

Explanatory Exclusion in History and Social Science

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Judgments of explanatory exclusion are a necessary part of the explanatory practice of any historian or social scientist. In this article, the author argues that all explanatory exclusion results from mutual explanatory incompatibility of some sort. Different types of exclusion arise primarily as a result of the different elements composing "an explanation." Of most philosophical interest are judgments of explanatory exclusion resulting from the incompatibility of explanatory relevance claims. The author demonstrates that an ontic theory of explanation is necessary to make sense of this type of exclusion and in so doing develops an analysis similar to Jaegwon Kim's well-known analysis of explanatory exclusion. To conclude, the author demonstrates the differences and connections between Kim's analysis and his own.

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EXCLUSION IN PRACTICE

It is often the case that we are faced with a good many explanations in the same area of historical scholarship. Likewise, a plurality of theories and explanations is to be found in response to most questions in the social sciences. Before we can set about deciding which explanations or theories are better than others, we are faced with a prior task: to sort those explanations, theories, or elements thereof that are exclusive from those that are not. In practice, these decisions may be more or less complicated, though are likely to be more so as additional explanations are added to the domain. Examining the underlying basis and justification for judgments concerning explanatory exclusion is a

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task for the philosophy of history and the social sciences and is the subject of this article.

The question of explanatory exclusion is particularly pressing when comparing multiple explanations for the same phenomenon. Consider the following explanations (collectively “FR”), all of which have, at times, been taken by prominent historians to provide an outline explanation for the French Revolution:

(FR): Why did the French Revolution come about?

1. The bourgeoisie had economic power but not political/legal power—the correction of this imbalance brought about the revolution.
2. The monarchy suffered acute financial crisis in the late 1780s.
3. France’s geopolitical position led to unsustainable military costs.
4. Enlightenment philosophy encouraged revolution against the ancien régime, in favor of government based on reason, fairness, and efficiency.
5. The revolution was a mistake: certain errors were made by key actors, particularly Louis XVI, at crucial times.
6. Capitalism was unpopular with the “falling bourgeoisie” (for example, government officials or rentiers, those who loaned small amounts of money); the revolution was their attempt to halt the encroachment of capitalism.

In many cases, explanations can and should be regarded as consistent. Explanations 2 and 3, for example, focus on two complementary aspects of a wider interpretation. On the other hand, explanations 1 and 6 are clearly exclusive to at least some degree. While the former explanation takes the bourgeoisie to have brought about the revolution so as to reorder the political landscape consistently with their economic (capitalist) activities, the latter takes the bourgeoisie to have brought about the revolution so as to halt the encroachment of capitalism.

Yet it is also clear that there are relations of mutual exclusion to be found in FR that are less obvious and perhaps more debatable. Compare, for example, explanation 1 with explanations 2, 4, or 5. While there may be no direct disagreement, we may nonetheless decide that some or all are mutually exclusive. After all, consider the likely reaction to a historical work that purported to explain the French Revolution using all four of these proto-explanations: such a work would, at the very least, be regarded as confused. Why? Because the suspicion would be that the explanatory elements are somehow, and to some extent, indirectly exclusive.

In this article, I aim to develop a coherent and plausible basis for the sort of practical judgments made in the previous two paragraphs. Previous philosophical writing on this topic (Kim 1988, 1989; Risjord 1999) has certainly served to suggest useful ways to approach explanatory exclusion. Problems remain, however: as I shall argue, some approaches have suffered from a lack of generality and others from a reliance on an unsatisfactory underlying theory of explanation. My aim is to provide a systematic framework capable of both integrating previous insights on explanatory exclusion and enabling the comprehension of a wide array of different types of exclusion. The explicit focus will be explanations of particular facts, as is the case in example FR. However, the topics discussed are tightly linked to the question of the mutual exclusion of explanations of general facts and of theories, as I will suggest.

EXCLUSION AS INCOMPATIBILITY

The fact that explanations are simply *different* is insufficient to lead to their mutual exclusion. In particular, different explanations may legitimately cite different causes of the same phenomena. To take a well-worn example, “the car crashed because the road was icy,” “the car crashed because the driver was not concentrating,” and “the car crashed because the bend was a tight one” are not, *prima facie*, exclusive. Rather, the mutual exclusion of explanations results from their mutual *incompatibility*. Incompatibility of explanations is, in general, all there is to explanatory exclusion. The advantages of this short analysis are clear: explanatory exclusion can be understood as a tractable and unitary phenomenon.

However, it is also clear that explanations can be exclusive in a number of different ways, as I suggested with regard to FR. These differences arise as a result of the multiple elements that constitute “an explanation.” Specifically, any analysis of explanation would locate three elements: an explanandum, or target (that which is explained); one or more explanans (that which do the explaining); and one or more claims of relevance (which connect the first two elements in an appropriate way).¹

1. A note on terminology: in using the words *explanans* and *explanandum*, I do not want to commit myself to the explanatory theory of Carl Hempel, who coined the terms. Specifically, I do not intend it to be inferred that I believe that the explanatory relata are sentences. I use *explanandum* and *explanatory target* interchangeably throughout this article.

If we accept that these elements, properly understood, are the primary constituents of any given explanation, then explanatory exclusion typically arises in the following four ways. Each principle, on its own, denotes an instance of explanatory incompatibility; hence, each is a sufficient condition of explanatory exclusion. Comment on exclusion of the types given by A, B, and C follows in this section; discussion of exclusion of the fourth type forms the basis of the remainder of the article.

- A. Explanations exclude where the targets of those explanations are incompatible.
- B. Explanations exclude where the explanans of those explanations are incompatible.
- C. Explanations exclude where the target of one explanation and the explanans of another are incompatible.
- D. Explanations exclude where the relevance claims of those explanations are incompatible.²

First, consider the exclusiveness of explanatory targets (type A). My favored account of explanatory targets is the contrastive. The theory of contrastive explanation states that we explain not simply a fact, “P,” but the combination of a topic and contrast(s), “P rather than Q (or Q₁, Q₂, . . .).” Together, the topic (sometimes instead referred to as “the fact”) and the contrasts (or foils) constitute the explanatory target. It is presupposed that the topic is true (or, if you prefer, empirically adequate) and the contrast(s) false (empirically inadequate). (Contrastive explanation accounts for many common features of explanatory practice;³ in addition, we shall see that a contrastive theory of explanation enables us to deal with two problems concerning explanatory exclusion due to relevance claims.)

If this theory is correct, then explanatory exclusion of the first type would be realized where one explanation disputed either the truth of another’s topic or the falsity of another’s contrast(s). Note that it is not, strictly, explanatory targets themselves that are incompatible, for

2. I think it likely that there are, in fact, five principles of explanatory exclusion. The fifth would be that “explanations exclude where the importance claims of those explanations are inconsistent.” By “importance claim,” I mean the claim that a certain cause *c* was more important in bringing about *e* than was a further cause *d*, though both *c* and *d* were efficacious to some degree. The basis of importance claims in history and the social sciences is, however, contentious, and while much of the following discussion concerning relevance claims would also have a bearing on the putative fifth type of exclusion, it is more properly the subject of a separate article.

3. A claim argued for in Day (2002, chap. 5).

only sentences or statements may stand in this relationship. Explanatory targets are facts, usually contrastively delineated. The incompatibility arises rather as a result of presuppositions to which the explainer is committed: in this case, that the topic is true and the contrast(s) false. To illustrate, consider the following amended version of the Marxist explanation (1) in the initial FR example:

7. The revolution of 1789 took place in France (rather than some other country) because, previously to that date, the bourgeoisie in France held economic power but not yet political/legal power, a state of affairs that could not continue.

An explanation that excluded explanation 7 on grounds of incompatibility of targets would be either one aimed at answering why there was no revolution in France in 1789 or one aimed at answering, for example, why there were revolutions in France *and Germany* around that time but not in other European countries. To reemphasize, explanations that *differ* in explanatory target without being incompatible in that regard would not (for that reason) be exclusive.

The requirements for exclusion of type B would be met by an explanation that disputed the truth of the explanans, since it is a presupposition of explanans that they be true (or, again, empirically adequate). Here too, the explanatory exclusion results from the incompatibility of presuppositions to which those who assert the explanans are committed. For example, in relation to explanation 7, an exclusive explanation may be one that claimed that the bourgeoisie of that nation and that time were not economically powerful or ascendant.⁴ Explanatory exclusion of type C is included for the sake of completeness of analysis, though is perhaps realized less commonly than type A and B, and in any case raises no separate issues.

Isn't it the case—as is often supposed—that sameness of explanatory target is at least necessary (even if not sufficient: recall the car crash) for explanatory exclusion resulting from explanans? I think not. We may regard explanations as potentially exclusive even where they don't share the same target, so long as explanatory exclusion in general is understood in terms of incompatibility of explanatory presuppositions. If, for example, an explanation of the British victory at Trafalgar contained the statement "the French navy decreased during the 1780s" and an explanation of the French Revolution contained the

4. This is, in fact, the central claim of Cobban's (1964) social explanation of the French Revolution, used in FR, above, as the basis for example 6.

statement “the French navy increased during the 1780s” (thereby helping to cause the unsustainable government expenditure), then the two explanations are incompatible, hence exclusive, no matter that they have different targets.

Yet explanatory exclusion in a narrower, and perhaps more practically relevant, sense does require the sameness—or at least similarity—of targets. As social scientists or historians, we are usually concerned with the relation between multiple explanations of the same phenomenon, as in the case of FR. In addition, we will see in the final two sections that similarity of target does have a subsidiary role in the analysis of the fourth type of exclusion.

While I have illustrated the incompatibility of targets and explanans in terms of factual disagreement, this is not the only sense in which these explanatory elements may contradict. Any empirical statement—such as that “the bourgeoisie were economically powerful”—carries certain further presuppositions. It is assumed that the items mentioned actually exist(ed) and that the concepts used are appropriate in the context. For this reason, conditions A, B, and C may be realized in other ways than through factual inconsistency.

An example of disagreement resulting from the first type of assumption can be given in relation to the initial example FR (2): that the monarchy suffered acute financial crisis in the late 1780s. Were a rival explanation to include the claim that there was no monarchy in France in the late 1780s, incompatibility and therefore exclusion of this type would be the result. An example of conceptual disagreement is to be found in the disputes in French Revolutionary scholarship concerning the concept bourgeois. While a Marxist historian such as Lefebvre⁵ would use bourgeois in a way roughly indicated by example 7, the explanation of a “revisionist” historian such as Cobban would be exclusive of the Marxist explanation on the basis that bourgeois either should not be used in relation to that historical period or should be employed in a different way.

When is conceptual difference to be treated as a case of incompatibility of explanans? Just as difference of fact is insufficient for incompatibility (and, hence, for exclusion), so is straightforward difference of concept. Rather, the implication of the rival exclusive historical explanation must be that the concept in use in the first explanation is incompatible with their own. In particular, the claim should be either

5. See, for example, Lefebvre (1947).

that the concept in question cannot be said to exist or that it is inappropriately employed. There may arise practical problems concerning the potentially vague conditions governing a concept's "existence" and "appropriateness"; it may not be entirely clear whether one of these conditions is challenged. Nonetheless, I would maintain that *some* conceptual "clashes" may generate the incompatibility necessary for explanatory exclusion. In practice, we should demand that conceptual relations between potential explanatory rivals are carefully traced.

Two general comments relate to the types of explanatory exclusion discussed thus far. It should be appreciated that exclusive explanations are not often (if ever) completely opposed. Rather, explanatory exclusion should usually be seen as a piecemeal affair, denoting a complex pattern of different types and cases of incompatibility. Explanations can be, and often are, exclusive in more than one way. But there will be much of each explanation that is compatible. The degree of exclusion located by statements A, B, and C may be more or less important; after all, the explanatory targets and explanans may be fundamentally, if not entirely, compatible. Any proper philosophical appreciation of the relative importance of cases of exclusion will of course be dependent on the content one provides to the phrase "more or less important." We should not, for example, simply hope to count the contradictory explanans and thereby derive a measure of the degree of exclusion, since those explanans may be more or less fundamental or trivial. However, the task of examining *explanatory importance* is for another day.⁶

Second, not only may the incompatibility be more or less important, it may be more or less likely. One way for a partial satisfaction of statements A, B, or C to come about is where the epistemological support for the claim of incompatibility is unclear. For example, it may be that it is likely, though not certain, that the explanans of one explanation would have causes or effects in contradiction with the explanans of a second explanation. "The aristocracy owned the majority of the factories in prerevolutionary France" most likely contradicts "the bourgeoisie had the economic power in prerevolutionary France," though the two do not logically contradict.

6. I have maintained elsewhere that at least some judgments of historical importance can be substantively defended (Day 2002, chap. 7-9).

THE INCOMPATIBILITY OF EXPLANATORY RELEVANCE CLAIMS

The difference between explanatory exclusion arising from explanans (type B) and exclusion arising as a result of relevance claims (type D) may be illustrated by returning to example 7. To be exclusive with regard to explanans, the rival explanation should be incompatible with the fact of the bourgeoisie's economic position as stated by 7. To be exclusive with regard to relevance relations, the rival explanation would be compatible with the fact itself but would rule out the possibility of that fact's being relevant to what is to be explained.

It may appear that conditions B and D are similar; it may even be thought that D is a special case of B. After all, is it not the case that one's factual claims and relevance claims are both set forth as part of the explanans? If so, then exclusion resulting from the incompatibility of either the truth or the relevance of the respective explanans would be adequately accounted for by condition B. Even if this is so, conditions B and D indicate different ways for explanans to be incompatible. Furthermore, a consideration of the incompatibility of relevance claims leads to issues of quite a different sort to those raised thus far.

In the same manner as conditions A, B, and C, exclusion of sort D may be realized where explanations directly dispute the relevance claims of another. For it is sometimes the case that explanations characterize explanatory mechanisms according to absence or limitation: the fact that the car's skidding did *not* lead to its crashing may be explanatorily salient as to why the car did not crash. And in this case, an explanation that cited the irrelevance of the car's skidding would be directly incompatible with another that cited the relevance of that skid. Yet there is, in addition, a large class of cases of exclusion with respect to relevance claims that does not make reference to a direct incompatibility of that kind.

The possibility of indirect incompatibility of relevance claims is required to make sense of much explanatory critique. Certain explanations are explicitly formulated as critiques, with the intention of demonstrating the untenability of the relevance claims of the critiqued explanation. The important point is that the perceived untenability of the relevance claims of the critiqued explanation is the *result* of accepting those of the critical explanation. It is precisely this inference—from the assertion of alternative, though not straightforwardly inconsistent, relevance claims to the rejection of the critiqued

explanation—that requires philosophical examination. It is vital to be able to understand how it can be that explanations can be consistent in a straightforward factual, or even conceptual, manner, and yet it be the case that we properly regard these as exclusive rivals. In cases such as the original example, FR, we need to entertain the possibility (in the case of FR, perhaps the probability) that there simply is not room for all the different explanations. The possibility is equally vital when considering rival social-scientific theories. It is necessary to assume that it is possible for rival theories in the same domain to be factually consistent, yet nevertheless for there to be no room for both. The possibility that relevance claims may be indirectly incompatible provides the basis for intuitive judgments of these kinds.

To further examine the possibility of incompatibility of relevance claims, it is opportune to consider one of the few previous analyses of explanatory exclusion in social science, that of Mark Risjord (1999). Risjord relies on an erotetic theory of explanation, of the kind developed by Van Fraassen (1980, chap. 5) to develop his two principles.⁷ Van Fraassen's theory is well known, but the elements of that theory relevant to the present discussion are worth emphasizing. The proponent of an erotetic theory analyzes explanations as being answers to (explanation-seeking) why-questions. The major motivation for adopting an erotetic approach is to emphasize the pragmatic nature of explanation: that explanations are provided in particular circumstances, in relation to particular audiences with particular requirements, expectations, and standards. Formally, explanation-seeking questions ask,

Why P rather than Q (or $Q_1, Q_2 \dots$)?

As we have seen, the presuppositions of such a contrastive why-question are that the topic, P, is true and that the contrast cases, Q_i , are false. In addition, a range of acceptable answers is chosen, or implied, by the question: those that meet the "relevance relation." The relevance relation delineates a class of answers that are of the right type, according to the particular context of the question. While it may appear that the key notion of an erotetic analysis is precisely the relevance relation, Van Fraassen (1980) attempts to minimize its role by refusing to provide it with any substantive content: "Is this not where the inextricably modal or counterfactual element comes in? But not at

7. A similar theory of explanation developed in the context of social theory can be found in Garfinkel (1981, chap. 1).

all; in my opinion, the word 'because' here signifies only that A [the answer] is relevant, in this context, to this question" (p. 143).

Risjord (1999) states that two explanations conflict when either

1. the presuppositions of one (kind of) why-question are inconsistent or not compossible with the presuppositions of another (kind of) why-question, or
2. the relevance relation for the two (kinds of) why-questions isolate classes of answers that are always or typically inconsistent or not compossible. (P. S302)

Since the presuppositions of a why-question are, first and foremost, that the topic is true while the contrasts are false, Risjord's first criterion corresponds to my condition A. Indeed, given that I have argued that "incompatibility" means, in general, that the presuppositions of explanations are inconsistent, Risjord's criterion and my own are essentially equivalent. The meaning of "compossible" in this context is not made entirely clear but perhaps refers to answers that, though not strictly logically inconsistent, are highly unlikely to be compatible. Such a notion would accord well with my previous comments. "Answers," in the erotetic theory, correspond to *explanans* as I have used the term. Given this equation, Risjord's second criterion can be seen to correspond to my condition B. In addition, I take it that a suitably erotetic version of my condition C could be adopted by Risjord for the sake of analytical completeness.

Yet Risjord provides no analogue to my condition D, the criterion of relevance exclusion. This is not due to oversight on Risjord's part; the erotetic theory that frames his principles cannot license such a criterion. The possibility that relevance claims may contradict requires that such claims may have a bearing on explanatory situations beyond the particular one framing that claim. Yet for Van Fraassen, the relevance relation is essentially a pragmatic limitation on what could possibly be an answer to *that particular* question, in that particular context. Since the essence of a pragmatic commitment is that it does not extend beyond the particular situation in which it is uttered, different pragmatic commitments cannot lead to inconsistency. We should no more expect purely pragmatic relevance claims to contradict than to expect two speakers stating their own current positions in indexical terms ("I am here") to contradict. It is true that Van Fraassen does stipulate that relevance relations be restricted by certain minimal epistemic requirements—so the relevance relation is only "essentially" pragmatic. In particular, he stipulates that the relations be con-

sistent with our background scientific knowledge (Van Fraassen 1980, 147, 156). These epistemic restrictions allow for the possibility that relevance relations may be incompatible with background knowledge, but they do not further the possibility that relevance relations may be incompatible with other such relations.

Seemingly contrary to these considerations, Risjord's analysis of Macdonald and Pettit's (1981) rejection of functional explanations of social phenomena appears to suggest a need for the possibility of explanatory exclusion due to incompatible relevance claims. "They think that the explanans of social [functional] explanations, when taken as explanatory, conflict with our conception of ourselves as agents" (Risjord 1999, S301). Risjord takes Macdonald and Pettit to believe that all answers given in functional terms to questions concerning social action—those that are alleged to conflict with our conception of ourselves as agents—are excluded. Yet this would require that the relevance claims made in the rival, nonfunctional explanations are capable of application not only to the particular explanation of which they are a part but are also, somehow, able to overrule relevance relations offered in very different pragmatic situations.

Risjord has suggested (in conversation) that relevance relations may be regarded as performing two separate roles—first, as in Van Fraassen's theory, that of governing pragmatic limitations on admissible answers but, in addition, that of governing restrictions on *the* type of explanation suitable for that subject matter in general: that explanations be, for example, functional, rational, or nomological. Clearly, the latter role is nonpragmatic and may conceivably provide a basis for explanatory exclusion of an indirect type to result from relevance claims. Yet though this response is certainly along the right lines, it is insufficient for two reasons. Not only does it require a theory of explanation that is not purely erotetic, but we should, in any case, not seek to limit cases of relevance exclusion to those cases where the explanatory *type* of the two sets of relevance relations differs. It is not only the case that functional explanations may, for example, exclude rational explanations; it should be possible that one functional explanation excludes another.

THE NEED FOR ONTIC EXPLANATION

To recap, we need an understanding of how the relevance claims made in different explanations may be indirectly incompatible, in

order to fully understand explanatory exclusion of this kind (type D). Such an understanding cannot be found using a (purely) erotetic theory of explanation. What is required for this type of exclusion is that relevance claims may be subject to more demanding restrictions than the minimal, and essentially pragmatic, requirements imposed by an erotetic understanding.

Indirect exclusion due to incompatible relevance claims is comprehensible once it is accepted that proper claims of explanatory relevance refer to an existing entity of the right kind. To affirm this commits one to an alternative understanding of explanation, the *ontic*. An ontic theory allows the following condition to be formulated:

Synthetic incompatibility (SI): when the intended referent of the relevance claims of two or more explanations is the same part of the net of o-relations, those explanations are either identical or exclusive.

I regard the type of explanatory incompatibility derived from the principle as synthetic. Whereas explanatory exclusion in general often derives from a more direct incompatibility, exclusion due to relevance claims may be derived from the very general metaphysical principle given by SI. I intend SI to get at the idea that explanations can exclude by “treading on each others’ toes”: it is suggested that two explanations do the same explanatory job, but this is a job that can only be done by one.

Two initial comments on the terminology employed in SI are required. “O-relations” are those ontological relations that are referred to in explanations. The o-relations are assumed to form a single interconnected “net” of relations, which connect that entity referred to by the explanandum to that or those referred to by the explanans. It helps to bring the discussion down to ground if “o-relations” is read as “causal relations.” Whether all o-relations are causal relations depends largely on the stringency of one’s definition of “cause.” The question of whether all explanations are intended to refer to causal structure in some way is certainly relevant to the extent of the applicability of SI. In what follows, I shall presume that, broadly, explanations do so refer. It may be thought that the idea of causal historical or social-scientific explanations is problematic, since the specification of necessary and sufficient conditions for one thing being a cause of another is not at hand. Suffice to say that further argument is, of course, required; such argument, however, raises issues that are more properly considered elsewhere.

Second, where it is the case that SI affirms explanations to be “identical,” there is likely to be a sense in which they are not. They are identical in that they are referentially identical. They may well not be identical in terms of the way that they conceive of the same referent: they may not be “sense” identical. “Identical” explanations typically refer to the same o-relations but in different ways. “Exclusive” explanations are intended to refer to the same o-relations but do not since one of the explanations fails to refer.

As I have formulated it, SI is (intentionally) similar to Jaegwon Kim’s (1988) well-known principle of explanatory exclusion (KPEE):

there can be no more than a single complete and independent explanation of any one event, and we may not accept two (or more) explanations of a single event unless we know, or have reason to believe, that they are appropriately related—that is, related in such a way that one of the explanations is either not complete in itself or dependent on the other. (P. 233)

Kim formulated his principle in the context of the debate concerning the relation of causal mental explanations (“reasons explanations”) to causal neurophysiological explanations. Yet Kim intends KPEE to be general with regard both to subject matter (not restricted to mental explanations) and to the nature of the explanatory relation (not only causal explanations).

KPEE is best justified via two premises: a commitment to explanatory realism and to there being certain very general metaphysical constraints on relevant ontic relations. Kim defines explanatory realism thus: “*C* is an explanans for *E* in virtue of the fact that *c* bears to *e* some determinate objective relation *R*. Let us call *R*, whatever it is, an ‘explanatory relation’” (Kim 1988, 226). It is important to note that according to Kim’s version of explanatory realism, “*c*” and “*e*,” that which are referred to by the explanans and the explanandum, are events.

The second, metaphysical, premise connects the thesis of explanatory realism to KPEE. Kim aims to provide an exhaustive consideration of all possible relationships between multiple ontological relations (which should be understood in a similar way to my “o-relations”) and, hence, given explanatory realism, between multiple explanations. The intention is to demonstrate that there are only three possibilities, corresponding to those mentioned in the definition of KPEE. Where relations are directed at the same event—where explanations share the same target, either ontological relations—

hence, explanations—exclude, or they are incomplete, or they are dependent.

Consider two explanations of the same event *e*. Explanation 1 refers to fact *c*'s appropriate relation to *e*, while explanation 2 refers to fact *c**'s appropriate relation to *e*. There are five possible relations between *c* and *c** and, hence (given explanatory realism), five possible relations between explanations 1 and 2:

1. $c = c^*$. The explanations refer to the same items, even though different terms may be used to pick these out.
2. *c* is supervenient on *c**.
3. *c* and *c** are not independent; for example, *c* is an earlier link in a causal chain that comes to include *c**; hence, in this case, *c** is dependent on *c*.
4. *c* and *c** are each components of a wider explanatorily relevant event; for example, *c* and *c** are both necessary but insufficient causes composing a jointly sufficient set. Hence, neither *c* nor *c** is complete.
5. *c* and *c** overdetermine *e*. In this case also, Kim claims that neither *c* nor *c** is complete.

Cases 1 and 2 are those in which we actually have only one explanation, not two. Case 3 describes dependent explanations, which are excluded from KPEE. Cases 4 and 5 describe incomplete explanations, also excluded from KPEE. To derive KPEE, therefore, we need to assume two things: first, the realist principle that explanatory relationships mirror ontological relationships and, second, that the above five possibilities map all possible ontological relationships.

Criticisms of Kim's principle are possible; two in particular demonstrate the unsatisfactory nature of Kim's underlying explanatory theory and the consequential modification that I would suggest. First, Kim's insistence that explanatory relata are events is problematic considering cases of instantiation. In particular, the explanans of one explanation may be an instantiation of the explanans of another: "Briar's stabbing of Able" is an instantiation of "Briar's killing of Able," for example. In such cases, the explanans may be complete, are independent (in the sense that neither is a cause of the other), and yet are not mutually exclusive. The natural remedy, which I recommend we adopt, is to maintain that in cases of this sort, we are faced with two different explananda, not one. We should reject Kim's emphasis on events and replace it with either the idea that the explanatory relata are properties or, as I prefer, a contrastive theory. A contrastive theory would make it clear that while Briar's stabbing of Able may

explain why Able died in that way rather than another, Briar's killing of Able may explain why Able died, rather than Able living.

Second, the key notion of "completeness" in KPEE is liable to seem intractable. This is not the appropriate place for a detailed examination of the concept; suffice to say that, again, a contrastive approach fares better than the alternatives. We might, first, take a complete (causal) explanation to be one that cites all antecedents of the target event. Famously, Mill (1996, bk. 3, chap. 5, sec. 3) regarded only such a complete set as the "real cause" of an event. Yet considerations similar to Mill's suggest the impossibility of ever listing such a set and, therefore, the impossibility of providing a complete explanation. In the context of a contrastive explanation, however, the complete set of causal information relevant to the explanatory target may be drastically reduced, given an appropriate contrast or contrasts. Peter Lipton's (1993) difference condition states, in outline, that to explain "why P rather than Q" we select an actual difference between the causal histories of the fact, P, and the foil, Q. If the foil has a similar history to the fact, as it usually should, then a large part of the causal history of the fact will be irrelevant to the contrastive explanatory target.

Adopting a contrastive theory of explanation, therefore, suggests a resolution to each of these problems.⁸ It may, however, be a cause for concern that though using the background of contrastive explanation allows the structure of KPEE to be retained, it also weakens the principle. For, given that contrastive targets are far more specific than event targets, it may be that it is unlikely that two explanations focus on the same target and, therefore, unlikely that KPEE can apply. To recognize that a first explanation asks why the revolution happened in France, rather than in some other country, while a second asks why the revolution happened in 1789, rather than at some other time, quite properly encourages the presumption that those two explanations will not contain incompatible relevance claims. Yet we should not seek in *every* case to interpret explanatory disputes in this way, on pain of restricting the applicability of KPEE, and perhaps the applicability of exclusion concerning relevance claims in general, to zero.

To respond to this concern is to focus on the relation between KPEE and my analogous principle, SI. SI is a more general version of KPEE, in that the latter provides one possible way for the former to be real-

8. It must be emphasized that though the idea of contrastive explanation was a central element of Van Fraassen's erotetic theory of explanation, it can be very fruitfully combined with an ontic theory. This can be so if, as I take to be the case, the theory of contrastive explanation is a thesis concerning the nature of explanatory target.

ized. One way for explanations to be directed at the same o-relations is where those explanations are complete and independent and have the same explanatory target. In this case, those explanations must be categorized as either identical or exclusive, as is demanded by SI. SI can be seen to be the more general principle, though, since there are other ways for explanations to be directed at the same ontological relations than through the construction of complete explanations. Most clearly, this may be through *direct* designation of the relevant ontological relations that the explanation is intended to capture. For example, two historians both concerned with offering “social” explanations of the French Revolution would be *prima facie* candidates for treatment according to SI.

SI is deliberately very general: it is intended to provide a condition both sufficient and *necessary* for the exclusivity of explanatory relevance claims. Yet for that reason, SI may be of little practical help in guiding particular judgments of explanatory exclusion. KPEE may be of more methodological benefit. The heuristic role of KPEE in the context of the more general SI can be demonstrated in relation to our original example, FR. I suggested that it was reasonable to suppose that the four types of explanation referring to the socioeconomic state of France, the financial situation of the French crown, the intellectual background, and personal errors were mutually exclusive—this despite their surface compatibility. This judgment can plausibly be analyzed in terms of KPEE. Each of the four examples has a similar target, and each is independent. Crucially, while it is perhaps unrealistic to claim that any of the explanations are individually complete, each is intended to approach completeness. KPEE therefore cannot, in this case, be applied in the strict form in which Kim presented it. However, the explanations do appear to be complete enough for us to infer that there is some overlap in the underlying relations to which it is intended that each refers.

Once the heuristic role of KPEE is appreciated, we should appreciate that the principle can be, and should be, applied flexibly. Even where targets differ slightly—or where explanations are nearly complete, or nearly independent—relying on considerations *similar* to KPEE may suggest that relevance claims are incompatible. For, just as a complete explanation mentions all the relevant underlying relations leading to the explanatory target, an explanation that approaches completeness mentions most, though not all, of these relations. As such, these explanations are likely to be directed at some of the same set of underlying relations and, therefore, to be subject to principle SI.

A flexible application of KPEE is justified in the context of the broader condition imposed by SI.

CONCLUSIONS

While the primary focus of this article has been the exclusivity of explanations, the ontic approach that I have proposed bears on the question of the exclusivity of theories. This should be expected, given that a social-scientific theory may be regarded as a sort of general explanation. Theories may be seen as collections of general statements, intended to capture general aspects of a domain and able to underpin more particular explanations of target facts within that domain. SI applies to theories too, in that theories which purport to refer to the same o-relations are either identical or exclusive. In the terminology commonly adopted in the literature concerning the mutual relationship of theories, "exclusive" theories are those where *elimination* is necessary. "Identical" theories include those cases where one theory is *reducible* to the other; in this case, theories should not be regarded as exclusive. Hence, the application of SI to theories corresponds to, and indeed underpins, attempts to determine the reductive correlations between scientific theories.

My strategy has been to begin with plausible intuitive judgments concerning explanatory exclusion in historical explanations and to examine how such judgments might be justified at the level of underlying philosophical commitments. I have argued that the general way to understand explanatory exclusion is through the idea of incompatibility of explanations. Incompatibility means, in general, that one or more of the presuppositions of each explanation are inconsistent. Explanatory exclusion is a patchwork affair; potential rivals will often be found to be incompatible in a variety of ways, and compatible in many more. The proponent of any philosophy of explanation should find such an analysis amenable. Yet once we seek to find space for a full understanding of exclusion due to relevance claims, our choice of explanatory theory is more circumscribed. I have argued that a full appreciation of explanatory exclusion of this kind requires a theory of explanation that is both ontic and contrastive.

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