, ‘close’, and ‘open’, since these are all patientive ambitransitives that can be used to characterise basic bodily action (ibid.).

We see then that if we, like Hornsby (2011), accept the universality of the (T) principles, then in the case of basic bodily movement action, the agent's acting is their causing their body's moving_[intrans], while their action does not cause this. This conclusion is however contrary to that argued for here in Chapter 4, where it was argued that in the case of basic bodily action it cannot be said either that the agent's action causes their body's changing_[intrans], or that the agent's acting is their causing their body's changing_[intrans]. I will return to the question of how to resolve this conflict in §5. First, I outline the other of Hornsby's (2011) two arguments for the view that there is a causal aspect of action that can only be accounted for by a theory of action as the agent's causing the results of their action, where the agent's causing is not an event that causes those results.

5.3 The Argument from Non-Mediate Action

Hornsby (2011) argues that in cases of *non-mediate action* quite generally, where the (C) principles have application, there is causation by the agent in action which is not accompanied by causation by the agent's action. Now, Hornsby characterises cases of non-mediate actions as those “where the event of *o*'s being Φ -d (being carried, or pushed, for example) cannot be pried apart from the event

of *a*'s Φ -ing (carrying or pushing) *o*" (2011, p. 108). What Hornsby seems to mean by this is that these are cases where the action-event of *a*'s Φ -ing *o* is identified with the event of *o*'s being Φ -d: a non-mediate action is identifiable with the event of its object being intrinsically, or locationally, changed. But it is highly contentious that there are any such cases. And it is particularly contentious that there are any such cases where the action description, '*a*'s Φ -ing *o*' is a non-basic one, and *o* is an extra-corporeal object. Yet, many of the examples that Hornsby provides of non-mediate action are precisely cases of interaction with extra-corporeal objects: Ann's carrying a suitcase (p. 107); an agent's squashing a can when the agent treads on it (2011, p. 109); my closing the door by pushing it gradually all the way shut (ibid., p. 112); treading on an ant (ibid., p. 121); printing a document from your computer (ibid., pp. 121-2). We should, I think, characterise non-mediate action less contentiously, as: action where the event of *o*'s being Φ -d is at least *apparently* simultaneous with the action-event of *a*'s Φ -ing *o*.¹³⁴ This would seem to fit with Hornsby's selection of examples of non-mediate action. Moreover, if non-mediate action is identifiable with the event of its object being changed, then these events do, naturally, take place at precisely the same time. But, my characterisation of non-mediate action does not require that it is identified with the event of its object being changed.

Having now clarified the notion of non-mediate action, let us consider the argument for such involving causation by the agent which is the agent's acting, but where the agent's action does not cause that which the agent does. Hornsby puts forward that in non-mediate action, there is a characteristic state of the

¹³⁴ Hornsby notes that "[she finds] that we don't always have firm intuitions about when an event of someone's doing something is/was ongoing, and [she doesn't] try to state any principles that deal with every case", adding then that "[t]he idea of a thing's being done non-mediate is surely vague, and it can remain vague" (2011, p. 121).

And while most of Hornsby's examples of non-mediate action involve the agent being in contact with the object of the action throughout the action, the final example of printing a document clearly does not conform to this. There does not, then, seem to be any contact, or even proximity, restriction for non-mediate action.

object that the agent causes, in conformity with the (C) principles, which is not caused by the agent's action. Hornsby makes her case by means of illustration, with the application of the (C_[present progressive]) principle to the case of Ann carrying her suitcase to some new location (2011, p. 107). Of such a case, Hornsby states that “[w]hen Ann is carrying her suitcase — when she is the process of carrying it, so that her action is occurring — there seems to be no candidate for an event that her action is causing”, and “Ann’s carrying the suitcase *is* the event of its being carried” (ibid.). Instead, “when Ann *has* carried the suitcase, she has caused a characteristic state of something that been carried, which is to say that the suitcase will be in some new location” (ibid., emphasis author’s own).

It is not clear whether (a) Hornsby supposes that no action of Ann’s can be said to cause the event of her suitcase’s being carried *because* these events are taken to occur simultaneously, and simultaneous causation is ruled out, so that it is only subsequently concluded that her action is to be identified with the event of her suitcase’s being carried;¹³⁵ or (b) Hornsby first assumes that Ann’s action is to be identified with the event of her suitcase’s being carried, so that it is on account of *this* that no action of Ann’s can be said to cause the event of her suitcase’s being carried. Either way, however, it is concluded that no action of Ann’s causes the event of her suitcase’s being carried, and her action is instead to be identified with that event.

It will perhaps be wondered, at this stage, what place Hornsby takes the event of Ann’s suitcase’s change of location to have in the goings-on. Well, since Hornsby asserts that “[s]o long as Ann is carrying the suitcase, the only event in which the suitcase participates is its being carried” (ibid.), it would seem that Hornsby takes

¹³⁵ Small endorses this line of reasoning, stating:

[I]f I raise my arm in order to raise the glass I’m holding, it is hard to see how my raising of the glass might be resolved into my raising of my arm (= my arm’s rising) and the glass’s rising, such that the former event is distinct from and the cause of the latter. After all, they are contemporaneous.

(Small 2016, p. 193).

the event of the suitcase changing location — which she does not deny the existence of — is to be identified with the event of the suitcase being carried. And the event of the suitcase being being carried, we have seen, is also taken to be identifiable with Ann's action of carrying the suitcase. So, by means of this example, we are encouraged by Hornsby to conclude that, quite generally, the agent's action-event in non-mediate action does not cause either the event of the object's being changed, or the object's resulting change. Instead, we are presented with a picture on which in non-mediate action, each of these events is identifiable with one another. The events are simply multiply describable, either with a transitive verb in the active, a transitive verb in the passive, or with an intransitive verb.

Hornsby does not, however, then make explicit why we should not suppose that in non-mediate action the action-event does not cause the characteristic state of the object's being acted upon in that way. The principle focus is on showing how the causality implied by ($C_{[present\ progressive]}$) in non-mediate action cannot simply be a matter of causation by an action-event of a further event. Yet, insofar as one takes the action-event to be identifiable with the event of the object's being changed and with the event of the object changing, one should rule out that the action-event causes any characteristic state of the object's being acted upon in that way. Such a state is, after all, either the end-state of the event of the object's being changed, with which the action-event is identified, or it is some midway-state of that event. Either way, the characteristic state can be understood to be *part* of the action-event itself. As such, the action-event cannot be a cause of that characteristic state. Consequently, that which the agent causes in acting is not similarly caused by the agent's action.

5.4 The Causality in Non-Mediate Extra-Corporeal Action

In this section, I argue that the apparent simultaneity of an action of a 's ϕ -ing o , the event of o 's being ϕ -d, and the event of o 's changing as a result, does not

prohibit a causal relationship between these events. I argue that in the case of extra-corporeal action, where the object that the agent acts upon is a physical object distinct from the agent, the action of a 's Φ -ing o is not identifiable with the event of o 's being Φ -d. But, the event of o 's being Φ -d is identifiable with the event of o 's changing as a result of a 's Φ -ing o . The action of a 's Φ -ing o then is a cause of the event of o 's being Φ -d, and o 's changing as a result. In this way, *contra* Hornsby, non-mediate extra-corporeal action does not present a causal aspect of action that cannot be accommodated in terms of causation by the action itself.

I will make my case by continuing to use Hornsby's example of Ann carrying a suitcase. With regards to this case, I maintain that Ann's action of carrying a suitcase is a distinct event from the event of the suitcase changing its location, as well as the event of the suitcase being carried. For, I suggest that the event of the suitcase being carried is identifiable with the event of the suitcase changing its location.¹³⁶ This event is not in fact simultaneous with Ann's action, and is caused by that action.

Let us begin by considering why Ann's action of carrying a suitcase is not identifiable with the result-event of the suitcase changing its location. First, recall that I have defended the view that when an agent Ψ s by Φ -ing, the agent's Ψ -ing action is identifiable with their Φ -ing action. And, when an embodied finite agent changes some extra-corporeal object, they do this only by changing themselves. In the case of Ann carrying a suitcase, Ann does this by changing her bodily self. So, Ann's action of carrying a suitcase is identifiable with some bodily action of hers: her reaching down to grasp the suitcase, and then raising her hand, for example. And this bodily action, insofar as it is a basic bodily action, which it may well be, is identifiable with the resulting bodily movement: the movement of

¹³⁶ While I put forward this identity, it is not crucial to the key claim here, which is that Ann's action of carrying a suitcase is a distinct event from the event of the suitcase changing its location, and the former event causes the latter event.

her arm and hand. In that case, Ann's action of carrying a suitcase is also identifiable with this resulting bodily movement, and it cannot be that the action is identifiable with not only this but also the result-event of the suitcase changing its location. The bodily movement and the change in the suitcase's location are spatially distinct. The bodily movement is confined to Ann's body, while the change in the suitcase's location is confined to the suitcase.

And now, since I take the event of the suitcase's being carried to be identifiable with the suitcase's change in location, I deny also that Ann's action of carrying a suitcase is identifiable with the event of the suitcase's being carried. Why identify the event of the suitcase's being carried with the suitcase's change in location though? Well, 'the suitcase's being carried' seems to pick out the event that results from someone carrying it. And given that the suitcase here is the subject of the verb, the event characterised by the passive verb here seems to be most naturally understood as a change in the suitcase, rather than a change in Ann. We can understand 'the suitcase's being carried' as characterising a change in the suitcase in terms of how and why that change comes about: it tells us that there is a change in the suitcase brought about on account of someone carrying it. And the change in the suitcase that results from someone carrying it is a change in its location.

As highlighted in the previous section, identification of the suitcase's being carried and the suitcase's change in location is also something that Hornsby endorses. But Hornsby also takes Ann's action of carrying a suitcase to be identifiable with the event of the suitcase's being carried. Hornsby suggests that "If you focus on the suitcase, you may see it being carried; if you focus on her, you may see her carrying. But there is only one event of carrying to be seen" (Hornsby 2011, p. 108). Yet, it is not at all obvious that we do not perceptually distinguish between the event of someone carrying a suitcase and the event of the suitcase being carried. In fact, insofar as the event of the suitcase being carried is the event of the suitcase changing location, it is very plausible that we do perceptually distinguish between this event and the that of someone carrying the suitcase. Intuitions

regarding our perceptual discrimination here would seem to be guided by our beliefs regarding event-individuation rather than vice versa.

Ann's action of carrying a suitcase should not then be identified with either the event of the suitcase's being carried, or the event of the suitcase changing location. But now, Hornsby would seem to agree with many of the premises in my argument for this conclusion, while disagreeing with the conclusion itself. Hornsby appears to agree with the view that when an agent Ψ s by Φ -ing, the agent's Ψ -ing action is identifiable with their Φ -ing action. At least, she agrees that when an agent engages in non-mediate extra-corporeal action by means of engaging in some bodily action, the agent's extra-corporeal action is identifiable with their bodily action:

A person's using her arms and hands in a certain way may in some circumstances be her pouring poison into someone's ear, in other circumstances her introducing some benign stuff into a filter. A person's moving her fingers in a certain way may in some circumstances be her kneading the dough, in other circumstances her massaging someone's back.

(Hornsby 2011, p. 115).

And as a non-mediate action, Hornsby takes an agent's bodily action to be identifiable with its bodily results: "a person's raising her arm (when she raises it) is indeed the same as her arm's rising (then)" (2011, p. 114). Yet, Hornsby immediately follows this claim with the further claim that "this is not a special case ... because an identity of the sort in question obtains whenever something is done non-mediate" (ibid). And since it is held that "an identity of the sort in question obtains whenever something is done non-mediate", Ann's carrying a suitcase is taken to be identifiable with her suitcase's changing location, as well as with the suitcase's being carried. In that case then, Hornsby is content to identify all of the following events: Ann's action of carrying a suitcase; the suitcase's being carried; the suitcase's change in location; Ann's moving her body; Ann's body being moved; and Ann's body's moving. Hornsby would seem to deny, in that case, that the event of Ann's body's moving is confined to Ann's body, while the

event of the suitcase's change in location is confined to the suitcase. Presumably, Hornsby instead takes the single multiply described event to stretch across from Ann's body to the suitcase, and to any other object that is acting on non-mediate while she carries her suitcase. This provides a rather unattractive individuation of the events involved in this case, however.

Let us now consider the case for a causal relationship between distinct events of Ann's action of carrying her suitcase on the one hand, and the change in the suitcase's location on the other. I will not suggest that we question the assumption that simultaneous event-causation is impossible, or, at least, physically impossible, although this has been questioned.¹³⁷ Instead, I will suggest that these apparently simultaneous events are plausibly not in fact simultaneous, and that the causal relationship between them can be accounted for in the same way that cases of apparently-simultaneous event-causation are standardly accounted for.

Consider Kant's famous case of apparently-simultaneous-event causation in which a lead ball is placed upon a cushion, compressing it and leaving a hollow impression (Kant 1781, A203). This looks like a case of simultaneous event-causation, because it is natural to suppose that while the lead ball's change in location causes the cushion's change in shape, these two events seem to take place through precisely the same stretch of time. Other similar cases include: a locomotive pulling a caboose, where the locomotive and the caboose seem to move simultaneously (Taylor 1966, p. 36), and the movement of a pencil,

¹³⁷ Some have defended the existence of simultaneous event-causation (Taylor 1966), and indeed some have argued that all event-causation is simultaneous event-causation (Mumford and Anjum 2011). But Mellor (1995, pp. 108-9) presents several persuasive reasons for denying the existence of simultaneous causation. Perhaps most significantly, and as is also emphasised by Glynn (2012, pp. 1102-3), the idea of absolute simultaneity is incompatible with current relativistic physics, so simultaneity can only be reference-frame relative. And, if two distinct events are simultaneous relative to some frame, then unless the distinct events have precisely the same spatial location, as well as the same temporal location, the events will be located outside of each other's future light-cones. In that case, to suppose that they might be causally related is to suppose that there might be causal processes that propagate faster than the speed of light.

grasped in a hand that is moving, apparently simultaneously with the pencil (ibid.).¹³⁸

But, as Mellor (1995) points out, that none of the objects in these cases are *perfectly* rigid (and indeed perfectly rigid objects are incompatible with special relativity — insert citation) means that the apparent simultaneity of the events in the listed cases may be merely apparent. And the *appearance* of simultaneity of the events involved, such the lead ball's change in location, and the cushion's change in shape, in Kant's case, is understandable if time and space are dense, or, at least, quantised in imperceptibly small units. The lead ball's change in location and the cushion's change in shape might then fail to *perfectly* overlap in time, with the lead ball's change in location starting and ending earlier than the cushion's change in shape, but the difference might be vanishingly, or at least imperceptibly, small. Indeed, Kant himself even said of his example that “the time between the cause and its immediate effect may be a vanishing quantity” (Kant 1781, A203). Moreover, we might suppose that the event of the ball's total change in location can be said to cause the event of the cushion's total change in shape in virtue of each part of the cushion's total change in shape being caused by some (perhaps imperceptibly) earlier part of the ball's total change in location. This is in line with Lewis' (1986c, pp. 172-175) account of *piecemeal* causation of one temporally extended event by another, but does not require its commitment to a counterfactual account of causation.

We can, then, make sense of the causality in the case of Ann carrying her suitcase in just the same kind of way. We can suppose that the action-event of Ann's carrying her suitcase, which is identifiable with some bodily movement of hers, might begin and end imperceptibly earlier than the event of her suitcase changing location. Ann's bodily movement might be said to cause the total change in the suitcase's location in virtue of each part of the total change in the suitcase's location being caused by some (perhaps imperceptibly) earlier part of Ann's

¹³⁸ The latter of these examples could even be a case of non-mediate extra-corporeal action, where an agent waves a pencil around in their hand.

bodily movement. This does not require that each causal component of Ann's bodily movement corresponds to an action of Ann's moving her body. All that is required is that each change in the suitcase's location is preceded, at least slightly, but perhaps imperceptibly, by some part of Ann's action.

And now the causal interaction with an extra-corporeal object in any non-mediate extra-corporeal action can be accommodated in just the same way. In any case where an agent ϕ -s o , and, in doing so, causes some change in o , then even if the change in o is apparently simultaneous with the agent's action of ϕ -ing o , the simultaneity is *merely* apparent, and the action can be said to cause the change in o .

5.5 Against the The Causal Interpretation of Transitive Action Verbs

In this section I argue against the causal interpretation of transitive action verbs, as embodied by the (T) and (C) principles. I first argue specifically against ($T_{[\text{present progressive}]}$) and ($C_{[\text{present progressive}]}$), and I then briefly identify some difficult cases for all the (T) and (C) principles, which will be the focus of Chapter 7.

5.5.1 Against the Progressive (T) and (C) Principles

I suggest here that there are cases that are appropriately described with a transitive action verb that is both a patientive telic and a patientive ambitransitive, such that the antecedents of both ($T_{[\text{present progressive}]}$) and ($C_{[\text{present progressive}]}$) are satisfied, but where the consequents are not satisfied. As a reminder, these principles go as follows:

($T_{[\text{present progressive}]}$) a is $\phi_{[\text{trans}]}-\text{ing } o$ ONLY IF a is causing o 's $\phi_{[\text{intrans}]}-\text{ing}$.
(*ibid.*, p. 115)

(C_[present progressive]) *a* is Φ -ing *o* [e.g., *a* is carrying *o*, is pushing *o* to location L, . . .] ONLY IF *a* is causing something characteristic of *o*'s being Φ -d [*a* is causing *o*'s being carried, *o*'s being pushed to L, . . .].

Indeed, these are cases where although *a* is Φ -ing *o*, there is not yet any resulting change, or new state, in *o* itself. So, not only do I oppose (T_[present progressive]) and (C_[present progressive]), I also oppose the following present progressive condition for patientive ambitransitives:

a is Φ _[trans]-ing *o* ONLY IF *o* is Φ _[intrans]-ing.

Moreover, I oppose the following two conditions for transitive patientive telics, made explicitly by Ford (2014, p. 24), but clearly assumed by Hornsby:

a is Φ -ing *o* ONLY IF *o* is being Φ -d by *a*.

a is Φ -ing *o* ONLY IF *o* is changing on account of being Φ -d by *a*.¹³⁹

In particular, I suggest that in the early stages of an agent's action of Φ -ing *o*, the agent might not yet be causing any result-change-event in *o*, and is nevertheless appropriately described as Φ -ing *o*, where ' Φ ' might not only be transitive, but also a patientive telic and patientive ambitransitive. The suggestion turns on two key features of descriptions of action in the present progressive, both of which are highlighted by Anscombe (2000).

First, is the feature that was discussed here in Chapter 3, with regard to the so-called imperfective paradox:

¹³⁹ Ford does, however, put these conditions in different terms in his "Pathetic Syllogism".

A man can *be doing* something which he nevertheless does not *do*, if it is some process or enterprise which it takes time to complete and of which therefore, if it is cut short at any time, we may say that he *was doing* it, but *did not do* it.

(Anscombe 2000, p. 39)

Recall that one may, for example, be crossing road, though one never makes it across, so that it will be true that the individual was crossing the road, though not that they did cross it.

Second, is the feature of there being a “common use of the present to describe a future action which is by no means just a later stage in activity which has a name as a single whole” (Anscombe 2000, p. 39). Anscombe provides the examples of “I am seeing my dentist”, and “He is demonstrating in Trafalgar Square”, highlighting that “either might be said when someone is at the moment e.g. travelling in a train” (Anscombe 2000, p. 40). In fact, this a feature that Hornsby herself acknowledges:

[A] person may start or stop acting on an object before or after she makes contact with it. When someone treads on an ant, for instance, her foot is moving before it touches the ant. But we don't distinguish two parts of the treading, according as the foot has already, or has not yet, touched the ant.

(Hornsby, p. 121).

But now, note that given the first highlighted feature of action-descriptions in the present progressive, that it may be true that I am treading on an ant, even if, because of some interruption, my foot never ends up coming into contact with the ant. I may be treading on the ant, and yet never end up having trodden on it. Similarly, I might be seeing my dentist, but never make it to the dentist, and I might be demonstrating in Trafalgar Square, but never make it to London. And, indeed, this seems to be appropriate characterisation of the possibilities. But, this indicates that an agent's acting might well be appropriately described using a transitive verb in the present progressive, which is a patientive telic and patientive ambitransitive, at a moment when it is not true that the agent is causing either an intrinsic or locational change-event, or intrinsic or locational state, in the object of their action. At such a moment, we would seem to have a counterexample to

(T_[present progressive]) and (C_[present progressive]), as well as the additional conditions given for transitive patientive ambitransitives, and patientive telics in general, in the present progressive.

Indeed, while I am treading on an ant, but my foot has not yet come into contact with it, I am not causally interacting with the ant. The ant is not itself changing, being changed, being trodden on, or coming to have a new intrinsic or locational state as a result of my treading on it. And since the ant might not ever end up being trodden on by me, and so might not ever end up changing as a result of my treading on it, I cannot be said to be causing any intrinsic or locational change-event in the ant, or any intrinsic or locational state in it.¹⁴⁰

But consider also the following case, deriving from an example given by McDowell (2011b, pp. 8-9): Cassie is baking a cake, but is interrupted at the early stage of cracking eggs into the butter and sugar, and never manages to return to her baking. I described Cassie's activity using the verb 'bake_[trans]', which is a transitive patientive ambitransitive in the present progressive (see Levin 1993, p. 243). This is appropriate regardless of the fact that Cassie cannot be said to be causing the cake's baking_[intrans], for the cake never bakes_[intrans]. Indeed, there is no cake to bake_[intrans]. All there is is some egg that has been broken into some butter and sugar, and flour that has yet to be added to the mix. One might argue that in fact the cake does in fact exist even at this stage, as a scattered object, scattered across its various ingredients (see Parsons 1989, Szabó 2008). But this is clearly far from intuitive. It may well seem appropriate to say that once all the ingredients have been mixed together and poured into a cake-tin, we then have an

¹⁴⁰ Hornsby (2018) in fact argues against Hyman's (2015) account of action as the causing of a change in its object that it cannot accommodate present-progressive descriptions of action, since one might be acting without there being any change in the object that the agent could be said to be causing. One might wonder why Hornsby does not take this to be a problem for her own proposal too. Then again, perhaps Hornsby does now recognise the problem for her own proposal. Alternatively, it may instead be that, given Hornsby's particular view of events — she seems to hold that an event only exists when it is over (see Hornsby 2013, p. 9) — Hornsby supposes that if an agent is acting, then the object is changing, and so the agent can be said to be causing new states in the patient, even if there is not yet a change in the patient.

unbaked cake, which undergoes a change in the oven, to being a *baked*_[intrans] cake. Indeed, this seems to be the change in the cake that is describable as it baking_[intrans]. But, we are considering a stage considerably earlier than this. And while there is no cake that can be said to be baking_[intrans], or being baked_[trans], there is clearly also no state of the cake that Cassie can be said to be causing.

Returning now to the case of Ann carrying her suitcase, imagine that Ann resolves to show her strength by carrying her suitcase some way along a path, and, with this resolve, she stretches down and reaches with her hand to grasp the handle of the suitcase. At this stage, she has not yet made contact with the suitcase, and yet, in light of her resolve, and the movements that she is making on this basis, it is legitimate to characterise Ann as carrying her suitcase, in much the same way that it is legitimate to say of myself that I am seeing my dentist, when I am merely travelling in a train en route to the dentist. Moreover, if Ann herself were asked “what are you doing?” while she reaches down to grasp the suitcase handle, she might well answer by saying that she is carrying her suitcase. And, it might well be the case that Ann never gets any further in her carrying, such that she is stopped before she manages to grab the suitcase handle at all. In that case, it will not end up being the case that Ann carried her suitcase. In this scenario, while Ann is reaching down to grasp the suitcase handle, it is true that Ann is carrying her suitcase, but it cannot be said that Ann is causing any intrinsic or locational state of the suitcase that is characteristic of its being carried. There is no relevant new intrinsic or locational state of the suitcase for Ann to be causing.

These cases show ($T_{[present\ progressive]}$) and ($C_{[present\ progressive]}$), as well as the additional conditions given for transitive patientive ambitransitives, and patientive telics, in the present progressive, to be false. Yet, since it is particularly the progressive nature of these action verbs that creates the conflict here, a natural reaction would be to simply give these up, citing general peculiarities regarding progressive verbs, but hold on to the simple and perfective versions of the principles. For, we use simple and perfective action verbs to describe actions that are completed, and, at least in the cases that have been considered so far, it seems plausible that the

completed action is conditional on causation by the agent of both a change in the patient, and a new state of the patient that is characteristic of its being so acted upon. For example, it is highly plausible that Ann carried her suitcase to location *l*, only if she caused her suitcase's change in location to *l*, and its being at *l*. Yet, the falsity of (T_[present progressive]) and (C_[present progressive]) should already cast significant doubt on the view that our transitive action verbs reveal a causal aspect of action. For we have seen here that when action is in progress, such that the agent can be said to be *doing* something, the transitive verbs that we use to describe what is going on in no way encourage us to suppose that the agent is causing anything in particular.

5.5.2 Against the Simple and Perfective (T) and (C) Principles

In fact, there are cases that show the simple and perfective versions of the (T) and (C) principles to be false too. These are cases of action that are described using transitive action verbs that are both patientive ambitransitives and patientive telics (and so both (T) and (C) apply), but where the change in, and state of, the object of action, that result from the action, are not caused by the agent. Such changes and states include changes in, and states of: novels, pieces of music, plays, essays, and films. In the following chapter, I argue that these objects are *changeable abstract artefacts*: objects that are created by human agents, and can be changed by human agents, but which may have multiple concrete instances. Moreover, I argue in the final chapter, Chapter 7, that in creating, or changing, an abstract artefact, an agent may act such that their action has both a result-event that is an intrinsic change in the object of action, and a result-state that is an intrinsic state of that object, but where neither of these results are caused by the agent. In such cases, all versions of the (T) and (C) principles are falsified.

Consider, for example, that an author might *extend*_[trans] their novel, such that their novel is *extended*_[trans]. The novel can then be said to *extend*_[intrans], as a result of the author's *extending*_[trans] it, and to thus acquire a new intrinsic state that is

characteristic of a novel that is extended_[trans] — its being longer, presumably. But, the novel's extending_[intrans], and the new state of the novel, may fail to be *caused* by the author who extends it: the relationship here may, on account of the ontological nature of abstract artefacts, not be a causal one. This is, at least, what I will argue in Chapter 7.

If my argument in Chapter 7 succeeds then this, along with the examples of early-stage action, undermines Hornsby's (2011) (T) and (C) principles. And, in that case, the description of action by means of a transitive patientive ambitransitive or patientive telic does not in itself imply causation by the agent. As a result, the (T) and (C) principles cannot successfully motivate the proposal that actions so described involve causation by the agent which is not accompanied by causation by the agent's action.

5.6 My Proposed Alternative Interpretation of Transitive Action Verbs

In this section I argue that the various (T) and (C) principles are not well motivated. First, I put forward that the (T) principles are not the only available explanation of the relationship between the transitive and intransitive forms of patientive ambitransitives in the past and present simple, and past perfective. I here present an alternative explanation. And given the availability of an alternative, the (T) principles cannot be used to successfully motivate the proposal that in basic bodily action, the agent causes their body's moving_[intrans], while their action does not cause this. I then turn to offer an alternative to the (C) principles, in order to account for the semantic relationships that patientive telics stand in.

5.6.1 An Alternative to the (T) Principles

While it has been fairly widely maintained that the causal interpretation of the transitive forms of patientive ambitransitives offers the most plausible explanation

of the meanings of the verbs, and their relationships to their intransitive forms, this is not obviously correct. As mentioned above, Parsons (1990) has questioned whether the assumption that the transitive forms of patientive ambitransitives have causal meanings genuinely offers the best explanation of the relation between their transitive and intransitive forms in all cases. Parsons suggests that, at least in some cases the legitimacy of the inference from a proposition of the form ‘ $a \Phi_{[\text{trans}]}-s \ o$ ’, to a proposition of the form ‘ $o \Phi_{[\text{intrans}]}-s$ ’ can instead be adequately accounted for just in terms of the transitive form having an *agential* meaning:

A particularly interesting option is to obtain the “direct motion” sense [of ‘move’] by retaining the notion of agency while removing the extra causing event. The analysis of ‘x moves y’, in the “direct” sense of ‘move’, would then be

$(\exists e)[\text{Moving}(e) \ \& \ \text{Agent}(e,x) \ \& \ \text{Theme}(e,y) \ \& \ \text{Cul}(e)],$

Where ‘Moving(e)’ is the very same predicate used in intransitive sentences, such as ‘His arm moved’.

(Parsons 1990, pp. 116-7).¹⁴¹

Parson’s suggestion amounts to the idea that there is a “direct” sense of move, where ‘ $a \text{ moves}_{[\text{trans}]} \ o$ ’, simply means something like: ‘ $o \text{ moves}_{[\text{intrans}]}$ and a is *responsible* for o ’s moving_[intrans]’. The attribution of responsibility here would seem to be neutral with regards to the metaphysical nature of the relationship that underpins that responsibility. In that case, the description of an action with the transitive form of ‘move’ is compatible with there being a causal relationship between the agent and the resulting movement_[intrans], but it does not *specify* such a causal relationship, so that the description is also compatible with a non-causal relationship between the agent and the resulting movement_[intrans].

We can adapt Parsons suggestion, so that transitive patientive ambitransitives in general have a sense on which they have merely agentive meanings. Moreover, we can allow, *contra* Parsons, that the agentive meaning can be identified without

¹⁴¹ See also Dowty (1979, p. 125) for an earlier suggestion that verbs describing basic bodily actions might not have causal meanings.

providing a semantic *analysis* of transitive patientive ambitransitives. The proposal, then, would be the following:

For any patientive ambitransitive, ϕ , there is a sense of ‘ ϕ ’ on which a
 $\phi_{[\text{trans}]}-s$ o only if o $\phi_{[\text{intrans}]}-s$ and a is responsible for o ’s $\phi_{[\text{intrans}]}-ing$.

However, insofar as we are inclined to suppose that transitive patientive ambitransitives have a sense on which they do have causal meanings, this proposal entails ambiguity for such verbs. And the suggestion of ambiguity in these verbs has been derided (see Hyman 2015, pp. 30-1; p. 40), such that it has been concluded that these verbs must *unambiguously* have causal meanings. For, it has been thought to be uncontroversial that at least some uses of patientive ambitransitives have causal meanings, for example when used to describe interactions between inanimate objects (see Hyman 2015, pp. 36-7). One can, for example, legitimately characterise the sun as having melted_[trans] some wax. The sun cannot be said to *agentially* responsible for the wax’s melting_[intrans], in the way that someone who intentionally melts_[trans] the wax is. And it does seem to be implied by the statement ‘the sun melted_[trans] the wax’, that the sun caused the wax’s melting_[intrans]. And certainly it is generally assumed by linguists and philosophers alike that at least some uses of patientive ambitransitives have causal meanings. For example, Parsons states that “[t]o break the window is to cause the window to break; to cool the soup is to cause the soup to cool; to close the door is to cause the door to close” (1990, p. 106).

But, it is important to emphasise that linguists themselves have highlighted that the concept *cause* used in their analyses of patientive ambitransitives need not, and perhaps *should not*, be considered identical to the usual concept of cause (see Hall 1965, p. 28; Dowty 1979, p. 98-9; Parsons 1990, pp. 112-7). The suggestion is made on the basis of cases that are taken to be counterexamples to a simple causal analysis of patientive ambitransitives, in terms of the usual concept of *cause* — there are both cases where the simple causal analysis applies, but the

corresponding patientive ambitransitive does not, and cases where a patientive ambitransitive does apply, but it is at least not obvious that the simple causal analysis applies. Yet, while these linguists have suggested that perhaps a distinct concept of *cause* should figure in our analysis of patientive ambitransitives in replacement of the usual concept of *cause*, they have not themselves expanded on how exactly the alternative concept of *cause* is to be understood.

We might well, then, simply deny that any transitive patientive ambitransitives express causation at all. For the alternative agential meaning, in terms of responsibility, put forward above, need not imply agency that requires intentional action; it need not imply any form of agency that cannot be satisfied by inanimate entities. As Hyman himself emphasises, we do often talk about inanimate entities in terms of agency: “soap is a detergent, i.e. a cleansing agent, cortisone is an anti-inflammatory agent, oxalic acid is a precipitating agent, and so on” (2015, p. 30; see also Alvarez and Hyman 1998, pp. 243-5). And similarly we talk about inanimate entities in terms of responsibility; as Feinberg indicates, “[a] low-pressure system over the Great Lakes, we might naturally say, was *responsible* for the storms in New England” (1965, p. 144, emphasis author’s own). Now both Hyman and Feinberg suppose that the talk of agency and responsibility with regards to the inanimate world expresses causation by the agent, but this need not be supposed. Certainly, we may have a background assumption that when an inanimate object is responsible for some change, then what underpins this responsibility can only be causation. But this does not require us to suppose that the verbs that we use to describe interactions between inanimate objects themselves *express* causation by the inanimate object identified as the agent in the interaction. In that case, we might reject the claim that at least some uses of transitive patientive ambitransitives have causal meanings, and, in doing so, avoid positing ambiguity in these verbs.

Then again, in light of the phenomenon of the accordion effect, which was discussed in Chapter 1, we might consider that there is in fact reason to embrace the idea that transitive patientive ambitransitives are ambiguous, with one

agential sense, and one causal sense. For, the accordion effect is a feature only of verbs being used to describe action that involves intentional action. I outlined the accordion effect as follows: if an agent, *a*, Φ -ed, where their Φ -ing involved some action of *a*'s which was intentional under some description, and *a* thereby caused an E-type event, we may say that *a* Ψ -ed, where that *a* Ψ -ed implies that an E-type event occurred and *a* was agentially responsible for this. Davidson's example to illustrate the accordion effect is of a man who intentionally moves his finger, causing a light-switch to be flicked, a light to come on, the room to be illuminated, and a prowler to be alerted. The man can then be said to have flicked a light-switch, turned on the light, illuminated the room, and alerted the prowler (2001b, p. 53). By contrast, if the wind is so strong that it dislodges a stone from ledge, so that the stone then rolls off the ledge and onto some ice, thereby causing the ice to crack, we cannot thereby appropriately say that the wind cracked the ice (see Davidson, p. 54). When it comes to inanimate objects it would seem to be the case that one can only legitimately characterise an object, *o*, as having Ψ -ed, where this would have implied that an E-type event occurred, if *o* was a relatively proximate cause of an E-type event. So we can say, for example, that the stone in the case above cracked the ice, since the stone is a relatively proximate cause of the ice's cracking.

In that case then, it is plausible that at least a number of action-verbs have at least two senses: one that does not imply intentional action, but does imply proximate causation; and another that does imply intentional action, but does not imply proximate causation. 'Cracked' in 'The stone cracked the ice' does not imply any intentional action by the stone, but does imply proximate causation by the stone of the ice's cracking; 'cracked' in 'Kim cracked the ice' does imply some intentional action by Kim, but does not imply proximate causation of the cracking by Kim — Kim may have caused the ice's cracking only by throwing a stone at the ice which caused it to crack. And note that 'crack' is a clear case of a patientive ambitransitive. So, the restriction of the accordion effect to verbs describing action that involves intentional action, makes it somewhat plausible

that transitive patientive ambitransitives are, in fact ambiguous. The suggestion is that transitive patientive ambitransitives have one agential sense that implies intentional action, but does not imply causation, and one causal sense that implies proximate causation, but does not imply intentional action.

Whether we accept ambiguity for transitive patientive ambitransitives or not, we should accept the the existence of some sense on which these verbs do not have causal meanings. Moreover, the two proposals that I have put forward here still provide a good explanation of the relationship between the transitive and intransitive forms of patientive ambitransitives in present and past simple, and past perfective. And there is no obvious reason to think that the (T) principles offer a *better* explanation of that relationship. In fact, we might suppose that an explanation of the relationship that also accounts for the restriction of the accordion effect is a better explanation. The (T) principles cannot then be assumed, and they certainly cannot be used to successfully motivate the proposal than in basic bodily action, the agent causes their body's moving_[intrans], while their action does not cause this. Without the (T) principles, and with the possibility of a purely agential sense of transitive patientive ambitransitives, the simple fact that an agent moves_[trans] their body presents no reason to think that the agent causes their body's moving_[intrans].

5.6.2 An Alternative to the (C) Principles

Unlike with the (T) principles, Hornsby does not present the (C) principles as explanations of any obvious semantic relationship involving patientive telics. Yet, the following relationships do seem to hold, and the present and past simple, and past perfective, (C) principles could be understood to explain these, along with the identities that Hornsby defends:

PATIENTIVE TELICS:

Present Simple: $a \phi$ -s o only if o is ϕ -d by a , and o is f as a result (where o 's being f is an intrinsic or location state).

Past Simple: $a \phi$ -d o only if o was ϕ -d by a , and o was f as a result.

Past Perfective: a has ϕ -d o only if o has been ϕ -d by a , and o was f as a result.

Then again, these relationships, like those between transitive and intransitive patientive ambitransitives, can be explained in non-causal terms. Just as with patientive ambitransitive, it can be supposed that there is at least some sense of active transitive patientive telics that has a merely agential meaning:

For any patientive telic, ϕ , there is a sense of ' ϕ ' on which $a \phi$ s o only if o is f and a is responsible for o 's being f (where o 's being f is an intrinsic or location state).

In line with my argument in the previous chapter, o 's being f can, in at least some cases where $o = a$, be the end-state of a change in o , where that change is identifiable with a 's action of ϕ -ing o . So, as we see, there is little motivation to suppose that transitive patientive telics have causal meanings in all cases. Where causation does seem to be implied, as in descriptions of extra-corporeal action, this can be attributed to background assumptions regarding the metaphysical relationships that might hold between a finite embodied agent and a distinct physical object. But in that case, where we have some resistance to supposing that the relationship between an agent and the object of their action is a causal one, appeal to the (C) principles cannot successfully motivate the conclusion that the relationship is indeed a causal one.

Given the argument that I have presented against (T) principles as well as the (C) principles, I think that we should conclude that the assumption that all our transitive action verbs have causal meanings should be rejected. This is a starting point in action-theory that smuggles in unwarranted assumptions. We cannot, then, appeal to our language to show that action is essentially causal. More specifically, the verbs we use to describe action do not support the view that there is a causal aspect of action that can only be accounted for in terms of causation by the agent, rather than causation by the agent's actions.

6. Changeable Abstract Artefacts

In this chapter, I argue that there are abstract artefacts that are changeable. Abstract artefacts are entities that are created by human agents, like tables and chairs. And, like tables and chairs, abstract artefacts can, I suggest, also be changed by human agents. But, unlike tables and chairs, which are *concrete particulars*, abstract artefacts are repeatable — i.e. each can have multiple concrete instances — and possibly uninstanced — i.e. each can exist without there being any concrete instance of it. The entities that I take to be abstract artefacts include the following: works of literature (e.g. novels, plays, poems, fictional characters), musical works (e.g. songs, symphonies, operas, albums), essays, films, photographs, audio-recordings, websites, product-designs, flags, games, recipes, words, languages, and alphabets.

In the following chapter I will argue that there are cases of action where an agent creates or changes some abstract artefact, but does not cause the action's result-event or result-state. But, in this chapter I focus just on defending the existence of abstract artefacts that are changeable. To this end, I first defend the claim that these entities are abstract, i.e. that these are repeatable and possibly uninstanced (§6.1). I then defend the claim that these entities are created by human agents, and can be changed by human agents (§6.2). I go on to address arguments in the literature against the possibility of entities that are abstract but also created and changeable, where these arguments turn on the causality of abstract entities, and the causality of creation and change (§6.3). As well as addressing those arguments, I address responses to them that have been offered by others. I argue that despite the fact that there are abstract entities that are created and changeable, these may, nonetheless, be acausal. That is, it does not follow from the fact that an entity is created and can be changed that it can causally interact with other entities.

6.1 Abstracta

In this section, I argue that amongst the entities that were created by human agents some are abstract, where an abstract entity is repeatable and possibly uninstanced. That is, I stipulate that ‘abstract’ here simply means ‘repeatable and possibly uninstanced’. I do not enter into debates regarding how the abstract-concrete distinction is to be drawn so as to respect our general labelling practices.¹⁴²

Of the entities that I characterise as abstract artefacts, most philosophical attention has been paid to those that are *artworks*, such as works of literature (e.g. novels, plays, poems, fictional characters) and musical works (e.g. song, symphonies, operas), where debate has centred on whether such artworks are, in fact, created. But it should be noted that there are, in fact, a wide variety of artefacts that are abstract, and which are not naturally classified as artworks. These include essays, films/photographs/audio-recordings that serve merely as evidential records, websites, product-designs, games, recipes, words and alphabets. I argue here first that these entities are repeatable, then that they are possibly uninstanced. I then briefly discuss various articulations of the abstract-concrete distinction.

6.1.1 Repeatable

Let us consider then, the proposal that these entities are repeatable. The proposal is that a single such entity is capable of having multiple concrete instances, which can exist at the same time, in distinct spatial locations. And each one of these concrete instances provides a means of beholding the whole repeatable artefact of which it is an instance. This is, I take it, in conformity with how we intuitively think of such entities as novels, essays, songs, and websites. For example, we

¹⁴² For discussion of views on how to draw this distinction see Lewis 1986a (§1.7), Burgess and Rosen 1997 (pp. 13-25), and Rosen 2018.

suppose that the concrete instances of a novel include the various printed copies of it, many of which might exist at the same time, each in a distinct spatial location. Indeed there is no limit to the number of copies of a single novel that might exist at a single time. And each copy is an instance of the whole novel; a copy is neither itself a proper part of the novel, nor an instance of a proper part of it. If one reads the whole of a single copy of *Lady Chatterley's Lover*, then one has (insofar as the copy is not damaged) read the whole of *Lady Chatterley's Lover*, rather than merely some part of it. So, we suppose that novels, at least, can have multiple concrete instances that are entities, namely printed copies. We do not, however, suppose that all concrete instances of repeatable artefacts are entities; we take some to be events. A play, for example, might have multiple concrete instances that are its performances.

The repeatability of novels, essays, songs, websites, and the like, distinguishes these (at least apparent) artefacts from concrete particular artefacts, such as particular tables, paintings, and computers.¹⁴³ De Vinci's *The Mona Lisa*, for example, by contrast to *Lady Chatterley's Lover*, does not have multiple copies that can each be said to be concrete instances of De Vinci's painting: any copy of *The Mona Lisa* is a mere *imitation* of the real thing. The real thing is the single painting, framed and hung in the Louvre.

The idea that novels, songs, words and the like are repeatable is a popular one amongst those who consider the ontology of such entities (see Margolis 1977; Levinson 1980; Currie 1989; Strawson 1996; Steward 1997; Carroll 1998; Davies 2001; Dodd 2007; Walters 2013; and Wollheim 2015). And it is commonly maintained by those that take these entities to be repeatable that they are repeatable *types*, whose *tokens* are their concrete instances (see Strawson 1996; Steward 1997; Dodd 2007; Walters 2013; Wollheim 2015). So, the various copies of a novel are its tokens, and the various performances of a play are its

¹⁴³ Although it has been suggested that the non-repeatability of paintings may simply be a contingent fact that results from "the empirical deficiencies of reproductive techniques" (Strawson 1996, p. 231 n.1). I am not sure that this is true, but I leave the matter open here.

tokens. Types may have many distinct tokens, and, in fact, like the concrete instances of a single repeatable artefact, the tokens of a single type may qualitatively differ from one another. In the case, of a novel, there may be millions of distinct instances of one novel, each at least slightly qualitatively different from the rest — one paperback that is a bit more dog-eared, another with a distinctive smudge on the first page, for example. Moreover, some instances of a novel will be paperbacks, some hardbacks, some will be downloaded onto kindles, and some will be audiobooks.

The distinction between types and tokens, and the relationship between them is often illustrated with the case of letters, words and sentences.¹⁴⁴ Spatio-temporally located inscriptions and utterances are said to be tokens of types of letters, words, and sentences. So, in the following sentence: ‘There is no **there** THERE’, there are three distinct word-tokens, that is, inscriptions, of the single word-type *there*, each qualitatively different from the others.¹⁴⁵ As often highlighted, this distinction between the word-tokens and the word-types makes for an ambiguity in certain counting questions and statements. If I am asked how many words there are in the sentence ‘There is no **there** THERE’, the question is ambiguous between asking for the number of word-tokens — of which there are five — and the number of word-types that are tokened — of which there are three: ‘there’, ‘is’, and ‘no’.

But it is also supposed that there are non-linguistic types, and that all of the entities that I call abstract artefacts are said to be types, regardless of whether they

¹⁴⁴ This is, at least in part, due to the distinction having been introduced by Peirce (1933, p. 413), in application to words and inscriptions.

¹⁴⁵ Different fonts have been used to guarantee obvious qualitative difference between the three tokens of of the type, *there*.

are linguistic types or not.¹⁴⁶ And, indeed, just as the type-token distinction makes for ambiguities in questions and statements concerning counting in the case of words, so too does the distinction between an abstract artefact and its concrete instances. Suppose that I am a *Hamlet*-obsessive and I go to see five different performances of *Hamlet* in one month, and I see no other plays in that month. If I am then asked how many plays I saw that month, the question is ambiguous between asking for the number of play-instances (particular performances) — of which I saw five — and the number of plays whose performances I saw — of which I saw only one, namely *Hamlet*.

As Steward has emphasised, the type-token distinction is not mutually exclusive, however:

That something counts as a type relative to some range of tokens ought not, on this understanding, to rule out its categorization as a token relative to further more general types; and neither should the classification of something as a token of some type or other mean that it cannot count as a type relative to further tokens.

(Steward 1997, p. 123).

As a result, Steward claims that “the type-token distinction ... should be regarded as a relative, logical, not an absolute, metaphysical, distinction” (ibid.) But, the same cannot obviously be said with regard to the distinction between instances and entities that they are instances of. This is, I think, instead a metaphysical distinction.

Consider, for example, that Homer’s *The Odyssey*, has as instances the various written copies of the epic poem. We might then consider *The Odyssey* to be a type of which those copies are its tokens. But what then of the more generic *Odyssey-story*, which covers Joyce’s *Ulysses*, and the Coen brothers’ *O Brother Where Art*

¹⁴⁶ Strawson, for example, states that “the general title of ‘types’, often, though rather waveringly, confined to words and sentences, may well be extended”, and he then cites “works of art, such a musical and literary compositions” as examples, as well as “makes of thing, e.g. makes of motor-car, such as the 1957 Cadillac, of which there are many particular instances but which is itself a non-particular; and more generally other things of which the instances are made or produced to a certain design ... e.g. flags such as the Union Jack” (1996, p. 231).

Thou?, as well as Homer's *The Odyssey*? It would seem to be appropriate to classify the *Odyssey-story* as a type of story of which *Ulysses*, *O Brother Where Art Thou* and *The Odyssey* are tokens. And indeed, we find that the same kind of ambiguity that was illustrated above comes up in questions and statements regarding numbers of stories. Suppose I am doing a PhD in Cultural Studies, and I am comparing the influence of *The Odyssey* on Western culture with the influence of *The Illiad*. If I am asked how many stories I am writing about, the question is ambiguous between the number of types of *Odyssey* story — of which I am writing about several, including Joyce's *Ulysses*, etc. — and the number of types of story — of which I am writing about only two, namely the *Odyssey-story* and the *Illiad-story*. But when it comes to the tokens of *The Odyssey*, i.e. its written copies, it seems that these could also be said to be tokens of the *Odyssey-story*, along with the written copies of *Ulysses* and the DVD copies of *O Brother Where Art Thou*. It would seem then, that at least in many cases, if x is a token of y and y is a token of z , then x is a token of z too.¹⁴⁷

But, it is not obviously appropriate to classify *The Odyssey*, *Ulysses*, and *O Brother Where Art Thou?* as themselves *instances* of the *Odyssey-story*, along with the various copies of *The Odyssey*, *Ulysses*, and *O Brother Where Art Thou?*. When talking of instances of *Odyssey-story*, it may be that we are talking simply of those copies: those entities that are *particulars*. It is not obvious, then, that we should take the relationship between an abstract artefact and its concrete particular instances to simply be that between a type and its tokens. I will, then, avoid talking of abstract artefacts as types, although I am in agreement with those who

¹⁴⁷ Moreover, it is worth noting that insofar as the counting ambiguity indicated above is a mark of a type-token relationship, such a relationship would seem to be dependent upon relations to some further entity, given by a third term. (I am indebted to Pete Faulconbridge for pointing this out, and discussing the ramifications of this with me.) This third term specifies what the type is a type *of*. So, the word-counting ambiguity arises from the question: "how many words are there?", and this can be understood in terms of *types of words*, or tokens of some *type of word*. 'Word' is here then the third term, identifying some entity that both the type 'the', and its tokens, stand in some relation to. It is tempting to suppose that 'word' here identifies some further type, of which 'the' is a token. But, then, if every type is a type of something, which is itself some further type, it would seem that every type initiates an infinite regress of types and tokens.

take novels, songs, words, and the like to be types, that these entities are repeatable.

But now, there are some who deny that these entities are repeatable (Kaplan 1990; Caplan and Matheson 2006; Cameron 2008a; Hazlett 2013). The alternative to supposing that they are repeatable is either to deny that novels, songs, words, and the like exist at all (Cameron 2008a), or to take them to be concrete particulars that are constituted by what I have called their concrete instances (Kaplan 1990; Caplan and Matheson 2006). The first of these options is a clearly unattractive one, which takes all of our talk of novels, songs, words, and the like to either be false or loose talk. This option is to be turned to only as a last resort, where all attempts to make sense of the existence of these objects fails. But the latter of the two alternative options also faces a number of difficulties.

First off, as indicated above, this option conflicts with intuitions regarding our encounters with novels, songs, words, and the like. We naturally suppose that in interacting with a copy of novel, for example, insofar as the copy is a complete and undamaged copy, one interacts with the whole novel of which it is a copy. If one reads the whole of a single copy of *Lady Chatterley's Lover*, then insofar as the copy is complete and not damaged, one has read the whole of *Lady Chatterley's Lover*, rather than merely some part of it. Consider also a scenario in which I and two of my friends each have a distinct paperback copy of *Lady Chatterley's Lover*, and there are no other concrete instances of the novel in existence. It would seem wholly inappropriate, in such a scenario, to take *Lady Chatterley's Lover* to have three distinctly spatially located parts, each sharing the spatial location of only one of the three paperbacks. For one thing, it's not clear what would determine each part's spatial location, as shared with one particular paperback, rather than the other two. The view that novels, songs, words, and the like are in fact concrete particulars constituted by their copies, performances, inscriptions etc., is then something that should be turned to only if one encounters some insurmountable problem with the intuitive view that these entities are repeatable. And now, in

general, the alternative view is simply motivated by squeamishness regarding repeatable objects in general (sometimes characterised as a commitment to *naturalism*), or repeatable objects that have the other features that we take novels, songs, words, and the like to have. This in itself is not a good motivation for giving up on the intuitive view of these entities as repeatable.

Moreover, it should be noted that a novel cannot simply be identified as the *fusion* of its copies, since this does not allow for the temporal and modal flexibility that novels have: novels can and do continue to exist with changing numbers of copies. The single novel *Pride and Prejudice* has existed since Austen's authorship, but with radically changing numbers of copies in existence over the years. And indeed no doubt some of those copies that once existed, no longer exist. In that case, any account of novels, songs, words, and the like as concrete particulars, must take them to be able to persist despite increases, decreases, and replacements in their constituting parts. And while this can perhaps be accommodated, no fusion-theory can account for the fact that novels, songs, words, and the like can also exist without any concrete instances at all, as I will argue they can in what remains of this section.

6.1.2 Possibly Uninstantiated

Although novels, songs, words, and the like can have multiple concrete instances, as I have argued, they can also exist without any concrete instances. That is, a given novel, *N* can be present at some *t*, when *N* has no concrete instances that are present at *t*. Not only does a novel's persistence not depend upon the persistence of any particular concrete instances, it also does not depend upon the persistence of any concrete instances at all.

Consider that a novel can persist even if its manuscript is destroyed, and there is no other copy of the novel, if the author, or someone else, has memorised the novel. And similarly, all abstract artefacts can persist without any concrete

instances, on the basis of memorisation. One might, at this point, respond with the suggestion, that, to the contrary, when someone memorises a novel, *they themselves become a concrete instance of the novel*. And indeed, in Ray Bradbury's novel *Fahrenheit 451*, where it is imagined that, in the face of a ban on printed books, a group of individuals take it upon themselves to each memorise some book, these "book people" talk about themselves as if they have become copies of the books that they have learnt: "I am the Prince by Machiavelli" declares one of the group in the film adaptation of *Fahrenheit 451*.

But we should consider carefully what is required to memorise something like a novel. It seems like one needs to gain the ability to recite the novel, think through the whole thing, or write it down. In other words, one needs to have the ability to produce a concrete instance of the novel. One does not need to be, or have inside one's head, a persisting concrete instance of the novel throughout the time in which the novel is memorised. And indeed, when actors talk about learning their lines, they often talk about practicing speaking them over and over again, so as to build a sort of "muscle memory" for the lines, relying on a sort of bodily habituation to carry them through the recitation of the lines, rather than a persisting stored memory of the words as such. Alternatively, an actor can learn how to reconstruct their lines as they go, by obtaining a full understanding of their character, the situation, and the way they speak and interact with others. Consequently, then, it seems like we needn't suppose that one has to be, or have inside one's head, a concrete instance of a novel, if one has gained the ability to recite it. And, intuitively, a novel still exists if it can be recited, even if there are no concrete instances of it. With regards to the "book people" of *Fahrenheit 451*, these individuals demonstrate that they must continually recite their assigned books in order to retain the ability to do so, and so it is plausible that the individuals are not in fact themselves concrete instances of those books, but maybe retain the ability to produce concrete instances. Their talk of themselves as being the books — "I am the Prince by Machiavelli" — can then plausibly be

understood as a case of metonymy, such as when ‘the ham sandwich’ is used by a waiter to refer to a customer who ordered a ham sandwich (see Nunberg 1995).

And just as a novel can persist without a concrete instance, insofar as someone has memorised it, so too can a song, a word, a film, and the other entities that I call abstract artefacts. In fact, this may be even more obvious in other cases, such as dance routines, where these are generally just memorised by learning how to perform them. What is required, then, for the persistence of some given abstract artefact is simply the ability of some individual to produce a concrete instance of that abstract artefact. This may in fact not require memorisation of the given abstract artefact, and may be in place simply with some instructions on how to produce a concrete instance of the abstract artefact. Either way, it would seem that the continued existence of some concrete instance(s) is not required for the continued persistence of the abstract artefact of which it is an (or they are) instance(s).

6.2 Changeable Artefacts

6.2.1 Created

In this section I argue that of the entities that are abstract (as defined in the previous section), some — namely, those that I have labelled as abstract artefacts, such as novels, songs, words, and the like — are created by human agents. As well as arguing for this view as intuitive, I also oppose the alternative view that abstracta can only be discovered, rather than created.

The notion of creation that I am concerned with here is the notion of the action-kind of bringing something into existence. It is the action-kind with the result-event of something coming into existence, for which the agent of the action is thereby responsible. I do not want to presuppose anything further regarding the

conditions for such actions of creation. In particular, I will leave aside questions concerning the necessity of intentionality for these actions. In that case, there are certain abstracta, such as natural languages, for which it will remain unclear whether we should take them to be created or things that have merely come into existence at some time. Then again, as I will indicate below, there are other abstracta that are clear products of creation, in my sense, if anything is: novels, songs, and essays are prime examples of these.

Why, then, should we suppose that at least some abstracta, such as novels, songs and essays, are genuinely created, in the sense of coming into existence at some time, as a result of some action? The first point to highlight is that, insofar as we naturally consider endeavours, such as sculpture, painting, and watch-making to involve the creation of concrete objects, so too we naturally consider endeavours of novel-writing, song-composing, and essay-writing, to involve the creation of new entities that are distinct from the concrete objects that may also be involved in the process.¹⁴⁸ We do not suppose that there were any novels, (lyrical) songs, and essays before Homo Sapiens evolved, and we assume that those that currently exist were brought into existence by their author(s).¹⁴⁹ We take authorship to be a form of creation.

Consider the novelist's novel-writing, in particular. It is irresistible to think of the novelist as fashioning something new, over and above her particular manuscript(s) — particular now that novels are more typically typed on computers, rather than handwritten. We think of the author creating something new that could survive

¹⁴⁸ This is to take a stand on the debate over constitution of physical objects (see Wasserman 2017 for overview of the debate). The suggestion here is that the more intuitive position is that a statue is a distinct object from the clay from which it is made. Like the position on which novels are genuinely created abstracta, I take it that the intuitive view is given up on the basis of apparent conflict with other theoretical principles (such as the impossibility of co-located multiple physical objects), when it is not clear why we should not instead take the conflict to motivate giving up the over-general conflicting principles.

¹⁴⁹ There may have been non-lyrical songs in existence before Homo Sapiens evolved, which were created by non-human animals.

beyond the destruction of her manuscript(s) (or saved file).¹⁵⁰ A lot of work and effort goes into the specific project of creating a new novel, where this transcends the effort put into any particular manuscript(s). The novelist may, for example, produce several manuscripts in the endeavour of serially re-drafting her novel, in order to perfect the novel. When this process is finished to the novelist's satisfaction, she is satisfied *qua* having produced the novel that she hoped to produce, not *qua* having produced the manuscript that she hoped to produce. And consider also the cases of choreographing dance-styles, devising recipes, and developing websites. According to Wikipedia, Twitter, for example “was created in March 2006 by Jack Dorsey, Noah Glass, Biz Stone, and Evan Williams”.¹⁵¹

Admittedly, as has been pointed out by those who deny that repeatable artworks are created, such as Dodd (2000, pp. 430-1), insofar as we talk in terms of authorship, rather than explicitly in terms of creation — although, as indicated above, we do this too — our talk does not itself establish that we take authorship to be a case of genuine creation of an abstract artefact. And indeed, one might suppose that even our explicit talk in terms of creation of novels, websites, and the like, is merely loose talk. However, that we do take authorship to be a form of creation, rather than mere discovery, is displayed by our practice of individuating these entities not merely in terms of their “internal properties”, such as the ordering of words and punctuation in a novel, but also in terms of “external properties” determined by the circumstances of their authors at the time of their authoring, such as their cultural context (see Levinson 1980, pp. 10-14; Thomasson 1998, pp. 8-9; Walters 2013, p. 464; Wollheim 2015, p. 114). So, we allow for the possibility of multiple works of literature, or musical compositions, that are “internally” identical — with the same “internal properties”, but distinct “external properties”.

For example, in imagining a (perhaps unlikely) scenario where two poets, who have never encountered one another, or each other's work, just happen to write

¹⁵⁰ Levinson writes similarly about the creation of musical compositions (1980, pp. 8-9).

¹⁵¹ <https://en.wikipedia.org/wiki/Twitter>.

word-for-word identical poems decades apart, we imagine that two distinct, albeit “internally” identical, poems have been authored. We suppose that the two poems would have distinct properties determined by the distinct cultural contexts of their authors at the time of their authoring. One poem might be remarkably ahead of its time, while the other is mere pastiche. If we instead conceived of authorship as merely a matter of discovery, we would surely instead imagine the given scenario as one where the two poets authored — and therefore discovered — a single poem. There is no reason to suppose that poems that are identical in their ‘internal properties’, but discovered in two different circumstances, are two distinct poems, rather than one. To suppose otherwise is to suppose, implausibly, that there are multiple (perhaps indefinitely many?) distinct but internally identical poems, where their distinguishing features are brute: they are not determined by the internal properties of the poems, but nor are they determined by their distinctive relations to anything. Moreover, it is left unexplained why the two poets happen to discover distinct, rather than identical poems, and how we know that this is the case.

Now, in order for us to be sure that the “internally” identical poems of the imagined case are in fact distinct, we must suppose that the two poets have never encountered one another, or each other’s work. For, where such encounters have taken place, we cannot rule out that one or other poet is merely reproducing the other poet’s work. In such a case, one poet merely produces a further concrete instance of the poem already created by the other poet, and passes it off as a concrete instance of their own creation (plagiarising perhaps only unintentionally). Indeed this difficulty of distinguishing between independently created work and plagiarism is the theme of Borges’ short story, *Pierre Menard, Author of the Quixote*, which concerns the efforts of a fictional writer, Pierre Menard, in independently creating a novel identical to Cervante’s *Don Quixote*, despite having read Cervante’s work. It is suggested that Menard succeeds in independently creating a short piece of writing identical to part of *Don Quixote*. And here, we find distinct external properties, despite identical internal properties: “The archaic style of Menard ... is somewhat affected. Not so the style

of his precursor, who employs the Spanish of his time with complete naturalness.” (Borges 1998, p. 94).

In fact, the possibility of distinct but internally identical written works, distinguished from plagiarised written work, is built into copyright law, as has been highlighted by Hick (2011). This is indicated in the Judge’s notes for a case called *Alfred Bell & Co. v. Catalda Fine Arts, Inc.* which state that:

The “author” is entitled to a copyright if he independently contrived a work completely identical with what went before; similarly, although he obtains a valid copyright, he has no right to prevent another from publishing a work identical with his, if not copied from his (191 F.2d 99, 103 (2d Cir. 1951)).

And while the cases I have discussed here have involved only written works of literature, I suggest that we can similarly imagine scenarios involving pieces of music, films, websites, designs, or dance styles, where there are distinct but internally identical such entities. These entities are then most plausibly individuated in terms of features that are determined by the circumstances of their creation.¹⁵²

It is worth noting that those who reject the existence of created abstracta, such as novels, pieces of music, and the like, do not do so on the basis of lacking the intuition that these entities are genuinely created. Indeed, the counterintuitive nature of their rejection is often acknowledged (see Cameron 2008a, p. 295-6). The rejection of created abstracta is instead always taken to be motivated by other theoretical commitments. I address these supposed motivations for opposition in §6.3.

¹⁵² Evidently, who endorses the view that there are abstract artefacts, also highlights that this view, in contrast to its denial, allows for the appropriate modal flexibility of something like a musical composition. That is, the view allows for the possibility that a musical composition *could have been* different from how it in fact is (Evidently 2016, p. 136). For example, Holst’s *The Planets* could have been a bit longer than in fact is.

6.2.2 Changeable

In this section I argue that those abstracta that I have argued to be created by human agents are also changeable. That is, these entities can be changed: each either has been change, could yet be changed, or could have been changed at some earlier time. Moreover, the change here is *real* change, rather than so-called “mere Cambridge change” (Geach 1969, pp. 71-2): change only in virtue of change in some completely distinct entity (or entities). Even universals and numbers can undergo such Cambridge change, since they can change in terms of how they’re thought about, by philosophers, for example. The proposal is that novels, songs, films, websites, games and the like, can undergo real change in themselves and their parts.

Indeed, we take many examples of these entities to have changed substantially over the years. Chess, for instance, has a complex history, or evolution, as it is often put, which is to say that it has changed in various ways over the centuries.¹⁵³ Moreover, we don’t suppose that chess has itself spontaneously changed; we suppose instead that various chess-players are responsible for those changes. These chess-players changed chess by introducing various different rules to the game.

In addition, we generally take the creators (at the very least) of novels, songs, films, websites, games and the like to be able to *re-write*, *revise*, or *edit* their creations, and parts of their creations. And when we think of an author re-writing, revising, or editing their work, we conceptualise this as a matter of the author really changing their work, and the work really changing as a result (see Eynine 2016 pp. 137-8; Walters 2013, p. 463; Walters 2017, p. 15). This change can happen year after the creation of the entity in question. For example, it was relatively recently reported that Margaret Atwood *extended* her novel, *The Handmaid’s Tale*, for its release as an audiobook, more than twenty years after its

¹⁵³ For an outline of the history and evolution of chess, see Eales (2002).

initial publication.¹⁵⁴ And Atwood herself describes the occasion in these terms: “I was excited to extend the story with additional material meant specifically to be heard.” That Atwood has changed the story that she originally created more than twenty years earlier is certainly more intuitive than an alternative picture on which her story does not come into existence until *after* the extension is complete, and there are no further revisions.

But, in fact, it is also often the case that revision is an important part of the process of *completing* something like a novel, once it has been brought into existence in some crude form.¹⁵⁵ Consider De Beauvoir’s description of her writing process. She writes that after writing three or four hundred pages:

I begin again at page one, read it through and rewrite it sentence by sentence; then I correct each sentence so that it will fit into the page as a whole, then each page so that it has its place in the whole chapter; later on, each chapter, each page, each sentence, is revised in relation to the work as a whole.

(De Beauvoir 1992, p. 285).

Once an author has got to this stage of rewriting, it seems that there is an entity that is being rewritten, something that is being changed: worked on and improved. And that entity is not just the concrete manuscript, which is a concrete instance of the novel, or essay. What takes so much effort is the changing of the novel, or essay itself, rather than the physical changes to the manuscript: the addition of various ink-marks. Just as what takes so much effort in the *creation*-process, it is the improving of the fiction or non-fiction work itself, rather than any concrete entity that is its instance. Indeed, our conception of what the incomplete manuscript itself is is radically altered if we do not take it to be an incomplete manuscript of an existent but incomplete piece of writing. Moreover, if we are prepared to allow that there is an incomplete manuscript, it is not clear why we should not similarly allow that there is an incomplete novel, essay, or similar.

¹⁵⁴ see <https://www.themarysue.com/handmaids-tale-audiobook/>.

¹⁵⁵ It might be a vague matter when a novel, essay, or similar, comes into existence.

And it is just the same when it comes to the creation and completion of a film, a piece of music, a dance routine, a design, or a website. In undertaking the project of creating and completing one of these things, one puts effort distinctively into creating, and then improving, the thing itself, rather than any concrete entity that is its instance.

Dodd (2007, pp. 87-92), however, has challenged the idea that we conceptualise revision and editing of abstracta as resulting in real change to some persisting abstract work. Dodd suggests that we really conceptualise a composer's revision of a musical piece in terms of the composer creating some new version(s) of the piece. Yet, Dodd wrongly presents the options here as mutually exclusive. In fact, revision of musical pieces may be conceptualised in terms of the creation of new versions of pieces, *and also* in terms of real change to persisting pieces. Indeed, it seems most plausible that the creation of a new version of some piece *amounts to* changing that piece: on account of revision, the piece comes to have more versions than it previously did. And since a piece is constituted, in some sense, by its various versions, this change is just as plausibly *real* change in the persisting piece, as the change in a computer that results from the addition of a newly constructed part is *real* change in the persisting computer. In fact, I think it is appropriate to understand all change of abstract artefacts in terms of creation of new versions of those abstracta.

When Atwood extended *The Handmaid's Tale* for its release as an audiobook, she created a new, longer version of *The Handmaid's Tale*. As well as the later-created longer version, there is also the shorter version, which was published more than twenty years earlier. Atwood's change to *The Handmaid's Tale* consists, I suggest, in her creating a new, longer, version of it. And similarly, when an author rewrites their work, in the process of completing it, I suggest that they can be understood as writing, perhaps repeatedly, new versions of their work. Consider that a contemporary novelist, writing their novel on a computer, might have a system in place which saves a new version of their novel with every addition or subtraction

of a word. Each of these versions might have concrete instances (print-out copies, example).

In fact, I suggest that all change to abstract artefacts is a matter of creating, and possibly also destroying, versions of abstract artefacts. In that case, not only does creating a new version of an abstract artefact amount to changing it, changing an abstract artefact also amounts to either creating or destroying (or both) a version of that abstract artefact. It is difficult to see what else change to an abstract artefact might consist in, other than creation or destruction of versions. However, I am somewhat cautious about the notion of destruction of abstract artefacts or versions of them, since it is not at all clear what is required for an abstract artefact, or a version of an abstract artefact, to be destroyed, such that it is hard to be sure when, if ever, this happens. Perhaps an abstract artefact persists for as long as it is possible to create a concrete particular instance of it, and this possibility may persist even while no concrete particular instances are present, and no-one remembers the abstract artefact. For example, a poem might persist without any record or memory of it, if we could use technology to reconstruct historical engravings of it that have since eroded, or been destroyed in some other way.

But, in introducing this understanding of change to abstract artefacts in terms of the creation, or destruction, of new versions, we ought to say a little more on the notion of a version, and the relationship between a version and that which it is a version of. First off, it seems to be the case that a version of an abstract artefact, of sortal kind F, is itself an F. So, a version of a novel is itself a novel. The film-adaptation of a novel, by contrast, can be said to be a story that is one version of some story, while the novel (also a story) is a different version of that story. Each of these versions can be instanced, and can take on a life of its own. One particular version might be said to be *canonical*, or might be hailed as the best overall, or the best for some particular purpose.¹⁵⁶ The various quartos of *Hamlet*,

¹⁵⁶ Pragmatics might dictate that most references to some specific abstract artefact are references to some specific version of it.

for example, are discussed as different version of the plays with different merits.¹⁵⁷ But each concrete instance of a version of some story is also a concrete instance of the story that the version is a version of. So, each performance of the “bad” Hamlet quarto is also a performance of Hamlet.

I think that we should, then, understand the relationship between the versions of some abstract artefact, and the abstract artefact that the versions are of, as somewhat analogous to the relationship between determinates and their determinables. The determinate-determinable relationship is most easily illustrated with the example of colours; crimson, maroon, scarlet, and post box red, are all determinate shades of the more determinable colour red.¹⁵⁸ And every object that is some determinate shade of red is also red. The various shades of red are each various *ways for red to be*. The various versions of an abstract artefact, such as *The Handmaid’s Tale*, are something like various ways for *The Handmaid’s Tale* to be.¹⁵⁹ In that case, we can suppose that the creation of a new version of an abstract artefact creates something like a new way for the abstract artefact to be. It is like the — in fact, impossible — case of changing the colour red, by creating a new shade of red. Moreover, just as the colour red can be said to be constituted, in some sense, by all the various determinate shades of red, *The Handmaid’s Tale* can be said to be constituted, in some sense, by all the various versions of *The Handmaid’s Tale*.

¹⁵⁷ See <http://www.quartos.org> for the various Hamlet quartos.

¹⁵⁸ The terminology used to identify the determinate-determinable distinction was introduced by Johnson (1892). For more on the determinate-determinable relation, see Wilson (2017); Prior (1949); and Yablo (1997).

¹⁵⁹ Note that just as each crimson object is also a red object, so too each token of a version is a token of the type of which it is a version. For example, each token of the so-called “bad quarto” of *Hamlet* is also a token of *Hamlet*. However, that is not to say that *every* bearer of a determinate property is also a bearer of the determinable property.

6.3 Arguments against the Creation and Changeability of Abstracta

Opposition has been voiced against the creation of abstracta, such as works of literature and music, however. One line of opposition, which has been voiced by Dodd (2000, pp. 431-2; 2002, p. 397) and Cameron (2008a, p. 296) takes the following form:

OBJECTION₁:

- (1) If x was created then x is causal (where for x to be causal is for x to be an entity of a kind that that can cause effects and be caused to change or be in some state) (CAUSALITY₁).
- (2) Abstracta are *acausal* (ACAUSALITY).
- (3) Therefore, there are no created abstracta.

Those keen to defend the view that works of literature and music are created, while accepting their abstract nature (according to the notion of abstractness given above), such as Walters (2013), have directed their critical focus on premise (2) of this argument, which I refer to as ACAUSALITY. Walters (2013) argues that works of literature and music are in fact causal. As I will indicate, however, his argument for this conclusion does not succeed. Then again, I will not *defend* ACAUSALITY — and, indeed I oppose Juvshik's (2017) defence of it. Instead, I suggest that whether or not premise ACAUSALITY is well-motivated, premise (1), which I refer to as CAUSALITY₁, and which is largely taken for granted, is certainly not well-motivated.

However, one might deny CAUSALITY₁, and so accept that there are created abstracta, but deny that there are any changeable abstracta, on the basis of the following analogous argument:

OBJECTION₂:

- (4) If x is changeable then x is causal (where for x to be changeable is for x to have been changed, to be such that it can yet be changed, or to be such that it could have been changed) (CAUSALITY₂).
- (5) Abstracta are *acausal* (ACAUSALITY).
- (6) Therefore, there are no changeable abstracta.

OBJECTION₂ has not yet been voiced in the literature, and nor indeed has premise (4) of this new argument, which I refer to as CAUSALITY₂. But CAUSALITY₂ is at least as attractive, *prima facie*, as CAUSALITY₁. Moreover, it follows from the widely asserted view that to change something just is to cause it to change (e.g. Hyman 2015, p. 38). One may then find CAUSALITY₂ more compelling than CAUSALITY₁. But, as I will argue, CAUSALITY₂, along with the view that to change something just is to cause it to change, is in fact, like CAUSALITY₁, poorly motivated.

I will start by identifying the weakness of Walters' opposition to ACAUSALITY, before outlining what strikes me as a legitimate basis for ambivalence regarding ACAUSALITY. I then argue against CAUSALITY₁ and CAUSALITY₂.

6.3.1 Against Walters' Opposition to ACAUSALITY

Walters' opposition to ACAUSALITY (premise (2) in the OBJECTION₁ argument against created abstracta, and premise (5) in the OBJECTION₂ argument against changeable abstracta) is based upon the idea that there are true statements that seem to assert causal interaction with abstract artworks, such as works of literature and music, which cannot be paraphrased in terms of causation by/of concrete particulars:

[There is no] convincing reason for accepting that causal statements involving abstracta can *always* be paraphrased away, let alone that we ought to accept the resulting paraphrases *at the expense of* the face-value claims involving abstracta, but I think we can see that the idea is in any case implausible.

... [C]ausal statements involving abstracta are sometimes better than causal statements not involving abstracta. There is, then, no reason to deny that abstract objects can stand in causal relations[.]

(Walters 2013, p. 469).

Insofar as a causal statement that seems to assert causal interaction with some abstract artwork can be “paraphrased away” in terms of causal interaction with other entities, such a statement should, presumably, be understood as “loose talk”, or “elliptical”. And given the discussion of ellipsis here in Chapter 2, it would seem that there is a case for ellipsis only if there is one quite obvious candidate for the full sense of the supposedly elliptical sentence.

However, Walters’ proposal requires evidence in its favour, and appropriate evidence is not provided. The single example statement that Walters offers only explicitly asserts causation by *an individual’s engagement with an abstract artwork*, rather than causation by an abstract artwork: ‘John’s reading *American Psycho* caused him to buy copies of all of Easton Ellis’s other works.’ (2013, p. 470). And it cannot be assumed that engagement with a novel, in the form of reading, involves causally interacting with it. Moreover, it is not at all obvious that there are any true statements that seem to assert causal interaction with abstract artefacts and which cannot be paraphrased in terms of causation by/of concrete particulars. Walters does not then provide reasons to hold that abstract artefacts are indeed causal. Why, in that case, should we not simply deny CAUSALITY₁ (and CAUSALITY₂) and suppose that some abstracta are created (and changeable) despite being acausal?

Before we embrace this conclusion, however, we should ourselves consider some candidate statements that seem to assert causal interaction with abstract artefacts:

“*Lady Chatterley’s Lover* caused scandal and intrigue”.¹⁶⁰

“The novel still caused outrage nearly three decades after publication”.¹⁶¹

¹⁶⁰ <https://journalpublishingculture.weebly.com/uploads/1/6/8/4/16842954/article-published.pdf>

¹⁶¹ <http://www.mirror.co.uk/news/uk-news/lady-chatterley-inspired-queen-mothers-6388022>

“I saw *Hamlet* last night”.

“I heard the most fantastic piece of music the other day”.

The first two statements here explicitly assert causation by abstract artefacts. The latter two statements, however do not, and only explicitly assert the perception of abstract artefacts. Yet, statements that assert the perception of abstract artefacts, while not *explicitly* asserting causation by abstract artefacts, are prime candidates for statements that *implicitly* assert causation by abstract artefacts. For, it is standardly supposed that in order for an individual to perceive X, X must cause some experiential change in that perceiving individual (see Hyman 1992, p. 278). Indeed it is consideration of unobjectionable statements asserting auditory perception of musical works that moves Dodd (2007, pp. 11-16) to defend the causality of musical works, despite their abstract nature.

Now, Walters provides some requirements for paraphrasis of causal statements: it is maintained that a statement seemingly asserting *proportional* causation of E by X is only paraphrasable as a statement asserting causation of E by Y (where $Y \neq X$) if the causation of E by Y is also proportional. The notion of proportionality of causation here is taken from Yablo (1997), who makes use of the notion in his defence of non-overdetermining causation by mental states, conceived as distinct from physical states. As Walters outlines, Yablo’s notion of proportionality can be put as follows.

PROPORTIONALITY:

A cause is proportional to its effect when it is enough for the effect, while also being required for it.¹⁶²

And the sense of enoughness and requirement are spelt out as follows (Walters 2013, p. 470; Yablo, pp. 266-7).

¹⁶² see Walters 2013, pp. 469-470; Yablo 1997, pp. 258, 266-7.

C is required for E iff none of its determinables screens it off from E.

C is enough for E iff it screens off all of its determinates from E.

Where:

C_1 screens C_2 off from E iff, had C_1 occurred without C_2 , E would still have occurred.

And:

Y is a determinate of X =_{df} Y necessitates X because X is immanent or included in Y.

While:

Y is a determinate of X iff X is a determinable of Y.¹⁶³

Yablo's definition of 'determinate' and 'determinable', that Walters refers to, appeals to the opaque relations of *being immanent in* something, or *being included in* something. But rather than try and make sense of these relations, we can instead take Yablo and Walters to be trying to capture the sense of 'determinate' and 'determinable' that were illustrated here in §6.2.2 in terms of the determinable colour *red*, and the various determinate shades of red, such as *crimson* and *scarlet*. These were roughly glossed as *ways for red to be*. In general, we can think of determinates, roughly, as ways for their determinables to be.

It is not obvious that abstract artefacts have determinates or determinables at all however. Then again, we could allow that a version of an abstract artefact be counted as a determinate of the abstract artefact of which it is a version. In that case, the abstract artefact of which it is a version may be counted as a determinable of the version. As indicated previously, there is a sense in which a version is a way for an abstract artefact to be. By contrast, concrete particular instances would not be appropriately counted as determinates of abstract artefacts. The relationship between concrete particular instances and abstract

¹⁶³ (Yablo 1997, p. 175, n. 22).

artefacts is more analogous to the relationship between a crimson *apple* and crimson/red, than the relationship between crimson and red. Moreover, the activity of creating, changing, or otherwise engaging with an abstract artefact certainly will not qualify as a determinate of the abstract artefact engaged with.

With this in mind, let us consider whether the statements seemingly asserting causation by abstract artefacts might be said to assert proportional causation, and whether there are candidate paraphrases that assert proportional causation by other entities. Let us consider each of the listed statements in turn, beginning with: “*Lady Chatterley’s Lover* caused scandal and intrigue”.

We can well suppose that *Lady Chatterley’s Lover* is both enough for, and required for, (in Yablo’s sense) scandal and intrigue. It is plausible that *Lady Chatterley’s Lover* screens off its various versions from the scandal and intrigue. And, plausibly, *Lady Chatterley’s Lover* is not screened off from the scandal and intrigue by any further determinables. But is it really the case that this causal statement cannot be paraphrased in terms of similarly proportional causation by concrete particulars? In many contexts, it would in fact seem that statements such as “*Lady Chatterley’s Lover* caused scandal and intrigue” are often used interchangeably with statements like “The publication of *Lady Chatterley’s Lover* caused scandal and intrigue”¹⁶⁴. And the publication of *Lady Chatterley’s Lover* is no abstract entity; it is instead a concrete particular event with a single (albeit, perhaps scattered and vague) spatio-temporal location. And, it would seem that the publication of *Lady Chatterley’s Lover* is proportional to the relevant scandal and intrigue just as much as the novel itself is. It is plausible that the publication of *Lady Chatterley’s Lover* screens off its determinates from the scandal and intrigue: the publication of particular versions of the novel. And, plausibly, the publishing of *Lady Chatterley’s Lover* is not screened off from the scandal and intrigue by any further determinables.

¹⁶⁴ see https://en.wikisource.org/wiki/Lady_Chatterley%27s_Lover

But what of the case of “The novel still caused outrage nearly three decades after publication”? This statement may well fail to be interchangeable with the statement “The publication of the novel still caused outrage nearly three decades after publication”. In fact, the sentence which served as the source of this example went as follows: “the novel still caused outrage nearly three decades later when it was published in full”. But, in that case, the statement “The novel still caused outrage nearly three decades after publication” would seem to be interchangeable with “Publications of the novel still caused outrage three decades after its original publication”. There may yet be cases which we would describe in terms of a novel continuing to cause outrage, when it is not the case that this is related to the republication of the novel. But, it strikes me that there are likely to be other forms of engagement of the novel which we might think of as equally causally proportional to outrage as the novel itself. Possibilities include: the circulation of the novel, the legal permission of ownership of the novel, the reception of the novel, the reading of the novel. Importantly, these various engagements with novels are each concrete particular events with single spatio-temporal locations. Moreover, it strikes me as highly plausible that in each case of a statement seemingly asserting causation by a novel, in light of the context, there is one quite obvious candidate for the full sense of the statement. In this way, the statements seemingly asserting causation by novels are very plausibly elliptical and paraphrasable in terms of causation by concrete particular entities.

Finally, then, let us consider the scope for paraphrasing statements asserting perception of abstract artefacts, such as “I saw *Hamlet* last night”, and “I heard the most fantastic piece of music the other day”. In these cases, it seems that a paraphrase in terms of some form of engagement with the abstract artefact may not always be most available. Instead, however, it would seem that a paraphrase in terms of engagement with some concrete particular instance of the abstract artefact is always available. An appropriate paraphrase of “I saw *Hamlet* last night” would seem to be “I saw a performance of *Hamlet* last night”. And an appropriate paraphrase of “I heard the most fantastic piece of music the other day” would

seem to be “I heard a performance of the most fantastic piece of music the other day”.

Indeed, even when defending the literal audibility of musical works, Dodd is keen to emphasise that “one hears the symphony *by* hearing the performance ... hearing a work by hearing a performance of it is a matter of hearing a type of sound-event by virtue of hearing one of its token patterns of concrete sounds” (2007, p. 11; emphasis in original). Dodd cites Wolterstorff approvingly on this matter, as stating that “[i]n listening to a symphony one hears two things at once, the symphony and a performance thereof” (Wolterstorff 1980, p. 41; cited in Dodd *ibid.*). But this emphasis in fact raises the option that what it is to hear a musical work is just to hear a concrete particular instance of the work, such as a performance of it. If that is so, then perhaps the requirement on hearing a musical work — and, more generally, the requirement on perceiving an abstract artefact — is not causation of perceptual experience by the abstract artefact itself, but causation of such by a concrete particular instance of the abstract artefact. In this way, it would not in fact be correct to suppose that statements asserting perception of abstract artefacts implicitly assert causation by abstract artefacts at all.

Then again, Dodd explicitly opposes the option just raised, that what it is to hear a musical work is just to hear a concrete particular instance of the work, such that it involves only causation by the concrete particular instance. He instead holds the following view.

A work of music, thus construed [as an abstract object], can enter into causal relations *derivatively* by virtue of being a type of sound-event: a type whose token events can feature as relata of causal relations. ... The work itself counts as a *bona fide* object of hearing because the event that initiates the causal chain leading to an auditory experience — a sound-event — is one of its tokens.

(Dodd 2007, p. 16; emphasis added).

But, as Davies (2001; 2009) and Juvshik (2017) have indicated, it is not clear what Dodd’s notion of derivative causation could amount to here, if it does not

have the result that to hear a musical work is just to hear a concrete particular instance of the work.

6.3.2 Ambivalence Towards ACAUSALITY

Although there are no definitive arguments in favour of the causality of abstracta — on the definition of abstract that I am operating with — there is similarly no definitive argument in favour of the *acausality* of all abstracta. Let us consider a couple of supposedly definitive arguments for ACAUSALITY that have been put forward, or seem to be assumed by its proponents.¹⁶⁵ The first of these is a causal exclusion argument, put forward by Juvshik (2017, see especially pp. 813-6).¹⁶⁶ The argument can be condensed to the following.

THE CAUSAL EXCLUSION ARGUMENT:

- (7) If some abstractum were to cause some effect, then that effect would be overdetermined by the abstractum and some concrete particular instance(s) of the abstractum.¹⁶⁷
- (8) It is not the case that abstracta cause effects only ever by overdetermining their effects with some concrete particular instance(s).
- (9) Therefore, abstracta do not cause effects.

¹⁶⁵ There is also an argument for ACAUSALITY that is put forward and then rejected by Dodd (2007) and Caplan and Matheson (2004), who deny ACAUSALITY on the basis of the failure of that argument. I will not consider this argument in the main body of this chapter, and will only briefly address it here. The argument that they put forward turns on the assumption that entities that are not events only cause effects derivatively, by participating in events in the right kind of way. The argument then posits that abstracta fail to participate in events in the right kind of way, this being the premise that Dodd and Caplan and Matheson oppose. I think that the assumption that entities that are not events only cause effects derivatively should also be rejected, in light of arguments that I offered here in Chapter 2.

¹⁶⁶ Juvshik explicitly mirrors the causal exclusion argument against mental causation that has developed and defended by Kim (1993, 1998).

¹⁶⁷ Juvshik himself does not use the term ‘concrete particular instance’, and instead talks in terms of abstract types and their concrete tokens.

Juvshik concludes then that all purported causation by abstracta is really done their concrete particular instances in their stead. And now, while this may well be true — and indeed, as I hope to have shown, it is plausible that statements seemingly asserting causation by abstract artefacts are elliptical for statements asserting causation by concrete particulars — the causal exclusion argument for it is not sound. In particular, we should take issue with premise (7). For one thing, insofar as there are any independent reasons to suppose that abstracta cannot cause effects, the antecedent to this counterfactual is necessarily false, rendering this counterfactual (as well as the counterfactual with the same antecedent but the negation of its consequent) only vacuously true (on the standard Lewis-Stalnaker semantics for counterfactuals, see Lewis 1973; Stalnaker 1968).¹⁶⁸

But furthermore, if there are not any independent reasons to suppose that abstracta cannot cause effects, the conditional would seem to be false. Recall from Chapter 2 that I defended the following as a necessary condition for overdetermination.

c_1 and c_2 overdetermine e only if both of the following counterfactuals are non-vacuously true:

- (1) If c_1 had been present without c_2 , then the probability of an effect of the same type as e (an E event) occurring at t , when e does in fact occur, would have been just as it in fact is, at all times $x < t$.
- (2) If c_2 had been present without c_1 , then the probability of an effect of the same type as e (an E event) occurring at t , when e does in fact occur, would have been just as it in fact is, at all times $x < t$.

¹⁶⁸ It has also been argued that there are counterfactuals with impossible antecedents that are false (see Nolan 1997).

A concrete particular instance of some abstractum cannot be present without the abstractum that it is a concrete particular instance of. A paperback copy of *Pride and Prejudice* cannot exist without *Pride and Prejudice* also existing. And so, in that case, at least one of the above counterfactuals, (1) or (2), in application to causation by an abstractum and some concrete particular instance of it, would be vacuously true, such that the necessary condition for overdetermination is not satisfied.

In that case then, the causal exclusion argument does not succeed in establishing ACAUSALITY. A distinct argument for ACAUSALITY that has not been explicitly defended, but is plausibly assumed by those who assert ACAUSALITY is the following.¹⁶⁹

THE NON-SPATIALITY ARGUMENT

- (10) Abstracta are non-spatial (that is, they are not spatially located).
- (11) Non-spatial entities are acausal.
- (12) Therefore, abstracta are acausal.

But now, while some entities that we characterise as abstract may well be *as such* non-spatial, when it comes to abstract artefacts it is not clear that all these abstracta are non-spatial *throughout their existence*. My stipulatory use of the term 'abstract' does not specify that all abstracta are non-spatial. And while it is very plausible that an abstract artefact that lacks any concrete particular instances is not spatially located, it may be that an abstract artefact with some spatially located concrete particular instance(s) is located, where its concrete particular instances are located. Insofar as abstract artefacts are (sometimes) spatially located, they are, presumably, located where their concrete instances are located. This then casts doubt on premise (10) of the above spatiality argument for ACAUSALITY.

¹⁶⁹ See Field (1982, p. 59), for a case where this it is particularly plausible that this is assumed.

However, since each instance of an abstract artefact is an instance of the whole of that abstract artefact, if x being a concrete instance of abstract artefact y involves y being located at x 's location, then the only feasible option is that y is *wholly* located where x is located.^{170,171} In that case, insofar as abstract artefacts are spatially located at all, an abstract artefact with multiple distinct spatially located concrete instances is wholly located at multiple distinct spatial locations. And now, some have opposed the idea that a single entity might be wholly present in multiple distinct locations (e.g. Plato 1997, 'Philebus', 15b-c and 'Parmenides', 13b; Sider 1995, p. 14; Lowe 2006, p. 99), and so this may well serve as motivation for premise (10) of the non-spatiality argument for ACAUSALITY.

Then again, convincing argument is not offered against the idea that a single entity might be wholly present in multiple distinct locations. Instead, contemporary opponents to the idea tend to simply react with something like an incredulous stare.¹⁷² And, it is plausible that the hostility to the idea that a single entity might be wholly present in multiple distinct locations derives from an overgeneralisation from the true principle that a single *concrete particular* entity cannot be wholly present in multiple distinct locations. It may be that this is precisely how repeatable entities and concrete particular entities differ from one another. And now, there may also be hostility to the idea that a single entity could transition between having no spatial location, when it has no concrete particular instances, having a single spatial location, when it has a single spatially located concrete particular instance, and having multiple distinct spatial locations, when

¹⁷⁰ I adopt Parsons' definition of 'being wholly located in some region': for an entity, x , to be wholly located in a region, y , is for every part of x to be located in y (2007, pp. 11-2).

¹⁷¹ Effingham (2015) has argued that some repeatables at least, namely properties, are singly located at the union of locations of their instances, insofar as they are located at all. It is argued that the view that multiply instantiated properties are multiply located is undermotivated. However, Effingham does not consider the simple motivation given by the sheer unattractiveness of the alternative view on which a repeatable is only partially located where each instance of the whole of it is located.

¹⁷² I take this term from Lewis (1986a, p. 133) who uses it to describe the response he often receives to his modal realism.

it has multiple spatially located concrete particular instances. But again, it is not clear how legitimate such hostility is. It may be that this is precisely what it is distinctive about certain abstracta.

It may be, but just as I think that there are no convincing arguments against this, I also do not know of any convincing arguments in favour of it. I suggest, then, that the appropriate attitude towards the question of the spatiality of abstract artefacts, and premise (10) above, is one of ambivalence. And, likewise, I suggest that the appropriate attitude towards ACAUSALITY is one of ambivalence, since we should accept premise (11), the claim that non-spatial entities are acausal; causation is a relation that holds only between entities that have spatial locations. I will say more with regards to this idea in the following chapter, where I focus on the question of the requirements for causal relationships.

Moreover, even if abstract artefacts are spatially located when they have spatially located concrete particular instances, it may nonetheless be the case that these entities are acausal. Perhaps the default assumption should be that abstract artefacts are causal, unless convincing argument persuades us to deny this, but it is not obvious that this should be so. It may be that insofar as we are inclined to adopt this as the default assumption, this derives from overgeneralisation from the appropriate default assumption that all spatially located concrete particulars are causal. It is plausibly part of what it is for an entity to exist as a spatially located concrete particular that it is causal — and indeed this is perhaps the most plausible understanding (restriction) of the so-called Eleatic Principle, also known as Alexander's Dictum: "To be real is to have causal powers".¹⁷³

Yet, an unrestricted version of this Eleatic principle is maintained by some, e.g. Armstrong (1978, p. 5). And, this unrestricted Eleatic Principle, along with premise (11) of the above spatiality argument, might be taken to motivate the

¹⁷³ I quote this from Kim (1993, p. 348), who refers to the principle as Alexander's Dictum after the discussion of Samuel Alexander (1920, vol. 2, p. 8).

conclusion that insofar as there are any abstracta, these are spatially located (indeed, Armstrong maintains, on this basis, that universals are immanent rather than transcendent, i.e. spatially located). The unrestricted version of the Eleatic principle is not at all motivated, however. Again, it would seem to derive from the overgeneralisation from the appropriate view that all real spatially located concrete particulars are causal.

Now, to suppose that abstract artefacts may exist and yet be acausal, is to deny that counterfactual dependence of one state/event on another is sufficient for a causal relationship between those states/events, since states of, and changes in, abstract artefacts do counterfactually depend upon other states/events. Had Jane Austen not imagined what the life of a lively, but judgment, young woman would be like, then *Pride and Prejudice* would not exist as we know. But the sufficiency of counterfactual dependence between distinct states/events for causation should indeed be denied, since this sufficiency condition faces unresolved, and not obviously resolvable, difficulties distinguishing causes from epiphenomena, amongst other difficulties (see Kment 2010; Edgington 2011). I will return to this point in the following chapter.

Altogether then, we should, I think, remain ambivalent towards both the question of the spatiality of abstract artefacts, and the question of their causality.

6.3.3 Questioning CAUSALITY₁ and CAUSALITY₂

In this section I argue that regardless of the verdict on the causality of abstracta, CAUSALITY₁ and CAUSALITY₂ are both insufficiently motivated to warrant denial of the existence of created and changeable abstracta. That is, it should be maintained that there are created and changeable abstracta — abstract artefacts — regardless of whether abstracta are acausal or not.

Neither CAUSALITY₁ nor CAUSALITY₂ have been argued for in the literature, despite being maintained, or implied. But, insofar as they are accepted, I think it can be reasonably assumed that they are accepted on the basis of the following reasoning.

Argument for CAUSALITY₁:

- (13) If A creates x , then A causally interacts with some entity (entities) that comes (come) to be part of x .
- (14) If x is causally interacted with, then x is causal.
- (15) If some of x 's parts are causal, then x is causal.
- (16) Therefore, if x is created, then x is causal.

Argument for CAUSALITY₂:

- (17) If A changes x , then A causally interacts with x .
- (18) If x can be causally interacted with, then x is causal.
- (19) Therefore, if x can be changed, then x is causal.

These two arguments are not structurally isomorphic, since CAUSALITY₁ clearly should not rest on the idea that creation involves causal interaction with the created entity.¹⁷⁴ A created entity comes into existence only once it has been created, and so creation cannot involve causal interaction with the created entity. During creation, the created entity is not yet there to be causally interacted with. This point seems to have been made by Aquinas, in his discussion of God's creation of the world. He states there that "God had the power to make a world, but there was nothing that had the power of being made" (2012, Art. 1, ad Obj. 2.), and that "God at the same time gives being and provides that which receives being." (Ad Obj. 17). To make something is not to act on an object so as to render it made, since there is no such object until it has been made.¹⁷⁵

¹⁷⁴ Those who maintain CAUSALITY₁ maintain that creation is an act of causation, but do not make explicit what they take the nature of the causal interaction involved to be (see Dodd 2000, p. 431; 2002, p. 397; Cameron 2008a, p. 296).

¹⁷⁵ see Prior (1968, p. 74) for this kind of interpretation of Aquinas' points.

So, I instead take CAUSALITY₁ to rest on the idea that creation requires causal interaction with some entity or entities that come to be part of the created entity. In the case of concrete artefacts, such as tables and chairs, it is plausible that the creator of such an artefact must causally interact with at least some of the objects that come to form part of their creation. This causal interaction at least often consists in the creator causing a change in those objects, as when several pieces of wood are brought together to create a chair. But perhaps a concrete artefact can be created without the creator causing any change in the objects that come to form its parts; perhaps one can create a chair from an already appropriately-shaped stone, without changing any of its parts. Evnine (2016), who is alone in the literature in defending the possibility of created abstracta while maintaining their acausality, also considers an argument against such a possibility along the lines of the above argument for CAUSALITY₁, and maintains that in such cases where objects are re-purposed for some new function, the creator need not causally interact with the parts of the created object at all (see Evnine 2016, p. 110). However, it strikes me as plausible that in such cases, the creator must at least single out the given object to be re-purposed in thought, and that singular thought of a spatially-located concrete particular requires that the concrete particular have causally affected the thinker (see Sawyer 2012).

Yet, why should we suppose that creation, in the case of abstract artefacts, also requires causal interaction with the entities that end up as parts of the created entity? Premise (13) in the argument for CAUSALITY₁ seems to be the product of generalising from familiar cases of creating spatially located concrete particular artefacts. And the premise has intuitive appeal because our paradigmatic artefacts are spatially located concrete particulars. But why should we suppose that what obtains in the paradigmatic case of creation obtains in the creation of abstract artefacts too? We should instead consider that premise (13) might be an *over*generalisation from the requirements for creating spatially located concrete particular artefacts.

Likewise, premise (17) in the argument for CAUSALITY₂ is plausibly just an overgeneralisation from the requirements for changing spatially located concrete particulars. Our paradigmatic patients of change are spatially located concrete particulars, and when an agent changes some spatially located concrete particular distinct from themselves, it is very plausible that the agent must causally interact with it. Hence, the premise has intuitive pull. However, upon reflection, when we consider abstract artefacts, we should question whether what obtains in the paradigmatic case of change must obtain here too.

Moreover, I have argued that creating a new version of an abstract artefact, where the new version is itself an abstract artefact, amounts to changing the abstract artefact of which there is a new version. In that case, if creation of a new version of an abstract artefact need not involve causal interaction with the created version, and also need not involve causal interaction with the abstract artefact of which there is a new version — and why should it? — it follows that change to an abstract artefact need not involve causal interaction with an abstract artefact.

Then again, it is plausible that in order to create a new version of an abstract artefact, such as a novel, rather than a whole new novel with qualitative similarities, one must have previously had some interaction with spatially located concrete particular instances of the novel. But now, even if abstract artefacts are located where their spatially located concrete particular instances are, it does not follow that causal interactions with those concrete instances imply causal interactions with the instanced abstract artefacts. In addition, while one must have previously had some interaction with concrete instances of a novel in order to create a new version of it, that is not to say that the act of creation itself involves causal interaction with those concrete instances — these are instead, more appropriately considered as causal pre-requisites for the act of creation.

7. The Creation and Change of Abstract Artefacts

In this chapter, I argue that there are actions by human agents, with result-events and states that are neither caused by the agent, identifiable with the action itself (or its end-state), nor causal pre-requisites of the action. I argue that these result-events and states are instead non-causally determined by the agent's action. The actions in question are those in which the agent creates or changes some abstract artefact(s).

I first address the requirements for a causal relationship between distinct states and events (§7.1). I maintain that counterfactual dependence between distinct states or events is not sufficient for a causal relationship between them, and that there are further requirements for causal relationships between non-fundamental entities, at least. I then argue that there are at least some cases where a human agent intentionally creates or changes an abstract artefact, where the resulting change and state is not caused by the human agent, but only non-causally determined by their action, since the requirements for causation by non-fundamental entities are not met here (§7.2).

7.1 Requirements for Causation

In the following section, I will argue that there are at least certain cases where an agent intentionally creates, or changes, an abstract artefact, and where neither the agent, nor their action causes the results of their action of creation or change. Here, however, I defend the claim put forward in the previous section, that counterfactual dependence between distinct states/events is not sufficient for a causal relationship between them. I maintain that there is an additional requirement for causal relationship between non-fundamental entities. Having identified this additional requirement, I will come to argue that there are cases where an agent intentionally creates or changes an abstract artefact, and there are results of the agent's action that are distinct from and counterfactually depend

upon that action, but which are not caused by the action, since the further requirement for causation is not met.

7.1.1 Against the Sufficiency of Counterfactual Dependence for Causation

While it is widely acknowledged that counterfactual dependence between two distinct states/events is not necessary for there to be a causal relationship between them, given possible scenarios of pre-emption and overdetermination, it would seem to still be fairly widely accepted that counterfactual dependence between two distinct states/events is *sufficient* for there to be a causal relationship between them. This has, however, been opposed by some, such as Kment (2010) and Edgington (2011), who have, I argue, correctly identified problems for the sufficiency claim.

Both Kment and Edgington suggest cases where causes counterfactually depend upon their effects, despite the fact that the causal relationship is only one-way. Kment provides the following particularly persuasive example, which he identifies as due to Peter Lipton:¹⁷⁶ “A gigantic hydrogen bomb explodes in Detroit at noon. The pressure wave spreads outwards and destroys Ann Arbor at 12:03. What if the bomb had not destroyed Ann Arbor?” (Kment 2010, p. 84). As Kment indicates, it seems appropriate to suppose that if the bomb had not destroyed Ann Arbor, the bomb would not have exploded, since “once the bomb has exploded, only a big and conspicuous miracle could prevent it from destroying Ann Arbor” (ibid.). And this coheres with the standard, Lewisian (1973; and Stalnakerian, 1968), truth conditions for counterfactuals, and measure of closeness of possible worlds (Lewis 1986b). On the standard Lewisian truth conditions for counterfactuals, a counterfactual is true if and only if the consequent is true in all the closest possible world(s) where the antecedent is true. And, on the standard Lewisian measure of closeness of possible worlds, the closest

¹⁷⁶ The example is cited as having been presented by Lipton in a lecture at Cambridge University in 1997. Bennett (1984) also raises similar examples.

possible worlds where the antecedent is true are ones that are almost exactly like the actual world until the antecedent-time, with as small a divergence from actual goings-on before the antecedent-time as possible, resulting in as small a violation of the actual laws of nature (a miracle) as possible, such that the antecedent obtains. As Kment indicates, there is inevitably a smaller miracle in a world where the bomb does not explode such that Ann Arbor is destroyed, than there is in a world where the bomb does explode, but, somehow Ann Arbor is not destroyed. So, “[t]he closest antecedent-worlds must therefore diverge before that and omit the explosion altogether” (Kment 2010, p. 84). In that case then, we have here “backwards” counterfactual dependence where a cause — the bomb’s explosion — that precedes its effect — the destruction of Ann Arbor — counterfactually depends upon the effect.

As Kment highlights, such “backwards” counterfactual dependence is a product of the fact that the closest antecedent-worlds diverge from the actual world before the antecedent-time. In that case, there will be events that precede the antecedent-time that counterfactually depend upon the actual event that would, counter-factually, not occur at the antecedent-time, if the antecedent were true. Moreover, this has the result that there will be cases where an effect counterfactually depends upon other effects of a common cause; that is counterfactual dependence does not always distinguish causes from epiphenomena, as Edgington (2011) also highlights. Kment suggests that in the above example, not only does the bomb’s explosion counterfactually depend upon Ann Arbor’s destruction, so too does the destruction of Detroit. We might also add that Ann Arbor’s destruction counterfactually depends upon Detroit’s destruction, although, again, we do not have a causal relationship here; the destruction of both Ann Arbor and Detroit are simply both effects of a common cause: the bomb’s explosion.

It will be valuable to consider also a further example, due to Salmon (1984, pp. 141-3). Suppose that a disco-light is projecting a spot of light onto a wall, and the disco-light is whirling around such that the projected spot-light too moves

around on the wall. Assuming that the disco-light is functioning well, in this case it seems that each movement of the spot-light counterfactually depends upon the immediately previous movement: had the spot-light not moved from location A to location B on the wall, it would not have moved from B to C on the wall. The closest possible world where the spot-light does not move from A to B is, surely, one where the disco-light simply changes its course once, slightly before the move of the spot-light from A to B, such that the spot-light does not move to B, and, in which case, it does not move from B to C. There is a smaller miracle in this world than in one where, for some reason or other, the spot-light does not move from A to B, but then does move from B to C. Yet, despite the counterfactual dependence of the movement of the spot-light upon its earlier movements, there is no causal relationship here: the movement of the spot-light across the wall is instead causally explained in terms of the movement of the disco-light, and the light-beam projected from it to the wall. Each spot of light is just repeatedly caused by the disco-light and its beam. The series of movements of the spot-light across the wall is what Salmon calls a *pseudo* process, rather than a causal process. In other terms, we can characterise the series of movements of the spot-light as *epiphenomenal* upon the movement of, and projection by the disco-light.

The question is, then, if we cannot distinguish between *pseudo* processes (or epiphenomenal processes) and genuinely causal processes in terms of counterfactual dependence, can we distinguish between pseudo and causal processes in terms of some other feature, besides brute causality? Is there some further feature that causal processes have and which pseudo processes do not? I think it is very plausible that there is.

7.1.2 Further Requirements for Causation

Salmon offers his own proposal for the distinguishing feature of causal processes: the capability of transmitting a mark — some introduced characteristic — along the process (1984, p. 142). But this proposal is well known for facing the

challenge of defining the notion of a mark, such that pseudo process are not classified as being capable of transmitting a mark along the process. For example, a spot-light moving across a wall might be said to be capable of transmitting an introduced characteristic of some colour, if a coloured filter is placed upon the light-source. While such cases are supposed to be ruled out as cases of genuine mark-transmission, it is difficult to see how this might done non-circularly.

I think that we can and should distinguish between causal processes and pseudo process relating non-fundamental entities at the very least. The notions of fundamentality and non-fundamentality here are themselves to be understood in terms of non-causal dependence. The fundamental entities are those whose existence does not *non-causally depend* upon any other goings on — *non-ontologically-dependent* entities, or *non-metaphysically-dependent* entities as it is sometimes put — and so their existence does not stand to be *non-causally explained* in terms of any other goings on.¹⁷⁷ Of course, the existence of fundamental entities may, nonetheless, *causally depend* upon other goings on, and so may be causally explained in terms of them. The non-fundamental entities, by contrast, are those whose existence does non-causally depend upon other goings on — ontologically dependent entities. Now, we need not settle the question of whether there are fundamental entities, or if there are, then which they are. We need only agree that at least most of the ordinary medium-sized objects that we interact with day-to-day, including human agents, are not fundamental, with

¹⁷⁷ Talk of fundamentality in terms of ontological independence or metaphysical independence is common. For talk of fundamentality as metaphysical independence see, for example, Rosen (2010). For talk of fundamentality as ontological independence see, for example Lowe (1994), Correia (2008), Koslicki (2013), Tahko and Lowe (2015). It has been argued that it is possible that there are entities that are both fundamental and ontologically dependent — see, for example, Barnes (2012) and Wilson (2014, p. 560; 2016, pp. 192-3). But, it in fact seems very plausible that those cases deemed to be ones of fundamental but ontologically dependent entities should instead be treated as ones of symmetrically dependent and equifundamental entities.

It should be noted that the notion of fundamentality, while often introduced as ontological or metaphysical independence, is not often explicitly introduced as a form of specifically non-causal dependence. That ontological dependence is a form of non-causal dependence is often suggested or implied however, as is the case in Fine (1995).

Sometimes the non-fundamental is taken to be less *real* than the fundamental (e.g. Schaffer 2003a), and this need not be supposed.

their existence being non-causally dependent upon the interaction between the objects that constitute them. And, similarly abstract artefacts are not fundamental, with their existence non-causally dependent on there being concrete particular instances, or the possibility of new concrete particular instances. If physics discovers indisputably mereologically simple particles, then perhaps it will be agreed that there are some fundamental physical entities.¹⁷⁸

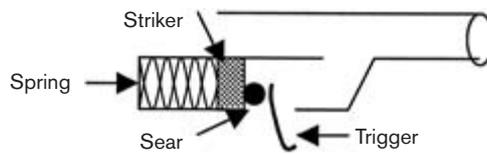
We can distinguish causal processes from pseudo processes between non-fundamental entities in terms of mechanism, rather than mark-transmission. This is not to suggest an analysis of causation between non-fundamental entities in non-causal terms, since the notion of a mechanism is itself a causal notion, to be explained in terms of causal interactions. Now, the term ‘mechanism’ may have connotations of very particular mechanistic accounts of phenomena, such as the seventeenth century mechanist accounts of all natural phenomena in terms of the *pushing* causal interactions between the rigid corpuscles assumed to constitute those natural phenomena (e.g. from Hobbes and Descartes). However, the notion of a mechanism need not imply any particular form of mechanistic account; instead a mechanism is simply some kind of system or process whose behaviour stands to be explained by the interaction of its parts.

And so, I suggest that causal processes between non-fundamental entities are distinctive in that these processes stand to be mechanistically explained in terms of the causal interactions between the parts of the entities involved in the processes. This has been put forward, by Glennan (1996) as a proposal that makes for an analysis of causation by non-fundamental entities, but we need not suppose this; rather we need only suppose that the notion of mechanism can be appealed to for an additional necessary condition for causation by non-fundamental entities. The proposed necessary condition can be put more precisely as follows: when it comes to states of, or changes in, non-fundamental entities, a

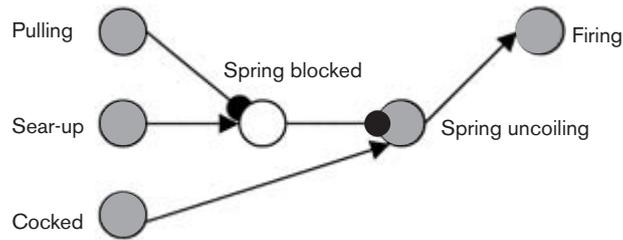
¹⁷⁸ See Schaffer (2003a), Markosian (2005) and Cameron (2008b) for discussion of whether there are, or must be, any fundamental entities.

causal relationship between such states, or changes, requires that those non-fundamental entities are parts of some concrete particular mechanism, where the causal relationship is explicable in terms of causal relationships between other parts of that mechanism, including their own parts, so as to produce a spatiotemporally continuous causal process between the causal related entities. And, insofar as there are fundamental entities at all, a causal relationship between states of, or changes in, those fundamental entities simply requires a spatiotemporally continuous causal process between them, i.e. no action at a distance. Fundamental entities, if such there are, are not constituted by parts, and so the causal relationships between them do not stand to be explained in terms of relationships between their parts.

The notion of a mechanism as simply some kind of system or process whose behaviour stands to be explained by the interaction of its parts, allows for mechanisms whose behaviour cannot be straightforwardly be explained in terms of the pushing and pulling of its parts, or transmission of any characteristic, physical or otherwise. There may even be mechanisms that rely upon causation by absences. Consider, for example, that, as Schaffer explains, the mechanism of a gun is such that the pulling of the trigger causes the bullet to fire, only because “pulling the trigger causes the removal of the sear from the path of the spring, which causes the spring to uncoil, thereby compressing the gunpowder and causing an explosion, which causes the bullet to fire” (Schaffer 2004, p. 199). Schaffer provides the following diagrams in order to illustrate this mechanism:



The mechanism by which bullets are fired can thus be represented as:



And, it should be noted that since this mechanistic explanation of the causal relationship between pulling the trigger of a gun and its firing a bullet appeals to causal interactions between further non-fundamental entities, these causal interactions too are supposed to be subject to further mechanistic explanation.

Returning to the pseudo process of the series of movements of the spot-light across the wall, it should be clear that the mechanistic explanation is one in terms of a mechanism that does not produce a spatiotemporally continuous causal process from earlier movements to later movements. Instead, it is in fact the mechanistic explanation that reveals that the process to be merely epiphenomenal upon the projection of the light-beam and the movement of the disco-light source.

Indeed, it is common in the sciences for causal claims to be assessed in terms of evidence for mechanistic explanation of causal relationships. Causation is often distinguished from mere correlation by means of mechanistic investigation. If we want to show that smoking causes cancer, rather than that the two are simply correlated on account of some related causal connection, we should rule out, for example, that smokers tend to do less exercise, and that it is this that causes

cancer. An effective way of doing this is to establish the mechanism by which the components of cigarettes, such as tar and nicotine, interact with components of the body so as to produce cancerous cells. Indeed, insofar as there is no plausible mechanistic explanation of a causal relationship, we doubt the veracity of the causal claim.

Moreover, we rely on our understanding of mechanistic explanations of causal relationships in order to conduct *controlled* experiments to assess further causal hypotheses. Insofar as we have no understanding of the mechanistic underpinnings of causal relationships, we have no way of ruling out causal influence from entities external to those entities being assessed. It seems, then, that we commonly make use of the idea that mechanistic explanation of causal relationships between non-fundamental entities is necessary for there to be such causal relationships, in scientific practice. And, since interventionist accounts of causation, such as that put forward by Woodward (2003), appeal to the notion of an idealised experimental set-up in order to define the notion of an intervention, in terms of which they provide conditions for causation, although they do not explicitly appeal to the notion of mechanisms, they do seem to *implicitly* rely upon the mechanistic condition that I have identified.

I have suggested, however, in the mechanistic condition that I have provided, that causal processes must be a spatiotemporally continuous causal process, and this will perhaps be questioned on a couple of grounds. First, on the basis of certain cases of causation by absences and double-preventers, and, second, on the basis of purported cases of causal action at a distance at between entangled quantum particles. I'll address each of these kinds of cases in turn. An example of a case of causation by absence that might be thought to present a challenge to the proposal that a causal process must be a spatiotemporally continuous causal process is one where an individual causes a plant to die by failing to water it. I think we should accept that this is a genuine case of causation, since we often talk about such cases

in explicitly causal terms, including in the law (Hart and Honoré 1959, pp. 2-3, 59-60; Schaffer 2004).¹⁷⁹

Yet, in fact, even in this case, when considered mechanistically, although there is no continuous transmission of any characteristic (physical or otherwise) from cause to effect, there may be understood to be a spatiotemporally continuous causal process from cause to effect. The nature of the interaction between the entities intermediate between the individual and the plant does explain how the behaviour of the individual constitutes a failure to water the plant, and there is a clear causal mechanistic explanation of why the lack of watering leads to the plant's dying.

Similarly, contrary to Hall's (2004) proposal, cases of double prevention can also be understood mechanistically as a spatiotemporally continuous causal process. Cases of double prevention are cases where one event prevents another, which, had it occurred, would have prevented yet another, which instead does occur. The case of double-prevention that Hall presents is the following:

Suzy is piloting a bomber on a mission to blow up an enemy target, and Billy is piloting a fighter as her lone escort. Along comes an enemy fighter plane, piloted by Enemy. Sharp-eyed Billy spots Enemy, zooms in, pulls the trigger, and Enemy's plane goes down in flames. Suzy's mission is undisturbed, and the bombing takes place as planned. If Billy hadn't pulled the trigger, Enemy would have eluded him and shot down Suzy, and the bombing would not have happened.

(Hall 2004, p. 241).

Hall suggests that while Billy's pulling the trigger counts as a cause of the bombing, this is a case of action at a distance: he claims that there is no spatiotemporally continuous causal process between Billy's pulling the trigger and Suzy's bombing of the enemy target. Yet, this verdict should, I think, be opposed.

¹⁷⁹ This view is opposed by Dowe (2001) and Beebe (2004), amongst others. Of course, if there is, in fact, no genuine causation by absences, then such causation does not present a challenge to the claim here that a causal relationship requires a spatiotemporally continuous causal process from cause to effect.

While Billy's pulling the trigger should indeed be counted as a cause of the bombing, there can in fact be said to be a spatiotemporally continuous causal process between them. After all, we understood why Billy's pulling the trigger counts as a cause of the bombing in terms of the fact that, as a result of Billy's pulling the trigger, a bullet is fired which reach the enemy plane, such that this plane then goes down in flames, and such that there is, as a result, never any bullet fired by the enemy plane towards Suzy's plane, so that the area around Suzy's plane is free of dangerous items until she bombs the enemy target. In that case, while this process is not one in which a characteristic is transmitted from cause to effect, we can causally explain the causal relationship in terms of the causal interactions between the parts of the process.

But what then of purported cases of causal action at a distance at between entangled quantum particles? Let us consider such a case (known as a Bell experiment). A pair of entangled particles, *A* and *B* are emitted by some source in opposite directions. The spin along some axis of each of the particles is measured by a pair of detectors, such that each may be measured as either having 'up' spin, or 'down' spin. For each particle, until the moment of measurement, the probability of its being measured 'up' is 0.5, as is the probability of it being measured 'down'. But, the particles are perfectly anti-correlated: if *A* has 'up' spin, then *B* has 'down' spin. The measurement events may be space-like separated, such that neither event is in the forward (or backward) light-cone of the other. Moreover, according to orthodox quantum mechanics, there is very plausibly no common cause of the anti-correlated states of the two particles. As such, if it is supposed that one measurement causes the other (or perhaps that each causes the other?), then insofar as the measurement events are space-like separated, then such causation would plausibly be a matter of action at a distance. Plausibly, there can be no spatiotemporally continuous causal process that takes place faster than the speed of light, as the process from one measurement to another would have to be, if the measurement events are space-like separated (outside of one another's

light-cones).¹⁸⁰ And what is more, since the particles are perfectly anti-correlated, the nature of the measurement events does not depend at all upon the entities, or the events taking place, in between them. In that case, it does not seem that one could explain the relationship between the measurement events in terms of the events spatially intermediate between them.

But, now, it has been thought that since the states of particles A and B are anti-correlated, the measurement of one as ‘up’, or ‘down’, must counterfactually depend upon the measurement of the other as having the opposite spin, such that, if counterfactual dependence is sufficient for causation, this alone establishes the existence of action at a distance (see Butterfield 1992b). Then again, that the anti-correlation of the particle states entails counterfactual dependence between the measurement events has, in fact, been challenged (Fenton-Glynn and Kroedel 2015). Moreover, since the sufficiency of counterfactual dependence for causation has been challenged, as we have seen, insofar as there is counterfactual dependence here, this may yet be a further case of counterfactual dependence without causation. And indeed, reluctance to accept that the relationship between the two measurement events is a causal one is not uncommon (see Butterfield 1992a), stemming precisely from the acknowledgment of the likely lack of a spatiotemporally continuous causal process between them.

7.2 Creation and Change of Abstract Artefacts Without Causation of Results

I will now put forward that there are at least some cases where an abstract artefact is intentionally created or changed, and the results of these actions — the coming-into-existence of the artefact, and ensuing existence of the artefact, or the change in the artefact (the coming-into-existence, or going out of existence, or both, of some version of the artefact), and ensuing new state of the artefact (the

¹⁸⁰ The details of such cases are presented by Butterfield (1989; 1992a; 2007) and Fenton-Glynn and Kroedel (2015).

ensuing existence, or non-existence, of some version) — although counterfactually dependent upon the behaviour of the agent, are not *caused* by the agent, or their actions. Instead, I suggest that these results are non-causally determined by the agent's action(s). And this is so regardless of whether abstract artefacts are spatially located when they have located concrete particular instances. I will start by putting forward and discussing particular cases of creation of abstract artefacts, and I will then put forward and discuss particular cases of change of abstract artefacts. I then discuss the idea of non-causal determination by the agent's action(s), indicating that there are, plausibly, further cases of this, besides in the creation and change of abstract artefacts.

7.2.1 Creation of Abstract Artefacts Without Causation of Results

I here make the case that, at least sometimes, when an agent intentionally creates an abstract artefact they do not cause the resulting coming-into-existence of the abstract artefact, and its ensuing existence and nature. When this is so, there is no mechanistic account of the relationship between the agent and the coming-into-existence of the abstract artefact. And this is, in part, because although the abstract artefact comes into existence, no *enduring* spatially-located concrete particular instance of the abstract artefact is brought into existence. As such, there is no *object* that is an instance of the abstract artefact that can be said to be part of a causal mechanism, and so the abstract artefact itself cannot be said to be an object-part of a causal mechanism.

The possibility of this is, I think, most evident in certain cases where the agent creates an abstract artefact “just in their head”. Consider a poet who puts together a poem, “just in their head”, as follows. The poet thinks of, in turn, six lines, and subsequently decides that those six lines make for a lovely poem, thereby creating a poem constituted by those six lines. In doing so, the poet does not create an enduring spatially-located concrete particular instance of the poem: there is no *copy* of the poem that is produced, there is just the agent's complex mental action

of thinking of its six lines, and deciding that the poem is complete. This mental action may well be a *basic* mental action, identifiable with a mental change, or series of mental changes in the agent. The action, and its parts, are not, however, identifiable with the coming-into-existence of the agent's poem. The poem is an enduring entity distinct from the agent and any part of the agent. And since no enduring spatially-located concrete particular instance of the poem is created, the coming-into-existence of the poem is not plausibly identifiable with any spatially located event. Indeed, plausibly there is no spatially located concrete particular instance of the poem at all, since the poet simply thinks of six lines in turn, not thinking at that time that these will come to constitute a poem, and only subsequently decides that they should, without thinking through those lines again at moment of decision. If the poem only comes into existence at the moment where the poet makes this decision, then before this time, their thinking of each the lines cannot be said to form part of an event that is a concrete particular instance of the poem.

In that case then, it does not seem that the coming-into-existence of the poem can be explained in terms of a spatiotemporally continuous process between the agent's action and the coming-into-existence of the poem: a non-spatially located event, where the poem itself has no spatial-location, and there are no spatially-located entities that come to form part of the poem, which the agent can be said to causally interact with in creating the poem. There is, then, no mechanistic account of the relationship between the agent's mental action and the coming-into-existence of the poem, and its ensuing existence. But we do, nonetheless, explain the coming-into-existence of the poem in terms of the agent's mental action: it does seem to be *determined* by the agent's mental action. I think we should conclude then, that what we have here is a case where the results of an agent's action are *non-causally-determined* by the agent's action.

7.2.2 Change of Abstract Artefacts Without Causation of Results

Similarly, I think there are cases where an agent intentionally changes an abstract artefact and neither they, nor their action, causes the results of their action: the change in the abstract artefact, and its new state. Since I have argued that change in an abstract artefact amounts to the creation or destruction of a version of an abstract artefact, where versions of abstract artefacts are themselves abstract artefacts, we should understand my proposal here as follows: there are cases where an agent intentionally creates a new version of an abstract artefact, but neither the agent nor their action causes the coming-into-existence (and subsequent existence) of the new version.

Consider again the above proposed case where a poem has been intentionally created by the poet “just in their head”, and there is no concrete particular instance of the poem. Having created the poem, by deciding that the six lines that they previously thought of should constitute a poem, suppose the poet later thinks to themselves, “No! The last word of the poem should be ‘love’, rather than ‘God!’”. In thinking this, the agent thereby intentionally creates a new version of the poem that ends with ‘love’. But still, there would seem to be no concrete particular instance of the poem, or any versions of it. At no point after the poem has been created does the poet think through the poem, and nor does the poet write out, or recite, the poem. So there is neither an event that is a concrete particular instance of the poem, nor an object that is a concrete particular instance of it. And, just as the coming-into-existence of the poem cannot be identified with any action of the agent’s, neither can the coming-into-existence of a new version of the poem. The coming-into-existence of the new version does not seem to be a spatially located event, and the new version itself does not seem to be spatially located, or have spatially located parts. In that case, the relationship between the agent’s actions and the coming-into-existence of a new version of the poem, ending with ‘love’, rather than with ‘God’, cannot be mechanistically accounted for. I suggest that just as the coming-into-existence of the poem is non-causally determined by the poet’s actions, so too is the coming-into-existence of the new version of the poem, and its subsequent existence. Since the coming-into-existence of the new version amounts to a change to the poem itself, this

change, and the subsequent new state of the poem, is then also non-causally determined by the poet's actions.

7.2.3 Non-Causal Determination by the Agent's Action(s)

I have suggested that there are a variety of cases in which an agent intentionally creates or changes an abstract artefact, and neither the agent nor the agent's action(s) cause the results of the action(s). I have proposed that in these cases the results are instead non-causally determined by the agent's action. It might be wondered, then, what exactly this non-causal determination amounts to, what the difference is between non-causal determination and causation, and whether there are other occasions where non-causal determination plays a role.

To begin with, it should be clear that one crucial difference between non-causal determination and causation is that while causation between non-fundamental entities requires a mechanistic account of the causal relationship, non-causal determination between non-fundamental entities does not require a mechanistic account of the determinative relationship. Indeed, there are no spatial restrictions on non-causal determination in general. In addition, non-causal determination can be thought to line up with certain conceptions of the grounding relation, where grounding is taken to be a real-world relation between events, as well as states (e.g. Schaffer 2016). Or, on other, perhaps more popular, conceptions of grounding, where grounding is a relation of explanation that holds only between facts (e.g. Rosen 2010 and Fine 2012), non-causal determination could be thought to be a real-world relation, where its holding underpins relationships of grounding between certain facts.

The notion of causation to which the mechanistic and spatial restrictions apply, by contrast, is the modern notion of causation, or efficient causation. This should

not be taken to be equivalent to the Aristotelian notion of efficient causation.¹⁸¹ It is the modern notion of causation, where causes produce their effects, and the causal relation is distinctively *empirically identifiable*. Importantly, however, it is not a specifically Humean notion of causation as reducible to constant conjunction, or human projections on the basis of constant conjunction. But, repeatable conjunctions producible through experimentation is central to the modern notion of causation. As Woodward emphasises, “the connection between causation and experimentation is built into the very content of causal claims” (2003, p. 35). And experimentation, as I have argued, relies upon the idea that mechanisms and spatiotemporally continuous causal processes underpin causal relationships between non-fundamental entities. Causal relationships are empirically established either through controlled experiments, through investigation of mechanisms, and through measurement of transfers of energy, momentum, and other properties.¹⁸² What is more, as Anscombe (1981) has famously emphasised, causation need not be a matter of determination. Non-causal determination, on the other hand, as the term suggests, is necessarily a matter of determination. Insofar as an agent’s action non-causally determines some result, the action determines, and so necessitates, that result.

And there are indeed, very plausibly, a number of other cases of non-causal determination. In fact, I think there are very plausibly further cases of non-causal determination of the results of an agent’s action by the agent’s action. Such cases include the following. Consider the team of agents who built the Eiffel Tower. These agents not only brought the Eiffel Tower into existence, they very plausibly also brought the singleton set of the Eiffel Tower into existence, by creating the Eiffel Tower.¹⁸³ The coming-into-existence of the singleton set of the Eiffel Tower

¹⁸¹ See e.g. Tuozzo (2014), for Aristotle’s distinct notion of efficient causation, and Schmaltz (2014) for presentation of the historical development in notions of efficient causation.

¹⁸² Cartwright complains that the interventionist account of causation overlooks these other methods of measuring causal relationships (2002, p. 422).

¹⁸³ Walters (2013, p. 471) discusses the case of bring about the existence of the singleton set of the Eiffel Tower by creating the Eiffel Tower.

is, I think, quite plausibly a result of the agents' action that is not caused by the action, but is instead non-causally determined by the result of their action: the coming-into-existence of the Eiffel Tower. The coming-into-existence of the singleton set of the Eiffel Tower takes place simultaneously with the coming-into-existence of the Eiffel Tower itself, and either takes place at the same spatial location, or has no spatial location at all. Either way, there cannot be said to be a spatiotemporally continuous causal process that takes place between them. The relationship is more plausibly one of *constitution* — a form of non-causal determination — than of causation.

A further case has been proposed by Pink (2011, pp. 362-3), who suggests that when you release someone from their obligation to you according to their promise to you, by asserting "I release you from your promise", their release is constituted, and so non-causally determined rather than caused, by your action of assertion.¹⁸⁴ Steward (1997, pp. 175-7) has similarly suggested a case where the result of an action is constituted, rather than caused, by the action. She proposes that if one breaks the law by parking on a yellow line, the breaking of the law is constituted by one's act of parking on a yellow line. These last two cases are cases where one's action plausibly constitutes, and so non-causally determines, some change in someone's social status. Another possible such case might be where one gets legally married by signing a piece of paper. And, finally, a case of a different kind might be the already considered case where one creates a chair from an already appropriate shaped stone, simply by thinking, with regards to the stone "from now on, that will serve as a chair". The creator of the chair here may be said to have causal perceptual contact with the stone that comes to constitute the chair, but may nonetheless not be appropriately said to themselves cause changes in the stone, so that they cannot either be said to cause the coming-into-existence of the chair. The coming-into-existence of the chair might, instead, be more

¹⁸⁴ Pink also later (2016, p. 264) suggests, plausibly, that when you release someone from a debt, their release is non-causally determined by your action.

appropriately said to be non-causally determined by the mental action of the creator: their thinking “from now on, that will serve as a chair”.

It would seem, then, that non-causal determination by events is very plausibly a fairly widespread phenomenon, and is far from restricted to cases of creation and change of abstract artefacts. What is more, these further cases present further examples that run counter to proposals that the results of intentional actions are caused by agents. In these cases, there are results of intentional actions that are neither caused by the agent, nor caused by their action(s), nor identifiable with their action(s) or parts thereof, nor causal pre-requisites of their action(s).

7.2.4 Against a Broader Concept of, or Distinctive Kind of, Causation

I expect, however at this stage, be met with something like the following response from a defendant of the view that the results of intentional actions are caused by agents: “You have simply presumed a certain *limited* concept of causation, such that there are certain cases of action where the results have been caused neither by the action nor by its agent on this limited concept of causation. There is some broader concept of causation, or multiple concepts of causation, such that, in those cases, the agent can still be said to cause the results of their actions.” And, indeed, there are agent-causal theorists of action, such as Taylor (1966) who suggest that the causation by the agent in action is a *unique* form of causation. Moreover, certainly no agent-causal theorist of action has endorsed the mechanistic condition on causation by non-fundamental entities that I proposed in chapter 6.

However, insofar as there is at least some form of causation by objects that is restricted in the manner I have defended in chapter 6, we must consider what unifies this with what is posited as a distinct form of object-causation in action, such that *both* qualify as forms of *causation*. Should we allow that there is, at least, always determination by the agent of the results of their actions, where this

determination is sometimes causal in the sense that I have presupposed, and sometimes not, so that what I call determination may instead be legitimately called causation of a broader form? I do not think that we should allow this. For one thing, as I have already indicated, in line with Anscombe, causation need not always be a matter of determination. So, where the results of an agent's action are caused but not determined by the action, these may not appropriately be said to be determined by the agent.

What is more, where the result of an action is identifiable with the action itself, and so cannot be said to be determined by the action, it is not obvious that we should say that the result is, nonetheless determined by the agent. To suppose that the result is determined by the agent in such cases is to suppose that the action too is determined by the agent. It is not obvious that we should say that the action itself is determined by the agent. Concern to avoid committing to the idea that the agent determines their actions as well as their action-results, would seem to be analogous to the concern that motivates avoiding the once-popular, but now no more, idea that agents cause their actions as well as their action-results (for rejection of this idea, see e.g. Alvarez and Hyman 1998, p. 222).

Where the result of an action *is* non-causally determined by the action itself, or by some other result of the action, it seems that we can say that the agent determined this result only in virtue of its determination by their action, or some other of its results. In that case then, the determination by the agent in action may not be independent of determination by action. Yet, the non-causal determination found in action is not plausibly a form of determination that is unique to action. Non-causal determination holds also, as I have indicated, between such events as the coming-into-existence of an object, and the coming-into-existence of the singleton set of that object.

Insofar as one seeks to uphold the notion that there is a form of causation by the agent, such that in all cases of action the agent causes the results of their action, and this form of causation is unique to action, this then warrants the kind of

reaction expressed by Davidson: “what more have we said when we say the agent caused the action than when we say he was the agent of the action?” (2001b, p. 52). That is, the only relation between the agent and the results of their actions that is plausibly unique to action is the relation of agential responsibility. In that case then, to assert that to be agentially responsible for some change or state in the world is to cause that change or state, where the form of causation here is unique to action, is simply to assert a tautology. One offers no genuine account of agential responsibility.

Conclusion

Summary

This thesis has been directed towards addressing the question of what it is to be agentially responsible for the changes and states in the world that result from our actions. In particular, I have focused on interrogating the now popular idea that the agent causes those changes and states in the world that result from their actions, such that their actions amount to causings of those changes and states. I hope to have presented a persuasive case that while human agents and other animal agents can be said to cause changes in and states of the world, and that the results of some actions are indeed caused by the agent, such that the agent's action can be said to be a causing those results that are caused by the agent, there are numerous cases of results of actions where this is not so.

I have argued that basic actions have results that are identifiable with the actions themselves, and an action cannot be said to be a causing of a result that is identifiable with itself. In addition, I have argued that there are cases where the results of actions are causal pre-requisites of those actions that they are results of. And, an action cannot be said to be a causing of a result that is a causal pre-requisite for itself. Finally, I have also argued that there are actions of creating and changing abstract artefacts that have results which are caused neither by the agent nor by their action, and are, instead non-causally determined by the agent's action. Again, an action cannot be said to be a causing of a result that is caused neither by the agent nor by their action, and is instead non-causally determined by the agent's action.

I think that we should give up on the idea that for an agent to be agentially responsible for some change or state in the world is, at least partly, for the agent to cause that change or state, such that their action amounts to a causing by them of that change or state.

In fact, I think that we should also give up the simpler idea that for an agent to be agentially responsible for some change or state in the world is, at least partly, for the agent to cause that change or state. I have indicated cases of actions with results that are not caused by the agent at all. I suggest that we instead consider that the concept of *agential responsibility* might be a primitive concept. I will here say more about why I think we should conclude in this manner, rather than supposing that *agential responsibility* is a disjunctive concept, to be understood simply as the relationship between an agent and results of an action of theirs that are either identical with the action, caused by the action, causal pre-requisites for the action, or non-causally determined by the action.

Against a Disjunctive Concept of Agential Responsibility

I indicate now why I suppose that even though we can identify results of actions as changes or states that are either identical with actions, caused by actions, causal pre-requisites of actions, or non-causally determined by actions, we should not suppose that *agential responsibility* is a disjunctive concept understood in terms of identity, causation and non-causal determination. First off, it should be recalled that not all events and states that are causal pre-requisites for an action are results of that action. In that case then we cannot give *sufficient* conditions for agential responsibility in terms of identity with, causation by/of and non-causal determination by actions. What is more, while the disjunction of these relations may indeed be necessary for agential responsibility, this strikes me as most plausibly derivative of the fact that the changes and states that are results of our actions are those whose occurrences are *explained* by the occurrence of our actions. That those occurrences that are explained by the occurrence of our actions are those that identical to, cause, caused by, or non-causally determined by our actions is simply because these are the various kinds of real-world relations that are required for explanation. Moreover, one can grasp the concept of *agential responsibility* without grasping the concept of non-causal determination. Similarly, while being red, green, blue, or yellow etc. is necessary for being coloured, *is*

coloured is not plausibly a disjunctive concept of being one of all the various colours. Being some particular colour is simply required for something to be coloured at all. As Williamson points out, “[o]ne can grasp the concept *is coloured* without grasping the concept *is green*” (2000, p. 33).¹⁸⁵

Finally, it should be acknowledged that had it in fact been the case that the agent causes all those changes and states that are results of their actions (such that this is not a merely tautologous claim), we might at least be said to have shed some illumination on the nature of agential responsibility *and* action. To act, it could then be said, as agent-causal theorists of action do indeed say, is to cause some change or state. But, we have drawn the conclusion instead that agents do not cause, in any sense, all those changes and states that are result of their actions, and that we can only, instead, hold that results of actions are changes or states whose occurrences are explained by the occurrence of those actions. As such, we do not have any real elucidation with regards to the positive nature of agential responsibility and action. At least, what we have concluded does not give any elucidation with regards to the positive nature of the acting which generates agential responsibility, since it does not provide any necessary non-agential conditions for acting.

I think that this at least encourages us, then, to the conclusion that *action*, *agency* and *agential responsibility* are primitive concepts that form a tight conceptual circle, and which cannot be elucidated in merely non-agential terms. Yet, how these concepts interconnect, along with those other agential concepts that were discussed in Chapter 1, such as *intention to act*, *awareness of action*, and *knowledge of action*, may yet allow for elucidation of our various agential concepts. As Strawson maintained, a concept might be “complex, in the sense that its philosophical elucidation requires the establishing of its connections with other

¹⁸⁵ Williamson argues that *knows*, like *coloured* is not a disjunctive concept, even though it is the case that “if one knows that A, then there is a specific way in which one knows; one can see or remember or ... that A.” He maintains that “one can grasp the concept *knows* without grasping the concept *sees*” (2000, p. 34).

concepts, and yet at the same time irreducible, in the sense that it cannot be defined away, without circularity, in terms of those other concepts to which it is necessarily related” (Strawson 1992, p. 23). Each of our various agential concepts — *action*, *agency*, *agential responsibility*, *intention to act*, *awareness of action*, and *knowledge of action* etc. — is very plausibly an example of a concept that is complex but irreducible in just this way. It strikes me as very plausible that none of these agential concepts can be defined away, without circularity, in non-agential terms.

References

- Aimar, Simona (2011). 'Counterfactuals, Overdetermination and Mental Causation.' *Proceedings of the Aristotelian Society* 111 (3):469-477.
- Alexander, S. (1920). *Space, Time, and Deity: the Gifford Lectures at Glasgow, 1916-1918* (Vol. 2). Macmillan.
- Alvarez, Maria (1999). 'Actions and Events: Some Semantical Considerations.' *Ratio* 12 (3):213-239.
- Alvarez, Maria and Hyman, John (1998). 'Agents and their Actions.' *Philosophy* 73 (2):219-245.
- Anscombe, G. E. M. (1979). 'Under a Description.' *Noûs* 13 (2):219-233.
- (1981). 'Causality and Determinism.' In *Metaphysics and the Philosophy of Mind: Collected Philosophical Papers Volume II*. University of Minnesota Press.
- (2000). *Intention*. Harvard University Press.
- Aquinas, Thomas (1976). *Summa Contra Gentiles Book Two: Creation*. James F. Anderson (trans.). University of Notre Dame Press.
- (2012). 'Creation, the First Effect of the Divine Power' in *The Power of God: By Thomas Aquinas*. Richard J. Regan (trans. & ed.). Oxford University Press USA.
- Aristotle (1984) *The Complete Works of Aristotle*. Jonathan Barnes (ed.). Princeton University Press.

Armstrong, D. M. (1968). *A Materialist Theory of the Mind*. Routledge.

——— (1973). 'Acting and Trying.' *Philosophical Papers* 2 (1):1-15.

——— (1978). *Nominalism and Realism Vol I: Universals and Scientific Realism*. Cambridge University Press.

Atwell, John E. (1969). 'The Accordion Effect Thesis.' *Philosophical Quarterly* 19 (77):337-342.

Aune, Bruce (1977). *Reason and Action*. Reidel.

Baier, Annette (1971). 'The Search for Basic Actions.' *American Philosophical Quarterly* 8 (2):161-170.

Baker, Lynne Rudder (1993). 'Metaphysics and Mental Causation.' In John Heil and Alfred R. Mele (eds.), *Mental Causation*. Oxford University Press.

Balslev, D., Cole, J., and Miall R. C. (2007). 'Proprioception Contributes to the Sense of Agency during Visual Observation of Hand Movements: Evidence from Temporal Judgments of Action.' *Journal of Cognitive Neuroscience* 19(9): 1535-1541.

Barnes, Elizabeth (2012). 'Emergence and Fundamentality.' *Mind* 121 (484): 873-901.

Beebe, Helen (1998). 'Do Causes Raise the Chances of Effects?' *Analysis* 58 (3): 182–190.

——— 'Causing and Nothingness.' In L. A. Paul, E. J. Hall & J. Collins (eds.), *Causation and Counterfactuals*. MIT Press.

Bennett, Jonathan (1973). 'Shooting, Killing and Dying.' *Canadian Journal of Philosophy* 2 (3):315-323.

——— (1984). 'Counterfactuals and Temporal Direction.' *Philosophical Review* 93 (1):57-91.

——— (1988). *Events and Their Names*. Oxford University Press UK.

Bennett, Karen (2003). 'Why the Exclusion Problem Seems Intractable and How, Just Maybe, to Tract it.' *Noûs* 37 (3):471-97.

Bishop, John D. (1983). 'Agent-Causation.' *Mind* 92 (January):61-79.

——— (1990). *Natural Agency: An Essay on the Causal Theory of Action*. Cambridge University Press.

——— (2011). 'Review: Thompson, Michael. Life and Action: Elementary Structures of Practice and Practical Thought.' *Ethics* 122 (1):212-220.

Block, Ned (2003). 'Do Causal Powers Drain Away.' *Philosophy and Phenomenological Research* 67 (1):133-150.

Bonomi, A. (1997). 'The Progressive and the Structure of Events.' *Journal of Semantics* 14 (2):173-205.

Bontly, Thomas D. (2002). 'The Supervenience Argument Generalizes.' *Philosophical Studies* 109 (1):75-96.

Borges, Jorge Luis (1998). *Volume 3 of Collected Fictions*. Andrew Hurley (trans.). Viking.

Boyle, Matthew and Lavin, Douglas (2010). 'Goodness and Desire.' In Sergio Tenenbaum (ed.), *Desire, Practical Reason, and the Good*. Oxford University Press.

Brand, Myles (1968). 'Danto on Basic Actions.' *Noûs* 2 (2):187-190.

——— (1984). 'Intending and Acting: Toward a Naturalized Action Theory.' *Journal of Philosophy* 84 (1):49-54.

Brent, Michael (2017). 'Agent Causation as a Solution to the Problem of Action.' *Canadian Journal of Philosophy* 47 (5):656-673.

Broad, C. D. (2016). *Determinism, Indeterminism, and Libertarianism: An Inaugural Lecture*. Cambridge University Press.

Butterfield, J. (1989). 'A Space-Time Approach to the Bell Inequality.', in J. T. Cushing and E. McMullin (eds), *Philosophical Consequences of Quantum Theory: Reflections on Bell's Theorem*. University of Notre Dame Press.

——— (1992a). 'Bell's Theorem: What it Takes.' *British Journal for the Philosophy of Science* 43:41–83.

——— (1992b). 'David Lewis Meets John Bell.' *Philosophy of Science* 59:26–43.

——— (2007). 'Stochastic Einstein Locality Revisited.' *British Journal for the Philosophy of Science* 58:805–67.

Cameron, Ross (2008a). 'There are No Things That are Musical Works'. *British Journal of Aesthetics* 48 (3):295-314.

——— (2008b). ‘Turtles All the Way Down: Regress, Priority and Fundamentality.’ *Philosophical Quarterly* 58 (230):1-14.

Caplan, Ben and Matheson, Carl (2004). ‘Can a Musical Work Be Created?’ *British Journal of Aesthetics* 44 (2):113-134.

——— (2006). ‘Defending Musical Perdurantism.’ *British Journal of Aesthetics* 46 (1):59-69.

Carroll, Noël (1998). *A Philosophy of Mass Art*. Oxford University Press.

Cartwright, Nancy. (1989). *Nature’s Capacities and Their Measurement*. Oxford: Oxford University Press.

——— (2002). ‘Against Modularity, the Causal Markov Condition, and Any Link Between the Two: Comments on Hausman and Woodward.’ *British Journal for the Philosophy of Science* 53(3): 411–53.

Chisholm, Roderick M. (1966). ‘Freedom and Action.’ In Keith Lehrer (ed.), *Freedom and Determinism*. Random House.

——— (1969). ‘Some Puzzles about Agency.’ in Karel Lambert (ed.) *The Logical Way of Doing Things*. Yale University Press.

——— (1971). ‘Reflections on Human Agency.’ *Idealistic Studies* 1 (1):33-46.

——— (1976a). *Person and Object: A Metaphysical Study*. Open Court.

——— (1976b). ‘The Agent as Cause.’ In M. Brand and D. Walton (eds.), *Action Theory*. Reidel.

Clarke, Randolph (2003). *Libertarian Accounts of Free Will*. Oxford University Press.

Clarke, Timothy (2015). 'Aristotle and the Ancient Puzzle about Coming to Be.' *Oxford Studies in Ancient Philosophy* 49:129-150.

Cole, J. (1991). *Pride and the Daily Marathon*. Duckworth.

Cole, J. and Paillard, J. (1995). 'Living Without Touch and Peripheral Information about Body Position and Movement: Studies with Deafferented Subjects.' in J. Bermudez, A. Marcel, and N. Eilan (eds.) *The Body and The Self*. MIT Press.

Coope, Ursula (2007). 'Aristotle on Action.' *Aristotelian Society Supplementary Volume* 81 (1):109–138.

Correia, Fabrice (2008). 'Ontological Dependence.' *Philosophy Compass* 3 (5): 1013-1032.

Crane, Tim (1995). 'The Mental Causation Debate.' *Proceedings of the Aristotelian Society* 69:211-36.

Currie, Gregory (1989). *An Ontology of Art*. Macmillan.

Danto, Arthur (1963). 'What we Can Do.' *Journal of Philosophy* 60 (15): 435-445.

——— (1973). *Analytical Philosophy of Action*. Cambridge University Press.

Davidson, Donald (1982). 'Rational Animals.' *Dialectica* 36 (4):317-28.

——— (2001). *Essays on Actions and Events: Philosophical Essays Volume 1*. Clarendon Press.

——— (2001a). 'Actions, Reasons, and Causes.' In Davidson (2001).

——— (2001b). 'Agency.' In Davidson (2001).

——— (2001c). 'Freedom to Act.' In Davidson (2001).

——— (2001d). 'Intending.' In Davidson (2001).

——— (2001e). 'The Logical Form of Action Sentences.' In Davidson (2001).

——— (2001f). 'Causal Relations.' In Davidson (2001).

——— (2001g). 'The Individuation of Events.' In Davidson (2001).

——— (2001h). 'Events as Particulars.' In Davidson (2001).

——— (2001i). 'Adverbs of Action.' In Davidson (2001).

——— (2001j). 'Reply to Quine on Events.' In Davidson (2001).

——— (2004). *Problems of Rationality*. Oxford University Press.

Davies, Stephen (2001). *Musical Works and Performances: A Philosophical Exploration*. Oxford University Press.

Davies, David (2009). 'Dodd on the 'Audibility' of Musical Works.' *British Journal of Aesthetics*, 49(2), 99–108.

De Beauvoir, Simone (1992). *Hard Times: Force of Circumstance II*. Richard Howard (trans.). Marlowe & Company.

DeGrazia, David (2009). 'Self-Awareness in Animals.' In Robert W. Lurz (ed.), *The Philosophy of Animal Minds*. Cambridge University Press. pp. 201–217.

Descartes, René (1998). *Discourse on Method and Meditations on First Philosophy*. Donald A. Cress (trans.). Hackett Publishing Co.

——— (2015). *The Passions of the Soul and Other Late Philosophical Writings*. Michael Moriarty (trans.). Oxford University Press UK.

Dodd, Julian (2000). 'Musical Works as Eternal Types'. *British Journal of Aesthetics* 40 (4):424-440.

——— (2002). 'Defending Musical Platonism.' *British Journal of Aesthetics* 42 (4):380-402.

——— (2007). *Works of Music: An Essay in Ontology*. Oxford University Press.

Dorr, Cian (2016). 'To Be F Is To Be G.' *Philosophical Perspectives* 30 (1):39-134.

Dowe, P. (2001). 'A Counterfactual Theory of Prevention and 'Causation' by Omission.' *Australasian Journal of Philosophy* 79 (2):216-226.

Dowty, David R. (1977). 'Toward a Semantic Analysis of Verb Aspect and the English 'Imperfective' Progressive.' *Linguistics and Philosophy* 1 (1):45-77.

——— (1979). *Word Meaning and Montague Grammar*. D. Reidel.

Dretske, F. I. (1967). 'Can Events Move?' *Mind* 76 (304):479-492.

Eales, Richard (2002). *Chess: the History of a Game*. Hardinge Simpole Publishing.

Edgington, Dorothy (2011). 'Causation First: Why Causation is Prior to Counterfactuals.' In Christoph Hoerl, Teresa McCormack and Sarah R. Beck (eds.), *Understanding Counterfactuals, Understanding Causation*. Oxford University Press.

Effingham, Nikk (2015). 'The Location of Properties.' *Noûs* 49 (4):846-866.

Ehring, Douglas (2009). 'Causal Relata.' In Helen Beebe, Christopher Hitchcock, and Peter Menzies (eds.), *The Oxford Handbook of Causation*. Oxford University Press.

Evans, Gareth (1982). *The Varieties of Reference*. Oxford University Press.

Evnine, Simon J. (2016). *Making Objects and Events: A Hylomorphic Theory of Artifacts, Actions, and Organisms*. Oxford University Press.

Fales, Evan (1990). *Causation and Universals*. Routledge.

Feinberg, Joel (1965). 'Action and Responsibility.' In Max Black (ed.), *Philosophy in America*. Cornell University Press.

Fenton-Glynn, Luke and Kroedel, Thomas (2015). 'Relativity, Quantum Entanglement, Counterfactuals, and Causation.' *British Journal for the Philosophy of Science* 66 (1):45-67.

Field, Hartry (1982). 'Realism and Anti-Realism About Mathematics.' *Philosophical Topics* 13 (1):45-69.

Fine, Kit (2001). 'The Question of Realism.' *Philosophers' Imprint* 1:1-30.

——— (2008). 'In Defence of Three-Dimensionalism.' *Royal Institute of Philosophy Supplement* 62:1-16.

——— (2012). 'Guide to Ground.' In Fabrice Correia and Benjamin Schnieder (eds.), *Metaphysical Grounding*. Cambridge University Press.

Ford, Anton (2013). 'Is Agency a Power of Self-Movement?' *Inquiry: An Interdisciplinary Journal of Philosophy* 56 (6):597-610.

——— (2014). 'Action and Passion.' *Philosophical Topics* 42 (1):13-42.

——— (2018). 'The Province of Human Agency.' *Noûs* 52 (3):697-720.

Frege, Gottlob (1951). 'On Concept and Object.' *Mind* 60 (238):168-180. P. T. Geach and Max Black (trans.).

Frost, Kim (2016). 'The Antinomy of Basic Action.' In Roman Altshuler and Michael J. Sigrist (eds.) *Time and the Philosophy of Action*. Routledge.

Galton, Antony and Mizoguchi, Riichiro (2009). 'The Water Falls but the Waterfall does not Fall: New Perspectives on Objects, Processes and Events.' *Applied Ontology* 4 (2):71-107.

Geach, P. T. (1956). 'Good and Evil.' *Analysis* 17 (2):33 - 42.

——— (1969). *God and the Soul*. Routledge.

Ginet, Carl (1990). *On Action*. Cambridge University Press.

Glennan, Stuart (1996). 'Mechanisms and the Nature of Causation.' *Erkenntnis* 44 (1):49-71.

Glynn, Luke (2012). 'Getting Causes from Powers, by Stephen Mumford and Rani Lill Anjum.' *Mind* 121 (484):1099-1106.

Goldman, Alvin I. (1970). *A Theory of Human Action*. Princeton University Press.

Hacker, P. M. S. (1982). 'Events and Objects in Space and Time.' *Mind* 91 (361): 1-19.

Haddock, Adrian (2005). 'At One with our Actions, but at Two with our Bodies: Hornsby's Account of Action.' *Philosophical Explorations* 8 (2):157 – 172.

——— (2010). 'Bodily Movements.' In Timothy O'Connor and Constantine Sandis (eds.) *A Companion to the Philosophy of Action*. Blackwell.

——— (2011). "The Knowledge That a Man Has of His Intentional Actions"?' In Anton Ford, Jennifer Hornsby, and Frederick Stoutland (eds.), *Essays on Anscombe's Intention*. Harvard University Press.

Hall, Barbara (1965). *Subject and Object in Modern English*. Doctoral Dissertation, MIT.

Hall, Ned (2004). 'Two Concepts of Causation.' In John Collins, Ned Hall & Laurie Paul (eds.), *Causation and Counterfactuals*. MIT Press.

Paul, L. A. & Hall, Ned (2013). *Causation: A User's Guide*. Oxford University Press UK.

Hampshire, Stuart (1959). *Thought and Action*. University of Notre Dame Press.

Harré, Rom and E. H. Madden. (1975). *Causal Powers: A Theory of Natural Necessity*. Oxford: Oxford University Press.

Hart, H. L. A. and Honoré, Tony (1959). *Causation in the Law*. Oxford University Press UK.

Hawley, Katherine (2015). 'Temporal Parts' in Edward N. Zalta (ed.) *Stanford Encyclopedia of Philosophy*, URL = <<https://plato.stanford.edu/archives/spr2018/entries/temporal-parts/>>.

Hazlett, A. (2013). 'Against Repeatable Artworks', in Mag Uidhir, C. (ed), *Art and Abstract Objects*. Oxford University Press.

Hempel, Carl (1965). *Aspects of Scientific Explanation and Other Essays in the Philosophy of Science*. The Free Press.

Hick, D. H. (2011). 'Toward an Ontology of Authored Works.' *British Journal of Aesthetics* 51 (2):185-199.

Higginbotham, J. (1985) 'On Semantics.' *Linguistic Inquiry* 16, 547-93.

Hobbes, Thomas (2008). *Leviathan*. J. C. A. Gaskin (ed.). Oxford University Press.

Hornsby, Jennifer (1979). 'Actions and Identities.' *Analysis* 39 (4):195-201.

——— (1980). *Actions*. Routledge and Kegan Paul.

——— (1996). *Simple Mindedness: In Defense of Naive Naturalism in the Philosophy of Mind*. Harvard University Press.

——— (2004). 'Agency and Actions.' *Royal Institute of Philosophy Supplement* 55:1-23.

——— (2005). 'Semantic Knowledge and Practical Knowledge.' *Aristotelian Society Supplementary Volume* 79 (1):107-145.

——— (2008). 'Agency and Alienation.' In M. de Caro and D. MacArthur (eds.) *Naturalism In Question*. Harvard University Press.

——— (2011). 'Actions in their Circumstances.' In Anton Ford, Jennifer Hornsby and Frederick Stoutland (eds.), *Essays on Anscombe's Intention*. Harvard University Press.

——— (2012). 'Actions and Activity.' *Philosophical Issues* 22 (1):233-245.

——— (2013). 'Basic Activity.' *Aristotelian Society Supplementary Volume* 87 (1): 1-18.

——— (2018). 'Acts According to Hyman.' *Philosophy and Phenomenological Research* 97 (1):238-242.

Hyman, John (1992). 'The Causal Theory of Perception'. *Philosophical Quarterly* 42 (168):277-296.

——— (2015). *Action, Knowledge, and Will*. Oxford University Press.

Ingram, H. A., van Donkelaar, P., Cole, J., Vercher, J.-L., Gauthier, G. M. and Miall, R. C. (2000). 'The Role of Proprioception and Attention in a Visuomotor Adaptation Task.' *Experimental Brain Research* 132(1): 114–126.

Johnson, Jeri (1993). 'Composition and Publication History.' In James Joyce's *Ulysses*. Oxford University Press.

Johnson, W. E. (1892). 'The Logical Calculus.' *Mind* 1 (2):235-250.

——— (1924). *Logic, Part III*. Cambridge University Press.

Juvshik, Tim (2017). 'Abstract Objects, Causal Efficacy, and Causal Exclusion.' *Erkenntnis*:1-23.

Kamp, Hans (1975). 'Two Theories About Adjectives.' In Edward L. Keenan (ed.), *Formal Semantics of Natural Language*. Cambridge University Press.

Kane, Robert (1985). *Free Will and Values*. State University of New York Press.

Kant, Immanuel (1999). *Critique of Pure Reason*. Paul Guyer and Allen W. Wood (trans.). Cambridge University Press.

Kaplan, David (1990). 'Words.' *Aristotelian Society Supplementary Volume* 64 (1): 93-119.

Kim, Jaegwon (1993). *Supervenience and Mind: Selected Philosophical Essays*. Cambridge University Press.

——— (1993a). 'Causation, Nomic Subsumption, and the Concept of Event.' In Kim (1993).

——— (1993b). 'Events as Property Exemplifications.' In Kim (1993).

——— (1998). *Mind in a Physical World: An Essay on the Mind-Body Problem and Mental Causation*. MIT Press.

——— (2005). *Physicalism, or Something Near Enough*. Princeton University Press.

——— (2008). 'Reduction and Reductive Explanation: is One Possible Without the Other?' In Jakob Hohwy and Jesper Kallestrup (eds.), *Being Reduced: New Essays on Reduction, Explanation, and Causation*. Oxford University Press.

Kment, Boris (2010). 'Causation: Determination and Difference-Making.' *Noûs* 44 (1):80-111.

——— (2014). *Modality and Explanatory Reasoning*. Oxford University Press.

Koslicki, Kathrin (2013). 'Ontological Dependence: An Opinionated Survey.' In Benjamin Schnieder, Miguel Hoeltje and Alex Steinberg (eds.), *Varieties of Dependence: Ontological Dependence, Grounding, Supervenience, Response-Dependence (Basic Philosophical Concepts)*. Philosophia Verlag.

Kroedel, Thomas (2008). 'Mental Causation as Multiple Causation.' *Philosophical Studies* 139 (1):125-143.

Landman, Fred (1992). 'The Progressive.' *Natural Language Semantics* 1 (1):1-32.

Larson, F., and Segal, G. (1995) *Knowledge of Meaning*. MIT Press.

Lavin, Douglas (2013). 'Must There Be Basic Action?' *Noûs* 47 (2):273-301.

Levin, B. (1993). *English Verb Classes and Alternations*. The University of Chicago Press.

Levinson, Jerrold (1980). 'What a Musical Work is'. *Journal of Philosophy* 77 (1): 5-28.

Lewis, David K. (1973). 'Counterfactuals and Comparative Possibility.' *Journal of Philosophical Logic* 2: 418–446.

——— (1986a). *On the Plurality of Worlds*. Wiley-Blackwell.

——— (1986b). *Philosophical Papers Vol. II*. Oxford University Press.

——— (1986c). 'Causation.' In Lewis (1986b).

——— (1986d). 'Causal Explanation.' In Lewis (1986b).

——— (1986e). 'Events.' In Lewis (1986b).

——— (2002). 'Tensing the Copula.' *Mind* 111 (441):1-14.

——— (2004). 'Causation as Influence.' In John Collins, Ned Hall, and L. A. Paul (eds.), *Causation and Counterfactuals*. Cambridge, MA: MIT Press.

List, Christian and Menzies, Peter (2009). 'Nonreductive Physicalism and the Limits of the Exclusion Principle.' *Journal of Philosophy* 106 (9):475-502.

Locke, John (1979). *The Clarendon Edition of the Works of John Locke: An Essay Concerning Human Understanding*. Peter H. Nidditch (ed.). Clarendon Press.

Lombard, Lawrence Brian (1986). *Events: A Metaphysical Study*. Taylor and Francis Group.

Lowe, E. J. (1994). 'Ontological Dependency.' *Philosophical Papers* 23 (1):31-48.

——— (2002). *A Survey of Metaphysics*. Oxford University Press.

——— (2006). *The Four-Category Ontology: A Metaphysical Foundation for Natural Science*. Clarendon Press.

——— (2008). *Personal Agency: The Metaphysics of Mind and Action*. Oxford University Press.

Maravita, A. and Iriki, A. (2004). 'Tools for the Body (Schema).' *Trends in Cognitive Sciences* 8(2): 79–86.

Markosian, Ned (2005). 'Against Ontological Fundamentalism.' *Facta Philosophica* 7 (1):69-83.

Margolis, Joseph (1977). 'The Ontological Peculiarity of Works of Art.' *Journal of Aesthetics and Art Criticism* 36 (1):45-50.

Maslen, Cei; Horgan, Terry; and Daly, Helen (2009). 'Mental Causation.' In Helen Beebe, Christopher Hitchcock, and Peter Menzies (eds.), *The Oxford Handbook of Causation*. Oxford University Press.

Mayr, Erasmus (2011). *Understanding Human Agency*. Oxford University Press.

McCann, Hugh (1974). 'Volition and Basic Action.' *Philosophical Review* 83 (4): 451-473.

McDowell, John (1994). *Mind and World*. Harvard University Press.

——— (2011a). 'Anscombe on Bodily Self-Knowledge.' In Anton Ford, Jennifer Hornsby, and Frederick Stoutland (eds.), *Essays on Anscombe's Intention*. Harvard University Press.

——— (2011b). 'Some Remarks on Intention in Action.' *The Amherst Lecture in Philosophy* 6: 1–18. URL = <<http://www.amherstlecture.org/mcdowell2011/>>.

- McTaggart, John (1921). *The Nature of Existence*. Cambridge University Press.
- Mele, Alfred R. (2003). *Motivation and Agency*. Oxford University Press.
- Mellor, D. H. (1981). *Real Time*. Cambridge University Press.
- (1995). *The Facts of Causation*. Routledge.
- (1998). *Real Time II*. Routledge.
- Menzies, Peter (2009). 'Platitudes and Counterexamples.' In Helen Beebe, Christopher Hitchcock, and Peter Menzies (eds.), *The Oxford Handbook of Causation*. Oxford University Press.
- Menzies, Peter and List, Christian (2010). 'The Causal Autonomy of the Special Sciences.' In Cynthia Mcdonald and Graham Mcdonald (eds.), *Emergence in Mind*. Oxford University Press.
- Merricks, Trenton (2001). *Objects and Persons*. Oxford University Press.
- Mithun, Marianne (2000). 'Valency-Changing Derivation in Central Alaskan Yup'ik.' in R.M.W Dixon and Alexandra Y. Aikhenvald (eds.) *Changing Valency: Case Studies in Transitivity*. Cambridge University Press.
- Montague, Richard (1974). 'Towards a Proper Treatment of Quantification in English.' In Richmond H. Thomason (ed.), *Formal Philosophy*. Yale University Press.
- Mourelatos, Alexander P. D. (1978). 'Events, Processes, and States.' *Linguistics and Philosophy* 2 (3):415-434.

Mumford, Stephen and Anjum, Rani Lill (2011). *Getting Causes From Powers*. Oxford University Press.

Nagel, Thomas (1986). *The View From Nowhere*. Oxford University Press.

Neale, Stephen (1993). 'Descriptions.' *Philosophical Quarterly* 43 (172):392-394.

——— (2001). *Facing Facts*. Clarendon Press.

Nida-Rümelin, Martine (2007). 'Doings and Subject Causation.' *Erkenntnis* 67 (2):255 - 272.

Nolan, D. (1997). 'Impossible Worlds: A Modest Approach.' *Notre Dame Journal of Formal Logic* 38: 535–72.

Noordhof, Paul (1999). 'Micro-Based Properties and the Supervenience Argument: A Response to Kim.' *Proceedings of the Aristotelian Society* 99 (1): 115-18.

Nunberg, Geoffrey (1995). 'Transfers of Meaning.' *Journal of Semantics* 12 (2): 109-132.

O'Brien, Lucy (2017). 'Actions as Prime.' *Royal Institute of Philosophy Supplement* 80:265-285.

O'Connor, Timothy (1995). 'Agent Causation.' In *Agents, Causes, and Events: Essays on Indeterminism and Free Will*. Oxford University Press.

O'Connor, Timothy (2000). *Persons and Causes: The Metaphysics of Free Will*. Oxford University Press USA.

O'Shaughnessy, Brian (1980). *The Will: A Dual Aspect Theory (2 Vols. 1st Ed.)*. Cambridge University Press.

O'Shaughnessy, Brian (2008). *The Will: A Dual Aspect Theory (2 Vols. 2nd Ed.)*. Cambridge University Press.

Owen, G. E. L. (1978). 'The Presidential Address: Particular and General.' *Proceedings of the Aristotelian Society* 79:1-21.

Parsons, Josh (2007). 'Theories of Location.' *Oxford Studies in Metaphysics* 3:201.

Parsons, Terence (1989). 'The Progressive in English: Events, States and Processes.' *Linguistics and Philosophy* 12 (2):213-241.

——— (1990). *Events in the Semantics of English: A Study in Subatomic Semantics*. MIT Press.

Paul, L. A. and Hall, Ned (2013). *Causation: A User's Guide*. Oxford University Press UK.

Peacocke, Christopher (1979). *Holistic Explanation: Action, Space, Interpretation*. Clarendon Press.

——— (2006). 'Mental Action and Self-Awareness.' In Jonathan D. Cohen and Brian P. McLaughlin (eds.), *Contemporary Debates in the Philosophy of Mind*. Blackwell.

Peirce, C. S. (1933). *Collected Papers, IV: The Simplest Mathematics*. C. C. Hartshorne and P. Weiss (eds.). Harvard University Press.

Pianesi, F., and Varzi, A. (2000). 'Events and Event Talk.' In J. Higginbotham, F. Pianesi, and A. C. Varzi (eds.), *Speaking of Events*. Oxford University Press.

Pickard, Hanna (2004). 'Knowledge of Action Without Observation.' *Proceedings of the Aristotelian Society* 104 (3):203-228.

Pietroski, P. (2003). 'Semantics and Metaphysics of Events.' In K. Ludwig (ed.), *Donald Davidson*. Cambridge.

Pink, Thomas (2011). 'Freedom and Action Without Causation: Noncausal Theories of Freedom and Purposive Agency.' In Robert Kane (ed.), *The Oxford Handbook of Free Will: Second Edition*. Oxford University Press.

——— (2016). *Self-Determination: The Ethics of Action, Volume 1*. Oxford University Press.

Plato (1997). *Plato: Complete Works*. John M. Cooper and D. S. Hutchinson (eds.). Hackett Publishing Co..

Prichard, Harold Arthur (1949). *Moral Obligation*. Oxford, Clarendon Press.

Prior, Arthur N. (1949). 'Determinables, Determinates and Determinants.' *Mind* 58 (229):1-20.

——— (1968). *Papers on Time and Tense*. Oxford University Press.

Quirk, Randolph; Greenbaum, Sidney; Geoffrey Leech; and Svartvik, Jan (1985). *A Comprehensive Grammar of the English Language*. Harlow-Longman.

Reid, Thomas (1969). *Essays on the Active Powers of the Human Mind*. Baruch A. Brody (ed.). M.I.T. Press.

Rödl, Sebastian (2002). 'Practice and the Unity of Action.' In Georg Meggle (ed.), *Social Facts & Collective Intentionality*. Hänsel-Hohenhausen.

Rosen, Gideon (2010). 'Metaphysical Dependence: Grounding and Reduction.' In Bob Hale and Aviv Hoffmann (eds.), *Modality: Metaphysics, Logic, and Epistemology*. Oxford University Press.

——— (2012). 'Abstract Objects.' In Edward N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*. URL = <https://plato.stanford.edu/entries/abstract-objects/>

Ruben, David-Hillel (1990). *Explaining Explanation*. Routledge.

——— (1991). 'Review of John Bishop: *Natural Agency*'. *Mind*, 100 :287-90.

——— (2003). *Action and its Explanation*. Oxford University Press.

Russell, Bertrand (1927). *The Analysis of Matter*. Kegan Paul.

Ryle, Gilbert (1949). *The Concept of Mind*. Hutchinson & Co.

Sacks, O. (1982). 'The Leg.' *London Review of Books*, 4 (11):3-5. URL = <https://www.lrb.co.uk/v04/n11/oliver-sacks/the-leg>.

Salmon, Wesley (1984). *Scientific Explanation and the Causal Structure of the World*. Princeton University Press.

Sartre, Jean-Paul (2018). *Being and Nothingness*. Sarah Richmond (trans.) Routledge.

Sawyer, Sarah (2012). 'Cognitivism: A New Theory of Singular Thought?' *Mind and Language* 27 (3):264-283.

- Schaffer, Jonathan (2003a). 'Is There a Fundamental Level?' *Noûs* 37 (3):498–517.
- (2003b). 'Overdetermining Causes.' *Philosophical Studies* 114 (1-2):23 - 45.
- (2004). 'Causes Need not be Physically Connected to their Effects: The Case for Negative Causation.' In Christopher Hitchcock (ed.), *Contemporary Debates in Philosophy of Science*. Blackwell.
- (2016). 'The Metaphysics of Causation.' In Edward N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*. URL = <https://plato.stanford.edu/entries/causation-metaphysics/>
- Schäfer, F. (2009). 'The Causative Alternation.' *Language and Linguistics Compass* 3 (2):641-681.
- Schmaltz, Tad M. (ed.) (2014). *Efficient Causation: A History*. Oxford University Press.
- Schroeter, François (2004). 'Endorsement and Autonomous Agency.' *Philosophy and Phenomenological Research* 69 (3):633 - 659.
- Scriven, Michael (1975). 'Causation as Explanation.' *Noûs* 9 (1):3-16.
- Setiya, Kieran (2011). 'Knowledge of Intention.' In Anton Ford, Jennifer Hornsby, and Frederick Stoutland (eds.), *Essays on Anscombe's Intention*. Harvard University Press.
- (2012). 'Knowing How.' *Proceedings of the Aristotelian Society* 112 (3): 285-307.

Sider, Theodore (1995). 'Sparseness, Immanence, and Naturalness.' *Noûs* 29 (3): 360-377.

——— (2001). *Four Dimensionalism: An Ontology of Persistence and Time*. Oxford University Press.

Simons, Peter (1987). *Parts: A Study in Ontology*. Oxford University Press.

——— (2000). 'Continuants and Occurrents.' *Aristotelian Society Supplementary Volume* 74 (1):59–75.

Small, Will (2012). 'Practical Knowledge and the Structure of Action.' In Günter Abel and James Conant (eds.), *Rethinking Epistemology Volume 2*. De Gruyter.

——— (2016). 'Bodily Movement and its Significance.' *Philosophical Topics* 44 (1):183-206.

——— (forthcoming). 'Basic Action and Practical Knowledge.' *Philosophers' Imprint*.

Stalnaker, R. (1968). 'A Theory of Conditionals.' In *Studies in Logical Theory, American Philosophical Quarterly Monograph Series, 2*. Blackwell.

Steward, Helen (1997). *The Ontology of Mind: Events, Processes, and States*. Oxford University Press.

——— (2000). 'Do Actions Occur Inside the Body?' *Mind and Society* 1 (2): 107-125.

——— (2009a). 'Animal Agency.' *Inquiry: An Interdisciplinary Journal of Philosophy* 52 (3):217-231.

——— (2009b). 'Sub-intentional Actions and the Over-mentalization of Agency.' In Constantine Sandis (ed.), *New Essays on the Explanation of Action*. Palgrave-Macmillan.

——— (2012a). *A Metaphysics for Freedom*. Oxford University Press.

——— (2012b). 'Actions as Processes.' *Philosophical Perspectives* 26 (1):373-388.

——— (2013a). 'Processes, Continuants, and Individuals.' *Mind* 122 (487): 781-812.

——— (2013b). 'Responses.' *Inquiry: An Interdisciplinary Journal of Philosophy* 56 (6):681-706.

——— (2015). 'What is a Continuant?' *Aristotelian Society Supplementary Volume* 89 (1):109-123.

——— (2016). 'Making the Agent Reappear: How Processes Might Help.' In Roman Altshuler and Michael J. Sigrist (eds.), *Time and the Philosophy of Action*. Routledge.

Stout, Rowland (1997). 'Processes.' *Philosophy* 72 (279):19-27.

——— (2010). 'What are you Causing in Acting?' In Jesús H. Aguilar and Andrei A. Buckareff (eds.), *Causing Human Action: New Perspectives on the Causal Theory of Action*. MIT Press.

——— (2016). 'The Category of Occurrent Continuants.' *Mind* 125 (497): 41-62.

Stoutland, Frederick (1968). 'Basic Actions and Causality.' *Journal of Philosophy* 65 (16):467-475.

Strawson, P. F. (1992). *Analysis and Metaphysics: An Introduction to Philosophy*. Oxford University Press.

——— (1996). *Individuals*. Routledge.

Szabó, Zoltán Gendler (2004). 'On the Progressive and the Perfective.' *Noûs* 38 (1):29-59.

——— (2008). 'Things in Progress.' *Philosophical Perspectives* 22 (1):499-525.

Tahko, Tuomas E. and Lowe, E. J. (2015). 'Ontological Dependence.' *Stanford Encyclopedia of Philosophy*. URL = <https://plato.stanford.edu/archives/win2016/entries/dependence-ontological/>

Taylor, Barry (1985). *Modes of Occurrence: Verbs, Adverbs, and Events*. Blackwell.

Taylor, Richard (1966). *Action and Purpose*. Humanities Press.

——— (1992). *Metaphysics*. Prentice Hall.

Thalberg, Irving (1976). 'How Does Agent Causality Work?' In Myles Brand and Douglas Walton (eds.), *Action Theory*. Reidel.

Thomasson, Amie L. (1998). *Fiction and Metaphysics*. Cambridge University Press.

Thompson, Michael (2008). *Life and Action: Elementary Structures of Practice and Practical Thought*. Harvard University Press.

——— (2011). 'Anscombe's Intention and Practical Knowledge.' In Anton Ford, Jennifer Hornsby and Frederick Stoutland (eds.), *Essays on Anscombe's Intention*. Harvard University Press.

Thomson, Judith Jarvis (1971). 'The Time of a Killing.' *Journal of Philosophy* 68 (5):115-132.

Tuozzo, Thomas M. (2014). 'Aristotle and the Discovery of Efficient Causation.' In Tad M. Schmaltz (ed.), *Efficient Causation: A History*. Oxford University Press.

van Gulick, Robert (1993). 'Who's in Charge Here? And Who's Doing All the Work?' In John Heil and Alfred R. Mele (eds.), *Mental Causation*. Oxford University Press.

Velleman, J. David (1992). 'What Happens When Someone Acts?' *Mind* 101 (403):461-481.

Vendler, Zeno (1967). *Linguistics in Philosophy*. Cornell University Press.

von Wright, G. H. (1963). *Norm and Action*. New York: Humanities.

——— (1989). *The Philosophy of Georg Henrik von Wright*. Open Court.

Walter, Sven (2008). 'The Supervenience Argument, Overdetermination, and Causal Drainage: Assessing Kim's Master Argument.' *Philosophical Psychology* 21 (5):673 – 696.

Walters, Lee (2013). 'Repeatable Artworks as Created Types'. *British Journal of Aesthetics* 53 (4):461-477.

——— (2017). 'Are The Statue and The Clay Mutual Parts?' *Noûs*:23-50.

Wasserman, Ryan (2017). 'Material Constitution', in Zalta, Edward N. (ed.) *The Stanford Encyclopedia of Philosophy*, URL = <<https://plato.stanford.edu/archives/fall2017/entries/material-constitution/>>.

Watson, Gary (1982). 'Actions by Jennifer Hornsby.' *Journal of Philosophy* 79 (8): 464-469.

Weslake, Brad (2013). 'Proportionality, Contrast and Explanation.' *Australasian Journal of Philosophy* 91 (4):785-797.

Wiggins, David (1980). *Sameness and Substance*. Harvard University Press.

——— (1985). 'Verbs and Adverbs, and Some Other Modes of Grammatical Combination.' *Proceedings of the Aristotelian Society* 86:273-304.

Wilkins, John (1668). *An Essay Towards a Real Character, and a Philosophical Language*. Printed for S. Gellibrand.

Williams, Bernard (2005). *Descartes: The Project of Pure Enquiry*. Routledge.

Williamson, Timothy (2000). *Knowledge and its Limits*. Oxford University Press.

Wilson, Jessica M. (2014). 'No Work for a Theory of Grounding.' *Inquiry: An Interdisciplinary Journal of Philosophy* 57 (5-6):535-579.

——— (2016). 'The Unity and Priority Arguments for Grounding.' In Ken Aizawa and Carl Gillett (eds.), *Scientific Composition and Metaphysical Ground*. Palgrave MacMillan.

——— (2017). 'Determinables and Determinates', in Zalta, Edward N. *The Stanford Encyclopedia of Philosophy*, URL = <<https://plato.stanford.edu/archives/spr2017/entries/determinate-determinables/>>.

Wittgenstein, Ludwig (1958). *The Blue and Brown Books*. Harper & Row.

Whittle, Ann (2003). 'Singularism.' *Proceedings of the Aristotelian Society* 103 (3): 371–379.

——— (2016). 'A Defense of Substance Causation.' *Journal of the American Philosophical Association* (1):1-20.

Wolfson, Ben (2016). 'Second Nature and Basic Action.' In Roman Altshuler and Michael J. Sigrist (eds.) *Time and the Philosophy of Action*. Routledge.

Wollheim, Richard (2015). *Art and its Objects*. Cambridge University Press.

Wolterstorff, N. (1980). *Works and Worlds of Art*. Oxford: Clarendon Press.

Won, Chiwook (2014). 'Overdetermination, Counterfactuals, and Mental Causation.' *Philosophical Review* 123 (2):205-229.

Wong, Hong Yu (2018). 'Embodied Agency.' *Philosophy and Phenomenological Research* 97 (3):584-612.

Woodward, James (2003). *Making Things Happen: A Theory of Causal Explanation*. Oxford University Press.

Yablo, Stephen (1992). 'Mental Causation.' *Philosophical Review* 101 (2): 245-280.

———— (1997). 'Wide Causation'. *Noûs* 31:251-281.

Zhong, Lei (2014). 'Sophisticated Exclusion and Sophisticated Causation.' *Journal of Philosophy* 111 (7):341-360.