

Introduction

This is a study of Aristotle's understanding of accidental causation. As a first pass, to be improved upon throughout, accidental causation manifests when something is accidental to a cause or effect. Examples of this sort of phenomenon abound in Aristotle's works. One is a person who happens to be both a doctor and a builder: When this person heals someone, Aristotle says that the builder accidentally causes health. Another example is a house's happening to be aesthetically pleasing, in which case the house's builder accidentally causes the house's beauty.

These examples are central to Aristotle's notion of accidental causation. Typically, scholars understand Aristotle as holding that accidental causes are causally efficacious of their effects and yet somehow deficient in this causal activity.¹ For instance, the builder accidentally causes health, and by this we should understand that the builder brings about health, as does the doctor who non-accidentally causes health, but the builder's status relative to this effect is somehow causally lacking. This deficiency is the usual focus of scholarly attention: Some have it that, for Aristotle, the doctor explains, or figures centrally in an explanation of, the patient's recovery, whereas the builder does not; some have it that the builder only rarely causes health, whereas the doctor nearly always does. But regardless of the nature of the deficiency of accidental causes, the consensus view is that they cause their effects.

I argue for a deviant account of accidental causation. I attribute to Aristotle the thought that accidental causes are causally inert relative to

¹ There are numerous article-length treatments of accidental causes in Aristotle, especially in connection with luck and chance, though notably there are no extended treatments of accidental causation in its own right. The following contain helpful discussions: Allen (2015), Annas (1982), Charles (1984, 2003), Charlton (1970), Denyer (1991), Dudley (2012), Everson (1997), Fine (1981), D. Frede (1985, 1992), Freeland (1991), Hankinson (1998, 2002), Heinaman (1985), Ide (1993), Irwin (1988), Johnson (2005), Judson (1991), Kelsey (2004), Kirwan (1993), Kress (2020, 2021), Lennox (1984), Leunissen (2010), Lorenz (2015), Meyer (1992), Rossi (2011), and Sorabji (1980).

their effects.² On my interpretation, the causal relation that obtains between non-accidental causes and their effects simply does not obtain between accidental causes and their effects. The builder who accidentally causes health does not, in fact, cause health, not even when she happens also to be the same person as the doctor. Now, it is clear that accidental causes may be intimately related to what do cause their effects. The doctor and the builder are, after all, the same human being. Because accidental causes do not cause their effects, and yet are closely tied to what do, I call my account of accidental causation *the illusory cause account*.

My argument for this view comes in three parts. First, I argue that various accidental causes are not causally connected to their so-called effects. The most common example in these cases is that of some expert or other: a doctor, a builder, a sculptor, or a confectioner. Each of these is what Aristotle calls an accidental unity, a compound of a human substance and some characteristic power. We will see, in *Metaphysics* 6, that in these examples of accidental causes, these characteristic powers are not activated and the goals of the experts not realized. For example, the builder's accidentally causing health is no realization of her function as a builder, no activation of her power to build. But this realization and activation are constitutive of causation for Aristotle, so the builder's accidentally causing health, whatever that might be, fails to be causation. Another accidental cause that I examine in detail is luck, one of the most philosophically significant accidental causes in Aristotle's works. I show that luck, as it is described in *Physics* 2, is an accidental cause that is not casually connected to its so-called effects. With this conclusion drawn, I turn to the second part of my argument, an analysis of the various qualifiers Aristotle uses when making causal claims. I show that, regardless of how Aristotle depicts his particular examples of accidental causes, his understanding of how 'accidental' and related modalities work in causal contexts concludes that accidental causes do not cause their effects. And finally, I argue that this causal disconnect answers long-standing questions of interpretation. These answers provide indirect evidence of the deviant account: Their plausibility

² Throughout, I speak of experts, humans, and colors as causes, as sufficient or insufficient for something. This might sound strange to modern ears, for none of these are events or conditions that could be sufficient or necessary for something. (Frede is valuable here; see M. Frede (1980, 128).) Rather, these things figure in relevant conditions that are necessary and sufficient for there being some effect. Talking in this way is imprecise, but it is quite justified in Aristotle's causal framework, for as we will see, he identifies as causes things lacking the structure of conditions, for example, the builder, Socrates, and pallor.

further supports understanding accidental causes as failing to cause their effects.

I outline the case supporting the illusory cause account in more detail in Section 4.1. But there are three misunderstandings that I want to anticipate before going any further. One might reasonably think that each of these following ideas is constitutive of, or implied by, the illusory cause account:

- (1) Because the builder is an accidental cause, the builder does not cause anything.
- (2) All accidental causes are accidents.
- (3) There is no such thing as accidental causation.

Each of these would be puzzling ingredients in an interpretation of Aristotle. However, none is part of my interpretation, nor are any implied by it; so why might one think as much? In short, it has to do with the contexts in which we find Aristotle speaking of accidental causation. Accidental causation plays a pivotal role in various topics of Aristotle's natural philosophy, including the nature of causation, the causal structure of actions, causal inference, causal powers, luck and chance, and causal priority. As we will see, examining these topics through the lens of accidental causation casts them in a new light, in large part because accidental causation crucially involves accidentality. For Aristotle, what is distinctive about the domain of natural philosophy, the world where things come to be and pass away, is that, in addition to causes and changes, it contains accidents.³ To be sure, it also contains substances, and the importance that Aristotle bestows on substances when explaining his ontology makes them a common point of departure for those interested in his theory of causation. But we must take care not to presume that, for Aristotle, the importance that substances enjoy in ontology transfers, automatically, into etiology. Such a presumption can lead to misunderstandings of many different issues; to ward off these misunderstandings, we must examine Aristotle's causal theory in the proper light.

I argue that the best way to see it in the proper light is to counterbalance the tendency to focus on substances by closely examining the role of accidental causation within it. When we do so, we see that, for example, (1) cannot be attributed to Aristotle. His examples very often feature two different sorts of expert skill: one of which is causally active and the other of which is not. The builder who happens to be a doctor, for instance, is a

³ *Metaphysics* 6.2 [1026b27–1027a28].

person who possesses both the art of building and the art of medicine; when she heals, only the latter is causally efficacious. But these skills are the same kind of entity in Aristotle's causal theory, so it would be strange for the art of building always to lie dormant. And indeed, it is not part of my interpretation that it does always lie dormant, for I take Aristotle's examples to show that accidental causes should be specified relative to some effect: The builder is an accidental cause *of health*, but the builder is not an accidental cause *of a house*; similarly, the fact that the doctor non-accidentally causes health does not imply that the doctor is never an accidental cause. More generally, nothing prevents something's being an accidental cause relative to some effect and a non-accidental cause relative to a different effect. This context-dependence is not something typically seen in Aristotle's discussion of substances and accidents – there is no condition relative to which Socrates is not a human being, and no circumstance in which the art of medicine is not a quality – but it does arise in accidental causation. And with this idea in hand, we can safely say that even though accidental causes fail to cause their effects, Aristotle need not hold that the builder, an accidental cause of health, never causes anything.

Nor is it part of the illusory cause account that (2) all accidental causes are accidents. Again, the primacy of substances in Aristotle's ontology might lead one to infer that accidental causes must be an accident of some sort, on the basis of their association. It is all too easy, for example, to take Aristotle's talk of experts in his examples and infer that these accidental unities are accidental causes. But again, the context-dependence of accidental causation introduces a greater variety of accidental causes than one might expect. We will see that some accidental unities are accidental causes, and that some are non-accidental causes; that some accidents are accidental causes, while some are non-accidental causes; and that some substances are accidental causes, while some are non-accidental causes. It simply comes down to what effects we are tying to the accidental cause in the first place: relative to health, the builder, an accidental unity, is an accidental cause; but relative to a house, that same accidental unity is a non-accidental cause. Simply being *accidental* in some fashion does not imply being *an accidental cause*. Nor does being *substantial* imply being *a non-accidental cause*. And this all stems from a context-dependence that arises in Aristotle's natural philosophy, but not his basic ontology.

Finally, one might very well think that the illusory cause account implies (3), the thought that for Aristotle, there is no such thing as accidental causation. Of course, I do not think it does: According to my

interpretation – and any other reading – accidental causation manifests when the conditions Aristotle sets on there being accidental causation are satisfied. So, regardless of what accidental causes are like, as long as something is accidental to a non-accidental cause or an effect, then there will be accidental causation. But it is likely that this issue turns on a more nuanced line of reasoning, one akin to the following: If accidental causes do not cause their effects, then they do not deserve to be dubbed ‘causes’ in the first place; and if that is so, then there really is no such thing as accidental causation. I handle this refinement in Section 4.2, but the gist of my argument there is that Aristotle sometimes uses ‘accidental’ in such a way that being an accidental F does not imply being an F. Now, such a failure of entailment does not manifest when Aristotle sets out his basic ontology: Someone who is accidentally pale is, in fact, pale. But this is simply another way in which natural philosophy diverges from that ontology: Being an accidental cause does not imply being a cause, just as being a forged Vermeer does not entail being a Vermeer. But a forged Vermeer is still a forgery, and an accidental cause is still an accidental cause, so ultimately, I maintain both that accidental causes are not causes and that there is yet accidental causation.

This book provides a detailed theory of accidental causation, so as to understand better these subtleties, and the broader brushstrokes, of Aristotle’s natural philosophy. To be sure, much work has been done on the issues I examine, but again, it has been done in large part by focusing on substances. Aristotle has much to say, however, about both the substantial and the accidental in his causal theory. The picture that I argue for throughout is, then, more complete than the usual picture of his causal theory, in that it portrays the causal role of the substantial and the accidental alongside each other. At times, this fuller picture shows that some of Aristotle’s positions, previously thought to be well-understood, are surprisingly complex; at times, it shows that there are compelling but neglected features of his account of causation. In both cases, what follows is a consequence of taking Aristotle’s account on its own terms.

I.1 Ontology, Physics, and Their Intersection

Accidental causation brings together two great strands of Aristotle’s thought, accidentality and causation. ‘Accident’ is my translation of the term *συμβεβηκός*, a participle formed from the verb ‘happens’ (*συμβαίνω*). Aristotle often pairs the participle with the preposition ‘by’ (*κατά*), and translators render the resulting phrase variously as ‘coincidental,’

‘incidental,’ and ‘accidental’ – I use ‘accidental’ throughout, and this is not meant to rule out some subtlety implied by the variable terminology of others. Aristotle uses both of these expressions to describe the way in which something is related to something else.⁴ His doing so introduces the first great strand, namely his notion of the accidental.

It is clear that Aristotle holds accidentality to be relational, that when something is accidental, it is always accidental to something else.⁵ It is for this reason that Aristotle easily goes back and forth between talking now of an accident (συμβεβηκός), now of what is accidental (κατὰ συμβεβηκός): An accident is just whatever truly fills the argument place of ‘is accidental to something,’ and something’s being accidental to something else makes the former an accident. But there is more to being accidental than being relational, for Socrates is related both to his pallor and to his essence, yet only one of these items is accidental to Socrates: Socrates’ essence is intrinsic (καθ’ αὐτό) to him, and therefore not likely to be accidental to him.⁶ Rather, accidentality connects two items that fit a certain profile. When *a* is accidental to *b*, *b* is the subject of *a* and ‘accidental to’ indicates the way in which *a* belongs to *b*, namely *a* belongs to *b* neither always nor for the most part.⁷ To return to the example above, the house that is accidentally beautiful is therefore one to which the quality beauty belongs

⁴ Even though it is normally adequate to translate prepositional phrases with an adverb, I am reluctant to translate Aristotle’s predications of accidentality with ‘accidentally.’ As we will see in Section 2.2, accidentality is asymmetric – if *a* is an accident of *b*, *b* is not an accident of *a* – and sentences of the form ‘accidentally, *a* is *b*’ can mask this fact. (Compare: if, necessarily, Cicero is Tully, then necessarily, Tully is Cicero.) I therefore avoid translating Aristotle’s use of κατὰ συμβεβηκός in such a way to suggest that it denotes a sentential operator. For the same reason, I avoid, with only a few exceptions, ‘it is an accident that’ as a translation of variants of συμβαίνειω without a preposition.

⁵ *Metaphysics* 4.4 [1007a35], *Physics* 1.3 [186a34–b17]. On accidentality generally, see Ebert (1998), Graham (1975), Granger (1981), Smith (1997), and Tierney (2001).

⁶ On what is accidental and what is intrinsic being mutually exclusive, see LSJ s.v. ‘συμβαίνειω.’ Of course, Aristotle does speak of ‘the intrinsic accidents’ (τὰ καθ’ αὐτὰ συμβεβηκότεα) in *Posterior Analytics* and elsewhere; however, Socrates’ essence is not an intrinsic accident of Socrates.

Aristotle’s use of ‘intrinsic accident’ is sometimes accommodated in translation by rendering κατὰ συμβεβηκός as ‘coincidental’ or ‘incidental.’ The reason for this is as follows: a typical rendering of καθ’ αὐτό is ‘essential,’ in which case one might translate τὰ καθ’ αὐτὰ συμβεβηκότεα as ‘the essential accidents.’ If one takes ‘essential’ and ‘accidental’ to be incompatible predicates, this translation makes a mess of Aristotle’s thought, and therefore ‘incidental’ or ‘coincidental’ is to be preferred. (See Barnes (1993) and Tierney (2001).) But we can just as easily resolve this issue in our rendering of καθ’ αὐτό: a more literally translation of that phrase is ‘in itself,’ and I take it that ‘intrinsic’ is therefore a perfectly acceptable translation of καθ’ αὐτό. (See Johnson (2005).) Because ‘intrinsic accidents’ does not have the ring of contradiction, I proceed using ‘accidental’ and ‘intrinsic.’

⁷ *Metaphysics* 5.30 [1025a14–16] and *Metaphysics* 6.2 [1026a34ff.]; see also Urbanas (1988, 42). I examine what it means to happen always or for the most part in Sections 4.1.2 and 4.3.2. Aristotle also describes accidentality as a relation that obtains when it is possible both for something to belong and fail to belong to something (*Topics* 1.5 [102b4–26]). None of my arguments in the main text oppose this alternative construal. The reason I explain accidentality in terms of what belongs neither

in a certain way – Aristotle must hold that houses are not, for the most part, beautiful – and from this fact it follows that the builder of the house accidentally caused the house's beauty.

The other great strand is Aristotle's theory of causation. In explaining what causation amounts to, Aristotle frequently uses the word αἴτιον. The basic sense of this term is 'thing responsible,' which is why 'cause' is one of the typical renderings of the word.⁸ For instance, in our example above, the housebuilder is an αἴτιον of the house, which is to say the housebuilder is a thing responsible for the house, a cause of the house. Now, there are shortcomings to this translation, primarily that 'cause' is such a laden term that its use conversationally implies that what Aristotle holds to be an αἴτιον has certain features incompatible with being a cause.⁹ But as we will see, Aristotle holds many of the things he identifies as an αἴτιον to be things that produce or are capable of producing; for instance, the doctor is a producer, a maker of sorts, and the art of health is capable of producing. In these cases, Aristotle's characterization has its roots in the verb 'to make' (ποιεῖν), and making is an activity that is less problematically construed as causal.

Understanding accidental causation involves, then, understanding how these great strands connect. To be sure, that accidental causation is a phenomenon at the intersection of ontology and etiology makes it both of great interest and a springboard for many connected issues. But as we have already seen, it is tempting to presume that a firm grasp of some basic ontological examples will result in a firm grasp of accidental causation in its own right. This temptation introduces a theme I will return to throughout. When we consider just how accidental causation works, surprising details of Aristotle's thought emerge. Now, these details can be difficult to detect, for, very often, we examine Aristotle's physics through the lens of his ontology. And this approach is a reasonable one: The two disciplines examine the very same substances and accidents, and of the two, Aristotle gives only ontology the honorific title 'first philosophy.' But we

always nor for the most part is simply that it will turn out to be more useful than a formulation in terms of possibly belonging and possibly not belonging.

⁸ On the sense of αἴτιον, see Johnson (2005, 40) and Sedley (1998, 115).

⁹ For instance, part of modern sensibility is that causes are events, in which case Aristotle's taking the housebuilder to be an αἴτιον suggests that using 'cause' to characterize Aristotle's account is not always preferable – the housebuilder is simply the wrong kind of thing to be a cause, for the housebuilder is not an event. Some therefore translate the term with 'explanation,' and doing so does fit some of Aristotle's examples better than 'cause.' On the relative merits of 'cause' and 'explanation,' see also Annas (1982), Fine (1987), M. Frede (1980), Hankinson (1998), Hocutt (1974), and Johnson (2005).

must not take these facts to imply that the substances and accidents we find in both disciplines are fully characterized in Aristotle's ontology alone.

Unfortunately, there is no dedicated treatise on accidental causation in Aristotle's works.¹⁰ This is hardly a surprise: Aristotle says in *Metaphysics* 6.2 [1026b3–5] that there is no science of the accidental, a claim that makes it unlikely that Aristotle would dedicate a treatise to accidental causation itself. Nevertheless, there is knowledge of what accidental causation is. Knowledge is of opposites, so knowing what it is for something to belong intrinsically is also knowing what it is for something to belong accidentally, and knowing what it is for something to cause intrinsically is also knowing what it is for something to cause accidentally.¹¹ But coming to know the role of the accidental in Aristotle's physics requires bringing together texts that are editorially distant and putting together his otherwise piecemeal remarks. Throughout, I will draw on texts that scholars typically rely on (*Metaphysics* 6, *Physics* 2), as well as some in the biological works (*Generation of Animals*, *De Anima*) and the *Organon* (*Categories*, *Posterior Analytics*, *Topics*). As we will see, any cohesion lost by considering such a diverse group of texts will be regained in the interlocking account of accidental causation, and its implications for Aristotle's causal theory, that they jointly provide.

I.2 Outline

Roughly, the rest of this book divides into two uneven parts: First, I examine accidental causation and give a basic theory of this phenomenon (Chapters 1 to 7); second, I consider two implications of this basic theory (Chapters 8 and 9). According to our sketch, accidental causation arises when (i) something (ii) is accidental (iii) to a non-accidental cause or effect. And so, a theory of accidental causation minimally requires three ingredients: an account of the entities that enter into relations of accidentality and non-accidental causality – or simply: intrinsic causality – as well as explanations of the relations of accidentality and intrinsic causality in their own right. The first three chapters start building the basic theory, then, from the ground up, supplying each of these ingredients in turn. In the next four chapters, I turn to accidental causation in its own right. In the final

¹⁰ *Physics* 2.4–6, Aristotle's treatise on luck and chance, which I consider in Chapter 6, comes closest, for luck and chance are species of accidental causes. Still, there are many philosophically significant features of accidental causation that are absent from those chapters – at best, the treatise is an incomplete account of accidental causation.

¹¹ *Metaphysics* 4.2 [1004a9].

two chapters, I examine implications that the basic theory has for the individuation of actions and Aristotle's understanding of priority.

I begin, in Chapters 1 and 2, with arguments concerning the texture of Aristotle's ontology; those less interested in ontological issues and more interested in causal ones may wish to start with Chapter 3. But because experts feature prominently in Aristotle's examples of accidental causation, it is paramount to settle their ontology. In Chapter 1, I argue that these experts are accidental unities, and generally that Aristotle's world contains substances, accidents, and accidental unities. Typically, the inclusion of accidental unities in Aristotle's ontology is controversial, with scholars either taking them to be identical with some substance or taking them to be a new kind of entity altogether. I argue that we should instead explain Aristotle's ontology in his own words. The passages relevant to accidental unities contain predications using the term 'same' (ταὐτόν), predications that tolerate an argument place. Explaining the relation between substances and accidental unities in terms of sameness with a specification provides a clear route between the two sides of the dispute: Hippocrates and the doctor are not the same compound, though they are the same substance.

The argument of Chapter 2 hinges on sameness as well. With a menu of the entities that can enter into relations of accidentality and causality in hand, I consider what, in Aristotle's examples of accidental causation, are in fact said to be accidental to something else. These examples suggest that the elements of Aristotle's ontology generously combine – perhaps even too generously. For instance, a standard example of an accidental cause is Polyclitus, a human substance Aristotle seems to hold is accidental to an accidental unity, namely the sculptor. But the sculptor also seems to be accidental to Polyclitus, and this is hard to square with what we are told about accidentality. The accidentality relation is asymmetric, and so, there is something of a puzzle to solve. The way through this difficulty is to recognize that in that case, Polyclitus is not accidental to the sculptor but rather only *accidentally the same* as the sculptor. Aristotle has it that accidental sameness and accidentality are connected, of course – *a* and *b* are accidentally the same only if one is accidental to the other – but the asymmetry of the latter is perfectly compatible with the symmetry of the former.

Having considered one of the two relations that manifest in cases of accidental causation in Chapter 2, I consider the other in Chapter 3, examining the various intrinsic causal relations Aristotle marks out in the examples he gives of accidental causation. Again, in these cases, experts

figure prominently, and so, in this chapter, I examine the efficient causal structure of expert activity. For Aristotle, both experts and their characteristic skills are efficient causes of expert products, with experts being somehow reliant on their skills to carry out this causing. But Aristotle's characterization of the skills themselves is puzzling: On the one hand, they seem to have features that block other candidates from being efficient causes, namely that they are 'unaffected and unmoved'; on the other, Aristotle clearly holds, in *Generation of Animals*, that they are efficient causes. The way forward is classically Aristotelian – he distinguishes between varieties of unaffectedness, and therefore has the resources to take his candidate as being efficiently causal while rejecting other candidates – but it is easily missed, for the scholarly consensus is that skills are strictly and robustly unaffected.

With the ingredients in place for a theory of accidental causation, I turn, in Chapter 4, to the question of what being an accidental cause consists in. I put forward the first element of my argument in favor of the illusory cause account, showing that many examples of accidental causes are examples of something failing to cause its effect. This commitment puts Aristotle shoulder to shoulder with a number of contemporary philosophers, despite their differing presuppositions.¹² Whatever other relations they may bear toward their effects, accidental causes are causally inert, so the possible candidates for playing causal roles are drastically winnowed: For Aristotle, nothing extraneous to, or inadequate for, the production of an effect can be a cause.

In Chapter 5, I consider the second element of my overall argument, the role that accidental causation plays in causal inference. In Chapter 5, I investigate how the various qualifiers Aristotle applies to causal claims – including 'accidentally' but also 'intrinsically,' 'simply' (ἀπλῶς), and 'qua F' (ᾧ F) – relate to one another. These different qualifiers help him guard against oversimplification; for instance, he claims variously that Polyclitus is a cause of some statue accidentally, that luck is not a cause simply, that the builder built as such (ᾧ αὐτὸ), and that the builder did not build *qua* doctor. Here, I explain the connections between causing accidentally, causing as such, causing simply, and causing intrinsically. The account I give does not rely on the particular examples considered in Chapter 4, and so the resulting picture's support for the illusory cause account is further evidence of the account's plausibility. But another finding of this chapter is that Aristotle's use of '*qua*' is not as well-understood as it seems.

¹² For example, see, Craver (2007), List and Menzies (2009), and Yablo (1992).

Though there is some debate today as to how ‘*qua*’ works, the consensus is that Aristotle’s use of this vital word is analyzable in predicate logic with modals. But by focusing on what Aristotle has to say about how these qualifiers relate to one another, we see that no such analysis captures how he uses the word.

Luck (τύχη) is the focus of Chapter 6. Aristotle identifies luck as a kind of accidental cause in the *Physics*, one whose importance for our purposes is twofold. First, luck does not seem to fit the standard model of accidental causation. Luck is an accidental cause of occurrences that have no intrinsic cause, so luck is not an accidental cause in that it is accidental to an intrinsic cause; nor is it an accidental cause in that it is accidental to something intrinsically caused. Second, the nature of luck bears on the issue of whether Aristotle holds that some occurrences in the natural world are uncaused. In fact, the illusory cause account, in conjunction with the fact that what comes to be by luck has no intrinsic cause, jointly yield a brisk argument for an affirmative answer. But this answer has been challenged time and again, and in the course of defending it against such challenges, I bring to light the building blocks of a better model for accidental causation. Luck is an accidental cause in that lucky occurrences are relevantly similar to occurrences that are intrinsically caused. This fact gives us insight into what accidental causation is, for Aristotle: Accidental causation is to be analyzed, not in terms of causation and accidentality but causation and sameness.

I conclude the basic theory with a reflection on why Aristotle needs accidental causation. One might worry that, because accidental causes are causally inefficacious, they have no place in a causal theory. But in fact, Aristotle’s characterization of the physical world shows the need for him to have such a concept. In *Physics* 2.5, he says that substances in the physical world have indefinitely many accidents and that this explains why effects have indefinitely many accidental causes. The two claims, which guide the chapter, are underappreciated, being both philosophically interesting in their own right and in how they bear on each other. Aristotle holds that the fact that substances enjoy indefinitely many accidents explains why effects have indefinitely many accidental causes; and I argue that by tracing out their logical relations, a rich connection between physics and ontology is revealed. According to the formal features that Aristotle lays down, accidental causation is ubiquitous – wherever there is any causation at all, there is accidental causation – and this prevalence helps us to appreciate better the importance of accidental causation in Aristotle’s causal theory. Accidental causation is, for him, a tool that does the kind of work

counterfactuals or possible worlds do for us: It allows him to disentangle actual causes from the causal free riders that always accompany them.

Generally, the philosophical importance of accidental causation manifests in disparate areas, a fact that I reinforce in the last two chapters of the book. In Chapter 8, I consider an implication of the basic theory of accidental causes. The implication concerns Aristotle's action theory. For him, actions cause certain effects, they make a difference in the way things are. They therefore must satisfy the requirements any cause must satisfy, whatever those may be. It is for this reason that Aristotle's theory of causation constrains his theory of actions. And as I argue, his account of the teleology of expert activity, in conjunction with accidental causes being causally inefficacious, constrains his theory of actions in ways wholly antagonistic to various strands of contemporary action theory. The importance of this observation is shown when considering the work of neo-Aristotelian philosophers of action, most prominently Elizabeth Anscombe, who time and again claims that her views are not only influenced by, but intimately cohere with, those of Aristotle. Given that Aristotle's theory of action is hostile to her own, Anscombe is not the Aristotelian that she says she is, nor is Aristotle's thought as congenial to moral philosophers today as Anscombe would have it.

In the final chapter, I examine what accidental causation tells us about the role of the accidental in Aristotle's natural philosophy. I begin by arguing that, like his ontology, Aristotle's etiology is sorted and ordered. But his causal theory makes use of a type of priority that is a different relation from the priority that orders his ontology, a fact that is easy to appreciate once we consider the causal profile of various accidental unities. That profile shows that the role of the accidental in Aristotle's causal theory goes beyond accidental causation, for not all accidental causes are accidental beings, as the case of Polyclitus' accidentally causing the statue shows; and not all accidental beings are accidental causes, as the case of the sculptor's intrinsically causing the statue shows. Accidental *causes* are causally inert, but this does not imply that accidental *unities* are causally inert, for the sculptor intrinsically causes her statue. Rather, the role of the accidental in Aristotle's etiology is analogous to the role of the substantial in his ontology. Because the substantial and accidental beings that are elements of his causal theory are also elements of his ontology, the fact that substances and accidental unities are different compounds commits Aristotle to a peculiar type of priority, one that is neither the priority that causes enjoy over effects nor the ontological priority that substances enjoy over accidents and accidental unities. Accidental unities are causally prior

to substances, even though substances are ontologically prior to accidental unities. Just as substances are Aristotle's prime examples of ontological priority, so too are accidental unities prime examples of causal priority. It is in this way that the role of the accidental in Aristotle's natural philosophy is seen most clearly: The accidental stands to doing as the substantial stands to being.