# Causation According to Mario Bunge and Graham Harman

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**Abstract** — Imagine a billiard table, with several red billiard balls. Suppose that one of them impacts another. It could be claimed that the first billiard ball, the cause, makes direct contact with the second one, the effect. If we had to generalize this for all things, not just billiard balls, we would say that "thing A causes thing B". As we shall see, both Bunge and Harman reject the preceding view of causation. They would agree that the statement "thing A causes thing B" is false. This is because things do not make direct causal contact with each other, there has to be a third element that links them. In Bunge's case, two things are linked by events. In Harman's case, two real objects are linked by a sensual object.

**Résumé** — Imaginez une table de billard, sur laquelle se trouvent plusieurs boules de billard rouges. Supposons que l'une d'entre elles en percute une autre. On pourrait prétendre que la première boule de billard, la cause, est en contact direct avec la seconde, l'effet. Si nous devions généraliser cela pour toutes choses, pas seulement pour les boules de billard, nous dirions que « la chose A cause la chose B ». Comme nous le verrons, Bunge et Harman rejettent tous deux la conception précédente de la causalité. Ils s'entendent pour dire que l'affirmation « la chose A cause la chose B » est fausse, parce que les choses n'entrent pas en contact causal direct ; il doit y avoir un troisième élément qui les relie. Dans le cas de Bunge, deux choses sont liées par des évènements. Dans le cas d'Harman, deux objets réels sont liés par un objet sensuel.

## 1] Causation According to Bunge

Bunge wrote on causation throughout his career. The first systematic treatment of this issue can be found in his book *Causality: The Place of the Causal Principle in Modern Science*. He returned

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to this topic in subsequent works. His general idea is that causation is a relation between events, not things. Thus, in *Chasing Reality*, he says:

> We start by making the usual if sometimes tacit assumption that the causal relation obtains between events (changes of state in the course of time), not between things or their properties. A simple classical example is Hooke's law: The strain or deformation of an elastic body is proportional to the applied tension or load. Because only events can cause, we must disallow such expressions as "Gene *G* causes trait *T*" and "Brain causes mind." We should say, instead, that the expression or activation of gene *G* causes it to intervene in the biochemical reactions resulting eventually in the emergence of phenotypic trait *T*. (Bunge 2006, p. 90)

In other words, things-in-themselves do not causally relate to each other directly, they do so indirectly, by way of events. I believe that this point should be emphasized, because it has often been overlooked by Bunge's readers, including myself. In another article published in this volume, I argued that according to Bunge, inorganic objects interact with each other as things-in-themselves. I realize now that my claim about Bunge was wrong, since he claims that causation is not a relation between things, but between their events. It was only through my reading of Graham Harman's works that I gained a better understanding of Mario Bunge's concept of causation. Given Harman's idea that causation is not a direct relation between two real objects, since it requires a sensual object that functions as a link, I had set out to compare that idea to Bunge's concept of causation. My question at that point was a simple one: would Bunge agree with Harman on this issue, or would he disagree? I had supposed that the latter was the case, but I was surprised to find out that it was the former.

But what was more surprising was the fact that I had overlooked Bunge's entire point about causation: that it is not a relation between things-in-themselves, but between their events. Even though Bunge's point may sound trivial, since it appears to be a simple technicality, that is not the case. What is at stake here is no small matter, since his concept of causation provides the answer to the following crucial ontological question: in the absence of humans and other animals endowed with nervous systems, do inorganic objects interact with each other as things-in-themselves? The answer is no,

they do not. They can only relate to each other indirectly, through some kind of link, which, in turn, is not a thing-in-itself.

A change, according to Bunge, can be either an event or a process. He defines an event as an instantaneous change of state, while a process is a series of events. For this reason, sometimes he speaks of causation as a relation between events, as in the preceding quote, and at other times he is more precise, defining causation as a relation between changes, which can be events or processes. The following is an example of this:

> To hold that "brain processes cause consciousness," as Searle […] does, is like maintaining that bodies cause motions, or that the gut causes digestion. Things do not cause processes: they undergo processes; and these in turn cause changes (events or processes) in other things. Shorter: the causal relation holds only among changes (events and processes). (Bunge 2006, p. 90-91)

Bunge's critique of Searle and of other philosophers of mind consists in showing that they do not have an adequate ontology. Causation, according to Bunge, is an ontological concept, and it is difficult to develop an adequate account of it without a general ontological framework. Thus, in *Matter and Mind*, he says:

> Other philosophers of mind are not so much narrow-minded as confused for lack of a broad and clear ontology. Thus John Searle […], who has published extensively on this subject, tells us that he opposes both materialism and psychoneural dualism. Yet he also claims that mental states are *caused* by brain processes at the neuron level. States of one kind caused by processes of another? This talk of upward causation sounds dualistic to me. Moreover, it is reminiscent of the nineteenth-century vulgar materialist Karl Vogt, who famously claimed that "the brain secretes thought just as the liver secretes bile." There is an elementary ontological confusion here: By definition, processes are sequences of states, and only events are supposed to cause events […]. For instance, not LSD by itself, but taking LSD, causes hallucinations. (Bunge 2010, p. 144-145)

The example of LSD mentioned at the end of the preceding quote is noteworthy. Clearly, the drug by itself, laying idly on a table, does not cause hallucinations. It has to be taken by someone for that to occur. Likewise, it may be said that a glass of water by itself does

not quench thirst, drinking the water does that. A red billiard ball laying idly on a billiard table does not cause another one to move, it must undergo a change in order to do that. This being so, we can see why the statement "thing A causes thing B" is false, since causation is not a direct relation between things. Compare that statement to the definition of causation that Bunge offers in *Chasing Reality*:

> Definition 4.1 Event *C* in thing *A* causes event *E* in thing *B* if and only if the occurrence of *C* generates an energy transfer from *A* to *B* resulting in the occurrence of *E*. (Bunge 2006, p. 90-91)

One could formulate a possible objection here: if there is an energy transfer from A to B, as the preceding definition states, then there is a contradiction, because that energy transfer is occurring between things (A and B), not between events (C and E). My reply to that possible objection is that the energy transfer from A to B can only occur by means of C and E, so there is no contradiction. Bunge offers some additional clarification on this point:

> The concept of energy may be used to define that of causation, and to distinguish the latter from correlation. Indeed, causation may be defined as energy transfer, as in the cases of the light beam that burns a dry leaf or activates a photocell. (In both cases the cause is light absorption, not light; likewise, the effects are processes: combustion in the first case, and electron emission in the second. To generalize, the relata of causal relations are events or processes.) (Bunge 2010, p. 66)

If in doubt, consider the following example. Imagine that a thing "A" does not undergo any changes, all of its energy remains within it. And imagine that a thing "B" does not undergo any changes either, it does not receive any energy. How is energy suppose to flow from thing "A" to thing "B" if they do not undergo any changes at all? It can only be transferred from one thing to the other if these things undergo changes. Thus, when thing "A" transfers energy and thing "B" absorbs it, both things have undergone changes, and it would be impossible for the energy transfer to occur directly, that is, from "A" to "B" without the changes "C" and "E".

## 2] Causation According to Harman

We will now consider Harman's view of causation. He addressed this problem at length in *Guerrilla Metaphysics*, and he continued to refine this notion throughout his subsequent works. Harman does not deny that real objects interact with each other. What he denies is that they do so directly, since there has to be something that links them. Bunge would agree, since he says that causation is not a relation between things, but between their events. Thus, in O*bject Oriented Ontology: A New Theory of Everything*, Harman says:

> Since real objects exceed the grasp not only of all human theory, perception and practical action, but of every sort of direct relation, then I wonder how it is possible for one entity to influence another in any way. Obviously, I do not question the existence of such influence, but only wonder about the mechanism behind it. (Harman 2018a, p. 150)

The mechanism in question, according to Harman, is that a sensual object functions like a vicar or an intermediary for the causal relation involving two real objects. Let us remember that, in Harman's terms, real objects exist in themselves, not only independently of humans, but also independently of each other as well. By contrast, sensual objects can only exist in relation to a real object. Consider the example he offers of a red billiard ball that impacts a blue one:

> We now have the basic OOO model of the cosmos: it is packed full of objects that withdraw from each other, incapable of direct contact. Here we encounter another aspect of this philosophy that many critics find hard to swallow. For is it not obviously the case that objects influence each other all the time? Does science not calculate these interactions with extraordinary precision, using the results to make badly needed medical devices and launch probes deep into the solar system? OOO is aware of this, of course. Its point is not that objects do not make contact, but that they cannot do so *directly*. In an obvious-looking case such as two billiard balls colliding on a table, the collision obviously occurs; we do not dispute this point. But as seen from the OOO reading of Heidegger's tool-analysis, the collision of these balls is really a question of both balls interacting only with the most superficial features of each other.

> When the red ball strikes the blue ball, it is not striking the blue ball itself, but only a translated blue ball accessible to the red ball's fairly impoverished world. By way of these impoverished blue-ball-features, the red ball makes indirect contact with the blue ball itself, which also makes contact with its own blue-ball-features, though in a different way. It is a question of indirect causation or, as OOO calls it, *vicarious* causation. (Harman 2018b, p. 127)

Thus, according to Harman, a real object can indeed interact with another real object, but not directly, only by means of a sensual object. Causation, according to him, is not only vicarious, but also buffered and asymmetrical. I cannot discuss the details of these characteristics here because it would involve a more thorough discussion of Harman's philosophy in general, and it would be necessary to examine other key concepts of his philosophy that I have not mentioned yet, but that pertain to his view of causation, such as allure and black noise, among others. I plan to address this issue in more detail in a future publication. For now, it should be noted that one of the fundamental features of vicarious causation is that it always creates a new object. Consider the example of two airplanes that crash into each other:

> When two fighter planes collide at an air show, we think that their impact caused damage so severe as to lead to the crash and explosion of both. But according to the model just sketched, this is merely a 'retroactive effect on its parts' of a larger collision-entity, to which we never pay attention because it lasts so briefly and takes on little or no physical form. (Harman 2010, p. 13-14)

If we analyze this example by distinguishing a series of phases, we may say the following. Initially, both planes, "A" and "B", exist separately from each other. Then the crash occurs, what happens here is that plane "A", as a real object, encounters a limited or sensual version of plane "B", and in addition to this, the encounter generates a new real object, "C", which contains the real plane "A" and the sensual plane "B". This new object "C" is the collision itself, the "situation", if you will. It lasts for a brief moment, but it is still real. In the final stage, the collision as a new object interacts with the two real planes, but not directly, it does so by way of a sensual version of plane "A" and a sensual version of plane "B", and through these intermediaries, it affects the real plane "A" and in the real plane "B".

## 3] Concluding Remarks

Despite the fact that Bunge and Harman disagree on some specific issues regarding causation, they agree on a more general and fundamental point: that it is not a direct relation between things-in-themselves, since it requires the existence of a link between those things, and that link is not a thing-in-itself.

What Bunge calls an "event" meets the criteria for being classified as a sensual object, because he thinks that there are no events in-themselves. What he means by this is not that events do not exist independently of human beings, since he says that they do. Rather, he uses the term "in-itself" as a synonym of "by-itself". There are no events in-themselves because they cannot exist by themselves, independently of things. Every event is a change of state of a thing. In other words, there are no thingless events.

I encourage other readers of Bunge to take notice of the profound ontological consequences that his concept of causation has. In general, when thinking about the concept of the thing-in-itself, we tend to differentiate this notion from the concept of phenomenon, surely due to the influence of Kant. This being so, we take it for granted that before the emergence of the first animals endowed with nervous systems, "there was no appearance, there was only reality", as Bunge (1983, p. 150-151) says. But this does not automatically mean that, before the emergence of those animals, things-in-themselves were causally relating to each other directly, since they were doing so indirectly, by way of events.

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