

Physical Causation and the Phenomenon of Separation

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The point of view differs between the mental and sensory trends regarding the interpretation of the causal relationship in nature. The first focuses on the presence of a metaphysical element mediating between cause and effect, called (necessity), which requires an element (effect) without the opposite. Whereas the sensory trend describes this causation in the case of a steady Spatio-temporal coupling without necessity or influence, as they are not sensory.

While we see that it is possible to infer the element of influence by inductive evidence without necessity. The justification for this separation in the situation is due to the fact that the existential difference between these two elements is that the effect is not an existential thing but rather an act that needs an influential subject according to the principle of general causation, and the specificity of this (imperceptible) influence can be inferred through the logic of probability and inductive evidence. As for necessity, it is neither an entity nor an act but rather a nihilistic matter; all that it means is that a thing remains in its state of existence or non-existence without having the ability to change at all, and from this point of view of nihilism it is difficult to infer.

According to the physical analysis, we add that the relationship included in the particular causation in nature, although it appears to the observer that it is a sign of contemporary and necessity, it is possible to disassemble it and make it include two events that are characterized by precedence without contemporary, and then without necessity and inevitability, according to the microphysical time.

Undoubtedly, this process is not just a conjugated temporal sequence, as depicted by the empirical doctrine. Still, there is a kind of actual influence that begins from the moment the cause affects the effect or the moment when the effect is generated by the action of the cause, which is a tiny physical moment. It is a tiny physical moment, as it is the first beginning of creation and influence without being preceded by a previous beginning.

According to contemporary physical measurement, time does not start from a continuous moment. According to mathematical analysis, starting from this moment will make the effect period take an infinite period. The reason for this is that the temporal connection includes moments that can be divided mathematically, which if it does not stop at the interruption of the moment, it is dragged into an infinite series, which makes the effect impossible, so there must be a break in the moments unlike what we witness in our lived sensory world. Thus, recognizing the existence of separate moments prepares a period for the beginning of the effect and its amplitude, as it includes fixed and final boundaries that cannot be divided.

The previous case applies to every change, including the spatial shift. If we start from the starting point within the spatial continuum, we will need an infinite distance to reach another neighboring point. Therefore if we do not assume discrete and discontinuous quantities of the place, we will fall into the predicament of the infinite spatial sequence; in the spatial continuum, the distance between the two adjacent points is infinitely divided. This is an issue that troubled the ancient philosophers and the theologians (mutakallim⁹n), who they influenced by them.

This problem simplifies in every case in which change and influence take place. Unless we start from a definitive standard unit, whether at the level of temporal, spatial, or effectual measurement, the problem of infinities will accompany us wherever we go. Therefore, the analysis must be subjected to physical measurement, even in terms of

theoretical consistency. We say it is indispensable for the cause to precede the effect by a standard period that cannot be transgressed as it is not divisible. At this supposed moment, the influence begins, and then it multiplies and accumulates until the effect becomes apparent. The same applies to every change and transition.

In general, if we relied on the considerations of separation as evidenced by Planck's laws, and likewise some of the perceptions belonging to quantum mechanics, the particular causal relationship would not include necessity or contemporaneity. Because between cause and effect is a record period that is impossible to transgress, which is Planck's time, and since the cause precedes the effect in time according to the physical measurement the bond between them can be broken, so the cause may be present without the possibility of the appearance of the special effect. The time interval between them is enough to prevent the presence of the cause when there is a barrier between them. But of course, the cause cannot dispense with the absolute cause, although it is possible to dispense with its cause when creating the barrier between them. Separation leads to permissiveness and non-inevitability. Therefore, the ancient philosophers emphasized the state of complete communication between cause and effect, for the relationship between them does not accept separation in any way, and then this relationship was considered among the hosts, so where there is a cause, there is an effect that lags behind it by a subject, not by time, and vice versa, which is what secures them with necessity or assumed determinism.

However, the physical analysis of particular causation makes the relationship between cause and effect return to the probabilistic laws rather than the deterministic ones. Therefore, it has been said that most physicists do not deny causation outright but rather deny the determinism that it includes. The physical conflict is a conflict that exists between deterministic and probabilistic thinking, as it is a conflict between the two theories of connection and separation.

The reference

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