

KIM ON THE METAPHYSICS OF EXPLANATION

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In a series of influential papers, Jaegwon Kim has argued for three substantive theses on the metaphysics of explanation, each of them having other prestigious defenders as well as independent intuitive appeal. They are: Explanatory Realism (ER): explanations are grounded in “world-cementing” objective relations between the events referred to by the explanandum and the explanans; Explanatory Pluralism (EP): there are, in addition to causal explanations, explanations tied to non-causal dependence relations; Explanatory Exclusion (EE): there cannot be more than one complete and independent explanation of the same event. But the following puzzle arises: (ER) couples explanations with structural objective relations, and causes are one kind among such relations. Now, most of us think that every event has a cause. Thus, there is one explanation for each and every event: the causal explanation which “tracks” the cause of the event under consideration. Given such a causal explanation, (EE) rules out any other explanation of an event, and this for all events there are. Hence, (EP) cannot be true. I suggest a way out of the puzzle that eschews one of the theses but preserves the intuitions behind it.

In a series of influential papers, Jaegwon Kim has argued for three substantive theses on the metaphysics of explanation, each of them having other prestigious defenders as well as independent intuitive appeal. They are:

EXPLANATORY REALISM (ER): explanations are grounded in structural, “world-cementing” objective relations between the events referred to by the explanandum and the explanans. (Yablo (1992), Kim (1989) and Kim (1994); also Salmon (1984), Lewis (1986) and Ruben (1990)).

EXPLANATORY PLURALISM (EP): there are, in addition to causal explanations, explanations tied to non-causal, structural dependence relations. (Kim (1994) and Kim (1974), as an important antecedent; also Ruben (1990) and Cummins (1983))

EXPLANATORY EXCLUSION (EE): There cannot be more than one complete and independent explanation of the same event. (Kim (1988), Kim (1989), Kim (1990); also Malcolm (1968))

I shall argue that, together with quite plausible assumptions, the three theses generate an inconsistency. I shall then point to a way of resolving the puzzle which I think preserves the intuitions behind each thesis.

Before proceeding, a few words may be needed to clarify the theses. Explaining is an epistemic activity in which we try to make a phenomenon intelligible. I know that the peak color of the foliage in the White Mountains was very early last year but I am curious about why this happened. Someone offers me an explanation in terms of temperature and rainfall in the region. I feel that my epistemic situation has improved, that I now un-

derstand why the peak was premature last year. There is a central epistemological question that an account of explanation has to address: what kind of knowledge constitutes my epistemic gain when I come to know an explanation of why the peak was so premature? However, explaining has its metaphysical side. For when we say that some phenomenon explains another we may have the tendency to think that such an explanatory relation is grounded by some sort of extra-epistemic relation between the phenomena. Is it the case that whenever there is an explanation of E in terms of F the explanatory relation holds *in virtue of* some objective relation connecting f (the event(s) referred to by F) and e (the event referred to by E)? A negative answer, explanatory internalism, would say that the explanatoriness of the relation between E and F is to be grounded in purely epistemic or pragmatic considerations: external objective relations play no role in an account of the explanatory properties of a relation between propositions. An affirmative answer, on the contrary, yields explanatory realism (ER).

If we accept (ER) as the most plausible answer to the (metaphysical) question of whether there is an extra-epistemic relation grounding the explanatory relation, the following question arises: *Which* relation(s) is (are) to play such a role¹? The traditional candidate has been causality. The causal relation diachronically structures the web of events, so there is little doubt that an explanatory realist must accept them as objective correlates of explanations. The question is whether causation needs to be the only such relation. We can call the thesis to the effect that explanations should be grounded by

¹ A related question may also arise for explanatory internalism.

causal relations explanatory causalism. Is explanatory causalism plausible? It has been argued that it is too narrow. For (ER) requires structuring objective relations and it is reasonable to think that causal relations are just one species among the relations which give the world its organization. Within the scheme of (ER), the metaphysical view that the world is structured by different dependence or determinative relations leads naturally to the rejection of explanatory causalism and the adoption of a more liberal view about the nature of the relations which can ground explanations, a view that can be called explanatory pluralism (EP). According to (EP) there are, in addition to causal explanations, explanations tied to non-causal, structural objective dependence relations. The most visible structural non-causal relation is the relation of mereological dependence or mereological supervenience – the relation in which an object's instantiation of a property depends on the properties and relations instantiated by its parts. For instance, the property of being transparent of a fluid depends on the properties and relations of the fluid's molecules. There might be structural relations other than causal and mereological ones, but mereological dependence suffices to make (EP) more plausible than the narrower causalism².

² “Cambridge” dependence and identity are other dependence relations that have been proposed as explanation-grounding candidates. It is important to note that (EP) does not necessarily propose to reopen the debate on explanations by reasons as different from causal explanations. In fact, many current defenders of (EP) would accept that reasons, if they are to explain, have to be causes, but they would also claim that causal relations are only a proper subset among those dependence relations that structure the world, and that make explanation possible.

Another thesis on the metaphysics of explanation has also received attention recently. If we accept (ER), we may be inclined to say that once you have a complete explanation of an event you have provided all the objective information that structurally links that event with all the other events in the world³. If so, there is no objective relation which remains to be picked out, and thus there cannot be further explanatory information to be given regarding the event involved. For where else could we find grounds for an explanation other than in a structuring, objective relation? A complete explanation “pre-empts” any other explanation unless we can show how the second explanation depends upon (or perhaps reduces to) the first.

1. THE PUZZLE

(ER) couples explanations with structural, as opposed to merely accidental, objective relations. Of course, causes are one kind among such relations. Now, most of us think that there are no uncaused events, i.e., that every event has a cause. Thus, there is one explanation for each and every event: the causal explanation which “tracks” the cause of the event under consideration. Given such a causal explanation, (EE) would rule out any other explanation of an event, and this for all events there are: if we have a causal explanation for every event there cannot be another, non-causal explanation for any event⁴. Therefore, (EP) must be false.

³ Explanatory exclusion can be defended also within explanatory internalism (cf. Kim (1989)).

⁴ Events are understood here in fine-grained fashion. But perhaps nothing important hinges on this since if we phrase the exclusion

Worries about both inferential steps of this argument will be dissipated, I expect, once some aspects of the three theses are discussed. The first step of the argument resorts to (ER) and the principle that every event has a cause. It could be said that (ER) together with such a principle do not exactly entail that *there is* a causal explanation for every event, but that *there might be* a causal explanation for every event, i.e., that there is the potential for an explanation. And it might then be claimed that such a weakened (intermediate) conclusion is not enough for the general conclusion that denies (EP)⁵. I think this worry is unfounded. Even if we weaken the intermediate conclusion to “there is potentially a causal explanation for every event,” it is in no way clear that (EE) would not yield an undesired result for the pluralist. For even if epistemologically the causal explanation in question is just a potential explanation, (EE) is – particularly for an explanatory realist – more than an epistemological principle (Kim (1989), p. 257). It rules out not only our *acceptance* of two complete and independent explanations but also that *there can be* explanations of such characteristics. Thus we are in a position to affirm that a (metaphysically guaranteed) potential explanation is enough to “preempt” the metaphysical ground for other potential explanations and then to wholly exclude them since the explanatory realist will be unable to find structural relations capable of founding these other explanations. And this generalizes over every event.

principle in terms of the events’ properties a related puzzle may arise for a coarse-grained account of events.

⁵ This move seems to presuppose something that an explanatory realist would find difficult to accept: that some causal relations might not give us *actual* explanations.

The second step of the argument uses (EE) and the intermediate conclusion that there is a causal explanation for every event. The worry here would be whether we are misusing (EE) to obtain the conclusion. For (EE) explicitly rules out any additional *independent* explanation of an event provided we already have a *complete* explanation of such an event. What if causal explanations are not complete, or what if the rival, non-causal explanations are not independent from the causal ones? In each case, the last step of the argument would be a *non sequitur*. The first question is easy to dismiss. For when we say that every event has a cause we imply that it has a set of causal conditions which are jointly sufficient for the event, so we are entitled to a complete causal explanation (and thus to a complete explanation *simpliciter*): the putative non-causal explanation cannot be a partial explanation.

The latter, more difficult question is whether non-causal explanations can coexist with the complete causal ones by being in some sense dependent on them. Suppose, just for the sake of argument, that every non-causal explanation is dependent on a causal one. Would this be acceptable to an explanatory pluralist? Probably not. For a pluralist seems to be giving up the substance of her thesis if she recognizes that no non-causal explanation is a full-fledged explanation standing on its own, or, in other words, that all non-causal explanations are just dependent on the “real” causal ones. Explanatory pluralism stems from the appealing idea that there are metaphysically significant, world-structuring relations which are non-causal and in no way reduce to or depend upon causal relations (Kim (1974), Ruben (1990), ch. 7). Thus, if non-causal explanations are not independent, (EP) seems to lose its appeal and its rationale.

A maple's becoming crimson is a sufficient determinant for that maple's becoming red. According to (DE), then, we should conclude that the fact that a maple became red is uncaused since any cause would be preempted by that fact's determinant, namely the fact that the maple became crimson. But perhaps the determinable-determinate relation is not a structural objective relation and (DE) applies only to structural relations. So consider again: the change in a solution's concentration of hydrogen ions is a sufficient determinant for the change in pH value of the solution. So the change in the solution's pH is uncaused? If we have the plausible conviction that every macro-event depends on micro-physical events, then *every* (including chemical and biological) macro-event would be uncaused. (And if we do think that (DE) applies to determinable-determinate relations, no macro-event would depend on a micro-event, since given (DE) micro/macro dependence relations would also be preempted by determinable-determinate relations). Thus, (DE) provides an unacceptably cheap way to preempt causes (and perhaps dependence bases) of events and yields extremely implausible results, so it cannot be adopted. And without (DE) we have no basis for exclusion at the explanatory level.

Finally, the "elegance and plausibility" argument. Since, as I argued, non-causal explanations do not require causal overdetermination, we can discard this problem at the ontological level: we don't have to settle for an inelegant and implausible world. Still, a defender of (EE) might have a point here. For even if there is no causal overdetermination, there is in fact some sort of explanatory overpopulation. An account of explanation should take into account the unifying and simplifying character of explanatory activity. Kim puts things this way "when two distinct explanations are produced to account for a

single phenomenon, we seem to be headed in a direction opposite to the maxim of explanatory simplification: ‘explain as much as you can with the fewest explanatory premises’” (Kim (1989), p. 254). This seems indeed an important epistemological disadvantage. However, it falls short of establishing (EE). Even an explanatory realist accepts that explaining is an epistemological activity and what counts as a good explanation depends (within the limits fixed by (ER)) on the epistemic situation of those in need of understanding (Kim (1988), p. 225-26). On the one hand, in different epistemic contexts, each of the “competing” explanations might enhance our understanding of the explanandum. On the other hand, we might be able to provide one of the “competing” explanations but not the other. It seems clear that there are *epistemic* gains which result from allowing two explanations of the same phenomenon. And these gains are to be weighed against the lack of simplicity. Thus, in absence of an ontological reason against accepting more than one explanation, there is no straightforward argument from a maxim of simplicity to explanatory exclusion.

We can conclude that what makes a causal principle of exclusion appealing does not guarantee an explanatory extension¹⁰. Moreover, as long as we preserve (CE), we can give up (EE) and keep the intuitions that make it appealing. The way out of the puzzle, thus, shows a minimum of departure from the original triad of plausible theses¹¹.

¹⁰ This conclusion has an straightforward application to the problem of mental causation. I explore this in Sabatés (forthcoming).

¹¹ I am indebted to Josep Corbí, Martín Davies, Jaegwon Kim, David Sosa and two anonymous referees for this Journal for helpful comments. This paper was written while I was a British Council Fel-

Abstract: *En una serie de influyentes trabajos, Jaegwon Kim ha defendido tres tesis sustantivas acerca de la metafísica de la explicación. Cada una de ellas no sólo cuenta con otros defensores prestigiosos sino que también resulta intuitivamente atractiva. Las tesis son: Realismo Explicativo (ER): las explicaciones están basadas en relaciones objetivas estructurantes entre los eventos denotados por el explanandum y el explanans; Pluralismo Explicativo (EP): hay, junto a las explicaciones causales, explicaciones basadas en relaciones no-causales de dependencia; Exclusión Explicativa (EE): no puede haber más que una explicación completa e independiente del mismo evento. Sin embargo, se plantea el siguiente problema: (ER) "aparea" cada explicación con una relación objetiva estructurante, y la causalidad es una de dichas relaciones. Ahora bien, la mayoría de nosotros piensa que todo evento tiene una causa. Así, hay una explicación para todos y cada uno de los eventos: la explicación causal que "rastrea" la causa del evento bajo consideración. Pero dada esa explicación causal, (EE) excluye cualquier otra explicación para dicho evento, y esto se generaliza a todos los eventos. Por lo tanto (EP) no puede ser verdadera. En este trabajo sugiero una solución a este problema que rechaza una de las tesis pero preserva las intuiciones que la motivan.*

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