

Backwards Causation and Max Black's Abominable Conjunction

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Abstract

Philosophers dispute whether an effect can be earlier than its cause (i.e. whether backwards causation can occur). For example, could a trainwreck cause a psychic to have earlier knowledge of it? Max Black tried to show backwards causation to be impossible but he failed to do so, or so I will argue. Nonetheless, his famous article can still teach us something important about certain cases of backwards causation.

In our experience a cause happens before or simultaneously with its effect: for example, the movement of my knife causes the bread to divide. Backwards causation occurs if an effect is earlier than its cause. Hypothetical examples would include the sinking of RMS *Titanic* somehow causing a psychic to know beforehand that the disaster would occur, or a time machine which would cause me to appear at some time in the past. Philosophers dispute whether such causation is possible, even if it never actually happens. Max Black, in his 1956 *Analysis* article 'Why Cannot an Effect Precede its Cause?', famously tried to show backwards causation to be impossible but, I will argue, he failed to do so. However, reflection on his argument enables us better to understand the structure of certain cases of backwards causation.

We often prevent things from happening. A brick hurtles towards my window. I catch it in time and thereby prevent my window from smashing. Here I prevent the effect from

occurring. In some cases of backwards causation, however, I can prevent the cause from occurring after the effect has occurred. More precisely, I can prevent a certain event from occurring which is such that, had it occurred, it would have been the cause of the earlier event. These are cases of *preventable backwards causation*.

Here is a sketch of such a case. Suppose that we have good evidence to believe that A-events cause B-events one hour earlier (i.e. a regular correlation between A- and B-events; no other apparent explanation of B-events; no apparent common cause of both types of event; no evidence that B-events surreptitiously cause A-events, etc.); and suppose that A-events are easily preventable.

In Max Black's example, A-events were the outcomes of coin tosses and B-events were the magician Houdini's earlier correct guesses about those outcomes – but these details are incidental. Black reasons thus: suppose, if only for *reductio*, that on many occasions A-events



caused earlier B-events; and suppose that, on at least one occasion, I observe the occurrence of a particular B-event and then prevent an A-event from occurring one hour later. In that case, urges Black, we are committed to the following intolerable result: B-events are sometimes caused by A-events (when I don't intervene) and sometimes not (when I do intervene). This is, he thinks, an abominable conjunction, a logical impossibility, and so we must reject our starting assumption that A-events ever cause B-events. More generally, Black thinks, we should conclude that backwards causation is logically impossible.

Black's final step clearly doesn't follow. His argument is constitutionally incapable of ruling out backwards causation in worlds with no preventers or in worlds where the relevant preventions are contrary to the laws of nature. Black's argument, in other words, can't rule out cases of *unpreventable backwards causation*. Hence, Black can't secure his general conclusion that

backwards causation is always and everywhere impossible.

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What though of Black's conjunction, namely, that B-events are sometimes caused by A-events, sometimes not? Should Black have found this to be abominable? Arguably not. Consider, for example, cases of pre-emption, familiar from the causation literature. These are cases where X causes Y, but had X been

prevented, some other event *Z* would have caused *Y*. Suppose that when a switch is down it causes my lamp to be on. On the occasions when that switch is up, however, a second switch kicks in and causes the lamp to be on. The lamp's being on has different causes at different times. There is nothing mysterious here, and similar cases have doubtless occurred many times. Black's conjunction, therefore, is not abominable: B-events, like the lamp's being on, merely have different causes on different occasions.

An intervener can determine the cause of a particular B-event: the cause is either an A-event, if he doesn't intervene; or some other event, if he does. In the latter case we may ask: which event is then the cause? Obviously, from the meagre description of the thought-experiment, we can't say. We can say only that there is some cause or other. (Or maybe the B-event is uncaused, but I leave this possibility to one side.) Perhaps, indeed, the act of intervention itself is the cause of the earlier B-event. In such ways, then, we can make sense of Black's conjunction, and thus make sense of cases of preventable backwards causation.

A codicil. A-events, we said, are preventable. Consider two particular A- and B-events, *A** and *B**, and suppose that *A** caused the earlier *B**. Although *A** wasn't prevented, it might have been. What would follow if it had? It might be thought that had *A** been prevented, *B** wouldn't have occurred. After all, it's normally true – pre-emption cases aside – that if one thing causes another, then had the first not occurred, neither would the second. A simple example: I turn the ignition key and my car starts; had I not turned the key, the car wouldn't have started. However, unlike the car case, it's not true that had *A**

been prevented, *B** wouldn't have occurred (even though *A** caused *B**).

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Why not? Because any A-event could have been prevented after the occurrence of a B-event, and some were. If *B** can occur without *A**, it can hardly be true that had *A** been prevented, *B** wouldn't have occurred. If *B** can occur without *A** then, had *A** been prevented, *B** might (still) have occurred. But we can make a stronger claim. If cases of preventable backwards causation have a pre-emption structure, it's not just that had *A** been prevented, *B** *might have* occurred. More than this: had *A** been prevented, *B** *would still have* occurred and would then have had a different cause. Thus we have a perfectly intelligible model for cases of preventable backwards causation.

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