

# Indeterminacy in the Mind-World Relationship

Simone Testino

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## Abstract

I want to show how reasoning and, particularly, doubting determinism affects the causal relationship between the mental and the physical world and changes the essential approach we have in facing the problem. First I look briefly at the historical origin of indeterminism, noticing the effects it had on other areas of philosophy. Then I'll focus on the implications that the possibility of having events *ex nihilo* has on the causal relation between the mental and the physical worlds.

## 1 Ex Nihilo

In “*De Rerum Natura*”<sup>1</sup> we see for one of the first times the term “*ex nihilo*” reported. The concept originally comes from one of the guiding voices of Greek philosophy, which influenced history of thought in its whole, Parmenides, who in *Περὶ Φύσεως* (On Nature) wrote:

Now I will tell you, and you shall listen to my words -  
these are the only ways to seek after the truth that one can think:  
one “is”, and it’s impossible for it to not be -  
it is the way of Persuasion (which follows the Truth) -  
the other way “is not”, and it’s necessary that it isn’t.  
And I tell you that on it you won’t learn anything,  
in fact you couldn’t know what is not because it’s not doable,  
and you couldn’t express it either.<sup>2</sup>

I won’t go deep into the needed exegesis, though I limit my comment in noticing how neat the distinction between what “is” and what “is not” is. “Nihil” is surely a term referring to what is not, and therefore there shall not *be* something that is originating from what *is not*<sup>3</sup>. The main application of the term, though, is in cristian theology, referring to the theory in which god created the world from nothing; though I use it in this essay essentially in its original ontological sense, meaning that an event has no cause at all, that it has its origin in nothing but itself.

### 1.1 The Tear in the Paper Sky

There are some concepts in the history of thought that for some reasons have been constants in the way that common people, scientists and even philosophers think. These are ideas that come naturally in our mind, that one has absolutely no reason to doubt, that stay there, naturally, like a sky made of paper in the background of a play which no actor ever touched<sup>4</sup>.

A perfect example of such an idea is that every event needs to have a cause. Do we have a reason to doubt it? Have we ever built, in the history of thought, something that high to recognise or maybe

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<sup>1</sup>One of the best works of divulgation of all times, it resembles various fragments of Greek philosophy, mainly epicureanism, and exposes it in wonderful poetry to make such difficult doctrines delightful to all men. It was written by Titius Lucretius Carus c.99 – c.55 BC.

<sup>2</sup>My translation from Fr. 2 in *Περὶ Φύσεως*, Parmenide, *Sulla Natura*, G. Reale, Bompiani, 2017

<sup>3</sup>Notice though that the discourse, at the end of the fragment, gets shifted to epistemology instead of ontology, and therefore the actual way I’ll talk on “what is not” is not contradictory at all to the Parmenides’ doctrine.

<sup>4</sup>This metaphor is not mine, instead it is one of the most famous Italian metaphors of the last century, originally written in *Il Fu Mattia Pascal* by Luigi Pirandello. In the book, similarly to my use here, it denotes the radical change from the ancient, stabile world to the culture of uncertainty of the modern era, that ripped the paper sky of naive assumptions.

even rip the paper sky above us? If a ball, which lays still on the floor, starts moving, surely someone or something moved it. If someone had the crazy idea to doubt it, science would lose its essence, there would be events happening with no reason at all, no law, nothing.

## 1.2 On the Recent Origin of Indeterminacy

Some of the best thinkers of the last centuries managed to go so high in the sky, that they felt that something there was fictional. I summarise an example contained in *An Abstract of a Treatise of Human Nature* (1740), it will show how Hume managed to alterate the conviction that everything needs a cause. There is a billiard table with two balls, one in motion  $A$  and one static  $B$ . The course of  $A$  will make it bump with  $B$ , as we all know, this will make  $B$  also move, and we have physical laws describing the motion of  $B$  in function of the motion of  $A$  and the environment. However, there's a special man observing the billiard table: Adam. Adam is the first man and has never seen two billiard balls bumping nor does he know anything about physics. Hume thinks that Adam will have no way to say what will happen after the bumping. The only difference between us and Adam is that we have more knowledge, we saw similar situations already, but he didn't. From this thought experiment we can derive that all the causal laws (and so also the scientific ones) come from nothing but experience. According to Hume, we will never find a sentence that will be logically proved true for any further experiments after the one we have already tried (this will then be stated more precisely by K. Popper). And so he writes:

That the sun will not rise tomorrow is no less intelligible a proposition, and implies no more contradiction, than the affirmation, that it will rise (*An Enquiry Concerning Human Understanding*)

This view makes scientific research useful for everyday life and engineering but not a precise tool at all. It is to say that all the laws concerning any kind of causation won't have a logical value, but just a psychological one<sup>5</sup>.

This will remain a central point in philosophical discussion in the years and centuries following 1740, particularly for Kant. The distinction and the characterisation of the Kantian noumenon, which is the core of its philosophy, is surely an influence by Hume, as he himself admits<sup>6</sup>. Even if Kant, somehow, tried to repair the hole in the paper sky that Hume ripped, the later thinkers, philosophers but also and mostly physicians, stood above the ripped paper sky. Quantum theory and the famous discussion between Heisenberg and Einstein<sup>7</sup> has been one of the most crucial moves which definitely ripped the paper sky and then allowed us all to doubt that every event needs to have a cause. Now I won't go on with the history of thought or the influences it had on philosophy of science and instead switch to the core of this essay.

## 2 Consequences on the Mind-World relationship

If we now accept that there could be some events that have no cause at all, how does it affect the mind-world relationship? An important note on determinism is made by Davidson in the exposition of his theory, after having criticised that I'll expose the two cases I regard as important.

### 2.1 The Davidson's argument

In the SEP<sup>8</sup> one reads that, even if Davidson considers mainly the case of a deterministic universe, his concept of strict law, would still apply without significant differences in the case of an indeterministic universe. He notices that in the deterministic case, laws are assumed to work with types<sup>9</sup> and then argues that indeterministic strict laws may be unable to predict the event but instead they "[specify] everything required in order for some effect to [possibly] occur"<sup>10</sup>. In my opinion, having

<sup>5</sup>Emanuele Severino, *La filosofia Moderna*, BUR Rizzoli, 2021, Hume, p. 233

<sup>6</sup>*Prolegomena*: 4, 260; 10

<sup>7</sup>see: [https://informationphilosopher.com/solutions/scientists/heisenberg/talk\\_with\\_einstein.html](https://informationphilosopher.com/solutions/scientists/heisenberg/talk_with_einstein.html)

<sup>8</sup>see: <https://plato.stanford.edu/entries/anomalous-monism/>, 3.1

<sup>9</sup>see my exam on the necessity of type theory for science

<sup>10</sup>ibidem

such laws would weaken the whole discourse, we would have anomalous events in their physical description also. Though I can't say much more than my opinion since, as the SEP reports<sup>11</sup> and as one notices in the text, no precise formulation of the third principle is given by Davidson. I would therefore stick with the physicist's claim that an undetermined physical event is said to have no law, and therefore at least as anomalous as a mental event for Davidson. Then existence of such events would make the difference between the mental and the physical description in Davidson's theory a lot weaker.

## 2.2 Examination of the Possibilities

The relation between the mind and the physical world is said, by evidence, to be causal, as Davidson, among many supposes; I will stick with this assumption. Then, since one has to cause the other, the option of the two being both uncaused and completely undetermined becomes meaningless, then I should focus on these two cases. First, I say that the physical world could have some uncaused events and then cause the mental, I will then also examine the connection with a popular and very recent theory by the theoretical physicist and cosmologist Roger Penrose. And second I consider the case in which some mental events are uncaused and then they determine the physical world, we can imagine this second scenario like the coexistence of an undetermined (and therefore free) will and a deterministic world (which is coherently affected by the subject's free acts).

## 2.3 De Mundo ex Nihilo

The physical being uncaused basically means that you have some events that, it is proven, you couldn't have ever foreseen. A famous example of such an indeterministic model is quantum theory, where you have some events, which are assumed to be not determined by any cause. All that is mental is caused by determined or undetermined events in the physical. The thesis of a strong relation of an indeterministic physical with mental events is what Roger Penrose believes in<sup>12</sup>. The core of the argument consists in the fact that Penrose regards consciousness, among all its properties, to be responsible for proving mathematical theorems. He then regards as a consequence of Gödel Incompleteness Theorem that the understanding of a mathematical object requires not computable operations. Since proving is admittedly part of consciousness and it has been said non-computable, he proved the whole consciousness being necessarily non-computable and therefore in need of an undetermined event in the physical being the cause of it. Even though I regard this argument far from conclusive, this shows perfectly an example of a model of an undetermined physical causing the mental.

## 2.4 De Mente ex Nihilo

When I say that the mind may come *ex nihilo*, I mean that there could be some mental events which are not caused by either any other mental events nor anything knowable, but they just *are*. If you prefer, you may regard them as coming *ex Deo*, iff. no proposition on god is said to be knowable. I firmly believe this case to be possible; not just as unproven wrong yet, but as ever unprovable wrong (which differs from it being proven true). The image this case describes, is really close to the one Descartes describes in *Meditationes* (similarly in *Discours de la Méthode*) before facing the dispute on god.

So if I judge that the wax exists from the fact that I touch it, the same thing will follow, to wit, that I am; and if I judge that my imagination, or some other cause, whatever it is, persuades me that the wax exists, I shall still conclude the same.  
(Descartes, *Meditationes*, II, XVI)

This is to say that it doesn't matter what the cause of the mental is, I would still perceive the same. This lets me affirm that some mental states (at least perception and all those which seem to be directly caused by the physical) have no knowable cause and therefore come *ex nihilo*. This is also

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<sup>11</sup>ibidem

<sup>12</sup><https://youtu.be/43vu0pJY46s>

strictly connected to an argument in favour of panpsychism, namely, since any change on the physical does not necessarily imply a change on the mental and we have certain knowledge on nothing but the mental: the physical may not exist and still be consistent with our perceptions.

And I tell you that on this way you won't learn anything,  
in fact you couldn't know what is not because it's not doable,  
and you couldn't express it either.