



Causality and determination, powers and agency: Anscombean perspectives

Jesse M. Mulder¹ · Thomas Müller² · Dawa Ometto³ · Niels van Miltenburg¹

Received: 16 May 2022 / Accepted: 8 August 2022 / Published online: 31 October 2022
© The Author(s) 2022

Abstract

Anscombe's 1971 inaugural lecture at Cambridge, entitled 'Causality and Determination', has had a lasting influence on a remarkably broad range of philosophers and philosophical debates, touching on fundamental topics in philosophy of science, action theory, the free will debate, epistemology, philosophy of mind, and metaphysics. Especially where anti-reductionist or pluralist strands of philosophical thought are being seriously considered, one should not be surprised to find references to Anscombe's lecture. Moreover, there appears to be a growing interest in Anscombe's comprehensive philosophical outlook, as attested by the recent publication of a weighty collection of essays spanning that outlook in its full breadth in the prestigious Routledge Philosophical Minds series. Against this background it is apt that now, 50 years after the original lecture, a Topical Collection sees the light, circling around the most central themes from Anscombe's lecture, with a particular emphasis on the question how these hang together, how they form part of the larger philosophical project that Anscombe obviously intended the lecture to highlight. This Introduction motivates the Topical Collection, and introduces the various contributions against that background.

Keywords Anscombe · Causality · Determination · Free will · Agency · Laws of nature · Indeterminism

Anscombe's 1971 inaugural lecture at Cambridge, entitled 'Causality and Determination' (henceforth: *C&D*), has had a lasting influence on a remarkably broad range of philosophers and philosophical debates, touching on fundamental topics in the philosophy of physics (and philosophy of science more broadly), action theory, the free will debate, epistemology, philosophy of mind, and metaphysics. Accordingly, it is regularly cited, for instance in contemporary debates on causality and laws of nature, on powers metaphysics, on action theory, in the free will debate, and in various cor-

ners of the philosophy of science.¹ Especially wherever anti-reductionist or pluralist strands of philosophical thought are being seriously considered, one should not be surprised to find references to Anscombe's lecture.² Moreover, there appears to be a growing interest in Anscombe's comprehensive philosophical outlook, as attested by the recent publication of a weighty collection of essays spanning that outlook in its full breadth in the prestigious *Routledge Philosophical Minds* series.³ However, what has already been remarked concerning another work of Anscombe's seems to equally hold true of *Causality & Determination*: the paper is "often quoted, sometimes read, rarely understood".⁴ One can readily find authors citing one or the other Anscombean slogan from *C&D* in isolation, which fits their purposes, but doesn't do justice to Anscombe's larger philosophical outlook.⁵ Therefore it is now, 50 years after the original lecture, high time that a collection of papers should see the light that focuses on the most central aspects of the mentioned Anscombean themes from *C&D*—with a particular emphasis on the question how they hang together, how they form part of the larger philosophical project that Anscombe obviously intended the lecture to highlight.

At first sight, it may be difficult to discern what exactly Anscombe's target in *C&D* is, and, accordingly, what exactly her positive contribution is, let alone how that contribution is indicative of her larger philosophical project. To be sure, it is obvious that Anscombe is critical, in *C&D*, of quite a range of substantial and relatively widely-held views and convictions. To name but the most conspicuous ones:

1. Hume's understanding of causality and his skepticism concerning its empirical detection — on which Anscombe remarks that "it turns out that the arguer has excluded from his idea of 'finding' the sort of thing he says we don't 'find'" (*C&D*, p. 137).
2. Kant's (as well as others') association of causality with necessitation by law — in response to which Anscombe dryly points out that "we often know a cause without knowing [...] whether there is a necessity" (p. 136).
3. Neo-Humean approaches towards the laws of nature and causality, which assume the laws to have the form of general statements concerning what "always happens" — yet Anscombe points out that, in truth, "there is no similarity" between

¹ See, e.g., Dupré (2001, esp. chs. 1 and 7), Thompson (2008, esp. ch. 3), Hornsby (2011), Rödl (2012, esp. ch. 6), Mumford & Anjum (2018a, 2018b), Van Miltenburg & Ometto (2020), Mulder (2018; 2021a,b), Groff (2021).

² The most obvious example here is Nancy Cartwright (see, e.g., Cartwright 2007, ch. 2; 2019, ch. 5). Indeed, Cartwright dedicated Chap. 5 of her earlier *The Dappled World* to Anscombe, and in particular to *C&D* (cf. Cartwright, 1999, p. 135).

³ Haddock & Wiseman (2021).

⁴ Compare Velleman's commendation for the 2000 reprint of Anscombe's *Intention* (1963/2000).

⁵ A clear example is David Armstrong, who remarks that Anscombe "protested vigorously, and ... successfully, against Donald Davidson's assumption that given a true statement of singular causation then it follows *a priori* that the sequence falls under some law", which made him "for some years unable to see how cause and law were to be brought together" — yet on the very next page he arrives at the strikingly un-Anscombean conclusion that "singular causes are nothing but instantiations of (strong) laws" (Armstrong, 1997, pp. 218-9).

- such statements and “scientific laws” (p. 138), and urges that we should give thought to “interference and prevention” (p. 147).
4. The (in Anscombe’s eyes) notorious tendency towards determinism — which she characterizes as “a mere extravagant fancy, encouraged in the ‘age of science’ by the happy relation of Newtonian mechanics to the solar system” (p. 147).
 5. Compatibilist approaches to free will — which Anscombe dismisses as “either so much gobbledegook or [as making] the alleged freedom of action quite unreal” (p. 146).
 6. Reductionist approaches within metaphysics and philosophy of science — to which Anscombe invariably responds by pointing out the “hurly-burly of many crossing contingencies” in which all manner of different ‘forces’ are operative, including “thermal, nuclear, electrical, chemical, muscular forces” (p. 143).

Now, it is possible to engage with Anscombe’s text on each of these topics separately, and, as we mentioned earlier, this has been often done. For concreteness, let us here briefly sketch a few examples of this, which are by no means intended as an exhaustive list. As will become apparent in our introduction of the individual contributions below, all of these examples find much more extensive treatment within the scope of this Topical Collection, often in more than one of the contributions:

- First of all, relating to (3), so-called ‘interventionists’ do take seriously the thought that instances of causation need not be underwritten by exceptionless regularities, yet Woodward, for one, still writes that although “the account that I present is not reductive [...] I would be delighted if someone were able to show how the nonreductive characterizations of cause and explanation that I provide might be replaced by reductive characterizations”, where he mentions “so-called regularity theories of law and causation” as well as “Lewis’s counterfactual theory” as examples of reductive theories (Woodward, 2003, p. 20–21).
- Similarly, in the contemporary debate on the metaphysics of powers, Mumford and Anjum explicitly side with Anscombe in writing that “the notions of causal production and causal necessitation are distinct”, yet theirs is a proposal to replace the modality of necessitation with a different, ‘weaker’ kind of modality, “which we can call tendency”, and which “is in some way between the traditional modal values of necessity and possibility” (Mumford & Anjum, 2018a, p. 9). In so doing, they appear to commit themselves to (2) while affirming the idea that causal production is on the same *scale* as full necessity as traditionally conceived, which is arguably at odds with (3).
- With regard to (1), Helen Beebe remarks, in an extensive discussion about the observability of causation, that “Anscombe [...] may well be right, since the evidence from psychology suggests that we can indeed have experiences that represent the scene before our eyes as causal”, but then goes on to dismiss Anscombe’s point because “the question of whether or not causation is observable turns out to be largely irrelevant to metaphysical issues concerning the nature and existence of causation” (Beebe, 2009, p. 418).
- On the other hand, many so-called *singularists* affirm the metaphysical significance of Anscombe’s claims, but do so only against the background of a

reductionist ontology (at odds with (6)). For instance, Whittle (2003) attempts to make sense of the idea that causation is a local matter by means of a clearly un-Anscombean metaphysics of tropes.

- Finally, in the literature on agency and free will, many claim Anscombe's support when it comes to the conceivability of indeterminism, while clinging to conceptions of agency, causation, and natural laws that she rejects. For example, Franklin (2018, p. 1) credits Anscombe's defense of the possibility of indeterminism as having "opened the door for a new version of libertarianism", while at the same time defending a causal theory of action that has "historical roots in the work of David Hume" (p. 11). Even agent-causalists who seem to follow Anscombe's lead in thinking of agency as a power often still see no problem in combining this commitment with an understanding of reasons-explanation based on Humean-style probabilistic laws (e.g. O'Connor, 2011).

However fruitful the practice of such 'cherry-picking' among the various specific claims or strands of thought in Anscombe's *C&D* may be for one's own systematic pursuit within this or that contemporary debate, the present Topical Collection is inspired by the possibility of casting the net wider, so as to trace out Anscombe's larger philosophical project, and gauge its fruitfulness for a more comprehensive philosophical picture. For what we presented as a mere list of critical stands Anscombe takes in (1)–(6) above is, in truth, surely not just a random enumeration of unrelated ideas and theses with which Anscombe happened to disagree. Clearly, Anscombe thought of all of those as *hanging together* in a certain way. Correlatively, both her critical and her constructive remarks on each of those issues are to be thought of as aspects of just such a comprehensive philosophical project. The resulting Anscombean outlook would be one which makes it possible to see causation in nature and in human agency as distinct forms of a unified phenomenon, and which positions our agency as neither necessarily determined by laws of nature, correctly understood, nor at odds with them. Read in this way, then, *C&D* displays a *programmatically* character, so that it can be taken as encouraging us to work out in more detail the various branches of that 'programme'; branches which, in *C&D*, are treated only sketchily.

By highlighting the ambitions of this special issue in this way, as circling around Anscombe's more comprehensive philosophical ambitions, we mean to suggest neither that all of the contributions to this topical collection share the *same* interpretation of Anscombe's programme, nor that they share the same final verdict on the cogency, relevance, and persuasiveness of that larger programme for our present-day systematic philosophical concerns. Still, the various contributions to this Topical Collection share an honest interest in Anscombe's work that goes beyond the sort of 'cherry-picking' illustrated above, and consequently seek to identify and evaluate her more comprehensive philosophical ambitions. In all cases, the relevance of such an exercise, despite the temporal distance of 50 years, readily comes to the fore — the papers speak for themselves in this respect.

Let us therefore now turn to briefly introducing each of the various contributions that jointly compose this Topical Collection.

1 Introductions to the contributions of this topical collection

Helen Steward: ‘What does causality have to do with necessity?’ (Steward, 2022). Steward carefully evaluates what she takes to be Anscombe’s core arguments against including the idea of necessitation in one’s conception of causality. All in all, she takes these arguments to collectively point to the conclusion that “we have no ground for supposing that causality essentially involves necessitation”. Thus, on her reading, Anscombe does not *establish* that causality doesn’t involve necessitation – it even makes room for ‘necessitating causes’, after all – but rather seeks to undermine the surprisingly stubborn conviction that *all* causation must involve necessitation, which, in turn, encourages a hang towards determinist thinking as well. Eventually, Steward comes to identify Anscombe’s *positive* conception of the relation between necessitation and causality (in case of necessitating causes) in terms of the ‘natures’ of the substances involved. This she connects to Anscombe’s example: “If a sample of such a substance is raised to such a temperature and doesn’t ignite, there must be a cause of its not doing so” (C&D, p. 138) – in such cases, given that *actually* (but contingently) there are no interfering factors, the effect *had* to come about.

Now, Steward notes that the decades after Anscombe’s lecture have in fact seen quite a surge in work on causation that *doesn’t* insist on necessitation. However, Steward here argues that the relevant body of work on causation (which includes, amongst others, interventionism) focuses on *general* causation (or, where it is concerned with ‘token’ or ‘actual’ causes, on *causal relevance*), while Anscombe’s focus is the “*productive causal process*” itself. Focusing on the latter, Steward insists that where *this* notion is at stake, there is still a strong tendency to conflate causation with necessitation – and she cites the literature on free will, agency, and mental causation as cases in point (thereby showing truly ‘Anscombean’ spirit, we submit).

Finally, Steward wonders *why* the conflation of causation and necessitation is so tempting, and offers two tentative suggestions; one empirically minded, one metaphysical in spirit. Her first suggestion consists in the hypothesis that our notions of causality and necessitation in fact derive from the very same, basic, ‘forceful’-agentive interactions with the world (here she cites relevant literature from psychology, linguistics, and neurophysiology). The second suggestion basically consists in the observation that, when one endorses an ontology *without* substances and powers (as neo-Humeans for instance do), the aforementioned rendering of causal necessity in terms of ‘natures’ is simply not available, so that one has no choice but to locate such necessity in the relation between an assumed ‘complete’ cause and its effect – as she aptly summarizes in her final sentence: “the mistake is only to assume that a necessitating cause must make the non-occurrence of its actual effect an impossibility.”

Anselm Müller: ‘Understanding Causation’ (A. Müller, 2021). Where Steward’s essay focuses on a *negative* aspect of Anscombe’s take on causation, Müller’s contribution investigates Anscombe’s core *positive* claim that “causality consists in the derivativeness of an effect from its causes” (C&D, p. 137), and shows in detail that this thesis cannot unproblematically be taken to constitute an analysis of the concept of a cause. That is, he argues that we possess no notion of *derivation* that is prior to, but can still explain, the notion of a cause. Of course, this is not to deny Anscombe’s

claim, nor to say that broadly Humean accounts are immune to Anscombe's criticism that they "forget about" the "derivedness of the effect" from the cause. But it does raise the question how Anscombe's alternative account is to be understood, and in what sense it can really do away with the importance of universality (or the idea of a law) — for, as Müller argues, following Makin (2000), it seems that the kind of "derivativeness" involved in causation cannot be understood independently from the idea of certain *general* ways of producing an effect. Like Ometto's contribution (see below), Müller's argument thus points towards the idea that an Anscombean account of causation cannot be helpfully understood as "singularist". Müller therefore investigates the importance of general patterns for Anscombe's account, of course carefully distinguishing the idea of such a general pattern from the idea of determinism or necessitation. Instead, he argues, the positive significance of the "Generality Thesis" is that a causal pattern "plays the role of" an Aristotelian "formal cause ... that *accounts for* this A's being an (efficient) cause of this B" (p. 12,141) — an idea best understood on "the Aristotelian conception of *nature* as a form", "a specific *disposition or tendency of operation*".

This understanding of Anscombe's alternative proposal, however, raises the question how it might be integrated with another central concern of *C&D*: free agency. For in free action, it seems (at least on Anscombe's preferred incompatibilist assumptions), a causal pattern of the required kind is not present: "free actions are characterized *inter alia* by the fact that the disposition, if any, which they manifest (virtue, for instance) is not one conferred on the agent by nature" (p. 12,142). That is to say, agents do not tend towards certain actions in the way in which iron, say, tends to melt when heated. But this raises a question of unity: "why then treat human agents as *causes* of their (intended) actions?" It is here that Müller sees and develops an essential connection to Anscombe's work in the philosophy of action. In the final part of his essay, he investigates how the notion of *practical knowledge* can help us understand the sense in which agency is related to causality.⁶ He argues in detail that the notion of a cause is "Janus-faced": it is the notion of something that can essentially be understood or predicated both in theoretical knowledge (paradigmatically, in observation) and in practical knowledge (knowledge of what we are intentionally bringing about) — "[w]hat your practical knowledge 'understands' [...] when you intend to turn the wheel, is the same kind of causal operation as your *observation* 'understands' when you see a wheel's being turned by whatever agent, human or other" (p. 12149). It is this feature that distinguishes the generality involved in causation from mere regular alteration.

Dawa Ometto: 'Causality and determination revisited' (Ometto, 2021). Like Müller, Ometto is concerned with the tension between general and singular aspects of causation. Is Anscombe a causal singularist? In *C&D*, she argues against the sugges-

⁶ Although we cannot go into detail here, it is worth noting that in recently popular Anscombean theories of action, the central thought is that the agent's practical knowledge of what she is doing is the formal cause of the action, thus establishing a parallel to Müller's claim that general causal patterns are formal causes. See e.g. Van Miltenburg (2011).

tive idea that “if an effect occurs in one case and a similar effect does not occur in an apparently similar case, there must be a relevant further difference” (*C&D*, p. 133). In particular, she opposes the (neo-)Humean conception of causality as the instantiation of exceptionless generalizations, observing that “you usually won’t get anything true” (p. 138) if you construct a universal proposition out of a singular case of cause and effect, and that it is hopeless to try and catch all the exceptions. As Ometto notes, this rejection of a certain generality-based account of causation has led many interpreters to view Anscombe as a singularist about causation and laws of nature, to the point that *C&D* is taken as the *locus classicus* for singularism. Ometto argues that this interpretation is mistaken. It is undeniable that Anscombe is an epistemic singularist about causation, indeed: she holds that causal efficacy can be observed in a single case, e.g., when someone makes noises or a paper boat. This does not mean, however, that instances of causation are metaphysically devoid of all generality.

As Ometto shows, Anscombe’s discussion of dispositional properties of substances as “laws of nature” points in the direction of a non-Humean, non-quantificational account of the generality of laws that is not troubled by exceptions and interventions. Furthermore, this account can provide the type of explanatory link that Anscombe shows to be lacking in Humean accounts of causation. The time-general statements of such laws of nature express powers of substances that pertain to their natures. As Ometto convincingly argues, this approach leaves conceptual room for true indeterminism via indeterministic powers, without thereby turning indeterminism into a conceptual necessity. It also fulfills the Kantian demand for the non-accidentality of causation without thereby enforcing determinism. The laws of nature, as Anscombe says, are like the laws of chess: they rule out many future happenings and thus constrain what can happen. But whether they rule out all but one future course of events depends on the configuration and on the powers of the pieces. Laws of nature thus explain how the indeterminism of the open future is limited. That limitation may leave room for only a single possible course of events — but this is not a conceptual necessity, and no prerequisite of a conception of causation that rejects metaphysical singularism.

Jesse Mulder: “‘Animals run about the world in all sorts of paths’: varieties of indeterminism’ (Mulder, 2021c). The theme of a limited, meaningful indeterminism also looms large in Mulder’s contribution. Taking his title from a part of *C&D* in which Anscombe contrasts the astonishing regularity of planetary motion in the solar system with the teeming, irregular life on the surface of our planet, Mulder argues that her essay paves the way for a layered conception of varieties of indeterminism that has important implications, e.g., for the free will debate.

Toward the end of her essay, after having lamented the intellectual disaster of the huge impact of 17th century deterministic physics due to astronomical regularities, Anscombe briefly discusses the question of how the indeterminism that has been made scientifically respectable through quantum physics relates to freedom of the will. In a brief, forceful passage, Anscombe rejects compatibilist reconciliations of freedom and determinism as “so much gobbledegook” and claims that physical inde-

terminism is “indispensable if we are to make anything of the claim to freedom” (C&D, p. 146). In fact, Anscombe extends this claim to include also the “voluntariness and intentionality in the conduct of other animals which we do not call ‘free’” (ibid.). Mulder picks up on this observation and develops it into a more fine-grained account of the role of indeterminism for enabling higher-order organization. If you are building a house, you need the bricks and beams to allow different movements and arrangements, given their physical nature. Similarly and more specifically, unless the level of the physical leaves enough wiggle room, biological life-processes could not organize the physical matter as their material. Mulder sees Anscombe as providing inspiration for the view that this principle of “matter as material”, which presupposes indeterminism at the level of the matter, is in place a number of times when a human being acts freely, “according to an idea” (ibid.): physical indeterminism enables biological organization, biological indeterminism enables organismal organization, and animal indeterminism allows for free will. If any of these levels turned out to be deterministic, it could not be organized as material at a higher level. Thus, according to Mulder’s innovative reading of Anscombe, human freedom is based on a whole variety of indeterminisms.

Thomas Müller: ‘Let’s build an Anscombebox’ (Müller, 2022). Thomas Müller zooms in on one of the most intriguing and at the same time mysterious arguments made in C&D in a highly original manner. At the end of her essay, Anscombe discusses what Müller calls the “statistics objection” against the possibility of indeterministic free agency. The objection is that, even if we allow that indeterministic causation *per se* is compatible with the idea of nature being subject to laws, the idea that human agents act freely still threatens a kind of violation — this time of the *statistical* laws: “quantum laws predict statistics of events when situations are repeated; interference with these, by the *will*’s determining individual events [...] would be as much a violation of natural law as would have been interference which falsified a deterministic law” (C&D, p. 145).⁷ Anscombe’s reply to this argument takes the form of a thought experiment: she asks us to imagine a box filled with many coloured particles, the movements of which in the box obey certain probabilistic laws. However, the box is “remarkable [...] for also presenting the following phenomenon”: it always displays on one of its sides a certain pattern, although not always in exactly the same size or shape. Anscombe insists that “it is not at all clear that those statistical laws [...] would have to be supposed violated by the operation of a cause for this phenomenon” (C&D, p. 146). As Müller helpfully clarifies, Anscombe’s thought is that there is no reason to suppose that an external cause (analogous to an agent’s will) operating on the box to produce the pattern would have to infringe the lower-level statistical laws, at least provided that the pattern is “multiply realizable”. But Müller takes the argument a step further: we need not speculate about whether Anscombe is right that there is no such reason, because we can actually build, or at least model, an “Anscombe box”!

⁷ Versions of this argument have been deployed in discussions of the viability of libertarian views of free will (often but not always in relation to agent-causation), e.g. recently in Pereboom (2014, Ch. 3) and De Caro & Putnam (2020).

Müller's model defines a set of probabilistic base dynamics for the particles that make up the box: rules that determine under which circumstances two particles flip positions (or flip their colours). Running a simulation of the box provides us with statistics concerning the frequency of such flipping-events. In further simulations, we may then activate an "external cause" that has the effect of ensuring that some pattern always appears on one of the box's sides. Müller shows that if (and only if) the desired pattern is indeed multiply realizable, the statistics can be the same as in the baseline simulation, in which no pattern-producing cause was active. He thus vindicates the Anscombean argument against the statistics objection. Although Müller's paper leaves open the question how we should precisely conceive of the causality exercised by agents' free decisions, his results may be taken to support the viability of the picture suggested by both Mulder and Van Miltenburg in their papers — that agency might be a higher-level, emergent power that realizes possibilities left open by the lower level laws that govern, say, agents' bodies.

Niels van Miltenburg: 'Causality, Determination and Free Will' (Van Miltenburg, 2022). Van Miltenburg seeks to both cast light on, and recommend for serious consideration, the lesson Anscombe teaches us about the role that indeterminism plays for a credible libertarian account of free will. In particular, he challenges a widespread misreading of Anscombe on this point, viz., one which suggests a *probabilistic* conception of the causality in which free agency consists. He identifies this probabilistic conception not only in the event-causal strand of contemporary libertarian accounts of free will, where it is quite obvious, but also in various agent-causal libertarian views. The latter, unlike their event-causal counterparts, typically endorse a broadly anti-Humean, powers-based understanding of causation — which Van Miltenburg identifies in Anscombe's *C&D* as well (as do most of the other contributions to this Topical Collection).

Now, Van Miltenburg argues that Anscombe would find the probabilistic element in these libertarian accounts of free will deeply problematic. Instead of such a probabilistic reading, he develops a reading of her reflections in *C&D* on which she in fact suggests a more radically pluralist conception of causality at large. On this pluralist reading, we should then distinguish what Van Miltenburg calls (following Marcus (2012) and Rödl (2007)) "rational causation" from *every* form of causation on the level of physics, be it deterministic or probabilistic. As Van Miltenburg stresses, this shift towards causal pluralism does not merely have consequences for the free will debate in particular, for it in fact concerns action theory at large — rational causation is the causation of rational actions, i.e., of intentional actions. The question how indeterminism might play a role in free agency thus turns out to find its proper home within an Anscombean theory of action, now conceived as a theory of the specifically rational form that causation can take. Its main opponent within contemporary action theory, the influential 'Causal Theory of Action', states that "rationalization is a species of ordinary causal explanation" (Davidson, 1963, p. 685), where "ordinary causal explanation" is to be read as denoting the kind of causal explanation found in the sciences. By contrast, then, the Anscombean holds that such 'ordinary' causation should not be allowed such total domination, since it is just one variety of a broader

range of causal notions, of which rational causation is another. Anscombe's chess analogy, in which players make moves (rational causation) *by* making use of the "powers of the pieces" (physical causation), aptly illustrates Van Miltenburg's resulting picture of free agency within a physically indeterministic world: "The play is seldom determined, though nobody breaks the rules" (*C&D*, p. 141 and 143).⁸

Erasmus Mayr: 'Anscombe and Intentional Agency Incompatibilism (for Human and Animal Agents)' (Mayr, 2022). This contribution (like those of Mulder and Van Miltenburg) departs from Anscombe's remarks on the incompatibility of free will and physical determinism. Mayr highlights that Anscombe's incompatibility claim is not merely due to specific features of human or "ethical" freedom, but (also) to certain general features of agency present in both human and non-human action. He thus classifies Anscombe's position as closely akin to the position that Steward (2012; see also van Miltenburg & Ometto, 2019) defends in contemporary discourse, and which is known as Agency Incompatibilism, i.e., the view that agency itself (rather than just free will) is incompatible with determinism.

Mayr goes on to discuss and mostly reject a number of increasingly specific Anscombean defenses of incompatibilism. The first and widest line Mayr considers is presented in Anscombe's (1983) "The Causation of Action". There, Anscombe argues that (micro)physical determinism would imply "mechanism", i.e., the thesis that all real causal work is done at the level of fundamental physics, and hence that all higher-level phenomena (including all psychological phenomena, and by extension all forms of agency) are causally impotent. Mayr investigates several different specifications of the thesis of (micro)physical determinism and argues that Anscombe's thought that this thesis implies mechanism should ultimately be rejected.

The second line Mayr discusses purports to establish that the phenomenon of agency, but not necessarily *every* psychological phenomenon, is incompatible with determinism. Mayr identifies and rejects two main arguments for this incompatibility claim. The first is that agency must be understood in terms of an agent's active powers and that determinism would make agents mere passive sufferers of the course of nature. This argument, which Mayr traces back to the work of Thomas Reid among others, is argued to be mistaken because we can draw the distinction between activity and passivity by distinguishing causal factors that are intrinsic to or extrinsic to the agent. And this second distinction, Mayr claims, is unthreatened by determinism. The second is Helen Steward's central argument in *A Metaphysics for Freedom* (2012), which rests on the thought that agents are essentially the "settlers" of antecedently open possibilities. Mayr rejects that such an incompatibilist notion of "settling" must be part of our conception of agency. According to him the more fundamental idea is that we typically think of agents as the "sources" of their actions. But that, Mayr argues, does not help the case of the agency incompatibilists, insofar as compatibilist accounts of sourcehood are available.

The final and most narrow line of argumentation Mayr discusses concludes that it is only intentional agency (rather than agency in general) that is incompatible with

⁸ Also compare Ometto's and Mulder's contributions for this understanding of indeterminism.

determinism. This line of argument rests on the thought that multiple open options are a prerequisite for practical deliberation. Mayr goes on to distinguish two forms of practical deliberation: deliberation about the right means for achieving a particular end, and reflection on the correct ends themselves. He argues that the first form of deliberation about what to do does not require that there are alternative possibilities in a sense that requires indeterminism, but only that the correct course of action is not antecedently settled independently from the deliberation process. Mayr concedes that this may be different for the second form of practical deliberation, but he also notes that such reflection on ends is no prerequisite for intentional agency, since non-human animals can act intentionally but lack this capacity of reflection. Mayr therefore concludes that the kind of agency incompatibilism Anscombe seems to suggest is ultimately untenable. On Mayr's view, it thus seems that if anything requires indeterminism, it would after all have to be something close to ethical freedom (i.e., practical deliberation about ends).

Vanessa Carr: 'Causality, Determination, Necessitation and Free Human Action' (Carr, 2022). Carr's contribution presents yet another take on the implications of *C&D* for our understanding of free will. Carr's focus, however, is not on Anscombe's treatment of determinism and its supposed incompatibility with both human and non-human agency (extensively discussed by Mayr, Mulder and Van Miltenburg). She rather starts from the observation that many accounts of distinctively human freedom and control appeal to a notion of self-determination that is often understood in causal terms. The idea behind such accounts is that freedom does not only require certain negative conditions—such as the absence of coercion or physical determinism—but also positively requires an "agent-relation condition": that free action must in a non-trivial sense be the agent's own. In this paper, Carr criticizes the idea that this agent-relation must be understood as the agent's efficient causation or determination of her action, and argues that *C&D*'s clear separation of causation from necessity opens the way to a novel understanding of the agent-relation not in terms of causation of determination, but rather as the agent's necessitating their action. Moreover, Carr argues, this understanding of the agent-relation as a matter of necessitation fits best with Anscombe's overall account of intentional agency.

On that account, intentional action is characterized in terms of practical knowledge: when the agent moves intentionally, they know that they make this movement and why they make it. Moreover, such practical knowledge is thought to be the formal cause of the agent's action, i.e., the intentional movement is essentially such that it is practically known by the agent. Given the centrality of practical knowledge to intentional agency, it is natural to suppose that we must also understand the agent-relation in terms of practical knowledge, and it has indeed been argued (e.g., by Schwenkler, 2019) that it is via their practical knowledge that the agent determines, or is the efficient cause of, their action. Carr objects to the idea that practical knowledge can be an efficient cause, given Anscombe's understanding of efficient causation in *C&D*. Efficient causes, Carr argues, must be separate and metaphysically prior to their effects, whereas the agent's practical thought is neither. However, this does not mean that understanding the agent-relation in terms of practical knowledge

is hopeless altogether. For *C&D*'s distinction between causation and necessitation, Carr believes, opens up the possibility that the agent's practical thought necessitates her action even when it does not cause it. Such necessitation, Carr argues, is weaker than the self-determination that free agents are often presumed to be capable of. But it does indicate that agents can have a distinct influence over what they are doing via their practical thought. And thus, Carr holds, we can employ this idea of practical necessitation in order to spell out the agent-relation condition for free human action.

Victor Gijbsbers: 'Perceiving Causation and Causal Singularism' (Gijbsbers, 2021). Gijbsbers takes *C&D* to both claim that causation can be perceived and to defend causal singularism, i.e. the view that universality is not part of the concept of causation.⁹ While *C&D* does not contain any explicit discussion about the relation between these two claims, it seems natural to think that if causation can be perceived in the individual case it must in some sense be present in the single observed cause-effect pair, and hence be independent of the obtaining of any universal regularities. The claim that causation can be perceived, in other words, seems to provide an argument for causal singularism. Helen Beebe, however, maintains that such an argument must be flawed (see, e.g., Beebe, 2009): while Anscombe is correct to think that causation can be perceived, she is wrong to think that a Humean regularity theorist is unable to account for causal perception. Gijbsbers argues that Beebe is wrong about this because there are what he calls "strongly local" causal experiences that the regularity theorist cannot account for. A causal experience is strongly local when it epistemically justifies an individual causal claim no matter what one learns about distant events (such as the obtaining or not obtaining of a general regularity). Now Gijbsbers argues that the causal experiences that are typically discussed in both the psychological and philosophical literature on causal perception—which are the experiences Beebe argues the Humean can account for—are not necessarily local or strongly local. However, in the work of Köhler (1947), Gijbsbers finds cases where we experience an external state of affairs as causing a reaction that is directed at that state of affairs, for example when we experience fear of a particular spider or admiration for a particular voice. Such experiences are strongly local because they cannot be undercut by information about non-local events. That, e.g., I am not generally an arachnophobic, or that I have never had traumatic experiences involving spiders, or that neuroscientists who showed me pictures of spiders have been unable to detect any fear related brain-activity, etc., does not seem to cast any doubt on the fact that I was in this particular instance scared by this particular spider. Moreover, Gijbsbers argues, such experiences are rationally transparent: we intrinsically grasp that the experienced reaction is an apt response directed at the target of the experience.¹⁰ Without such a grasp the very experience of, say, fearing a particular spider would be impossible: that experience cannot be understood as some general experience of an

⁹ See Ometto's contribution for a discussion of whether Anscombe indeed is a causal singularist in this sense.

¹⁰ Although Gijbsbers does not draw the connection, it may be interesting to observe that this category of rationally transparent strongly local causal experiences bears a strong resemblance to Anscombe's (1963, § 10) technical notion of a "mental cause".

undirected fear that we later come to discover is regularly linked with the presence of the spider. Hence, Gijsbers argues, these strongly local causal experiences are unlike Hume's typical example of the perception of the movements of two colliding billiard balls. In the latter example, the movements of the two balls are conceivable independently (and hence conceivably independent), but the former experience, by contrast, is only possible when it contains the recognition of a local causal connection between the object of experience and the experience itself. Gijsbers concludes that even if Beebe is correct that the perceptual experience of external causal relations can be accounted for by Humeans, they will still be unable to account for strongly local causal experiences. If Gijsbers' argument is correct, then his paper thus re-establishes the connection between Anscombe's idea that causation can be perceived and her idea that causation should not be understood in terms of Humean regularities.

Robert Reimer: 'Perceiving causality in action' (Reimer, 2021). Like Gijsbers, Reimer tackles the classical Humean argument that causation cannot be directly observed in the single case, but can be established only mediately, requiring a (quasi-) inferential step. Although not all Humeans need to agree with this thesis (Davidson (1995, p. 269), for instance, denies it), Anscombe identifies it as an influential reason for thinking that causation must be linked to universal regularities (of the Humean kind) at all. And as Reimer points out, the thesis is still defended, not only by contemporary Humeans, but also by certain bodies of work in cognitive psychology. Taking his cue from Anscombe's statement that there is "nothing easier" than observing causal efficacy in the single case — for "is cutting, is drinking, is purring not 'efficacy'?" (*C&D*, p. 137) — Reimer argues that the Humean thesis can seem convincing only when we artificially restrict our attention to one category of cases of causation: what he calls "causation-as-triggering", paradigmatically present in the billiard ball scenarios so prominent in philosophy. Similar to Gijsbers, Reimer's strategy is then to extend our paradigm of what can constitute observation of causality: he argues that there is a different but equally fundamental category of cases, which he terms "causation-as-control", which is instanced paradigmatically when agents act with or on external objects. Reimer's thesis is that in cases of causality-as-control, "the causality within the causal sequences can be perceived directly, in the same sense in which shapes, sizes, motions, and changes of an object can be perceived directly" (p. 14,203). He argues for this on the basis of an analysis of the phenomenology of causation-as-control: in observing someone, e.g., tying their shoelaces, we observe cause and effect as contemporaneous and complementary, and the agent as "entangled with" the target object. Reimer ends, in an Anscombean vein, by suggesting that an understanding of causation in agency might be more fundamental than an understanding of causation-as-triggering.

John Dupré: 'Causally powerful processes' (Dupré, 2021). Dupré's principal aim is to bring out the main characteristics of his preferred process-based understanding of biological causation, which turns out to be quite close to central tenets of Anscombe's *C&D*. The central aspects of the picture of biological causation Dupré sketches can be characterized as follows. Suppose we start with the broadly Humean idea of causation in nature as the instantiation of some universal regularity. The first

step, in line with *C&D*, is then to challenge that universality — which Dupré likes to do on naturalistic (i.e., science-based) grounds. This leaves open the possibility of *probabilistic* regularities, and so the next step, again in line with *C&D*, is to change the focus from *global* patterns (be they universal or probabilistic) to *local* matters. Dupré presents the ‘new mechanists’ as his primary example here, for whom causation in biology is to be thought of as the *local* interactions between the elements of some mechanism. The result is now indeed a move away from Humeanism at large, provided that the role of the global patterns is now taken over by the *capacities* (powers) of the elements of the relevant mechanism. Characteristically, Dupré’s final step is then to question, at least for the case of biology, the mechanist’s assumption that the elements of her ‘mechanisms’ are independently identifiable, stable ‘things’. In line with his ‘naturalistic’ approach to metaphysics, Dupré argues that *in fact* the things making up biological mechanisms themselves require the continuous operation of various stabilizing *processes* — which is why his proposal is, eventually, to understand the biological realm as processual through and through: what we usually think of as biological *things* really are “persistent biological processes” (p. 10,675).¹¹

On this basis, Dupré sketches an understanding of biological causation as the *interaction* of processes, expressive of relevant capacities belonging to those processes. While insisting that differentiation here is largely a matter of ‘time scale’, Dupré does distinguish homeostatic processes (which keep something as it *is*) from homeorhetic processes (which keep some process *going* but not in the same *state*), and details how these interact with each other and with their (living or inanimate, anticipated or unanticipated) surroundings.

Whereas the mechanistic view is ‘bottom-up’ in that it explains the causal functioning of each mechanism in terms of its elements and their powers (and arrangement), on Dupré’s view it may regularly be the case that the elements themselves are in fact stabilized by *overarching* processes. And that amounts to a form of downward causation, which Dupré suggests might be operative on various levels — ranging from the process of DNA transcription via the ‘process’ in which the liver consists to the process by which an evolutionary lineage perpetuates itself, and even to the stabilizing processes sustaining entire ecosystems. Here, Dupré’s exploration exhibits an Anscombean pluralism (compare Mulder’s essay): even accepting, e.g., mechanical causation à la Newton, she notes, doesn’t require us to rule out *additional* sorts of causes such as “thermal, nuclear, electrical, chemical, muscular” ones (*C&D*, p. 143), some of which (e.g., “muscular” ones) will obviously have ‘downward’ effects.

Funding Open Access funding enabled and organized by Projekt DEAL.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long

¹¹ One might wonder whether his observations really warrant this radical ‘switch’ from thing or substance to process — was not Aristotle’s category of ‘substance’ one of activity (*energeia*) rather than stasis from the very start? If so, perhaps it would be possible to read Dupré’s position as repairing an erroneously ‘static’ conception of substance, which would put him much closer to views like those put forward by Mulder, Anselm Müller, Van Miltenburg, and others in this collection.

as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Anscombe, G. E. M. (1963/2000). *Intention*, second edition (2000 reprint with an introduction by J. David Velleman). Oxford: Blackwell
- Anscombe, G. E. M. (1971). 'Causality and Determination', in: Anscombe, G.E.M. (1981). *Collected philosophical papers, vol. II: Metaphysics and the philosophy of mind*. Oxford: Wiley-Blackwell, pp. 133–47
- Anscombe, G. E. M. (1983). 'The Causation of Action', in: Anscombe, G.E.M. (2005). *Human Life, Action, and Ethics*. Ed. by Mary Geach and Luke Gormally. Exeter: Imprint Academic, ch. 9, pp. 89–108
- Armstrong, D. (1997). *A World of States of Affairs*. Cambridge: Cambridge University Press
- Beebe, H. (2009). 'Causation and observation', in Beebe, Helen, Christopher Hitchcock, and Peter Menzies (eds.) *The Oxford handbook of causation*. Oxford: Oxford University Press, pp. 471–498
- Carr, V. (2022). 'Causality, Determination, Necessitation and Free Human Action'. *Synthese*, 200, 320. doi:<https://doi.org/10.1007/s11229-022-03806-8>
- Cartwright, N. (2007). *Hunting Causes and Using Them*. Cambridge: Cambridge University Press
- Cartwright, N. (2019). *Nature, the Artful Modeler*. Chicago: Open Court. The Paul Carus Lectures
- Cartwright, N. (1999). *The Dappled World*. Cambridge: Cambridge University Press
- Davidson, D. (1963). 'Actions, Reasons, and Causes'. *Journal of Philosophy*, 60(23), 685–700
- De Caro, M., & Putnam, H. (2020). 'Free will and quantum mechanics'. *The Monist*, 103(4), 415–426
- Dupré, J. (2001). *Human Nature and the Limits of Science*. Oxford: Clarendon Press
- Dupré, J. (2021). 'Causally powerful processes'. *Synthese*, 199(3), 10667–10683. doi:<https://doi.org/10.1007/s11229-021-03263-9>
- Franklin, C. E. (2018). *A minimal libertarianism: Free will and the promise of reduction*. New York: Oxford University Press
- Gijsbers, V. (2021). 'Perceiving causation and causal singularism', *Synthese* 199(5): 14881–14895. doi:<https://doi.org/10.1007/s11229-021-03447-3>
- Groff, R. P. (2021). 'Conceptualizing causal powers: activity, capacity, essence, necessitation'. *Synthese*, 199(3–4), 9881–9896
- Haddock, A., & Wiseman, R. (Eds.). (2021). *The Anscombean Mind*. London and New York: Routledge
- Hornsby, J. (2011). 'Actions in Their Circumstances', in: Ford, Anton, Jennifer Hornsby, and Frederick Stoutland (eds.). *Essays on Anscombe's Intention*. Cambridge, MA: Harvard University Press, ch. 3, pp. 105–127
- Köhler, W. (1947). *Gestalt psychology; an introduction to new concepts in modern psychology*. New York: Liveright
- Makin, S. (2000). 'Causality and Derivativeness'. *Royal Institute of Philosophy Supplement*, 46, 59–71
- Marcus, E. (2012). *Rational Causation*. Cambridge, MA: Harvard University Press
- Mayr, E. (2022). 'Anscombe and Intentional Agency Incompatibilism (for Human and Animal Agents)'. *Synthese*, 200, 254. doi:<https://doi.org/10.1007/s11229-022-03523-2>
- Mulder, J. M. (2018). 'The Limits of Humeanism'. *European Journal for Philosophy of Science*, 8, 671–687
- Mulder, J. M. (2021a). 'Varieties of Power', *Axiomathes* 31(1):45–61
- Mulder, J. M. (2021b). 'Absolute Idealist Powers', Forthcoming in. *Australasian Journal of Philosophy*. doi:<https://doi.org/10.1080/00048402.2021.1933556>
- Mulder, J. M. (2021c). "'Animals run about the world in all sorts of paths": varieties of indeterminism', *Synthese* 199(5), pp. 11945–11961. doi:<https://doi.org/10.1007/s11229-021-03319-w>
- Müller, A. W. (2021). 'Understanding causation', *Synthese* 199(5), pp. 12121–12153. doi:<https://doi.org/10.1007/s11229-021-03326-x>

- Müller, T. (2022). “‘Let’s build an Anscombe box’: assessing Anscombe’s rebuttal of the statistics objection against indeterminism-based free agency”. *Synthese*, 200, 74. doi:<https://doi.org/10.1007/s11229-022-03565-6>
- Mumford Stephen and Rani Lill Anjum. (2018a). *What Tends to Be*. London: Routledge
- Mumford Stephen and Rani Lill Anjum. (2018b). *Causation in Science and the Methods of Scientific Discovery*. Oxford: Oxford University Press
- Ometto, D. (2021). ‘Causality and determination revisited’, *Synthese* 199(5), pp. 14993–15013. doi:<https://doi.org/10.1007/s11229-021-03452-6>
- O’Connor, T. (2011). ‘Agent-causal theories of freedom’. In R. Kane (Ed.), *The Oxford handbook of free will* (pp. 309–328). Oxford: Oxford University Press
- Pereboom, D. (2014). *Free Will, Agency, and Meaning in Life*. Oxford: Oxford University Press
- Reimer, R. (2021). ‘Perceiving causality in action’. *Synthese*, 199(5), 14201–14221. doi:<https://doi.org/10.1007/s11229-021-03417-9>
- Rödl, S. (2007). *Self-Consciousness*. Cambridge, MA: Harvard University Press
- Rödl, S. (2012). *Categories of the Temporal*. Cambridge, MA: Harvard University Press
- Schwenkler, J. (2019). *Anscombe’s intention: A guide*. New York: Oxford University Press
- Steward, H. (2012). *A Metaphysics for Freedom*. Oxford: Oxford University Press
- Steward, H. (2022). ‘What does causality have to do with necessity?’. *Synthese*, 200, 166. doi:<https://doi.org/10.1007/s11229-022-03482-8>
- Van Miltenburg, N. (2011). ‘Practical knowledge and foreseen side effects’. *Journal of Ethics and Social Philosophy*, 1, 1–7
- Van Miltenburg, N. (2022). ‘Causality, Determination and Free Will’. *Synthese*, 200, 279. doi:<https://doi.org/10.1007/s11229-022-03700-3>
- Van Miltenburg, N., & Ometto, D. (2019). ‘The libertarian predicament: a plea for action theory’. *Synthese*, 196, 161–178
- Van Miltenburg, N., & Ometto, D. (2020). ‘Free Will and Mental Powers’. *Topoi*, 39, 1155–1165
- Whittle, A. (2003). ‘Singularism’, *Proceedings of the Aristotelian Society* 103: 371–380
- Woodward, J. (2003). *Making Things Happen: A Theory of Causal Explanation*. New York: Oxford University Press

Publisher’s note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Authors and Affiliations

Jesse M. Mulder¹ · Thomas Müller² · Dawa Ometto³ · Niels van Miltenburg¹

✉ Dawa Ometto
dawa.ometto@uni-leipzig.de

Jesse M. Mulder
j.m.mulder@uu.nl

Thomas Müller
Thomas.Mueller@uni-konstanz.de

Niels van Miltenburg
n.vanmiltenburg@uu.nl

¹ Department of Philosophy and Religious Studies, Utrecht University, Janskerkhof 13, 3512BL Utrecht, Netherlands

² Fachbereich Philosophie, University of Konstanz, Postfach 17, 78457 Konstanz, Germany

³ Leipzig University, Institut für Philosophie, Beethovenstraße 15, 04107 Leipzig, Germany