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FRANK A. TILLMAN, CONSULTING EDITOR

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EDITED BY WILLIAM H. DRAY

Department of Philosophy

University of Toronto

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CAUSES, CONNECTIONS AND CONDITIONS IN HISTORY

MICHAEL SCRIVEN

1. Aims and Justification

The most important explanatory notion in history is that of causation, although it is by no means the only one. Its importance is not to be gauged by the frequency with which the actual word "cause" occurs; for the notion is very frequently embedded in other terms. Failure to notice this has led some philosophers and historians to believe, quite wrongly, that the notion could easily be eliminated from historiography.

If we examine a passage of historical writing that is intentionally condensed, say for an encyclopedia article, and is presumably thereby pared of the less essential details, we find a combination of purely descriptive narrative and explanatory narrative. The *Encyclopaedia Brittanica* article "English History," 1953 edition, written by Lucy Sutherland and John Holland Rose, provides such an example. The account there given of the history of the period contains both non-causal explanation and non-explanatory narrative; but a sample page also contains almost thirty occurrences of causal claims of which only two involve the term "cause." For example: "While political progress was *checked* by war, economic and social changes were *furthered* by it" (p. 531) (my emphasis on the causal notions). I take it that this could be translated without loss of essential meaning as: "The war *caused* a slowing-down of political progress, but also some advance in economic and social conditions."

Similar translations of other terminology are equally obvious, some of their phrases being: "resulted partly from," "led to," "stimulated," "increased under the pressure of," "enhanced by," "entailed," "made possible by," "forced,"

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"brought on," "averted," "pauperized," "added to," "gave a sharp stimulus to." (It should be stressed that some of these phrases can be used in other contexts in a non-causal way.)

How can we best analyze the causal element in these common terms of the historian's vocabulary? In everyday contexts, it is sometimes quite easy to use terms like these when describing activities to which one is a witness; for causal claims are not always based on complex inferences. They seem to be easy to understand and easy to use on many occasions. Even on occasions where there is difficulty, its source does not generally lie in the *meaning* of the causal terms. The historian frequently encounters two special problems. On the one hand, he wishes to apply these terms to activities in the past, which he does not witness directly; on the other, he uses them to refer to entities on a scale where direct witness is impossible—for example, he may speak of a political *movement* as having caused certain *social* changes. But neither of these extensions of the use beyond the simplest cases seems to provide any important *logical* difficulties, although both, of course, introduce further practical ones.

The logical difficulty is to offer a satisfactory *analysis* of the concept of cause itself. Such analysis is normally taken to require reduction of the idea to some other simpler ideas. This paper undertakes a more modest type of analysis, the elucidation of the concept in terms of a systematic classification of its types; but the argument also suggests that no analysis of the reductionist kind is possible. Support is provided for the latter contention with particular reference to the frequently proposed analyses in terms of necessary or sufficient conditions.

Despite the ease of applying causal notions in *some* cases, a better understanding of these points can be of considerable assistance to the practitioner of causal notions. For there arise in history certain very complex cases (e.g., the causes of the Civil War) where it does become necessary to examine the evidence in the light of a thorough analysis of cause, and the analyses hitherto employed on such occasions have been much too simple.

2. The Continuum of Causal and Non-Causal Language

Before we can analyze causal language, we need to see how it differs from non-causal language. Is there a sharp distinction?

If you are watching people enter a lecture room, you might notice someone who seems to be in a particular hurry doing what you would naturally describe as "forcing his way in." A policeman is sometimes described as "forcing a door," or as "forcing suspects to get into the Black Maria." An investor is sometimes said to have been "forced to sell blue-chip stock" to cover heavy losses on a speculative issue. These uses differ in important ways, but they are all causal notions in that they identify some agent as being responsible for an identified effect. They are miniature explanations of the named effect; and yet it is also reasonable to say that they are simply descriptions of what can be observed. When you see someone force a door or knock over a lamp, you have witnessed something which is correctly described in that way, but which is also a case of cause and effect; there is no sharp line between causal claims and observations. But there are clear cases of each that are not cases of the other, so we are dealing with a continuum and not a confusion.

The fact that it may be witnessed does not make the causal process a simple one logically, for the trained perception is capable of responding to immensely complex configurations and of building a very complex interpretation into the response. Our task is to clarify the kind of interpretation involved in a causal claim by contrast with a simple non-causal description like "He walked down the shorter path"; and yet, as we look carefully at this example, we can see that the term "walked" means "caused to move by the action of his legs, etc." The causal concepts are buried very deep in our language, indeed in our perception. The search for non-causal language is reminiscent of the search for pure sense-data. It would now be held by many that our concepts of physical objects are not built up from and cannot be analyzed in terms of pure sensations or appearances, and the analogous claim can be made here. We can explain the relation between causal and non-causal language, but not by showing that one is built out of the other.

Apart from the continuity and irreducibility claims just made, there is another aspect of causal language which involves a continuum, the continuum between cause and effect. We normally think of these as distinct, and it is often true that they are. But there are occasions where the distinction vanishes and the effect is simply part of the cause. "Opening a door" is a cause-impregnated descriptive phrase referring to an activity which brings about and explains an effect, namely, the door opening or being open. But it is *logically* impossible for this cause to occur without the effect occurring. This kind of example shows the extent to which we build the concept of causal connection into our language, and hence reinforces the original continuum claim. But it does more than this. It also shows how the distinction between cause and effect is itself a limited one, in the sense of being highly context-dependent. What is a cause in one context can be seen as itself a combination of cause and effect in another context. It is partly for this reason that historical narrative is explanatory—it incorporates what we might call micro-explanations in its very texture. In merely describing the course of a war or a reign the historian is constantly choosing language which implicitly identifies some phenomenon or aspect of a phenomenon as a cause and some other as an effect. And we, reading his account, are thus given a picture, an interpretation, which is a chain of causal explanations just as surely as it is when the resources of the language and our trained perception oblige us to use separate descriptions for cause and effect and label the connection between them with some explicitly connecting word.

Historical writing is of other kinds too. The narrative may be explanatory without being causally explanatory, by interpreting historical events as being of certain kinds that we understand well. In a neutral sense, this can be described as "evaluative." Moral evaluation sometimes enters into this process ("treachery," "treason," etc.) and sometimes even into the

causal analysis—and it may serve as an end in itself, despite the protestations of the "scientific" historians, for applied social science cannot and should not be divorced from moral evaluation, unless we want psychiatry to be applied to the politically deviant on the grounds of their statistical abnormality, corruption and bribery to be regarded as fringe benefits for power figures, civil rights to be lumped with the short hemline as mere convention, etc. Moral distinctions are not only made, but are important, and part of an historian's task is set by, and hence requires understanding of, the moral distinctions and their relative importance. But these are other stories. This one concludes with a reminder that the absence of a sharp line between causal and non-causal, between cause and effect, between object-descriptions and sensation-descriptions, between names and descriptions, between facts and hypotheses, between fat men and thin men, does not show these distinctions to be unimportant.

3. The Temporal and Spatial Relations of Cause and Effect

A causal claim connects, though it may not distinguish, two distinguishable but perhaps not wholly separable elements. These elements may be events, processes, states, or the absence of these; they may be separated in time, adjacent, overlapping, or concurrent; and they may or may not have identifiable links between them.

Thus, there is a way of distinguishing the action of opening the door from the door's opening (an event or process) —but the first is not only temporally coextensive with the second, it logically cannot occur without the second. There are indeed important differences between logical entailment and causal connection, but this truth does not entitle one to conclude that cases of the one do not include some cases of the other. Cases like this are to be found throughout historical writing:

> At the same time the significance of the City of London as a financial centre was enhanced by the transactions of the business involved in the provision of British subsidies, the supplying of British armies and the raising of government loans as well as by the eclipse of the financial power of Amsterdam. The growth of British exports, . . . was very rapid and entailed a similar growth in merchant shipping. . . .[1]

Notice that the first effect mentioned (an increase in the significance of the City of London) is not only simultaneous with its causes, but is to some extent the same thing as them—viewed from a different standpoint. The same comments apply to the relation between the growth of exports and of shipping. Any account of cause that fails to allow for cases where cause and effect are physically identical and only conceptually distinct will do scant justice to the historian's use.

Proceeding to the other extreme, it is a commonplace to the historian that events at one time may cause entirely different events at a much later time or at a distant place (and yet this has frequently been treated by philosophers as a logical impropriety). It is part of an historian's task to find out the intervening links, when a causal connection is asserted to hold over an interval—indeed, it is usually because they are already in his possession that he asserts the connection; but an historian has a good instinctive understanding of what is *meant* by the causal claim even when he lacks the links (otherwise he could not tell when the claim had been substantiated or disproved by the discovery, or proof of the non-existence, of certain links). However, it seems clear that the presence of the links is the *evidence for* a causal assertion, not the *meaning of* it, since in the experimental sciences it is easy enough to show a causal relationship when we have no idea at all as to the kind of intervening linkage there is, nor even any commitment to the view that there has to be one. (Gravitational effects provide an important historical case.) But the events of history are not so foreign to our understanding, and it might plausibly be argued that, as a matter of fact, there are always linkages of certain recognized kinds between any temporally separated historical cause and effect.

Any general analysis of cause would have to concern itself

not only with cases in which there are long intervals between cause and effect, and with cases where they are simultaneous, but also with cases where the cause might plausibly be said to come after the effect (precognition, for example).[2] But since historians seldom assert and have never substantiated the latter, we shall not concern ourselves with such cases here, except to say that they cannot be regarded as non-existent and make one stage of the analysis much harder.

4. The Alleged Connection Between Causes and Laws

The feature of causal assertions usually regarded as the most important, from a logical or philosophical point of view, is their alleged claim to instantiate universal laws. The key argument for such a conclusion goes like this. If *C* is said to be the cause of *E*, then more is being said than that *C* occurred and *E* occurred, even though those facts may be all that direct observation reveals about *C* and *E*.[3] We must therefore be relying on some further knowledge besides the fact of their occurrence to support our claim of a causal connection between *C* and *E*. Now that knowledge cannot be simply further observations about the circumstances surrounding *C* and *E*, since this would only yield more descriptions of particular events and no combination of these entails a causal claim. Nor can it be simply about the circumstances in *other* cases where *E* followed *C*, since that would be irrelevant to a causal claim about *this* case. Yet it seems clear that we have learned *something* from other cases which enables us to see in this one a causal connection between *C* and *E*. What we have learned must be some kind of generalization which we apply to this case. In some way, the co-occurrence of *C* and *E* must be a particular instance of a general law that connects a type of event of which *C* is an instance with a type of which *E* is an instance. This argument allegedly shows that particular causal claims, including those found in historical narrative, can only be analyzed in terms of general laws.

Now the general law might be of the simple form "*C*'s are always accompanied by *E*'s." This form implies that the association has been such that a *C* is always accompanied by an *E*, the reverse not having been established. It is usually thought that we can take this generalization to imply that *C*'s always cause *E*'s.

An illicit conclusion is that *whenever* we say *C* caused *E* we are committed to the unqualified generalization that *C*'s always cause *E*'s. We are only committed to *some* generalization of which the conjunction of *C* and *E* is a consequence. When an historian says that the London Corresponding Society "caused alarm" in the London of 1792 by its sympathy with the French Government,[4] he obviously does not stand committed to the claim that sympathy with France is always a cause of alarm in London. He asserts only that *in the circumstances of that time*, sympathy *by that group* caused alarm.

Logicians espousing the above argument have often said, in order to avoid the mistake just discussed, that the historian judges those circumstances to be of a kind about which he knows a law like this: "Whenever sympathy is expressed, in certain circumstances, with a foreign power meeting certain conditions, by a group of a certain kind, alarm follows." We may call this a *qualified* (although still *universal*) generalization about *C* and *E*. It proposes a general, though very vague, set of conditions of which *C* is part, that are together *sufficient* for the occurrence of *E*. Now historians have usually not felt the above to be an accurate reconstruction of their procedures, chiefly because they do not profess knowledge of even such heavily qualified and vague laws. Yet the argument seems to show that we cannot justify the original causal claim, except by claiming it to be an instance of such a law.

I shall claim that only a much weaker kind of general statement, which the historian agrees he *does* have, is enough to satisfy what is sound in the argument. The above argument is invalid at the point where it tries to prove that *universal* laws are required. What it actually shows is only that we must appeal to some general proposition which (a) applies reliably to the present case, and (b) is founded upon other cases. But

knowing a universal *C-E* connection, qualified or not, is only one means to this. Another is knowing a *possible C-E* connection, combined with an *elimination* of other possible connections. And a third is the *trained judgment* of the historian, which requires no knowledge of laws at all.

5. Eliminative Causal Analysis

My alternative account of causal explanations and their grounds may conveniently be approached through an examination of Professor Ernest Nagel's treatment of an historical example in *The Structure of Science*.[5] The example is Maitland's explanation of Queen Elizabeth's use of "etc." in stating her full title: the Queen is said deliberately to have chosen a vague expression to leave herself freedom of maneuver on the religious question troubling England at a time when Henry's breach with Rome was by no means accepted as final. Nagel rightly points out that the explanation, although it may well be perfectly sound historically, only leads us to see why she would choose *some* ambiguous phrase, of which the one cited was merely one of many open to her. Taking Maitland's explanation to be typical, Nagel generalizes as follows (p. 558): ". . . at best, the historian's explanation shows only that, under the assumptions stated, x's performance of A_1 on occasion t is probable" (where A_1 is the particular action, e.g., the use of the particular term "etc."). He thus concludes that typical historical explanation cannot attain the ideal status of instantiating a precise general law, but only a weak law which asserts a statistical connection between the conditions given and the occurrence of the effect.

The example, however, is actually devastating to the entire theory of explanation which Nagel, like other so-called "covering law" or "deductive model" theorists, accepts. He rightly sees that we could not *deduce,* using known laws and antecedent conditions, that the Queen would use this particular phrase; and he expresses this by saying that the explanation "at best . . . shows only that . . . [her doing this] is probable." But there

are surely a *very* large number of alternative phrases or devices that could have been used by Elizabeth to express herself ambiguously; the actual probability that she would choose the one she did is therefore very small; it could surely not be said that it was *likely* that she would; it was only a *possibility*. Yet the basic tenet of Nagel's concept of probabilistic explanation is that "though the premises are logically insufficient to secure the truth of the explicandum, they are said to make the latter 'probable'" (p. 22).

One might suppose that Nagel's reply to this would be that all the historian is "really" explaining is the use of an ambiguous phrase, and not the use of *the particular one* Queen Elizabeth employed. This reply has frequently been suggested by other proponents of the covering law model of explanation (whether deductive or probabilistic), who would thus "reconstruct" the explanation to bring its claims into conformity with their theory of what a good explanation must be like. The historian regards himself as having put forward a reasonable explanation of the precise utterance, which is presumably what his job requires; the philosopher contends that all he has "really" done is explain the Queen's producing an utterance of a certain general type. The distinction is not merely verbal: the alleged connection of explanation and prediction, on covering law theory, is thereby protected at the expense of a slight reflection on the historian's professional achievement. We are told something that, if we had known it in advance, would have shown us that what happened "was to be expected." For Elizabeth's circumstances and intelligence were indeed such that one might have expected, with some confidence, the use of some ambiguous phrase, though not the use of "etc."

Nagel, however, does not take this way out; he has too much respect for the historian. He takes seriously the task of analyzing rather than improving the historian's procedure, up to the point where errors or inconsistencies can conclusively be demonstrated. But having come this far, he seems to hesitate on the brink of producing a really novel account of historical explanation; and this not only cheats him of discovery, but

leaves him in an intrinsically awkward position—more vulnerable to counter-examples from historical usage than his more reconstructionist colleagues, yet advocating a type of position which is not sufficiently different from theirs to accommodate these examples satisfactorily.[6] Let us see what sort of logical account emerges from a more sustained attempt to accept the explanation as the historian claims it to be.

We should have to begin by conceding that it does not at all demonstrate that the events to be explained were to be expected. Covering law theorists, Nagel included, have always felt that, if this were not done, we should be left simply with a narrative description of *what* happened, without any explanation of *why* it happened: if we're not shown that what happened *had* to happen (in accordance with a law) given the preceding conditions, then we are just relating a sequence of events, none of which "brings about" its successors. Quite apart from the possibility that descriptions of what happened may be proper answers to the important kind of request for explanations that demand *how* something happened,[7] there is a straightforward way of meeting this very legitimate concern. An explanation tells us why something occurred if it tells us what factor or factors of the type in which we are interested (e.g., economic, motivational, political) actually brought it about, i.e., what factor, in the circumstances, so *tipped the balance of events* as to produce the known outcome. Such a factor need not itself be a sufficient condition for the outcome; it may be simply one element in a set which is jointly sufficient. This far the covering law model can still go. But the crucial point is that the historian *does not need to know* what the other conditions are that make up the sufficient condition. He isn't interested in them, usually, but he couldn't give them even if he were. So he is not in any way capable of showing that the event had to happen or was to be expected. But how then can he know that the factor he does quote *is* part of a sufficient condition for the effect? He knows this because he takes it as axiomatic that there had to be *some* set of conditions present which brought about the effect, i.e., he assumes determinism in the sense of the ever-presence of explanations.

Now of course many of the elements in the antecedent conditions are not causally efficacious. An historian *must* be able to show that the factor he selects is not causally redundant: a condition whose occurrence or non-occurrence would have had no effect whatsoever on the course of events leading to *E*. He must have reasons for supposing that the alleged cause "pulls some weight." One cannot, however, simply say that the cause is an antecedent factor that is a *necessary* condition for the effect—obviously some effects can be brought about in several ways and in such a case no one of these possible causes is necessary for the effect to occur. Professor Nagel strikes out in a more promising direction from talk about causes as sufficient or as necessary conditions when he proposes, as a criterion of causal connection, the idea of a cause as being "contingently necessary"; as being one which, *given the other circumstances*, is necessary for the outcome. In *this* situation, we would be claiming, the outcome would not have occurred had the cause not occurred. But even this improvement is open to possible misinterpretation. For there may be several possible replacements for the non-redundant condition which will causally complete a sufficient set, although they simply happen not to be present. Elizabeth might have had to compress her title on the coin of the realm for space-saving reasons or to avoid some currently vulgar use of terms in the official title. We can make a further improvement and say that a cause is one of several alternative factors the presence of one (any one) of which is necessary in order that a set of conditions actually present be sufficient for the effect. There are a number of possible reasons which might have led Elizabeth to choose an ambiguous phrase; Maitland believes he has identified the one that did—not that *had* to, but just that *did*. He is giving the *explanatory* factor, because in its absence, *and* in the absence of any other possible causes (which we discover by inspection), the effect would not have occurred in the way it did.

Now we could put all of this into the notion of "contingently necessary" which Nagel does not do (*loc. cit.*, p. 559). But *in either case* we shall have to reject his overall claim about the limitations on historical explanation. For in order to estab-

lish a causal claim on behalf of a factor what does the historian need? Merely evidence that his candidate was present, that it has on other occasions clearly demonstrated its capacity to produce an effect of the sort here under study (or there might be theoretical grounds for thinking it a possible cause rather than previous direct experience of its actual efficacy), and the *absence* of evidence (despite a thorough search) (a) that its *modus operandi* was inoperative here, and/or (b) that any of the other possible causes were present. If the event studied had a cause at all (which the historian assumes it did), then he may confidently assert that the residual condition is elected. This argument *proves* his claim—and it requires nothing the historian does not possess. The only general proposition that might be involved would be a list of the known possible causes of the kind of effect in question. Explanation proceeds by the elimination of possible causes, not by the application of possible laws.

6. Diagnostic Judgment and *Verstehen*

But how does a historian establish the claim of a certain factor to be a "possible" cause? I discuss this in the next section but make one comment here. By refusing to accept a covering law answer to such a question, I do not intend to deny a link between the particular case and our general experience. My analysis instead supports the idea, common among historians, that history teaches us about human nature and our future best choices by teaching us about *possibilities* rather than *regularities*. For the "causal lists" we learn, or learn to apply, on this analysis are backward-looking generalizations from which predictions about particular cases are not normally possible. Nevertheless, they can serve as important guides to individual behavior and social action since, for example, the deliberate and sustained elimination of all the possible causes of something guarantees its non-occurrence, and the attempt to bring about all its possible causes at least *increases* the chance it will occur.

Another question arises about this modest "schematization." Is it realistic to suppose that we are ever or often in possession of a "list of possible causes?" For wars, murders, strikes, and many other effects it is not hard to give such lists. But I do not believe such lists are essential, though possibly desirable. Even an experienced political historian might find it hard to give a comprehensive list of possible causes of the collapse of governments. Yet long training may have given him considerable diagnostic *skill:* he may be extremely good at identifying causes even though he does not know, let alone know how to describe, the perceptual cues he employs. The good mechanic can tell from the sound of the motor that the overheating is almost certainly due to a main bearing failure—but he cannot tell you just what it is about the sound that enables him to tell this. Nor can he tell you the *whole* list of other possible causes of overheating he would have explored had he not spotted this immediately (and which he can now ignore, because—unlike the historian—he knows that there is a negligible probability of overdetermination in such a case). He is like a man who can sing hymns from memory in a congregation but cannot recite them; at the end of each line, he needs the cues provided by the circumstances around him in order to remember the next.

The mechanic in his special field and the historian in his, like each of us in the field of human behavior, has learned to spot causes and motives from the myriad clues of language and context—in objects, documents, or persons—and even though we can rarely give any exhaustive list, we can often be rightly confident that "It must have been this—there's nothing else it *could* have been," because we can be fairly sure we would have spotted any others that were present in the course of our thorough search.

There is no magic about explicit inferences that makes them any more reliable than trained immediate diagnosis, and the empathists and *verstehen* theorists were right to recognize the peculiar virtues of the human instrument in diagnosing human behavior. The human historian can use himself as an extremely versatile model, just as an hydraulics engineer may

use a model of a dam site to determine silting rates; neither needs to know exactly what makes the model work as long as they can check that it does on enough occasions to make it reasonable to rely on it.

The special training of the historian (like the anthropologist) in a particular period or field can give him a special "feeling" for the people he studies and hence lead him to better explanations than would come naturally to someone unfamiliar with that culture. Confirmation of his judgments is often possible with the discovery of new material and serves to provide us with grounds for confidence in them when no direct confirmation is possible. It seems to me Nagel is wrong to suppose that empathic insight is heuristically helpful but not of itself a valid basis for the claim of comprehension. One may "see" (or understand) immediately why someone or some group did something, and not require further testing to be justifiably confident that this really is the reason. The internal complexity of the behavior studied may be sufficiently high for it to be entirely reasonable to conclude that one's insight has yielded the only possible explanation. One "sees" the explanation via *verstehen*—but the act of "seeing" is a highly tested skill, as is "seeing" the solution of a bridge or chess problem, or "seeing" that a set of tracks are those of a red fox running. The "seer" is a well-tested instrument, and the historian-reader combination is in an extremely privileged position in that the procedure of explanation only requires the historian to present enough cues to the reader to enable the latter to trigger off his own trained responses and obtain the same insight. This is a process which is most importantly and valuably—and not "unfortunately"—related to that involved in reading a work of literature. It is not in the very least unscientific; indeed it is extremely close to the very efficient way in which engineers or physicists communicate explanations by the use of analogies or jargon whose function is also to set up certain response-patterns.

The other special feature of *verstehen* is the way it explains actions with motives, rather than with a law of the "constant conjunction" sort. The latter may be well understood or accepted, but it cannot in general be any better understood than the former. The *verstehen* theorist does not, I think, maintain the less defensible thesis that we can understand *why* "an insult tends to produce anger" *better* than any physical phenomenon (Nagel, *op. cit.*, p. 483); all he needs is to understand *that* it does in order, say, to understand fully why Brutus became angry at Cassius when insulted.

Opponents of the *verstehen* approach often stress the undoubted fact that the presence of a motive or reason in a man's mind does not prove its causal efficacy; they ask how (except in the covering law way) we can *show* that it was the operative factor in the way the man acted. As Nagel points out, the accused in a murder trial may be under grave suspicion because he is "known to have hated the victim"; yet "he may have killed the deceased by accident, because he was paid to do so, or for a number of other reasons" (p. 555). But how *would* the prosecutor go about showing the motive was hatred? He would show that none of the other factors which are possible causes appeared to be present. Antony loved Cleopatra; nevertheless, he may have fled from the battle of Actium not to join her but because of "his ambition to make Egypt a granary of Rome" (p. 555). We look for evidence from his intimates, his diaries and his later actions to support any such alternative hypothesis. If this is not present, we justifiably conclude that the eminently suitable motive which we know about was the operative one. If another factor *is* present, we look for evidence that it had none of the intermediate effects which would be necessary if it were finally to bring about the effect in which we are interested. What could be more reasonable? An account of explanation like Nagel's, however, leaves room for only "one viable answer: the historian can justify his causal imputation only by the assumption that, when the given factor is a circumstance under which men act, they *generally* conduct themselves in a manner similar to the particular action described in the imputation . . ." (p. 555). Haters *generally* murder; lovers *generally* flee from battles. This is surely an implausible suggestion.

The historian cannot do without some kind of general

knowledge about human nature. The truth is, however, that this simply does not need to be of the kind "cited in theoretical treatises" (p. 549). The most abysmal truisms suffice: that people *can* commit murder from hatred and greed; that they *often* want food and clothing; that they *sometimes* value their children's lives before their own, and so on. (It should be noted that no distinction between causes and reasons is being made, for there is no difference in the analysis of their roles in explanations.) The reason these trivialities suffice is simple: historians have *only* to explain, so they have only to choose from the factors present the one(s) most likely to have been the causes(s). To do this they do not even have to know lists of all possible causes of the effect in question; they only need to be good at recognizing its causes when present. *This* can be called knowledge of human nature though not scientific knowledge.

7. Cause and Context

We must now proceed to a somewhat more careful analysis. In a given explanatory inquiry, there will generally be a number of factors which meet the formal requirement of being a non-redundant member of a sufficient set of conditions; yet we quite often talk of *the* cause of what occurred. A full analysis of causal judgment thus requires reference to further considerations of a pragmatic or contextual sort. Such considerations in fact carry half the weight.

The contextual aspect may be characterized as follows. The search for causes proceeds in a context which indicates two connected features: (a) the *type* of factor which is of interest, and (b) what may be called a "contrast state." For example, given the context, the proper type may be physiological or motivational, characterological or controllable, local or distant. Sometimes the "proximate cause" is of paramount interest, e.g., the assassination at Sarajevo, sometimes a remote one, e.g., childhood experiences. The choice is sometimes dictated by considerations of controllability, but often also by merely

analytical considerations, as in astrophysical discussions of the motion and explosion of stars. The function of contrast is shown in the fact that the question "Why has this man developed skin cancer?" may mean "Why has he got cancer *now*, whereas a month or so ago he did not?" or it may mean "Why has *he* got cancer whereas his brother, who works in the same job, has not?" In the first case, the implied contrast is between *his* being cancer-free and his present afflicted state. In the second, it is between *another* cancer-free individual and his afflicted state. So the answer to the first question may be "Because he was exposed to a heavy dose of ultra-violet radiation," and to the second, "Because of some (as-yet-unidentified) constitutional factor(s) present in about 20 percent of the population." The considerations of *type* directly bear on selection of the cause, those of *contrast* on the identification of the effect and hence indirectly on selection of cause.

In the Queen Elizabeth case, the contrast that interests the historian is between her using the ambiguous phrase and using her full title, not between using *this* ambiguous phrase and using another one. (For a speech-habit specialist, the latter might well be the contrast of interest.) Hence Maitland produces the factors which explain why Elizabeth used *this* phrase *in so far as the phrase has any historical significance.* It is not that he *doesn't* explain why she used *this* phrase; he does explain it, fully, with regard to the historically appropriate contrast. The difference between this analysis and the reconstructionist approach is still fundamental and not just verbal: for the other approach suggests that more work is needed to get a decent explanation; that all the historian has is just a weak probability explanation of what he is trying to explain.

We have introduced the idea that cause (and, in general, explanation) is essentially a context-dependent notion. This does not mean that we are giving a "psychological" rather than a "logical" analysis (as formalists often claim), or a "subjective" rather than "objective" one. It means that the territory of logic is not terminated by the period at the end of the sentence. The proper analysis of the meaning of some terms—as computer

programmers trying to get their machines to translate foreign languages have long known—sometimes requires that one resolve ambiguities in an utterance by consideration of contextual cues, and the relevant context is not always merely further linguistic utterances; it may be the state of knowledge of the reader.[8] When we are looking for causes we are looking for explanations in terms of a few factors or a single factor; and what counts as an explanation is whatever fills in the gap in the inquirer's or reader's understanding. If he's puzzled by a certain contrast, then what we need is the factor which accounts for this contrast; and it's often much easier to find this than it would be to find the set of conditions which are sufficient for the total state of affairs which is "the effect." That is a work of supererogation.

It is not wholly adequate but may be somewhat helpful to formulate the preceding point as: "What counts as *the effect* is dependent on the context." The way in which the context focusses the search applies also to the cause itself. It is thus that we get the restriction to factors of a certain type, e.g., economic or political or manipulable.[9]

A common kind of case is the following, though it is not the general case. If one of two causal candidates—otherwise equal—is a standing condition, always present, and known by the inquirer to be present, whereas the other is an unexpected "interfering condition" whose occurrence is a discovery for the inquirer, then it is correct to call the latter *the* cause. For this factor is (a) informative and (b) crucial for the relevant contrast. In these cases the contrast is between the state which actually occurs, and the one which was normal or to be expected; but in other cases the contrast may only be with a state which appears at least *as* likely to have occurred, or whose non-occurrence is not surprising but especially interesting because it was the rational, proper, prudent, or legal outcome, or an outcome that could easily have been brought about by the agent. (Similarly, the non-occurrence of a certain event may be identified as the cause, because the contrast of interest is with the situation in which the cause occurs and the effect does not.)

When we look for the cause(s) of the war between Napoleonic France and Russia, it is by contrast with the state of peace—it is *not* by contrast with the state of affairs in which the separate political entities of France and Russia do not exist. Thus, although the very possibility of a war between Napoleonic France and Russia, and hence the war itself, *depends* on the historically interesting circumstances which led to the formation of Czarist Russia, that dependence is not adequate ground for asserting that these circumstances are a cause of the war. They are necessary conditions but not the causes of the war. The historian's inquiry about the war begins with—is not *now* concerned with—the existence of those nations and his interest is simply in explaining a *change* in their relations. This contextual focussing can convert the merely "causal factor" status of any single item in the usual historical explanation into full causal status as "the cause"—in a given context only.

We may generalize this point to cover cases of sufficient conditions. It is perfectly true that, since all men are mortal, birth is a sufficient condition for death. But this is not an adequate ground for offering to a coroner investigating a murder the suggestion that he need look no further—the victim's death was caused by his birth. For the coroner's inquiry is clearly couched in terms of a contrast state of continued life, and birth is as much a sufficient condition for the continued life (had *it* occurred) as it is for eventual death (which *did* occur). So it does not provide us with a factor which accounts for the *contrast.* We need some factor which occurs only in the *actual* course of events and which (possibly with cooperation from factors common to both courses of events) is a sufficient condition for the difference between that course of events and the contrast state.

Of course, there *might* be circumstances in which the contrast state to death would not be "continued life," but another form of life-ending, say transfiguration. If death occurs only to those who are born and transfiguration occurs only to those whose life-beginning occurs as condensation from an insubstantial spirit, *then* the suggestion that birth was the cause of

a particular individual's death, made in an appropriate context, would be sensible. But in our world, poetry and philosophy provide the only contexts where the contrast is not with "continued life," and so it is never appropriate, in practical circumstances, to cite birth as the cause of death.

8. Defects of the Necessary Condition Analysis

The foregoing analysis has represented causes as selected on pragmatic grounds from conditions which are (a) known to be possible causes, (b) known to be present in the case under consideration, and (c) not known to operate in a way contra-indicated by known data about the case.

But this only defines "cause" in terms of "possible cause." Can we not proceed further and define "possible cause" in terms of some combination of necessary and sufficient conditions, these being interpreted as simple regularity notions? The answer appears to be that we cannot. The concept of cause is fundamental to our conception of the world in much the same way as the concept of number: we cannot define it in terms of other notions without conceptual or ostensive[10] circularity.

It is probably best to see the notion of cause, like number, as systematically developed from a simple case which we can exhibit, though not define in non-causal terms. The existence of this developmental sequence does not establish the common idea that later members are simply complex combinations of the earlier ones. (Finding the sum of an infinite series is not done by a complex combination of counting procedures even though the calculus is a development from arithmetic.)

8.1. *Basic Experimental Case.* Suppose that whenever and however we produce C, E occurs, and that E never occurs unless C is produced (so that C is in a sense the only handle by means of which we can manipulate E) then C is the cause of E. (We assume a normal experimental context throughout. E may also turn out to be a cause of C, e.g., where C and E are alterations in pressure and temperature of a cylinder of gas.)

8.2. *Basic Observation Case.* Suppose that C just occurs on various occasions and is accompanied by (perhaps followed by) E, and E never occurs on any other occasions. C is the cause of E if (but not only if) we can conclude that C *would* always be accompanied by E, no matter how or when it was produced (i.e., if we can reduce it to Case 8.1). Since we assume that something is responsible for the occurrence of E (determinism) and C is at least always present, the great problem is to eliminate the possibility that some *other* antecedent of C and E, say X, is bringing them both about *independently*.[11] Thus, the correlation between the early and late symptoms of a disease has often been mistakenly identified as a causal connection until it is discovered both are due to a third factor, the infection itself.

Case 8.1 is immune to this difficulty, since when we experimentally control C we produce it at random moments, i.e., moments not determined by[12] any preceding environmental factor that could possibly determine E (we may use a table of random numbers, dice, a roulette wheel, a decimal clock, or an electronic randomizer).

8.3. *Compound Causes.* Suppose that we need to bring about not only C but also D in order to get E (and that D alone is not sufficient). We may call C and D *causal factors* or *co-causes* of E. Neither can be called *the* cause, except when the context changes so that one or the other can be regarded as a standing condition or an irrelevant factor.

8.4. *Multiple Causes.* If C and D are *each* sufficient to bring about E, and nothing else is, then whichever occurs is the cause. If both occur, one of them may not have had any effect on this occasion, a possibility which we check by examining the situation for the presence of known intermediate links which characterize the *modus operandi* of C and D, i.e., any sets of conditions "C_1 or C_2 or . . ." (or "D_1 or D_2 or . . .") which are necessary for C (or D) to act as the cause of E. This test does not apply where no such links are known, and since it is not logically necessary that there be any (C and E may be adjacent links in the chain, or differ only from a certain

descriptive standpoint, or represent "action at a distance"), the test is not part of the meaning, of course. But it is the historian's and the coroner's key test.

If one has brought about E before the other could, although it would have in time, we have a case of *independent overdetermination* (Case 8.5), but only one cause.

If both occur, both may have been effective, bringing about E simultaneously, or essentially simultaneously for the purpose at hand, which gives the case of *simultaneous overdetermination* (Case 8.6)—for example, a firing squad—and neither factor can be identified as *the* cause (but cf. the compound cause, Case 8.3).

In any case of an effect for which there are multiple causes we are no longer able to infer to C from E, i.e., C is not a necessary condition for E. However, we can infer from C plus the absence of the other possible causes to E, and since the absence of the other causes is part of the surrounding circumstances, we might still regard the cause as "necessary in the circumstances" or what Nagel calls "contingently necessary." But this situation is complicated by the possibility of overdetermination, i.e., any cases of multiple causation where the causes are not mutually exclusive. If a revolution is overdetermined, as such events frequently are, there are several factors present which will ensure its occurrence, one of which we may assume gets in first. It will be quite incorrect to say that this factor is contingently necessary for the effect if, *ex hypothesi*, the remaining circumstances are quite adequate to bring about the effect by themselves.

We might try to save the situation for the contingently necessary analysis by invoking the fact that the other factors would not bring about the effect at the same time, and we might argue that the effect we are trying to explain is a revolution at the particular time it took place (i.e., the contrast state is peace at that moment). Unfortunately, this possibility is undermined by a species of overdetermination which we may call *linked overdetermination* (Case 8.7). There the factors are not independent; the circumstances are such that the very act

of preventing C from occurring will bring about D which will itself cause E ("Damned if he does and damned if he doesn't"). Suppose a radical group attempts a *coup d'état;* the effort is watched attentively by the army, which will take action if the coup is unsuccessful, but not otherwise. In such a case, where the political coup may be slower moving than the military, we cannot argue that the government's downfall would occur at a different time.

Suppose we argue that the cause is necessary to explain the way in which the collapse occurred, if not the time. But *many* facts about the way the collapse occurred are, in a particular case, such that the cause is not a necessary condition for *their* occurrence, e.g., whether communication of the crisis details between members of the tottering cabinet was telephonic or telegraphic. The necessary condition analyst replies that these facts are not historically significant, not relevant to the contrast in which he is interested. He *is* explaining the *exact* historical occurrence, but only historically, i.e., not with an equal interest in all aspects of it. How do we determine which details are historically relevant—since, after all, the delay involved in telegraphing could well be crucial in some such cases? The answer must be, it seems, that it depends on its consequences for the occurrence of the item of principal interest. Alas, this is a *causal* consideration and so we have not analyzed cause in terms of necessary condition but in terms of necessary condition and cause. The attempt is not without value, but it is not a reductive analysis. It reflects the good methodological principle of building up a case by finding clues which in their totality can *only* be explained by the hypothesis that C caused E.[13]

In general, then, the search for an acausal definition of "cause" turns out to be ultimately as unsuccessful as the search for an amoral definition of "moral." It is, however, no less illuminating, and in the present discussion we have uncovered two useful approximations to the notion of cause, formulated in terms of considerations which will at least avoid the common failure to allow for overdetermination. It may also be

seen from the discussion how historical and psychological analysis proceeds by the development of knowledge of possible causes and their *modus operandi*—a knowledge very unlike explicit knowledge of scientific laws—which is applied to the explanation of particular cases by the process of evidential, formal and contextual elimination described above.

NOTES

1. "English History," *Encyclopedia Britannica,* 1953 edition.

2. Michael Scriven, "Randomness and the Causal Order," *Analysis,* October, 1956.

3. It is usually assumed by proponents of this argument that *C, E,* and other circumstances are described in non-causal language and that causal connections cannot be directly observed. We ignore these errors for the moment.

4. "English History," *Encyclopedia Britannica,* 1953 edition.

5. Nagel, *The Structure of Science,* New York, 1962, pp. 552 ff. [The same example is similarly treated by Nagel on pp. 363 ff. of the present anthology—Ed.]

6. For further discussion see *Minnesota Studies in the Philosophy of Science,* Vol. II (ed. H. Feigl, M. Scriven and G. Maxwell, University of Minnesota Press, Minneapolis 1958), pp. 99–102.

7. There is ultimately a coincidence between the answers to "How did it come about?" and "Why did it happen?", which I believe to be the key types of explanation request in history (cf. "How *could* it have come about?").

8. Cf. the "requirement of total evidence" in probability theory and C. G. Hempel's theory of explanation. (See his essay in *Minnesota Studies in the Philosophy of Science,* Vol. III, ed. H. Feigl and G. Maxwell, University of Minnesota Press, Minneapolis, 1962).

9. In the legal context, as a special example, there is a noticeable tendency to incorporate notions of responsibility into the notion of cause since this is our principle concern. Hence foreseeability-by-a-reasonable-man (of the possibility of something like the effect) becomes a criterion in identifying an action as a cause (see H. L. A. Hart and A. M. Honoré, *Causation in the Law, passim*). One *might* say this is an attributive use rather than an explanatory one, but the distinction is not mandatory.

10. Ostensive circularity afflicts the Russellian definition of a number, which can only be applied by someone with the capacity to count that number of quantifiers, and hence in an important sense presupposes possession of the concept. (Cf. Tarski's definition of truth.) Neither ostensive nor conceptual circularity are fatal to *all* the purposes of definitions, but generally make their use as eliminative or reductive devices unsatisfactory.

11. Of course, even if *C* is the cause of *E,* many antecedents of *C* bring it about and *hence* bring about *E.* To say *X* brings about *C* and *E* independently means *roughly* that prevention of *C*'s occurrence will not prevent *E*'s occurrence.

12. Notice that this definition of "random" itself involves the causal notion of "determined by," just as the Case 8.1 description involves the notion of "producing" *C.* Both are dispensable only in terms of other causal notions, e.g., those of "independent and dependent variable," "free act" (in a technical sense).

13. *Technical footnote:* "*C* is the only possible cause of *E* in circumstances *C'*" is not the same as "*C* is a necessary condition for *E* in *C'*" not only for the reasons given (which show the first to include cases the second excludes unless made equivalent by circularity) but because, embarrassingly enough, the second description would identify many an *effect* of *E* as *E's* cause. For, with a suitable choice of *C'*, there are many effects of *E* (call them G_1, G_2, . . .) whose occurrence it is possible to infer from the occurrence of *E* i.e., the *G's* must occur if *E* does—in other words, their occurrence is necessary, given *E's* occurrence in *C'*—which makes the *G's* causes of *E* on the above proposed definition.

It is possible to salvage the necessary condition analysis here by using a slightly different and possibly more natural definition of necessary condition—unfortunately, it involves a causal notion. An analogous series of difficulties attends the notion of a cause as a non-redundant member of *some* set of conditions which are jointly sufficient for the effect. This handles linked overdetermination nicely but does less well on independent overdetermination, where *it* requires an accessory stipulation about the presence of intervening links, "links" being a causal notion. Nor can causes be distinguished from effects on this definition. It is possible to give a proof of the equivalence of these two notions under certain plausible assumptions, e.g., the assumption of the thesis of detectivism—the converse of determinism—which asserts that different causes have

different effects. It seems clear that the distinction between cause and effect is linked to the *range* of warranted counterfactual claims; we can't say flatly that if C hadn't occurred then E wouldn't have, but the weaknesses in this are less than and different from those in the claim that if G (one of E's effects) hadn't occurred, E couldn't (wouldn't?) have occurred.

THE HISTORICAL INDIVIDUAL

A. C. DANTO

It sometimes happens, in philosophy, that a whole set of distinct problems so resemble one another that a greater care than philosophers are willing to exercise is required to keep them apart. But because all these problems are treated as one, and because considerations which might properly bear upon one of them, are mingled together with considerations which might properly bear upon another, a satisfactory solution to either of them becomes increasingly difficult, and a vast and tangled and singularly frustrating philosophical literature grows up. The issue I shall be dealing with here appears to me to be of this sort. It is an issue which has been allowed to survive very largely as a consequence of our failure to admit that it is a single issue, to be distinguished from a set of other and distinct issues in epistemology, theory of meaning, ontology, and the philosophy of science, which happened to resemble it. The issue has really to do with the tenability of what has been termed "methodological individualism" as a regulative principle for the social sciences.

I

By *historical sentence* I shall mean: a sentence which states some fact about the past. Historical writings consist chiefly of historical sentences, and are further distinguished by the fact that a considerable number of the historical sentences which compose them employ, as grammatical subjects, proper names (e.g. "Frederick V") or definite description (e.g., "The Elector

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