

What is it like to affect the past?

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Abstract

Michael Dummett argued that, whilst we can imagine circumstances under which agents may rationally believe themselves capable of affecting the past, the attitude of such agents is bound to seem ‘paradoxical and unnatural to us’. Therefore, only agents very unlike us could intentionally affect the past. I argue that this is not the case. I outline circumstances in which the attitude of such agents is prudent, even by our own standards. Worlds in which backwards causation occurs could, then, contain agents very much like us.

Keywords: Michael Dummett, agency, backwards causation, causation, rationality

Could actions be preceded by their intended effects? The answer depends on both the possibility of backwards causation – causation in which effects precede their causes – and on what is involved in executing actions. Michael Dummett (1964) argued that, whilst backwards causation is possible, the possibility of *actions* being preceded by their intended effects is subject to a condition: if agents are to be capable of affecting the past, then prior to acting they must believe that they cannot know whether the intended effect has occurred. Dummett describes a scenario in which this condition is satisfied, and concludes that it is conceptually possible for actions to affect the past. He concedes, however, that there is a price to pay for this conclusion: the attitude of agents who believe themselves capable of affecting the past must seem ‘paradoxical and unnatural to us’ (1964: 358).

I will show that the price for holding that agents could affect the past is not as high as Dummett supposes. Far from seeming ‘paradoxical and unnatural’, such agents’ adopting the attitude Dummett describes can be shown to be reasonable.

1. Dummett's chief

Assuming that backwards causation is possible in principle,¹ could agents intentionally and voluntarily affect the past?²

Dummett approaches this question by imagining a person who believes himself capable of affecting the past and considering how we might persuade him that he is mistaken. He describes (1964: 348–49) a tribe whose men participate in lion hunts to prove their bravery. Hunt observers report to the tribe's chief whether the men indeed behaved bravely. After the hunt ends but before the observers have reported, the chief performs dances intended to cause the men to behave bravely. Despite his dancing after the events he intends to influence, he believes that his dances affect the men's behaviour.

Could the chief's belief be justified? Dummett thinks so, provided that the chief can cite a significant positive correlation between dancing and bravery (1964: 353), and that he has reason to believe that he is free to dance or not (1964: 355). The first condition justifies the belief that dancing and bravery are causally related. The second justifies the belief that the dancing is not made possible or compelled by the bravery, and thus that the causal direction is later-to-earlier

Dummett proposes an experiment to test the chief's belief in his ability to affect the past. Noting that the chief has never danced after the observers have reported, Dummett has us challenge him to dance only after receiving the report, on an occasion when the men have reportedly not been brave.³ Dummett describes three possible outcomes of this experiment. First, the chief dances after learning of the men's cowardice. This shakes his belief in the correlation between dancing and bravery. Second, he tries to dance but fails. This challenges his belief that his dancing causes the bravery; it suggests, instead, that the bravery makes the dancing possible. Third, he dances and later discovers that the observers misreported: the men behaved bravely, after all. Dummett notes that if the experiment is conducted repeatedly, and if the first two outcomes occur infrequently enough not to undermine the chief's beliefs

¹ Dummett argues for this at 1964: 338–40. I have also defended it in Roache 2009.

² Perhaps agents could affect the past unintentionally or involuntarily, but not intentionally and voluntarily. I will not consider this possibility.

³ This strategy is generally seen as Dummett's response to the 'bilking argument' against backwards causation (Black 1956; Flew 1956, 1957 and 1964).

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relating to correlation and causal direction, then – since these beliefs jointly justify his belief in his ability to affect the past – we will have failed to convince him that this latter belief is irrational.

However, if outcomes of the first two kinds are relatively rare, then outcomes of the third kind must be relatively common; that is, the observers are frequently found to be misreporting. As a result, ‘it seems likely that [the chief] will come to think of the performance of the dances as itself a ground for distrusting, or even for denying outright, the adverse reports of the observers’ (1964: 356). Based on these observations, Dummett concludes:

If anyone were to claim, of some type of action *A*, (i) that experience gave grounds for holding the performance of *A* as increasing the probability of the previous occurrence of a type of event *E*; and (ii) that experience gave no grounds for regarding *A* as an action which it was ever not in his power to perform ... then we could either force him to abandon one or other of these beliefs, or else to abandon the belief (iii) that it was ever possible for him to have knowledge, independent of his intention to perform *A* or not, of whether an event *E* had occurred. (1964: 357–58)

Dummett takes belief in (i) and (ii) to amount to belief in one’s ability to affect the past. When combined with (iii), Dummett notes that ‘there ... is a form of incompatibility among these *three* beliefs, in the sense that it is always possible to carry out a series of actions which will necessarily lead to the abandonment of at least one of them’ (1964: 357). Those wishing to maintain that they can affect the past must, then, give up (iii) when subjected to the relevant experiments.

2. Impossibility and scepticism

Let us state Dummett’s conclusion as follows:

DC: Any agent who rationally believes that an *A*-action at time *t* may cause an *E*-event at time t^1 must also believe that at any time after t^1 and before *t* it is impossible for him to know, independent of his intention to perform *A* or not, whether *E* has occurred.

What is implied by ‘impossible’ in DC? Hanoch Ben-Yami (2007) considers this question, and concludes that only physical impossibility will do, since any weaker kind is compatible with the existence of some means by which the chief could discover the hunt’s outcome before he dances. This, along with his desire to purge

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Dummett's conclusion of its epistemological aspects,⁴ leads Ben-Yami to formulate it as follows:

BYDC: An agent's *A*-action can cause an [earlier] *E*-event only if the fastest physically possible signal cannot leave *E* and arrive at the agent before *A*. (2007: 446)⁵

Ben-Yami argues that interpreted thus, Dummett fails to demonstrate the possibility of backwards agent-causation (backwards causation in which the cause is an agent's action). Ben-Yami argues that the most plausible account of how temporal order is established derives it from causal order. If – as BYDC requires – it is physically impossible to signal the men's bravery to the chief before he dances, then the bravery cannot causally influence the dancing. But, since causal order determines temporal order, this means that the bravery does not precede the dancing, and so the relation between dancing and bravery cannot be one of backwards causation. Therefore, even granting the possibility of backwards non-agent-causation, Dummett has failed to show that backwards agent-causation is possible.

BYDC is not an appropriate reading of Dummett, however. Dummett holds that, in circumstances where the men's behaviour is signalled to the chief (via the observers' reports) before he dances, the chief may rationally maintain that his dancing affects the men's earlier behaviour. It is implausible to suppose that Dummett also believes these circumstances to be exactly those that render it impossible that the chief's dancing affected the men's behaviour. As a result, it is implausible to ascribe to Dummett the view that in order for backwards agent-causation to be possible, it should be physically impossible for *E* to be signalled to the agent before *A*.

A more promising interpretation of 'impossible' in DC is suggested by Dummett's discussion of retrospective prayer (where one asks God to influence an outcome that has already occurred). He claims that, for the notion of such prayer to be coherent, all that is required is that one is in fact ignorant of the outcome about which one is praying (1964: 341–42). He does not, then, hold that the coherence of the idea that one's prayer may affect the past is conditional upon the impossibility – physical

⁴ I will not discuss Ben-Yami's efforts to separate the epistemological aspects of Dummett's account from its metaphysical ones, since they are not relevant to my argument. In addition, Ben-Yami arguably underestimates the ease with which one may effect such a separation, since epistemology and metaphysics are far more closely intertwined in Dummett's philosophy than in that of many writers.

⁵ I have made some trivial changes to Ben-Yami's wording.

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or otherwise – of one's receiving information, before acting, about the outcome one intends to affect.

Let us generalise this point, so that in order for the notion of backwards agent-causation to be coherent, one must – prior to acting – be ignorant of the earlier outcome that one intends to affect. In the experiment, the chief receives information about the outcome he intends to affect before he acts. For him to act with the intention of affecting that outcome, he must remain ignorant of it in spite of the information he has received. He can achieve this by adopting a sceptical attitude to the information: he must deny that the information he receives about the men's behaviour constitutes sufficient grounds for knowledge about the men's behaviour. With this in mind, we can take DC to entail that it is a condition of rationally maintaining that one may affect the past that one regards any information about the effect of one's yet-to-be-performed action as insufficient grounds for knowledge about that effect. This interpretation is in line with Dummett's own comments about his conclusion (at, for example, 1964: 358).

Dummett provides what we might call 'negative' reasons for adopting this sceptical attitude, in that he demonstrates that under certain circumstances one must adopt it on pain of inconsistency. He does not, however, provide positive reasons; that is, he provides no reasons to believe that the attitude would be compelling for reasons other than avoiding inconsistency. Generally, to the extent that we are able to cite reasons in support of our beliefs, we are able to cite positive reasons. We rarely claim to hold beliefs justifiable solely in terms of negative reasons.

This paucity of reasons for the scepticism of the rational agent who believes himself capable of affecting the past makes him difficult to fathom, as Dummett notes. He remarks that, unlike such an agent, 'doubtless most normal human beings', when faced with his inconsistent triad of beliefs, 'would rather abandon either (i) or (ii) than (iii), because we have the prejudice that (iii) must hold good for every type of event'. As such, '[t]he attitude of such a man seems paradoxical and unnatural to us' (1964: 358).

This is an unattractive result for Dummett, who expresses a desire for the insights from his discussion to have a 'moral to draw for our own case' (1964: 351). Our psychological dissimilarity to agents who believe themselves capable of affecting the past means that the moral for our own case is limited. Dummett is resigned to this

result, commenting, ‘I cannot see any rational considerations which would force [the agent] out of his position’ (1964: 358).

I contend that this result is avoidable. The attitude Dummett describes need not seem ‘paradoxical and unnatural’. I will demonstrate this by considering, in the next section, three plausible positive reasons in favour of adopting the sceptical attitude in question. In the light of these reasons, the attitude seems prudent, even by our own standards. Moreover, these reasons demonstrate that whilst agents who rationally believe themselves capable of affecting the past are prudent to be sceptical about information relating to the effects of their intended actions, they need not be *overly* sceptical: their scepticism is compatible with the common-sense, fallibilist approach to knowledge that most of us adopt in our daily lives. Finally, these reasons are not intended to be exhaustive, nor to apply in all possible cases of backwards agent-causation; but merely to illustrate that agents in worlds where backwards causation occurs may face epistemic difficulties, their awareness of which justifies the belief that it is impossible for them to know about the effects of actions they are yet to perform.

3. Epistemic difficulties

3.1. Conflicting evidence Dummett writes that, following the experiment, ‘[t]he chief no longer thinks that there is any evidence as to whether the young men had been brave or not, the strength of which is unaffected by whether he intends subsequently to perform the dances’ (1964: 357). In essence, the chief is faced with conflicting evidence about whether an event has occurred. His intention to dance is evidence that the men have behaved bravely, whilst the observers’ report that the men have not behaved bravely is evidence for that outcome. There may be no compelling reasons to believe either to represent the truth. As a result, the chief may reasonably deny that either the intention or the report constitutes sufficient grounds for (even common-sense, fallibilist) knowledge about the effect of the act he intends to perform.

Given this conflicting evidence, how might the chief discover the truth of the matter? The easiest ways are to carry out his intention and dance, or to abandon the intention and not dance. The former supplies grounds to believe that the observers misreported; the latter supplies grounds to believe that they reported accurately. There may be no compelling reason, however, for the chief to do one rather than the other,

nor to believe that he cannot choose voluntarily which option to take. As a result, the attitude that Dummett describes as ‘paradoxical and unnatural’ – that is, maintaining beliefs (i) and (ii) whilst rejecting (iii) – becomes understandable.

3.2. Incomplete causal history When ascribing properties to an event or object, *O*, we often rely on knowledge of *O*’s causal history. This strategy is useful where *O*’s possessing a property is contingent on the state of the world at some given time, or range of times. For example, we may assert ‘The bridge is strong enough to support this lorry’ based on knowledge that the bridge has recently supported several large vehicles, and we may assert ‘The cake is ready to be removed from the oven’ based on knowledge that the cake has been in the oven for the time specified in the recipe.

The likelihood that an ascription based on knowledge of causal history is true increases with the amount of relevant information we have about *O*’s causal history; specifically, relevant information about the causal history of the state of the world that renders the ascription true or false. In worlds where backwards causation does not occur, this causal history is complete at and after the moment when the state of the world suffices to render the ascription true or false – for brevity, the *S*-moment – but not before. Therefore, other things being equal, ascriptions made at or after the *S*-moment (such as the ascriptions above) are more likely to be accurate than ascriptions made earlier than the *S*-moment (predictions, like ‘It will rain tomorrow’). Only in the former case can we be sure that the state of the world that renders the ascription true or false will be unaffected by events following the ascription. We therefore tend to be more sceptical about predictions than we are about ascriptions made at or after the *S*-moment.

In worlds where backwards causation is widespread, ascriptions made at or after the *S*-moment are as vulnerable to inaccuracy as ascriptions made before the *S*-moment. In both cases, events following the ascription may render it false. Inhabitants of worlds where backwards causation occurs, then, may reasonably view *any* ascription whose truth or falsity depends on the state of the world at a given time – regardless of when, relative to the *S*-moment, the ascription is made – with the scepticism that, in our world, we reserve for predictions.

Since the observers’ reports to the chief rely on such ascriptions, the chief may reasonably view the reports with scepticism. Even a sincere report that the men have not behaved bravely may be mistaken if some yet-to-occur event causes their brave

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behaviour to have appeared otherwise. Therefore, the chief may deem reports of the men's cowardice insufficient grounds for knowing that the men were cowardly, and also insufficient grounds for believing that if he tries to dance, he will fail. And he may do so whilst taking the sort of common-sense, fallibilist approach to knowledge that most of us take. In the light of these considerations, the chief's attitude seems not at all 'paradoxical and unnatural'.

3.3. Event types and tokens Often it is important that an event that one intends to bring about is caused by one's own action. If it is not, one may care much less (or not at all) that it occurs. For example, one may care very much that the lottery ticket one intends to buy is drawn; and if it is not, one may care little that *some* ticket is drawn. In such a scenario, one aims not merely that an *E*-event should occur, but that a particular token of *E* – *E-caused-by-me* – should occur.

Where such an event occurs before one acts to bring it about, one may receive information that the event has occurred before acting; but this information may convey only that an *E*-event has occurred, not that *E-caused-by-me* has occurred. In order to ensure that *E-caused-by-me* occurred, one must carry out one's intention to act. This distinction does not arise in Dummett's scenario – there is no suggestion that the chief would value bravery caused by something other than his dancing less than bravery caused by his dancing, nor that there exists any other way to cause it – but we can construct a variation in which it does.

Imagine, then, that there is not one chief but four. They live distantly from one another and communicate only rarely and with difficulty. They believe that in order to ensure the men's bravery during the hunt, only one chief need dance. Which of them will dance is decided a few days before the hunt at a meeting where each chief argues his or her case. The dancer is elected by a committee of tribe members, and the other chiefs pledge to abstain from dancing. It is a great honour to be the chosen dancer, and much prestige attaches to dancing successfully. Now imagine that some catastrophe prevents our chief from attending the meeting. He sends a representative in his place, but when the time for dancing arrives the representative has not returned, so the chief does not know whether or not he is the chosen dancer. The observers report that the men were brave, which gives our chief reason to believe that *one* of the chiefs will dance, but no reason to believe that the bravery is an effect of his own dancing. He is keen that his own dancing causes the bravery, and he has no reason to

believe that he is not free to dance or not. Since his absence from the meeting means he has not pledged to abstain from dancing, he dances. He later learns that he was indeed the chosen dancer and that the other chiefs pledged not to dance, which leads him to conclude that his dancing caused the bravery.

Again, there seems nothing ‘paradoxical and unnatural’ about the chief’s response to the information he receives about the effect of his future action. The information gives the chief reason to believe that a certain type of event has occurred, but no reason to believe that a specific token – the effect of his later act – has occurred.

This issue highlights an ambiguity in Dummett’s argument. His inconsistent triad of beliefs is inconsistent only given a certain interpretation of (iii). Interpreted as ‘that it was ever possible for [one] to have knowledge, independent of [one’s] intention to perform *A* or not, of whether a type-*E* event had occurred’, it need never conflict with (i) and (ii). To conflict with (i) and (ii), one needs to interpret (iii) as ‘that it was ever possible for [one] to have knowledge, independent of [one’s] intention to perform *A* or not, of whether the *E*-token that is an effect of one’s later *A*-token had occurred’. That Dummett views the triad as inconsistent points to the latter interpretation.

Whilst Dummett does not discuss this distinction, the sort of problem faced by the chief in our variation of Dummett’s experiment may be ubiquitous for agents in worlds where backwards causation occurs. Discriminating between different tokens of a single event-type is often possible only with reference to those tokens’ causal histories, yet – as we saw in §3.2. – agents in worlds where backwards causation occurs may lack knowledge of important parts of events’ causal histories. This is especially true in cases where an event is caused by an action that one has not yet performed.

4. Conclusion

I have argued that Dummett was overly pessimistic to concede that the sceptical attitude of agents who rationally believe themselves capable of affecting the past is bound to seem ‘paradoxical and unnatural’. On the contrary, we can envisage circumstances in which this attitude seems prudent.

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None of this entails that agents in worlds where backwards causation occurs could never receive information that constitutes sufficient grounds for knowledge about the effects of their yet-to-be-performed actions. Imagine a world where, whenever an event is preceded by some of its effects, among those effects is a public announcement giving details of the event and its various effects. Imagine also that such announcements have never been known to be misleading. The attitude of agents in that world who refuse to trust such information may indeed seem ‘paradoxical and unnatural’, and we might deem it more natural for those agents to abandon their scepticism and concede that some things they do – in particular, things that occur after their effects – are not voluntary. Reliable information about the effects of yet-to-occur events is not an essential feature of worlds in which backwards causation is possible, however; consequently, having a ‘paradoxical and unnatural’ attitude is not an essential feature of agents who rationally believe themselves capable of affecting the past.

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