

Kane and Double on the Principle of Rational Explanation

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ABSTRACT: Using Jaegwon Kim's framework of explanatory realism versus explanatory irrealism, in addition to some observations about the metaphysics and epistemology of explanation, I re-examine the disagreement between Robert Kane and Richard Double over the principle of rational explanation. I defend Kane's account of dual rationality and argue that Double's principle has a narrower range of application than he claims. I also show that, contrary to what Double assumes, Kane's approach to action explanation does not lapse into a form of explanatory irrealism.

RÉSUMÉ : En utilisant le cadre théorique développé par Jaegwon Kim, soit l'opposition entre le réalisme explicatif et l'irréalisme explicatif, ainsi que quelques observations sur la métaphysique et l'épistémologie de l'explication, je réexamine le désaccord opposant Robert Kane à Richard Double au sujet du principe de l'explication rationnelle. Je défends la position de Kane sur la double rationalité et je soutiens que le principe proposé par Double possède un champ d'application plus limité qu'il le prétend. Je montre aussi que, contrairement à ce que suppose Double, la façon dont Kane entend expliquer l'action ne se transforme pas en une forme d'irréalisme explicatif.

Keywords: libertarianism, indeterminism, explanation, rationality, understanding

1. Introduction

Libertarians about free will have long struggled with the objection that indeterminism renders free choices irrational, capricious, or inexplicable and that this hinders rather than enhances the agent's control and responsibility for her choices. This problem is particularly vexing for those non-Valerian libertarians

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who locate the indeterminism at the conclusion of the agent's deliberation. If an agent is to have a categorical ability to choose otherwise than to A, then it must be possible for her to do so even if her deliberative process overwhelmingly supports A-ing. The problem with this possibility is that such a choice would strike us as irrational and inexplicable because it is not supported by the agent's deliberation. Richard Double refined this concern and brought it to bear on recent versions of libertarianism via his formulation and defence of the principle of rational explanation (PRE).¹ According to PRE, our ability to explain an event is directly proportional to the probability of its occurrence in the light of the event(s) cited in the explanans. The reason that the above non-Valerian agent choosing otherwise strikes us as mysterious, according to Double, is due to our implicit acceptance of PRE. Since the agent's deliberation overwhelmingly supports A-ing, it makes her doing A more probable than the alternatives. Should the agent choose to do otherwise, we are left without any explanation for why she acts as she does since her deliberation made doing otherwise less probable than doing A.

Robert Kane² responded to Double by appealing to dual rationality (DR), according to which certain choices are rational whichever way they go because the agent has a conflicted will, and, hence, has reasons for both options.³ Kane claims that DR allows for the possibility that an agent's undetermined choice is explicable in the light of her reasons, even if neither option is made more probable by those reasons. Double⁴ is unmoved by Kane's reply and insists that if an agent's reason is really to explain her choice and not merely to tell a plausible narrative about it, the reason must make her choice more probable than the alternative. Since many authors⁵ continue to voice objections to Kane's theory that draw on similar intuitions as those at work in PRE, it is fair to say that Kane's appeal to DR has struck many as insufficient to remedy the above problem for non-Valerian libertarianism.

My aim is to defend Kane's appeal to DR and to show that it is far more successful than Double and Kane's other critics claim. My approach involves introducing a framework for the discussion of the metaphysics and epistemology of explanation—a framework that is seldom employed outside of debates about nonreductive physicalism and mental causation. My hope is that by imposing this framework on the above debate the nature of the disagreement between Kane and his critics can be brought into greater relief, and that the advantages of Kane's approach will become clearer.

¹ Double 1988.

² Kane 1988.

³ Kane thinks that there may be situations in which there are more than two rational outcomes and so would involve plural rationality, but for the sake of simplicity I will describe Kane's view in terms of conflicts of will that involve two rational options.

⁴ Double 1993.

⁵ See, for example, Mele 1999; Levy 2005; Haji 2000; Franklin 2013.

My discussion is divided into five sections. In Section 2, I sketch out the debate about PRE in more detail. I outline Double's defence of this principle and say more about his disagreement with Kane on this issue. In Section 3, I introduce a framework drawn from Jaegwon Kim's⁶ distinction between explanatory realism (ER) and explanatory irrealism (EI) and employ it in order to highlight specific points of disagreement between Double and Kane. I argue that, although Double is probably correct to insist that insightful explanations should be grounded in objective relations between events in the way ER demands, considerations about the intensionality of explanation reveal an important epistemic dimension to explanation. I propose that Double adopts a Hempelian account of this dimension by virtue of the way in which he thinks explanations (of a certain kind) produce understanding, but I argue that this is not the only possible account. I then show that, although Kanean (dual) rational explanations produce understanding in a different way, they do not lapse into EI and, hence, are perfectly respectable explanations. In Section 4 I argue that Double's claim that neural indeterminism is a barrier to our ability to explain free choices—an objection that arises frequently in the literature—runs afoul of the intensionality of explanation. These considerations go a long way towards addressing the concerns that Double and others have raised about indeterminism, and provide additional support for Kane's version of libertarianism. However, I close the discussion in Section 5 by gesturing at a further problem that is generated by my defence of Kane's theory.

2. The Debate Over PRE

Double originally formulated PRE in his paper "Libertarianism and Rationality,"⁷ but I will rely predominantly on his more recent articulation and defence of the principle in "The Principle of Rational Explanation Defended."⁸ PRE states: "*Citing a person's reasoning process R rationally explains choice C only if the probability of C given R is greater than the probability of not C given R.*"⁹ Double thinks of PRE as a particularized case of a more general constraint on explanations. In his view, the explanans makes the occurrence of the explanandum more probable than its non-occurrence in *all* "insightful" explanations.¹⁰ So, if an indeterminate explanans makes A 0.6 likely and B 0.4 likely, the

⁶ Kim 1988; Kim 1994.

⁷ Double 1988.

⁸ Double 1993.

⁹ *Ibid.*, p. 134.

¹⁰ *Ibid.* Double often neglects the distinction between the propositions that constitute explanations and the events to which the explanans and explanandum propositions refer. I will make this distinction more perspicuous in the next section. For now, I will adopt Double's vocabulary with the caveat that he is implicitly referring to events when he speaks of the explanans making the explanandum more probable.

explanans can at best explain A; it cannot explain B. And if A and B are both 0.5 likely to occur, given the explanans, we can explain neither outcome. Hence, Double claims there is an intimate connection between our ability to explain a phenomenon by appealing to an event (or series of events) and the probability with which that event (or those events) will lead to the explanandum event. In the context of libertarian theories that appeal to indeterminism, PRE accounts for the idea that we require contrastive explanations for why the agent didn't make the more probable choice. Double describes PRE and its connection to libertarianism as follows:

My intuition was that although it would be easy to confabulate explanations for each of two contradictory indeterminate choices, and to convince ourselves that we had chosen rationally whichever way they went, I did not see how there could be any *insightful*, objective explanation of a choice unless that explanation entailed that the choice was at least slightly more probable than its not occurring. It just seemed *obvious* to me ... that in order to understand why a person chooses A we have to understand why the person did *not* choose *not* to do A. If we are to have a minimal degree of understanding of why an event occurred, then a satisfactory explanation must be, in Clarke's terms, "contrastive." For me, this is a perfectly general point about giving rational (that is, insightful, *good*) explanations of anything, whether we are trying to explain human choices or the rotation of a planet.¹¹

Kane disagrees with PRE on the grounds that agents have the capacity for dual (or plural) rationality, and that DR is at work when agents make certain kinds of free choices.¹² In particular, DR is involved when agents make what Kane calls 'self-forming actions': undetermined choices that involve freely shaping the agent's character. He defines DR as follows:

The choice of A by an agent is *dual rational*, if and only if, *whichever way it goes* (i.e., whether the agent chooses A or chooses otherwise), the outcome is (a) the intentional termination of an effort of will that is the agent's effort of will, (b) the agent has reasons for the choice (whichever occurs), (c) the agent does it for those reasons, and (d) given the agent's character and motives, it is, all things considered, rational for the agent to do it at that time for those reasons.¹³

Although such situations are relatively rare, Kane claims that there are times when agents have divided wills when faced with a choice between two or more

¹¹ Double 1993, pp. 134-135.

¹² While Kane's position has evolved since his exchange with Double, the basic contours of his theory remain the same, especially with respect to his claim that indeterminist libertarianism requires dual or plural rationality.

¹³ Kane 1988, p. 446.

incompatible actions. On such occasions, the agent has reasons for and against *both* of the available options—reasons the agent endorses and thinks of as her own. This leads to a conflict of will the agent must overcome, but the outcome of this conflict is not determined by the agent's prior character or motives. Instead, the agent exerts an effort of will to resolve the conflict (say, between moral and self-interested reasons). According to Kane, such efforts are indeterminate, leading to an undetermined choice. The fact such efforts are indeterminate, however, in no way undermines the explanatory worth of the agent's reasons. In Kane's view, whatever the outcome, the agent will have acted for the set of reasons that rationally supported that choice. The relative probabilities of each outcome are, for Kane, irrelevant to the explanatory connection between the agent's reasons and her choice or action. What matters is that the agent acts for one set of the identified reasons and—given the agent's character and beliefs—her choice is a rational one to make.

Double finds Kane's approach implausible. In particular, he takes issue with the idea that we can explain the agent's choice if it is the outcome of an indeterministic process or event.

... Until we assign probabilities there can be no adequate explanation of either ... [choice]: by hypothesis, the alternative that results depends upon a single event that no one can predict and no one can understand. Thus, no one can tell why the event occurred rather than not.¹⁴

According to Double, although the agent's conflicting reasons or divided character might very well explain the motivational conflict and the agent's effort of will to resolve it, "we will never reach the point where we see *why* either outcome results."¹⁵ In his view, this severs the explanatory connection Kane claims exists between the agent's reasons and her choice. Double is not alone here. A number of recent critics of Kane's position have voiced similar concerns about the explanatory role of an agent's reasons if they do not determine her choices.¹⁶

In the third part of his discussion Double steps back and contemplates the source of the disagreement between him and Kane on this issue. He proposes that they are likely working with different meanings of 'explain' and, hence, different conceptions of understanding. Double suggests that Kane is working with an excessively weak conception of what it is to explain a choice or action, viz.: that to explain an action is to provide a narrative in terms of the agent's reasons or psychological states that rationalizes the choice in the sense of rendering it *understandable*—that is, as something a rational person who

¹⁴ Double 1993, p. 136.

¹⁵ *Ibid.*

¹⁶ Mele 1999; Levy 2005; Haji 2000; Franklin 2013.

possessed those reasons can *reasonably* do. Double thinks this is too weak because, as Richard Nisbett and Lee Ross¹⁷ have argued, we are prone to confabulate reasons in order to generate plausible sounding narratives that maintain our appearance as rational beings. Given this, an approach to action explanation that places so much emphasis on the rationalization of the agent's choice is not sufficiently objective. Double claims we should also be wary of the idea that we can adopt Kane's account alongside his own or make what it is to explain something a pragmatic matter. After all, our concern with the explanation of choices is driven by the deeper question of responsibility: can a dual-rational agent be sufficiently in control of her choices to be responsible for their outcomes? According to Double, a relativistic or pragmatic account of explanation is surely too divorced from the underlying metaphysics for the rationalizing relation to provide a meaningful answer to this question. Double, then, takes a meta-sceptical attitude toward this part of the debate, urging that a bottom-up approach will get us bogged down in questions about the nature of explanation and leave the real issues of responsibility untouched.

3. The Metaphysics and Epistemology of Explanation

In order to settle the above disagreement and to address Double's scepticism, I want to introduce a framework for the discussion of explanations provided by Kim.¹⁸ This framework will highlight certain relevant features of both Double's and Kane's positions with the aim of showing how they can, in a sense, be reconciled. Kim embraces what he calls 'ER'. For Kim, explanations of individual events take the form of propositions, but they are grounded in and track metaphysical dependency relations between events in the world.

A realist about explanation believes that some objective relation between the events underlies, or grounds, the explanatory relation between their descriptions. That is, statement *G* constitutes a correct explanation of statement *E* in virtue of the fact that a certain relationship obtains between events *g* and *e*.¹⁹

Kim leaves room for the possibility that there are many different kinds of explanatory relations—as many as there are forms of metaphysical dependence—but he treats the causal relation as the most central case. This, of course, assumes what Kim calls 'causal realism' since causal relations would have to be objective, mind-independent relations in order to support ER.

Kim contrasts ER with EI. EI characterizes explanations in a way that makes explanation an 'internal' matter of how propositions about events relate logically to one another or to our overall body of knowledge. Kim describes EI as follows:

¹⁷ Nisbett and Ross 1980.

¹⁸ Kim 1988; Kim 1994.

¹⁹ Kim 1994, p. 57.

Explanatory irrealism, on the other hand, would be the view that the relation of being an explanans for, as it relates *C* and *E* within our epistemic corpus, is not, and need not be, “grounded” in any objective relation between events *c* and *e*. It is solely a matter of some “internal” relationship between items of knowledge. Perhaps, there are logical, conceptual, or epistemic relationships among propositions in virtue of which one proposition constitutes an explanans for another, and when that happens, we could speak of the events represented as being related by an explanatory relation. That is, given the explanans relation over propositions, a relation over the events they represent could be defined: *c* explains (is related by *R* to) *e* just in case *C* is an explanans for *E*. But an *R* so defined would fail to be an objective relation, as required by realism, for it would depend crucially on what goes on within our body of knowledge and belief.²⁰

Kim claims that views that analyse the causal relation *itself* in terms of explanation,²¹ or that treat explanations as arguments,²² or that make explanation entirely a matter of what Wesley Salmon²³ describes as the ‘psychological conception,’ are all irrealist because they do not ground the explanans relation between propositions in objective relations between the events the propositions are about.

It is reasonably clear that Double is committed to ER, given his insistence that genuine explanations should be “objective.”²⁴ While he does not employ the same framework or vocabulary as Kim, he surely thinks that a genuine or insightful explanation should be grounded in an objective relation between events. After all, he is concerned not to lose sight of the issue of responsibility in the debate about libertarianism, and this calls for an appropriate dependency relation between the agent’s deliberation, her choice, and subsequent action. Double also seems to think that if, following Kane, we make explanation *wholly* a matter of rational coherence between the agent’s reasons or motives and choices, we lapse into EI. Double’s worries about our propensity for confabulation in the weaving of plausible sounding narratives about our reasons and actions indicates a commitment to the idea that a good explanation of a choice must be more than a matter of logical, epistemic, or rational relations between the descriptions of the explanans and explanandum events.

It is difficult to fault Double for the above commitments. I am quite sympathetic with ER and I tend to agree that, if Kanean explanations of free (dual-rational) choices were just a matter of rational coherence between the explanans and explanandum, this would be unacceptably irrealist and, as such, would be

²⁰ Kim 1988, pp. 226-227.

²¹ Hanson 1958.

²² Hempel 1965.

²³ Salmon 1984.

²⁴ Double 1993, p. 134.

insufficient to ground moral responsibility. However, things are not so simple. The metaphysical relations highlighted by ER are but one dimension of explanation, and it is a mistake to think that Kane's view is unrealistic, or so I shall argue.

While our explanations are, as Kim claims, grounded in objective truths about the world, they also have an essentially epistemic dimension. Kim writes:

Explaining is an epistemological activity, and "having" an explanation is, like knowing, an epistemological accomplishment. To be in need of an explanation is to be in an epistemologically imperfect state, and we look for an explanation in an attempt to remove that imperfection and thereby improve our epistemic situation. If we think in terms of the traditional divide between knowledge and reality known, explanations lie on the side of knowledge—on the side of the "subjective" rather than that of the "objective," on the side of "representation" rather than that of reality represented.²⁵

Unfortunately, Kim has very little to say about this epistemic dimension of explanation because his purpose is to formulate and to defend his principle of explanatory exclusion, which is driven primarily by considerations drawn from the metaphysical dimension of explanation—ER and causal realism, in particular. Nevertheless, he does acknowledge that explanations might involve more than the representation of metaphysical relations:

I am not suggesting that the explanatory relation holding for events is all there is to explanations, or to the explanans relation. Just as knowledge requires more than truth, explanations presumably must meet further requirements ("internal" conditions—perhaps logical and epistemic ones), although exactly what these are does not concern us here.²⁶

I don't have a fully developed account of the epistemic dimension of explanation to offer either, but I will hazard a few remarks that are (I hope) relatively uncontroversial and that will prove useful for the evaluation of PRE.

Whatever else one might want to say about explanation, it is clear that it is an intensional relation. ER demands that the explanans and explanandum pick out events that stand in an objective dependency relation, but considerations about the substitution of logically inequivalent descriptions in explanation statements show that not just any descriptions of these events will be explanatory. Consider the following twist on Donald Davidson's²⁷ classic example offered by Ausonio Marras:

²⁵ Kim 1988, p. 225.

²⁶ *Ibid.*, p. 226.

²⁷ Davidson 1963.

To use a stock example, one can well agree that the earthquake caused the collapse of the building if and only if the event reported on p. 5 of today's *Globe and Mail* did, given that the latter event *was* the earthquake in question. But, if explanations are to provide understanding at all, it is at least contentious to suppose that these two singular causal statements provide the same *explanation* of why the building collapsed. I may well understand the latter statement (that the event reported on p. 5 of the *Globe and Mail* caused the collapse of the building) and be no wiser as to why the building collapsed, unless of course I know the identity in question. Two singular causal statements may thus be extensionally equivalent and yet fail to have the same explanatory content. Indeed, a causal statement may be true without being explanatory at all. It is no doubt true that the event that caused the collapse of the building caused the collapse of the building, but I doubt that this statement is explanatory at all. Causation may well be independent of any "conceptual apparatus" we may use in representing it, as causal realism claims, but it is strange to suppose that explanation is similarly independent.²⁸

If such examples are compelling, they suggest two related lessons. The first is that explanations have an irreducibly epistemic dimension that involves the generation of understanding. If they did not, we would find causal tautologies and causal claims that employ oblique descriptions of events explanatory, given that they satisfy ER. The second lesson is that explanations are not individuated *solely* by the objective relations they represent, but also according to the way these events and relations are described or the properties they token.

To suggest that explanation is non-extensional ... is to call attention to the fact that the explanatory relation, properly speaking, holds between events *as of a type*, or insofar as they exemplify this or that property. What displays the canonical form of a singular explanation statement is not "*c* explains *e*," but "*c*'s being *F* (or *qua F*) explains *e*'s being *G*," where *F* and *G* type identify the cause and the effect respectively. The explanation relation thus holds between facts (or *propositions*), and facts implicate *properties* or event *types* ...²⁹

These simple observations suggest an interesting possibility: depending on how we describe two events that stand in an objective dependency relation, there may be more than one way of producing understanding and, hence, more than one type of explanation available for the same event.³⁰

²⁸ Marras 1998, pp. 442-443.

²⁹ *Ibid.*, p. 445.

³⁰ My strategy, then, is to employ a version of what is sometimes called "the dual explananda" response to the causal exclusion argument, though my use of it here is to reconcile Kane's and Double's implicit accounts of explanation.

One way of generating understanding is already evident in PRE. Double makes this even more explicit by offering the following:

An explanans (N) adequately (insightfully, ‘rationally’) explains some event (E) just in case citing (N) enables an ideally rational being to understand (by reference to deterministic, probabilistic, functional or teleological laws) why E occurred.³¹

Although Double is agnostic about the correct *logical form* of explanations, his account of how explanations generate understanding appears very Hempelian. His emphasis on the role of laws is reminiscent of Carl Hempel’s claim³² that to explain an event is to see that its occurrence was something to be expected, given the explanans and laws of nature (whether deterministic or otherwise). In the light of this, it is clear why Double finds PRE so obvious. If we achieve understanding by coming to see how an event was to be expected, given certain laws and given the preceding events, it follows that we cannot understand the occurrence of an improbable event (i.e., one with a probability ≤ 0.5), since such events are by definition *unexpected*.

I have no quarrel with this view of understanding. I believe that it is a plausible and useful account of the epistemic dimension of explanation. However, in the light of the intensionality of explanation, I must disagree with Double’s assumption that this is the *only* acceptable account. Since the events that stand in an objective relation token a number of different properties, it is plausible to claim that alternative explanations of the same event are possible—ones that appeal to different explanatory relations between different pairs of properties of the cause and the effect.³³ Double focuses on nomological properties of the related events, whereas Kane appeals to a rational relation between mental (or content) properties of the cause and the effect.

According to the alternative approach, then, when we explain an intentional action by appealing to the agent’s reasons or other motivational states, we do not achieve understanding by coming to see that the action was to be expected, given the agent’s reasons and certain laws of nature. Instead, in a manner similar to the approach to action explanation proposed by William Dray³⁴ and

³¹ Double 1993, p. 138.

³² Hempel 1963, p. 146.

³³ If one prefers, one could instead here say that the different explanations involve distinct *explanans* relations, both of which are grounded in the same explanatory relation (i.e., the causal relation). Although this represents a departure from Kim’s vocabulary, I prefer to follow Marras and say that the *explanatory* relation is one that connects events as of a type, whereas the causal relation is the underlying metaphysical relation.

³⁴ Dray 1957; Dray 1963.

more recently by Kim,³⁵ we achieve understanding by seeing how the action is the rational thing to do, given the agent's beliefs and desires. This is surely Kane's view since he makes so much of the *rational* fit between the agent's reasons and her choices—whichever way she chooses.

The best way to illustrate this account is to consider our way of making sense of situations in which an agent's behaviour initially appears irrational.³⁶ Imagine that you see your friend Bob in the supermarket and that he is in the process of wrapping his head in aluminum foil. This is not normal behaviour when shopping. Indeed, such behaviour should strike you as extremely odd. Now suppose that you ask Bob what he is doing and he tells you the following story: he thinks the CIA has implanted a microchip in his head that can transmit his thoughts to CIA headquarters. Since he would prefer to keep his thoughts to himself, and since he believes that wrapping his head in foil will block the transmission of his thoughts by interfering with the radio waves used by the transmitter, he has rushed to the supermarket to procure some foil and has quickly set to work wrapping his head.

I think we can all agree that this is not a particularly *good* reason to wrap one's head in foil since it is justified by beliefs that are almost certainly false. But this does not mean that Bob's reason fails to explain his action. *If* you believe that the CIA is monitoring your thoughts, if you don't *want* the CIA to do this, and you *believe* that by wrapping your head in aluminum foil you can prevent it, as a rational person you *should* wrap your head in foil.³⁷ It seems clear that it is in virtue of this rationalizing role of Bob's reason that we find it explanatory. For it is not until we can grasp a rational connection between his action and his other mental states that we have a satisfactory account of what he is doing. To drive this point home, we need only to consider what would happen if we could not situate Bob's action in the context of his mental states in a way that rationalizes it. If every attempt to uncover a rational connection between his action and his beliefs and desires failed, Bob's behaviour would forever be mysterious. For example, if all we learned about Bob's mental states was that he thinks there is a conspiracy to prevent the mass production and distribution of the electric car, there would be no way to make any sense of his action. Accordingly, we would cease to regard him as a competent agent.

These considerations are hardly conclusive but, in the light of examples such as these, and of our explanatory practices generally, there is a *good case* for thinking that the epistemic dimension of action explanations is a matter of seeing how the agent's choice or action is rational, given the agent's other mental states or deliberation. Hence, the alternative to Double's account of the epistemic dimension of explanation cannot be dismissed out of hand, and so

³⁵ Kim 2010.

³⁶ I have employed this example before in Campbell 2008b.

³⁷ I hope it is clear that I am using a very thin conception of normativity here.

there is little reason to agree with his assumption that the *only* way in which an explanation can produce understanding is by showing that the explanandum event was to be expected with a degree of probability above 0.5.

Double would no doubt object that the above account in terms of the rationalization of the explanandum is excessively irrealist since it seems to make explanation entirely a matter of internal or logical relations between propositions about the agent's deliberation and choice. After all, the explanatory relation (i.e., the rationalizing relation) appears not to be an objective relation between events, but a logical relation between one way of describing them. But appearances are misleading and the concern is misguided. There is no reason to think that the above account of understanding is incompatible with ER. In fact, such a commitment is *already* built into Kane's account of DR (quoted earlier) in claim (c): "the agent does it [i.e., performs the action in question] *for* those reasons." That is to say, there is an objective relation (a causal relation) between the agent's reason and her choice or action. So long as the reason that explains the event in question caused it (either deterministically or via an indeterministic effort of will), there is no danger of EI. While our capacity for the confabulation of reasons is no doubt extensive, this fact does not undermine the claim that we achieve understanding by coming to see how an agent's choice is rational in the light of her reasons, for we can distinguish as Davidson did³⁸ between those reasons that did, and those that did not, cause her action, and this satisfies the metaphysical constraints on explanation that ER requires. The worry that Kane's account of explanation and understanding amounts to a form of EI, then, is misguided. Nothing about the fact that an action explanation produces understanding via the rationalization of the choice or action implies that this internal relation is all there is to such explanations, or that they are not grounded in underlying metaphysical relations. Thus, Double is too quick to dismiss Kane's account of explanation. Also, Double is premature to conclude that Kane's denial of the possibility for contrastive explanations in the context of undetermined self-forming actions severs the explanatory connection between the agent's reasons and her action.

4. Neural Indeterminism and the Canonical Form of Explanation Statements

While Kane's emphasis on the rationalizing role of an agent's reasons may be *consistent* with ER, Double and many of Kane's other critics continue to object that the indeterminism involved in dual rational choices represents a fundamental obstacle to any satisfying explanation of such choices. In an illuminating passage, Double expresses the concern in a way that still speaks for many of Kane's critics:

³⁸ Davidson 1963.

The agent experienced conflicting motivations. She struggled to pick the altruistic alternative against her strong inclination to select the self-serving one. She tried her best, and why she managed the degree of effort that she actually did is a mystery, inasmuch as it was traceable to an indeterminate quantum event, for which there is no telling why it occurred.³⁹

In this section, I argue that this kind of objection (and, hence, the concomitant demand for contrastive explanations) runs afoul of the intensionality of explanation.

We saw in Section 3 that the canonical form of a singular explanation statement ('*c*'s being *F* explains *e*'s being *G*') connects a property of the cause to a property of the effect. But, given that the cause and the effect both token multiple properties (under the assumption of nonreductive physicalism), how do we decide which property of the cause is explanatorily relevant to which property of the effect? Marras pairs the properties mentioned in the explanans and explanandum according to the causal relevance of the former to the latter, as revealed by a counterfactual test.⁴⁰ That is, *c*'s being *F* explains *e*'s being *G* only if it is the case that, had *c* not tokened *F*, *e* would not have tokened *G*. This approach has some problems in the light of apparent counterexamples⁴¹ and so my preference is to pair the property of the cause with the property of the effect according to their epistemic features.⁴²

Suppose, then, that, in accordance with ER we have two events, *c* and *e* that stand in a causal relation. Let us also assume, in accordance with the tenets of nonreductive physicalism, that *c* and *e* each token two non-equivalent mental and physical properties.⁴³ Hence, *c* tokens a mental property *M*₁ and a physical property *P*₁, while *e* tokens a mental property *M*₂ and a physical property *P*₂. What I have been proposing, in effect, is that the way we pair our descriptions of these events when we construct an explanation is determined by their epistemic features—to the ways in which the relations between the descriptions can produce understanding. The mental descriptions *M*₁ and *M*₂ stand in a rationalizing relation, such that the former rationalizes the latter. *P*₁ and *P*₂, we may assume, stand in a nomological relation, whereby the former would

³⁹ Double 1993, p. 136.

⁴⁰ Marras 1998.

⁴¹ Fuhrmann and Mendonça 2002.

⁴² For a more detailed discussion of Marras' approach and Fuhrmann and Mendonça's criticism, see Campbell 2008a.

⁴³ I will here remain agnostic about whether an event's having a property is solely a matter of description or a matter of its exemplification by an object at a time (i.e., between a Davidsonian or a Kimian theory of events). If one prefers, one can substitute the following talk of an event's tokening a property with the events being described using certain kinds of predicates.

lead us to expect the latter with either certainty or a high degree of probability, depending on the kind of law involved. Relative to the appropriate descriptions, then, we can have a rationalizing explanation alongside an explanation in terms of nomic implication, both of which involve the same pair of events and both of which are grounded in the same underlying metaphysical (i.e., causal) relation.

In most contexts, it would be fruitless to combine the above descriptions and hope that we would have epistemically satisfying explanations. While the claim that ‘*c*’s being M_1 explains *e*’s being P_2 ’ satisfies the metaphysical dimension of explanation required by ER, since *c* causes *e*, it is difficult to see how this statement could be explanatory. We do not normally think of events such as desires as rationalizing a complex set of signals sent through the nervous system, along with their effects on the contraction and expansion of certain groups of muscles. Although such complex events *are* actions, when so described, they are explained by an appeal to the neurobiological properties of the cause, not by mental content.⁴⁴ It seems to me that Double’s criticism, quoted above, makes precisely this mistake, though the descriptions are reversed: he describes the cause in physical terms (as a quantum neural event) and the effect as a mental event (a choice). If one works with these two descriptions, then, of course, explanation will fail, but this is not because no explanation is possible or because no objective relation exists between the identified events. The problem is with the way Double describes them. I take this to be what Kane is gesturing at when he says the following:

I agree that if the physical descriptions of these events were the only legitimate ones, then free will would look like nothing more than chance or probability. When neuroscientists described it in physicochemical terms, all they would get are indeterministic chaotic processes with probabilistic outcomes. In short, when described from a physical perspective alone, *free will looks like chance*. But the physical description is not the only one to be considered.⁴⁵

So, if we assume that the relevant events have physical descriptions according to which no laws, save perhaps probabilistic ones, apply, it will appear as though what happens is random and inexplicable. But, as Kane suggests, this is not the only available description of these events. Under their mental descriptions, the related events stand in a rationalizing relation, and this satisfies the epistemic dimension of explanation in the way described earlier. Those, like Double, who object to indeterminist theories like Kane’s by saying

⁴⁴ This is not to rule out the possibility of explanations that involve mixed mental and physical predicates in some explanatory contexts—explanations about perceptual judgements might be an example.

⁴⁵ Kane 1998, p. 147.

that at some stage in the deliberative process an indeterministic process ‘takes over’ and produces the outcome or choice when an agent’s will is divided are therefore doing something illegitimate: they are running roughshod over the fact that explanation is an intensional relation. They are ignoring the epistemic dimension of explanation and its dependence on the way we describe events or the properties they token.

One might object to this proposal that Kane is guilty of this himself when he interposes the effort of will between the agent’s reasons and her choice and characterizes the former in terms of ‘neural indeterminism.’ There is a sense in which this is true, but I think it is harmless. After all, Kane does not treat such efforts as a feature of our everyday action explanations since he claims that agents are typically unaware that they are making dual efforts. Instead, we should think of Kane’s appeal to neural indeterminism as an effort to uncover the metaphysical relations that are at work in such cases.

Recognizing these points goes a long way towards undermining PRE, or at least to limiting the scope of its relevance. Once we give the epistemic dimension of explanation its due, we can appreciate how there can be more than one way in which explanations generate understanding. To be sure, one is the way Double champions in PRE: some explanations generate understanding by helping us to see that the event in question was nomologically implied by the event(s) that preceded it. I have no doubt that many explanations of events operate in something like this way, and that our ability to explain such events is linked to the probability of their occurrence. But the application of this approach to the explanation of actions in terms of reasons is a mistake. Here, understanding is produced in a different way and considerations about probability appear largely irrelevant. Hence, PRE is not a general constraint on explanation as Double claims, but a constraint on a certain *kind* of explanation.

Employing Kim’s framework of ER, EI, and the metaphysics and epistemology of explanation has, I believe, proved to be extremely useful. It helps us not only to see the differences between Double and Kane more clearly, but also provides a way out of the impasse that Double claims exists between them. Both philosophers identify plausible accounts of understanding (and, hence, of explanation), but these are not incompatible in the way Double assumes. Indeed, they can operate side-by-side, provided that the events in question support the relevant descriptions or token the appropriate properties. Double worries that to relativize explanation to a description in this way will undermine our ability to say anything useful about responsibility, but we have also seen that this concern is misguided. So long as the Kanean account involved in DR satisfies the metaphysical commitments of ER, the connection to responsibility is guaranteed.

5. Another Problem on the Horizon

The foregoing argument should give non-Valerian libertarians like Kane hope, since it bolsters their existing attempts to create a bulwark against the unrelenting

tide of objections to the effect that indeterminism renders choices random and inexplicable. There is, however, a further problem that libertarians who adopt this approach will have to face. My claims about the intensionality of explanation will no doubt sound rather Davidsonian. To the extent that they involve the adoption of some form of nonreductive physicalism (not necessarily Davidson's), I suspect they are likely to provoke an objection with which nonreductive physicalists have struggled for some time now. The objection runs like this: If the mental properties that figure in rationalizing explanations are not the properties in virtue of which mental events cause actions, then they cannot be genuinely explanatory. Events have the power to cause what they do in virtue of their law-engaging physical properties; hence, an event's mental properties are epiphenomenal.

Arguments abound that the nonreductive physicalist cannot secure the causal relevance of mental properties unless they embrace reduction and identify mental properties with physical properties.⁴⁶ Kim succinctly describes this in terms of the 'problem of causal exclusion' as follows:

Thus, we have two causal claims about a single event, B: (1) *c*'s having content property R caused B and (2) *c**'s having neural property N caused B. (In line with Davidson's anomalism we may assume $c=c^*$, but this will not materially affect the discussion to follow.) When these two claims are viewed together, we should find the situation perplexing and somewhat unsettling. Why did George get up from the couch? What caused it? We are offered two causal explanations: 'Because *c* occurred and had R' and 'Because *c** occurred and had N.' But what is the relationship between *c* and *c**, or between *c*'s having R and *c**'s having N? George's reason, his desire for beer and his belief about where he could find some, is offered as what made him get up; but then a certain neurophysiological event of kind N is also offered as what made him get up. We want to ask: '*Which really did it?* What's the *real story?*'⁴⁷

In the light of the nonreductive physicalist's commitment to physicalism and to the causal closure of the physical domain, there is tremendous pressure to say that the neurophysiological property of the cause provides the *real story*, in which case the fact that the cause also has the mental property of being a desire for beer is irrelevant. Thus, the explanatory relevance of an event's rationalizing properties might still be in jeopardy, in which case the worry that Kane's approach leads to EI resurfaces. I cannot hope to resolve this issue on Kane's behalf here, though I do think there is an available plausible response. Suffice it to say that, although the argument in the previous sections has created a clearing, Kane is not out of the woods yet.

⁴⁶ For a small sample, see Honderich 1982; Stoutland 1980; Kim 1989; Kim 1993.

⁴⁷ Kim 1995, pp. 124-125.

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