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Chapter 2

Causal explanation, necessary conditions, and case studies

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> "I know what you are thinking about," said Tweedledum; "but it isn't so, nohow." "Contrariwise," continued Tweedledee, "if it was so it might be; and if it were so, it would be; but as it isn't, it ain't. That's logic."
>
> *Lewis Carroll*

In this chapter we make no attempt to survey the various meanings of causation. We focus on necessary conditions as a particular kind of important cause. Necessary conditions are important causes because they directly imply a key counterfactual, such as, if X had not been present/occurred then the Cold War would not have ended. A probabilistic version is that if X had not occurred then the end of Cold War would have been very unlikely.

It turns out that this rather simple causal strategy has wide-spread ramifications for explaining individual events. We first take a look at simple necessary condition explanations and their intimate connection with counterfactuals. However, necessary conditions also play an essential role in multivariate explanations of events as well. For example, one frequently reads about historical *chains* of events. If we take this metaphor seriously then each "link" is a necessary condition factor: break one link and the chain is broken.

One cannot discuss necessary condition causal explanations without an analysis of sufficiency. Continuing with the chain metaphor we can ask about the sufficiency of each link. It is absolutely essential to realize that in almost all case studies the basic goal is to explain how the outcome came about. To use one of our main examples, we examine

the causes of the end of the Cold War, by identifying the factors, events, or decisions that together were sufficient for this outcome to occur.

One can contrast the necessary condition counterfactual to a "contributing factor" view of causation. This kind of causal claim says the presence of X contributed to the occurrence of Y. We take this to mean that X was part of set of factors which were jointly sufficient for the outbreak of a particular event, or that made the probability of the event occurring very high. In statistical studies, where the aim is to explain or account for variation across outcomes in a larger number of cases, a contributory cause is often defined as a factor that increases the probability of a particular event (King, Keohane, and Verba 1994). For the purposes of this chapter we will define it as such: a contributing factor X is part of the set of conditions which are sufficient for Y but which is not necessary or sufficient by itself for Y.

We end this introduction with a couple of caveats about the scope and purpose of our analysis. We do not presume to do an analysis of what "cause" per se is. We do briefly discuss, however, how some philosophers and methodologists have defined cause in necessary condition counterfactual terms. We take as given that necessary conditions are an important *kind* of cause, but not the only kind. For example, our notion of a contributing factor is another kind of cause.

More generally, we use the logic of necessary and sufficient conditions as our basic explanatory framework. We shall argue, implicitly for the most part, that the necessary condition causal approach is a common causal explanation strategy in case studies. Not all explanations use necessary condition counterfactuals, but as we shall see in the cases of World War I and the end of the Cold War, they have been widely utilized.

The concept of cause in case studies

The topic of this anthology is *causal* explanations in case studies. It is worthwhile to briefly consider what counts as a cause, hence what one means by a causal explanation. It is all the more crucial to do so since views on causation within political science in general and qualitative methods in particular have been driven by philosophies of cause based on statistical considerations. These positions, typified by King, Keohane, and Verba (1994), have roots in Hempel's nomological, covering philosophy of science. Much less well-known to political scientists, but in fact more influential in contemporary philosophy, are positions that define cause in terms of necessary condition counterfactuals, a view associated with David Lewis (1986a) and others.

These two views of causation – the nomological covering law approach and the necessary condition counterfactual – represent the two primary and competing conceptions of causation in the literature, which are often confused. Wendt (1999: 79) provides one illustration of how scholars can combine the necessary condition counterfactual with the nomological in thinking about causation:

> In saying that '*X* causes *Y*' we assume that: (1) *X* and *Y* exist independent of each other, (2) *X* precedes *Y* temporally, and (3) but for *X*, *Y* would not have occurred.... The logical empiricist model of causal explanation, usually called the deductive-nomological model or D-N model, is rooted in David Hume's seminal discussion of causality. Hume argued that when we see putative causes followed by effects, i.e., when we have met conditions (1) and (2), all we can be certain about is that they stand in relations of constant conjunction. The actual mechanism by which *X* causes *Y* is not observable (and thus uncertain), and appeal to it is therefore epistemically illegitimate. Even if there is necessity in nature, we cannot know it. How then to satisfy the third, counterfactual condition for causality, which implies necessity?

One immediately notes the necessary condition counterfactual condition, "but for *X*, *Y* would not have occurred." At the same time one can see the presence of nomological considerations in Wendt's discussion. Most scholars have associated the idea of covering laws or nomological relationships with Hume's idea of causation as inference from constant conjunction. Wendt fails to see the contradiction between the necessary condition counterfactual view and the nomological one which relies on constant conjunction (see Lebow 2000: 561 for another example).

This confounding of the necessary condition counterfactual with constant conjunction goes back to one of the most quoted passages in the history of Western philosophy:

> [W]e may define a cause to be *an object followed by another, and where all the objects, similar to the first, are followed by objects similar to the second.* Or, in other words, *where, if the first object had not been, the second never would have existed.* (David Hume *An inquiry concerning human understanding*)

The history of philosophy has shown that no one thinks that "in other words" expresses an equivalence between the two formulations. David Lewis is very clear on this point:

> Hume's 'other words' [see above] – that if the cause had not been, the effect never had existed – are no mere restatement of his first definition. They propose something altogether different: a counterfactual analysis of causation. (Lewis 1986a: 160).

Absolutely crucial in the context of this anthology is that the counterfactual school associated the necessary condition view of cause is very closely tied to the explanation of individual events, while the covering law, constant conjunction position has just as intimate a relationship with causal generalizations (e.g., statistical methods). Lewis is typical in linking the explanation of individual events to a view of causation as necessary condition counterfactuals:

> I shall confine my analyses to causation among *events* ... My analysis is meant to apply to causation in particular cases. It is not an analysis of causal generalizations. (Lewis 1986a: 161-2).

Not surprisingly Holland (1986b: the source of King, Keohane, and Verba's view of causation) rejects Lewis's view of causation as being fundamentally different from his:

> I must disagree with Glymour's [comments on Holland 1986a] paraphrasing of my (i.e., Rubin's) analysis, however, and with the counterfactual analysis of causation of Lewis described by Glymour. I believe that there is an unbridgeable gulf between Rubin's model and Lewis's analysis. Both wish to give meaning to the phrase '*A* causes *B*'. Lewis does this by interpreting "*A* causes *B*" as "*A* is *a* cause of *B*." Rubin's model interprets "*A* causes *B*" as "the *effect* of *A* is *B*." (Holland 1986b: 970)

In the analysis of individual events there is an inevitable pull toward Lewis's view of causation since we are, after all, trying to find the causes of an event.

Hence, it is quite common for philosophers to define causation in necessary and sufficient condition terms:

> It is a fundamental axiom in the study of nature that events do not just happen, but occur only under certain conditions. It is customary to distinguish between necessary and sufficient conditions for the occurrence of an event.... The word "cause" is sometimes used in the sense of necessary condition and sometimes in the sense of sufficient condition. (Copi and Cohen 1990: 377)

> We can [take] ... the statement *A* was the cause of *B* [to mean] that *A* was the set, from among all those conditions that occurred , each of which was necessary, and the totality of which was sufficient for the occurrence of *B*. (Taylor 1976: 298)

The first quote comes from one of the most popular philosophical textbooks on logic. The second quote links multiple necessary conditions and sufficiency.

It is not surprising that philosophers often think of cause in terms of logic, that is the formal, mathematical methodology in which all

philosophers are trained. Similarly it is not surprising to see political scientists defining cause in statistical, probabilistic terms since that reflects their formal training.

In summary, there two basic schools of thought on causation that are relevant. One is the covering law, statistical/probabilistic causation school. The second is the necessary condition, counterfactual, approach. Very crudely, (1) the first school thinks of causation in terms of constant conjunction, while the second does so in terms of necessary conditions; (2) the first school thinks in terms of covering laws or generalizations, while the second thinks in terms of individual cases.[1]

To understand the implications of this difference in the context of explaining individual events it is useful to see how King et al. see the situation:

> [W]e have argued that social science always needs to partition the world into systematic and nonsystematic components, ... To see the importance of this partitioning, think about what would happen if we could rerun the 1998 election campaign in the Fourth District of New York, with a Democratic incumbent and a Republican challenger. A slightly [!] different total would result, due to nonsystematic features of the election campaign – aspects of politics that do not persist from one campaign to the next, even if the campaigns begin on an identical footing. Some of these nonsystematic features might include a verbal gaffe, a surprisingly popular speech or position on an issue, ... We can therefore imagine a variable that would express the values of the Democratic vote across hypothetical replications of this same election. (King, Keohane, and Verba 1994: 79; the systematic variable is incumbency effect)

Note that qualitative scholar focusing on explaining one election might well make the claim that *but for* the verbal gaffe the incumbent would have won. The statistical scholar is interested in general patterns ("mean effect") not the explanation of particular events.

It is not surprising then that many philosophers when thinking about the philosophy of history see causal explanations in terms of necessary condition counterfactuals. There is a long tradition starting at least with Max Weber (see Honoré and Hart (1985) for a very good history and analysis) that sees history as making necessary condition counterfactual claims. For example, Aron as well as Gallie clearly argue that causation in history is identified with necessary condition counterfactuals:

[1]There are a few who combined necessary condition hypothesizing with large-N statistical, methods, e.g., Bueno de Mesquita (1981), see Braumoeller and Goertz (2000) for some other examples.

> Si je dis que la décision de Bismarck a été cause de la guerre de 1866, que la victoire de Marathon a sauvé la culture grecque, j'entends que, sans la décision du chancelier, la guerre n'aurait pas éclaté ... que les Perses vainqueurs auraient empêché le "miracle" grec. Dans les deux cas, la causalité effective ne se définit que par une confrontation avec les possibles.[2] (Aron 1986 [1938]: 202)

> I wish to show that one kind of causal argument is peculiarly characteristic of historical explanation. Historians, I shall argue, sometimes explain events in a perfectly good sense of "explain," by referring us to one or a number of their temporally prior *necessary* conditions; they tell us how a particular event happened by pointing out hitherto unnoticed, or at least undervalued, antecedent events, *but for which,* they claim on broadly inductive grounds, the event in question would not or could hardly have happened. (Gallie 1955: 161; he explicitly contrasts this kind of explanation with sufficiency and correlational explanations)

With examples like Weber, Aron and Gallie in hand, we suggest that while there may be other ways of thinking about causation in case studies, the necessary condition counterfactual approach is an important one.

In the philosophy of history those who take Hempel's covering law view explanation almost always think of explanation in sufficient condition terms. For example, White (1965) clearly sees narratives as a chain of hypotheses, each supported by a covering law, each of which has a sufficient condition nature:

> A statement of the form "*A* is a contributory cause of *C*" is true if and only if there is an explanatory deductive argument containing "*A*" as a premise and "*C*" as its conclusion. (White 1965: 60)

The deductive argument that White has in mind is the sufficiency one associated with covering laws. These laws have the form of "If the situation is *A* then because of covering law *L* then *C* will happen." Because of equifinality, it is quite possible that there is covering law *K* that can also produce *C*. It is not surprising then that White will argue against necessary condition, counterfactual, or *sine qua non* approaches to causation (White 1965: 151-63).

Let us emphasize in conclusion that we do not think that cause *should* be defined in necessary condition terms or that there might not

[2] If I say that the decision of Bismarck was [a] cause of the war in 1866, that the victory at Marathon saved Greek culture, I mean that without the decision of the chancellor that war would not have broken out, that the victorious Persians would have prevented the Greek "miracle." In these two cases, the effective cause can only be defined by confronting possibilities. (Aron 1986 [1938]: 202; our translation)

be other types of cause. It may well be that there are events that have no necessary conditions.[3] Simply we would like to stress that making necessary condition counterfactuals is a core explanatory strategy in history and case studies. This is all the more important since the constant conjunction or covering law view of causation dominates the discussion in political science (again, in contrast to philosophy where there is a real debate between the probabilistic causation position, e.g., Salmon (1984), Humphreys (1989), and the counterfactual one defended by Lewis and many others).

Necessary conditions and counterfactuals

The extensive literature on counterfactuals has not treated the relationship between necessary conditions and counterfactuals (e.g., Elster 1978; Fearon 1991; Tetlock and Belkin 1996; though see Goertz 1994). We do not intend to discuss counterfactuals in general but only how they relate to a specific sort of causal explanation. Our general position is that the ease with which one can make counterfactuals and their validity depend to a large extent on the character of the theory or explanation used to make the counterfactual.

In the case of necessary conditions the link between a necessary condition explanation of a case and a counterfactual is built into the causal explanation itself. To say that X is necessary for Y means simultaneously the counterfactual that without X, Y would not have occurred. To assert a necessary condition is simultaneously to assert a counterfactual: they are bound together.

It is in large part because of the counterfactual implications of a necessary condition explanation that we consider necessary conditions to be important causes. If factor X is such that its absence would have prevented World War I then it certainly deserves to be considered a key cause of World War I.[4]

While necessary conditions are inseparably linked to counterfactuals, such is not the cause with other kinds of causes. If we take "contributing" factors or even sufficient conditions the ties to counterfactuals are much weaker. That X is sufficient for Y does not imply that if X had been absent then Y would not have occurred. As we discuss below, if an event is overdetermined, i.e., multiple sufficient causes are present, then we cannot make the natural counterfactual. Equifinality

[3]For example, linear regression models post no sufficient conditions.

[4]This assumes that it is not a "trivial" necessary condition, see Goertz 2004 for an extended analysis of the concept of a trivial necessary condition.

in its various forms such as INUS[5] causes (Mackie 1974) or Ragin's fuzzy logic methodology (Ragin 2000) proposes that there are multiple sets of sufficient conditions. This makes counterfactuals more difficult because the absence of factors on one causal path does not exclude the effects of other causal paths. In short, counterfactuals are hard with equifinality, easy with necessary conditions.

One way to think of this is in terms of truth and entailment. The truth of a necessary condition causal explanation directly entails the truth of the corresponding counterfactual. The truth of a sufficient condition proposition does not necessarily entail (though it may be true in individual instances) the normal counterfactual. The truth of a sufficient condition does entail the truth of some counterfactuals, but these are not the counterfactuals that normally interest students of case histories. The truth of "if X then Y" entails the truth of "if not-Y then not-X". This counterfactual has not been the focus of much attention at all in the analysis of individual cases.[6]

It is worth noting that the necessary condition counterfactual methodology is a *univariate* one. In many case studies the goal is to focus on one important causal factor. The aim is not a "complete" explanation of the event but rather a more modest one of exploring the consequences of a key independent variable. The necessary condition counterfactual methodology is thus a natural tool. Certainly if a good case can be made for the necessity of X then X can be said to be an important cause of Y.

As we shall argue in more detail below, the necessary condition counterfactual methodology really has two parts. First, one must demonstrate that X is in fact necessary for Y. Second, one must show it is a nontrivial necessary condition (see Braumoeller and Goertz (2000) for this in a quantitative setting). While these are separate issues and require different methodologies they are often discussed together in case studies.

As one might expect it is not hard to find necessary condition counterfactuals for World War I. As a matter of practice, scholars often frame causal explanations using language that implies the necessary condition connection. The counterfactual expression "Y would not have occurred without X" probably appears more often than the phrase "X is necessary for Y."

[5]A factor is an "INUS" cause if it is an insufficient but necessary part of a condition which is itself unnecessary but sufficient for the result.

[6]One example of where the focus of attention has been on the sufficient - as opposed to the necessary - condition version of the hypothesis is the democratic peace. The proposition that joint democracy is sufficient for peace is more interesting to most scholars than is the proposition that nondemocracy is necessary for war.

To get a taste for how this works in a concrete case here are some counterfactuals by prominent scholars for the origins of World War I[7]:

> Each decision, one can argue, led to the next, and in the absence of any one of them, the crisis [July 1914] might have been averted. (Williamson 1988: 806)

> If the Archduke had not been assassinated in 1914, giving rise to the unusual opportunity I have just described, it seems quite likely that Germany would have reached that fateful year of 1917 still at peace with its neighbors. (Lebow 1984: 168)

> The consequences of the cult of the offensive are illuminated by imagining the politics of 1914 had European leaders recognized the actual power of the defense.... Thus the logic that led Germany to provoke the 1914 crisis would have been undermined, and the chain reaction by which the war spread outward from the Balkans would have been very improbable. In all likelihood, the Austro-Serbian conflict would have been a minor and soon-forgotten disturbance on the periphery of European politics. (Van Evera 1984: 105)

These examples illustrate the tendency of many scholars to hedge (Lakoff 1973) their bets. Instead of strongly affirming the counterfactual, e.g., "was necessary for," one sees expressions like "might have been averted," or "probably would not have occurred." Often hedges take probabilistic form, e.g., very likely, but the use of hedges of this sort should not obscure the fundamental counterfactual, necessary condition character of the claim.[8]

Not surprisingly we can find many examples of necessary condition causes in the literature on the end of the Cold War. This approach can be found both in the arguments of the realists as well as those who stress the importance of ideas or individuals. For example:

> Oye argues that the pressures of international competition were a "significant permissive cause of political and economic liberalization within the Soviet Union" (Oye 1995: 58)

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[7]One can also find important necessary condition-counterfactuals on other aspects of the war: "a nonrepressive, nonexclusionary Germany would have ended the war before 1918, with 1917 a likely termination year" (Goemans 2000: 315).

[8]Although some (Lieberson 2003) believe that necessary condition hypotheses are deterministic, we argue that necessary conditions can be either deterministic or probabilistic. For further discussion of the issues involved see Goertz and Starr (2003) and Goertz (2005). For a completely probabilistic view of necessary conditions see Cioffi-Revilla (1998).

> The growth of the specialist network, its institutionalization and involvement in setting the political agenda, in addition to personnel changes, created a political environment in which a withdrawal [from Afghanistan] could happen. (Mendelson 1993: 342)

These examples from the literature on the end of the Cold War illustrate the use of "possibility, permissive" language to express necessary conditions. The use of counterfactual language shows quite directly the necessary condition character of the explanation. In contrast, one can find the use of alternative modes of expressing necessary conditions. These include the language of "permissive conditions," or "make X possible." Implied in this language is the hypothesis that had the factor been *absent* then the outcome would have been *impossible*, or at least extremely unlikely. These words are just as often used by structuralists, e.g., realists in the end of the Cold War debate, as by social constructivists who emphasize ideas and norms.[9]

One indication of the usefulness of the necessary condition causal strategy is that one can find it in "structural" as well as "contingency" explanations. In the case of the end of the Cold War necessary condition, counterfactuals are used by those arguing for the importance of individuals (e.g., Gorbachev), ideas, and material decline. Some, such as Kahneman (1995), suggest that necessary condition counterfactuals are inherent in causal thinking. While not all causal explanations take the necessary condition counterfactual form, it does form a core explanatory tool in case study settings. We have also tried to illustrate the various ways in which scholars express necessary condition counterfactuals, particularly notable is the use of permissive cause or possibility language. We hope this volume will make readers and scholars alike more attentive to the language they use and its implication in terms of causal explanations.

[9]While some may use the language of "permissive cause" or "make possible" in a way that is equivalent to the concept of necessary conditions, which has a specific technical meaning, it is possible that scholars use this alternative language in a looser, non-technical sense. For example, by saying that a particular factor (Soviet material decline, for example) "made the end of the Cold War possible," some might allow for the possibility that there might be another factor that might also make the end of the Cold War possible, a possibility that would be precluded if the first factor were a necessary condition. Similarly, some might say that X was a "permissive cause" of an event and not preclude the possibility that Y was also a permissive cause of the event. The concepts of necessary and sufficient conditions lack this ambiguity, and it is their precision that makes their use preferable.

Sufficiency

A basic goal in historical accounts of events like World War I is to produce a causal explanation.[10] While we think sufficiency claims are rare in general (particularly compared to the commonness of necessary condition ones), the end of the Cold War debate provides a nice example where sufficiency concerns are core to the debate between the realist and ideational[11] positions. It is possible to give a sufficiency explanation that uses no necessary conditions. In a related fashion there is the possibility that events, notably World War I, might be overdetermined.

Whether it is accurate or not, those that argue for the importance of ideas often critique the realist position in terms of its claim of sufficiency.[12] While we do not intend to adjudicate the debate (readers can judge for themselves after reading the relevant chapters), we would like to expose in a skeletal fashion how sufficiency arguments appear in this debate.

One can find realists making claims about the importance of the material decline of the Soviet Union in sufficiency-like terms:

> In each area, policy went through three phases that closely tracked the severity of resource constraints. 1985–6 was the competitive phase, during which the Soviet leadership appears to have thought it had the resources to drive a hard bargain with the West. By 1988, however, Gorbachev's efforts to "accelerate" the Soviet economy by deploying the defense sector had failed, producing an escalating deficit, powerful inflationary pressures, and no measurable increase in competitiveness. The result was a second phase of radical new thinking in which Gorbachev and his colleagues were willing to make much larger concessions on the assumption that their interests would still shape the eventual settlement.... In 1990–1 [third phase], when the terms for ending the Cold War were finally settled, resource constraints were overpowering the Soviet policy process on all fronts ... Change in ideas similarly

[10]See Hexter (1971) for a critique of this and a counterproposal that what historians do is provide "credible stories"; see also Pennington and Hastie (1986) and Sylvan and Haddad (1998).

[11]Unfortunately, there is no commonly accepted label for theories that stress the importance of ideas, beliefs, values, or norms. Constructivists often emphasize these factors, but not all arguments employing these variables are constructivist. We use the term "idea" or "ideational" interchangeably to designate theories that stress the importance of these factors.

[12]Brooks has described neorealism in general in sufficiency terms: "Neorealists would likely argue that the preceding three factors [potential costs of war, focus on underlying capability for aggressiveness, focus on the possibility not probability of conflict] – which they assert can be traced to the anarchic state of the international system – necessarily induce rational states to adopt a worst-case/possibilistic focus." (Brooks 1997: 448–9).

> tended to move in tandem with changes in policy that were necessitated by material pressure. (Schweller and Wohlforth 2000: 90–1)

In this passage Schweller and Wohlforth argue that changes in Soviet policy tracked, i.e., were caused by, changes in Soviet resource constraints. These changes were sufficient in the sense that one does not need recourse to other factors, notably ideational ones, to explain changes in policy.

In contrast, without exception, those who argue for the importance of ideas, norms, and the like grant that material constraints are part of the story but not the whole story; in other words, resource constraints might be a necessary cause of the end of the Cold War but they are not sufficient. For example,

> Economic decline was clearly a necessary factor in the inception of Soviet reforms, and the authors (Brooks and Wohlforth this volume) have given us new insights into how such pressures also played an important facilitating role. But they are still far from establishing material forces as a sufficient condition. (English this volume, p. 259)

Typically then, the critique from an ideational position argues that material factors are important but "indeterminate," i.e., they narrow the range of options but do not select one (which would be sufficiency).[13] The realist explanation is too "deterministic," meaning that it specifies a particular outcome (one could consider that necessary conditions are also deterministic in the more usual sense of the word). Realists arguments are "underspecified" again saying that important causal variables are left out.[14] These, and the list is not complete, are various ways to phrase an argument against a sufficiency position. Similarly, Risse-Kappen states that realist theories are "notoriously insufficient if we want to understand the way actors define and interpret their interests" (Risse-Kappen 1994: 214).

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[13]Kennedy raises the same sort of issue in the literature about World War I when he says that a structuralist approach "tells us why Wilhelmine Germany was expansionist at a certain time, but it has much less explanatory power when we move on to the equally important questions of what sort of expansionist policies were chosen, and why, and with what effects" (Kennedy 1982: 164).

[14]Waltz (1979) is more cautious than many other realists. He argues that international structures shape international outcomes by preventing certain outcomes from occurring, or at least making them extremely unlikely, rather than by forcing other outcomes to occur or by significantly influencing the foreign policy behavior of states. That is, Waltzian neorealism is a theory of constraints on international outcomes, not a theory of foreign policy.

Critics use the same strategy as Schweller and Wohlforth to argue against them. This strategy only really works if a sufficiency-like interpretation of realism is taken:

> But how a political leadership will respond to the strategy environment is indeterminate ... Virtually the same confluence of internal and external pressures that purportedly compelled the adoption of New Thinking had been present since the late stages of the Brezhnev regime without any significant changes in policy until 1985 (p. 277). Russia's growing assertiveness [ca. 1993] would seem to confound the expectations of realist theory.... how can they account for the Yeltsin government's increasingly nationalist course at a time when Russia is far weaker in both relative and absolute terms than in the late 1980s? (Herman 1996: 277, 312; see also Bennett 1999 chapter 2; Evangelista 1999 chap. 17)

Herman is saying that if we look at other periods of severe resource constraint we do not see policy shifts one would expect. For example, the early Yeltsin period was one of serious economic difficulty and Russian foreign policy got more belligerent.

A second common argument against sufficiency positions shows that alternative options existed and were quite possible outcomes. We discuss the importance of individuals below, but one can also argue that Gorbachev had other options than the one he chose:

> This suggests that Gorbachev could have attempted to appease both the MIP coalition and the yearning for economic and political reforms by espousing a combination of domestic reforms and hard-line, interventionist foreign policies. A number of possible linkages between domestic and foreign policy were open to him. If Soviet leaders during the drawn-out leadership succession in the 1980s had seen Soviet military interventions of the 1970s as successes rather than failures, Gorbachev might have competed for the mantle of "most interventionist" and sought the support of the very institutions that his reformist coalition downgraded. (Bennett 1999: 71)

Here, as with many of the arguments against sufficiency, one emphasizes that alternative possibilities and choices were available and that the potential sufficient condition cannot explain why a particular option or person was chosen.

Another way to express the difference between realists and their idea-based critics about the sufficiency of material factors is in terms of the distinction between adaptation and learning (Levy 1994). Realists concede the fact that Soviet leaders' beliefs changed in response to changing material circumstances, but argue that this was adaptation to structural change rather than genuine learning. Soviet leaders

"learned," but learning had no causal effect, because the change of beliefs was endogenous to changing material structures. Critics like English (2000, and in this volume) and Bennett (1999) argue that belief change was not fully endogenous to structural change, but was based in part on autonomous ideas. While realists emphasize the sufficiency of structural adaptation, idea-based critics emphasize the necessity of causal learning. Many of the critics concede some role to structural change, however, and in the end argue that structural change and causal learning were each necessary conditions for the end of the Cold War.

Our point in this brief discussion is to illuminate the causal and empirical strategies that one uses in making and defending sufficiency-like claims. The end of the Cold War literature is one of the best and most prominent examples of this that we know of.

The end of the Cold War example is rare in that most sufficiency explanations are multivariate in character. Take, for example, the following explanation for World War I by Maier:

> The irreversible momentum toward general war in 1914 is usually seen as a result of three factors: the hopeless, long-term instability of the Habsburg empire, the rigid structure of opposing alliances, and the ineluctable pull of military preparations. (Maier 1988: 822)

As we have seen in the section on the concept of cause, a complete causal explanation can be taken to be all those conditions which are individually necessary and *jointly sufficient* for the outcome. We shall see below that the powder keg, or window of opportunity-catalyst model makes sufficiency claims.

However, the necessary condition part of this very general explanatory framework can be put into question if the event is overdetermined. Logically, it is possible for an event to be simultaneously overdetermined and yet have multiple necessary conditions.[15] Nevertheless, there is a feeling that if an event, such as World War I, is really overdetermined the emphasis on necessary conditions might be misplaced.

For example, Schroeder sees World War I as basically overdetermined:

> The difficulty arises in accepting the notion, implicit in all of Fischer's work and explicitly drawn by many historians as the chief lesson of it, that Germany's bid for world power was the *causa causans*, the central driving force behind the war.... the whole attempt to find a *causa causans* behind the multiplicity of contributing factors is misconceived.... one encounters a plethora of

[15]Think of two sets of variables, each of which is jointly sufficient for an outcome, and each of which has multiple (but different) necessary conditions.

> "causes" far more than sufficient to account for the phenomenon one wishes to explain, clearly connected with it, and yet not "sufficient" in the sense that any set of them logically implies what occurred. The fact that so many plausible explanations for the outbreak of the war [World War I] have been advanced over the years indicates on the one hand that it was massively overdetermined, and on the other that no effort to analyze the causal factors involved can ever fully succeed. (Schroeder 1972: 320)

Maier is suggesting that these three factors were jointly sufficient for World War I. There appear to be causes "more than sufficient" to account for World War I. We can go back to Maier's three factors and ask if these are part of the "massive overdetermination" of World War I.

Recall that by definition necessary conditions are those factors for which there is no substitute within a given causal path. It is possible that say some factors of the causal explanation are massively overdetermined while others are very contingent. For example, the powder keg may be overdetermined because of the many factors pushing Europe into two camps and the many arenas, colonial, Balkans, and western Europe where conflicts occurred.

Nevertheless, there is a clear tension between overdetermination and the importance of necessary conditions. As the number of necessary conditions increase the contingency of events increases - *ceteris paribus* of course. If events are quite contingent, then they are not overdetermined.

Causal chains

One often reads of the "chain of events" leading up to some important outcome. The goal of this section is to begin an analysis of what that metaphor implies in terms of necessary or sufficient condition causal explanations. The chain metaphor also provides the occasion to introduce the topic of multivariate causal explanations. Potentially each link in the chain can be a cause of the outcome.

More generally, the chain metaphor permits us to tackle the question of narrative and causal explanation. History is traditionally - particularly in its classic form of political history - a narrative, i.e., a story, that ideally is also an explanation of why the event occurred.[16] Once again, we do not intend to survey the vast literature on history and

[16]Not all historical accounts of individual historical events take a narrative form. In his study of the origins of World War I, for example, James Joll (1992) begins with a narrative account of the July 1914 crisis, but then organizes his analysis (and subsequent chapters) around the following analytic themes: alliances and diplomacy, militarism and armaments, domestic politics, international economy, imperial rivalries,

narrative, but only to examine that part which is relevant to necessary condition causal explanations.

One frequently sees causal chains represented by $E1 \Rightarrow E2 \Rightarrow E3$. It is rarely made clear what causal interpretation to give to these arrows. Within the context of this chapter we can think of two interpretations, one is that the arrows represent a necessary condition, the second is that it represents a sufficient condition. To distinguish the two interpretations we shall use the subscripts N and S to differentiate the two, for example,

$$E1_N \Rightarrow E2_S \Rightarrow E3_{NS} \Rightarrow E3_N \Rightarrow E5$$

Key to our analysis of cause chains is the notion of the "strength" of the causal bond between links. We can rank links in terms of their strength from strongest to weakest, (1) necessary and sufficient, (2) sufficient condition and (3) necessary. Much of the debate about the relative importance of different factors relates to the kinds of relationships one finds between links in the chain.

Necessary condition causal chains

In a chain consisting of necessary conditions, if any link is absent then, counterfactually, the outcome would not have occurred. If an historical narrative describes a causal chain, then we would have a temporal series of necessary conditions for the event in question.

The classic chain metaphor does suggest one form of causal explanation in case studies. One potential multivariate causal explanation is a *temporal* series (chain) of necessary conditions, say, for World War I. For the purposes of this section the two key aspects are (1) the temporal nature of the series and (2) the components of the series are necessary conditions.

A traditional narrative focuses on key decisions in a process that over time leads to the event in question, e.g., World War I. While many narratives will include background and/or structural factors as part of the description we want to limit ourselves in this section to causal chains that invoke relatively specific decisions that link together to produce the outcome.

Levy (this volume) in summarizing his analysis of the decisions and factors that led to World War I gives this list:

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and "the mood of 1914." Levy's chapter in this volume uses a different theoretical framework, one based on rational choice analysis, to structure an analytic narrative of the July crisis. For more on narrative and non-narrative historical explanations, see Levy (2001).

1. The German assumption of British neutrality during the early stages of a continental war was a necessary condition for German support for Austro-Hungarian military action against Serbia, for Germany's willingness to risk a continental war against Russia, and therefore for the outbreak of a World War I involving all of the great powers.

2. German support for Austria-Hungary was a necessary condition for a major Austro-Hungarian military action against Serbia, and consequently a necessary condition for a war of any kind in 1914.

3. Russian intervention in an Austro-Serbian war was a necessary condition for a continental war and consequently for a world war.

4. Russian Foreign Minister Sazonov's belief that a partial mobilization against Austria-Hungary would not lead to a general European war was a necessary condition for his willingness to push for mobilization.

5. Some form of Russian mobilization was a necessary condition for German mobilization.

Now not all of the factors listed here are "decisions" per se. For example, the German assumption of British neutrality is really a belief. Nevertheless, this list summarizes key aspects of individual links that Levy discusses in detail. The list is given in chronological order as one would expect of a causal chain. In addition, Levy says that each link was a necessary step on the path toward war.

One can see a chain of factors (maybe or maybe not necessary) in ideas arguments about the end of the Cold War. As we discuss in more detail below, many see Gorbachev as a necessary link in the causal chain. We can then work our way back by asking how Gorbachev got his ideas. For example, English makes this point:

> None [of the usual explanations], however, adequately addresses a critical, earlier, process that made such an endgame possible; the emergence, over the preceding two decades, of a Soviet intellectual elite holding sharply unorthodox beliefs about their country's development and proper place in the world community.... So while crisis and leadership transition were vital preconditions, so an earlier intellectual change – the rise of a global, "Westernizing" identity among a liberal policy-academic elite – was a sine qua non of the Cold War's sudden and peaceful end. (English 2000: 2, 3)

Checkel (1997) has argued strongly for the importance of various institutes like IMEMO and ISKAN as the source of Gorbachev's ideas. He

argues that it was not just personal contacts or individual learning on the part of Gorbachev but rather the impact of organized, institutionalized ideas:

> Despite these various changes and despite Arbatov's skills, IMEMO was a relatively uninfluential player in these security debates. Arbatov was in fact a "policy entrepreneur" and a person like Yakovlev and Primatov had the necessary skills and connections to exploit open policy windows. Nevertheless, he failed to convert this entrepreneurship into influence, even though he had the clear backing of his boss, Primakov. A key element in this failure was that Arbatov, in bringing his expertise in strategic affairs to IMEMO, was attempting to modify fundamentally the institute's basic mission.... Moreover, his entrepreneurship was openly and actively resisted by various institute scholars. (Checkel 1993: 292–3)

Here Checkel uses an interesting strategy to make his case. He takes the example of Arbatov, someone without the (necessary) organizational support, and argues that this kind of personal contact did not result in policy change. Personal contacts *and* institutional support would influence Gorbachev but not just personal contacts alone.

We can continue to follow the causal chain back from Soviet policy institutes. Evangelista (1999) has made a forceful case for the importance of transnational actors in influencing individuals and organizations within the Soviet Union. So now the causal chain looks like Transnational groups ⇒ Soviet policy institutes ⇒ Gorbachev.

It is always important to remember that necessary condition causal chains are incomplete, while sufficient ones are not. The existence of a necessary condition makes the next link possible, but usually other factors must be included to explain why it in fact did happen.

Sufficient condition causal chains

We suspect when people use arrows to express causation that some sufficiency-like interpretation makes the most sense. This is because a sufficient condition actually produces the next link in the chain, whereas that is not the case for necessary condition links.

Consider the following causal chain of events (E) in the abstract:

$$E1_S \Rightarrow E2_S \Rightarrow E3$$

Since each link is sufficient we can say that the "intervening" link of $E2$ is not very important, the key cause is the first link of the chain $E1$. If Alice shoots Jane resulting in her death, the "immediate" cause of death is the bullet damaging Jane's heart ($E2$). However, since Alice's

aiming the gun and pulling the trigger leads direct to $E3$ via $E2$ we find that the principal cause is Alice shooting the gun. So the first sufficient condition is important while the second is much less so.

Now consider a different causal chain where there are links that are not all sufficient:

$$E1_N \Rightarrow E2_N \Rightarrow E3_S \Rightarrow E4_S \Rightarrow E5$$

The strength of the bond between $E2$ and $E3$ is weaker because $E2$ is necessary but not sufficient for $E3$. Hence other factors have to be present for sufficiency to be achieved. The link between the two is weaker than the link between $E3$ and $E4$. Yet $E2_N$ is typically more important than the $E4_S$ sufficient condition. The key principle here is that each necessary condition in the link is equally important, while in chains of sufficient conditions it is the first sufficient condition that typically is the really important one. Hence, (1) the relative importance of sufficient conditions depends on where the sufficient condition lies in the causal chain, (2) necessary conditions are of roughly equal importance (see below for more on this), and (3) sufficient conditions at the beginning of causal chains are usually more important than necessary condition ones.

One commonly used example of these issues in the World War I case is the degree of linkage between mobilization plans. All have remarked upon the tight connection between Russian and German mobilizations. Trachtenberg poses a key question: "A mechanism of this sort [linked mobilization plans] clearly existed, but was it actually a *cause* of the war? It is important to think through what is implied by the claim that this mechanism of interlocking mobilization plans helped bring on the cataclysm" (Trachtenberg 1990–1: 121; see also Ferguson 1999a: 267). We suggest that the examples above of chains with differing levels of bonds between links provides a framework for looking at this question.

Trachtenberg then uses the tightness of sufficiency links in the causal chain to downplay the importance of mobilization plans as a cause of World War I:

> [I]f in 1914 everyone understood the system and knew, for example, that a Russian or German general mobilization would lead to war, and if, in addition, the political authorities were free agents – that is, if their hands were not being forced by military imperatives, or by pressure from the generals – then the existence of the system of interlocking mobilization plans could hardly be said in itself to have been a "cause" of war because, once it was set off, the time for negotiation was cut short. But if the working of the system was understood in advance, a decision for general mobilization was a decision for war; statesmen would be opting for war with their

> eyes open. To argue that the system was, in such a case, a "cause" of war makes about as much sense as saying that any military operation which marked the effective beginning of hostilities ... was a real "cause" of an armed conflict. (Trachtenberg 1990–1: 122)

Sagan uses the same sort of explanatory strategy of strong links to argue that because of the tight connection between Russian mobilization and German war decisions the Russian decision is a very important cause of the war:

> The German threat to Russia – that it would soon be forced to mobilize, which meant war, which meant the Schlieffen Plan's offensive, if Russia did not stop the *partial* mobilization against Austria-Hungary underscores the importance of the alliance commitment in Berlin's calculations.... This decision [Russian mobilization] was critical, for once the full mobilization of the Russian army began, Bethmann-Hollweg called off the attempt to avert war by having Austro-Hungarian forces "Halt in Belgrade." (Sagan 1986: 165–6)

In short, Russian mobilization led directly and almost inevitably to war.

Others in their analysis of World War I will stress the importance of the Schlieffen Plan and downplay the Russian decision: "But there was only one decision which turned the little Balkan conflict between Austria-Hungary and Serbia into a European war. That was the German decision to start general mobilization on 31st July, and that was in turn decisive because of the academic ingenuity with which Schlieffen, now in his grave, had attempted to solve the problem of a two-front war" (Taylor 1969: 101).[17] Levy (1986) makes a similar argument regarding the common hypothesis that rigid organizational routines in the form of military mobilization and war plans were an important cause of World War I (Tuchman 1962; A. Taylor 1969). He argues that such hypotheses often exaggerate the causal impact of organizational routines by neglecting the systemic variables that create a "military necessity" for developing such plans and for implementing them in a crisis: "The greater the extent to which military necessity influences both the development of contingency plans and their rigid implementation in a crisis, the less the causal weight that can be attributed to the nature of the plans themselves" (Levy 1986: 193). These kinds of debates are about the relative importance of the links in the chain.

Thus the strength of the linkage between events plays a key role in evaluating the importance of individual events and decisions. Another

[17]For recent scholarship on the Schlieffen Plan, which might affect some of these interpretations, see Zuber (2003) and Lieber (2006).

such example is the very close sufficiency link between the violation of Belgian neutrality and the British entry into the war: "The argument that British intervention in the war was made inevitable by the violation of Belgian neutrality has been repeated by historians ever since [Lloyd George]" (Ferguson 1999a: 231). Because of the strong character of the sufficiency link blame is often given to the earlier factor. Hence, World War I it is not the fault of the British but rather the Germans.[18]

In causal chains of this sort often one considers the factors at the beginning of the chain as more important than those at the end as we have seen with Sagan's argument. One can see this at work in Bennett's analysis of learning and Soviet-Russian interventionism during and after the Cold War. Initially he argues that there is a very close correlation between beliefs and actions on the part of Soviet leaders.

> There was a high degree of consistency in every case study between the stated beliefs of Soviet and Russian leaders and their subsequent behavior. During periods in which beliefs were interventionist - 1973 to 1979 and 1992 to 1994 - the Soviet Union and Russia did not fail to intervene when opportunities arose.... During periods of noninterventionist beliefs - 1989-90 and to a less extent 1980 to 1989 - there were no new major interventions ... Even though the evidence is strong that stated beliefs correlated with subsequent behavior, it remains to be shown that ideas were not mere ephiphenoma of domestic politics or systematic pressures. (Bennett 1999: 351-2)

As we have seen above, constant conjunction (i.e., very high correlations) typify a sufficiency-like argument in analyses of particular historical events. However, one must be attentive to the possibility that beliefs were the result of more fundamental factors, e.g., systematic structures, and thus less important in the final causal explanation.

Turning points and critical junctures

The strength or weakness of the bonds between links is intimately related to the concepts of "critical junctures" or "turning points." We think that turning points are just those links that are weak in the causal chain. We would define turning points as those decision nodes where it would have been relatively easy to move onto a different path. In the terms of this section those are links that have weak bonds to the next link on the road to war (World War I) or peace (end of the Cold War).

[18]Shaver (1985) and Honoré and Hart (1985) provide extensive discussions of the close link between causal explanations and the attribution of blame.

Geiss's account (1966) of the German decisions leading to war illustrates a number of common and central characteristics of narrative accounts focusing on key choices. Geiss stresses two decision points that were critical in the German move towards war.[19] The first was the Kaiser deciding between two factions within the German government: "After Sarajevo Germany could not at once make up her mind which course to follow. The Auswärtiges Amt clearly saw the danger involved in Russia's trying to protect Serbia if Austria made war, namely, that a world war might result.... The German General Staff, on the other hand, was ready to welcome Sarajevo as the golden opportunity for risking a preventive war. In this situation it was the Kaiser's word that proved decisive" (Geiss 1966: 82–3). The second was when Bethmann-Hollweg suppressed the Kaiser's instructions (which would have helped avoid war) in despatches to Tschirschky on the evening of 28 July after he had learned that Austria had declared war on Serbia: "[Bethmann-Hollweg] stifled the only initiative from the German side which might have saved the general peace" (Geiss 1966: 86).

These key decisions appear to have two core, and correlated, characteristics. They were necessary links in the chain of German decisions that led to war or that could have led to peace. Second, they were possible "turning points" that could have led away from war. For the purposes of the present section the idea of a turning point means that there was a weak bond between the turning point and the decision taken.

The idea of a turning point is very closely related to the influence idea of "critical junctures": "Not all choice points represent critical junctures. Critical junctures are specifically those choice points that put countries (or other units) onto paths of development that track certain outcomes – as opposed to others – that cannot be easily broken or reversed.

Before a critical juncture, a broad range of outcomes is possible; after a critical juncture, enduring institutions and structures are created, and the range of possible outcomes is narrowed considerably" (Mahoney 2001: 7; see also Collier and Collier 1991).[20]

Hermann and Lebow (2001) have made turning points a central part of their analysis of the end of the Cold War. They define turning points as events where major new directions were taken that could not easily be undone:

[19]The turning points identified by Geiss (1966) are consistent with the causal chain posited by Levy (in this volume), and in fact occur within it.

[20]Clearly, concepts such as critical juncture and turning points are closely related to theories of path dependence (Mahoney 2000; Pierson 2004; Bennett and Elman 2006).

> We define a turning point in terms of two properties. First, it must be a change of significant magnitude, not an incremental adjustment but a substantial departure from previous practice. Second, it must be a change that would be difficult to undo. (Herrmann and Lebow 2004: 10)

Our conceptualization of turning points is different in that we think of them as decision nodes (forks in the road) where one can or perhaps did take a new direction. In our conceptualization, one can reaching a turning point and *not turn*. In Herrmann and Lebow's take turning points are only those nodes where a decision to turn was made.[21]

A turning point implies that the alternative was a "real possibility" (obviously a counterfactual proposition) and hence a weak bond in the causal chain. A strong bond is illustrated by Sagan's argument (see above) about the intimate bond between Russian and German mobilization decisions, whereby Russian mobilization entailed almost automatically German mobilization; it involved a decision, of course, but a decision that was very hard for the Germans not to make. The nature of the bonds, weak or strong, between key decisions plays an absolutely essential role in determining the relative importance that we attribute to decisions in a causal chain.

In the context of the debate about the end of the Cold War one can see, as we noted above, those that stress the importance of ideas argue that there was significant indeterminacy in Soviet policy in the mid- to late 1980s. One can formulate counterfactuals regarding the likelihood of other leaders taking power in the mid-1980s. It is a turning point in part because we can make plausible counterfactuals that lead to very different outcomes.

The key point is that there were necessary condition decisions and events along the road to World War I and the end of the Cold War. Many of these decisions were also turning points where leaders and governments could have taken the road away from war or toward continued confrontation. These two ideas, necessary conditions and turning points, are logically separate but nevertheless appear frequently together. Both necessary conditions and turning point hypotheses imply strong counterfactuals. Taking the path to crisis deescalation was very possible; the decision actually taken was necessary on the road to war.

[21] Critical junctures also often have this property: "Thus, the concept of a critical juncture contains three components: the claim that a significant change occurred within each case, the claim that this change took place in distinct ways in different cases, and explanatory hypothesis about its consequences. If the explanatory hypothesis proves to be false – that is, the hypothesized critical juncture did not produce the legacy – then one would assert that it was not, in fact, a critical juncture" (Collier and Collier 1991: 30).

The importance of individuals in historical causal explanations

Diplomatic history is just as much about narratives as about causal explanation. Hi(story) is often about the actions of key individuals. Not surprisingly then, counterfactuals about individuals are quite common. The most obvious example of this in our two cases is the importance (or lack thereof) of Gorbachev in the end of the Cold War.

While we have not conducted a formal survey, we think that many historians and political scientists believe that Gorbachev was an essential part of the explanation for why the Cold War ended. This view easily takes a necessary condition counterfactual form: "[F]or it is nearly impossible to imagine any of Gorbachev's competitors for the general secretaryship even undertaking, much less carrying through, his bold domestic and foreign reforms" (English 2000: 3; see also p. 192).

Here the counterfactual methodology is easier than in other situations. To support the necessary condition counterfactual one needs to go through the list of people, usually a relatively small number, who might have taken power instead of Gorbachev in the mid-1980s. One can then assess the likelihood of any of these players doing something as radical as Gorbachev did.[22]

In analyzing the likelihood that other possible Soviet leaders might have acted as Gorbachev did, we need to be very careful in the selection of the set of possible individuals for analysis. Ideally, we should be able to imagine that leader coming to power with a minimal change in international or particularly domestic political conditions. Otherwise, the inference that other leaders would have behaved differently (e.g., continued the Cold War) might be explained either by the importance of individuals or by other factors that changed. This is the logic underlying what Tetlock and Belkin (1996: 23–5) call a "minimal rewrite counterfactual."

One can find claims about the centrality of leaders in the World War I case as well. For example, "Absent the Iron Chancellor [Bismarck], it is hard to imagine a defeated Austria aligning with Prussia after the humiliations of Sadowa and Königgrätz. Similarly, it is equally hard to imagine a leader other than Wilhelm II repeatedly antagonizing Britain for so little purpose" (Byman and Pollack 2001: 134). Lebow's argument (in this volume) that the outbreak of World War I was contingent upon

[22] Similarly, some have gone beyond the rather common argument that Adolph Hitler was an important cause of World War II in Europe to make the stronger claim that Hitler was a necessary cause of the war, and have explained why other individuals who might conceivably have been in the role of German Chancellor would have behaved differently (Mueller 1989).

the assassination of Archduke Ferdinand (and other factors) is based on the use of a minimal rewrite counterfactual. One can easily imagine a failed assassination attempt without assuming a change in other key variables. One could use a similar logic in a counterfactual analysis of whether individual differences would have led Al Gore to pursue a different policy toward Iraq than George W. Bush. One needs to change virtually nothing to imagine Gore rather than Bush becoming president in 2000. We must recognize, however, that other variables would quickly change as the causal result of this individual-level change (e.g., the president's advisors and his political constituency), and we would have to consider their independent causal impact.

Structural explanations almost by definition downplay the importance of individuals. In the most extreme position the international or structural constraints are so strong that the leadership *has no choice*:

> We would be prepared to sustain the counterfactual claim that given the material distribution of power of the 1980s, a rapidly declining Soviet Union would have most likely sued for peace in the Cold War even if led by old thinkers. (Schweller and Wohlforth 2000: 100)

One of the rules of social science – as opposed to history – is to avoid proper names in giving causal explanations (Przeworski and Teune 1970). Instead one should give the properties or characteristics of the individual event or object that are casually relevant. This avoidance of proper names is closely linked to the desire for general theories. By giving the property of the individual that was casually relevant we assume that in other similar circumstances this property will also play a causal role. For example, Evangelista has argued that it was Gorbachev's skill in packaging his ideas [heresthetics] that accounts in large for his success:

> But only a skillful heresthetician such as Mikhail Gorbachev could have made controversial accommodations to material forces seem natural; only a skillful heresthetician could have ensured that enlightened ideas held by an elite few would seem universal. (Evangelista 2001: 32)

Of course, we can see the same set of issues at work in the literature on the causes of World War I. Here it is the assassination of Archduke Ferdinand that plays the role analogous to Gorbachev. Once again the structuralists argue that many crises could have just as well started World War I, just as the realists argue that many (new or old) thinkers would have ended the Cold War. Lebow's analysis of the assassination also focuses on its properties that were casually relevant to the outbreak of World War I, just as Evangelista does for Gorbachev.

In many, if not most, causal analyses of specific events, key actions or individuals will seem essential to the outcome. At the same time there are almost always structural accounts that will downplay the importance of individuals in favor of larger historical or structural forces.

Windows of opportunity

Without a doubt the image and metaphor of a window of opportunity plays a key role in explanations of World War I and the end of the Cold War. We shall argue that powder kegs, windows of opportunity, preconditions, (pre)requisites, permissive causes, and the like are all variations on the same causal theme. One reason that all these terms refer to the same causal explanation is that they are all seen as necessary conditions. We shall focus most of our attention on the window of opportunity metaphor and causal explanation, but our arguments apply directly to these other causal metaphors as well.

In spite of the popularity of the window metaphor we have found little in the way of a rigorous analysis of what this means in terms of causal explanations. Kingdon's classic work (1984) on agenda-setting is the most extensive analysis of the window of opportunity concept in the literature. Since it is about policy it is substantively quite relevant to government decisions about war or peace. Kingdon is quite explicit about the original use of the window of opportunity metaphor and what it means in a policy framework:

> In space shots, the window presents the opportunity for a launch. The target planets are in proper alignment, but will not stay that way for long. Thus the launch must take place when the window is open, lest the opportunity slip away. Once lost, the opportunity may recur, but in the interim, astronauts and space engineers must wait until the window reopens. Similarly, windows open in policy systems. These policy windows, the opportunities for action on given initiatives, present themselves and stay open for only short periods. If the participants cannot or do not take advantage of these opportunities, they must bide their time until the next opportunity comes along. (Kingdon 1995: 166)

Two of Kingdon's "streams" constitute windows of opportunity for agenda-setting. The "political stream" consists of the larger political context such as the mood of the public, but also exogenous events like crises. The "problem" stream is the specific problem that the policy is meant to address and solve. Each of these two streams must be

present for something to make it onto the agenda. The final stream is the solution(s) proposed by policy entrepreneurs.

> If one of the three elements [streams] is missing – if a solution is not available, a problem cannot be found or is not sufficiently compelling, or support is not forthcoming from the policy stream [context] – then the subject's place on the decision agenda is fleeting. (Kingdon 1984: 187)

In short, nothing can happen when a window is closed, it must be open: it is a necessary condition for an item to make it onto the agenda.

The window metaphor has been quite popular among those in the end of the Cold War who stress the importance of ideas. Checkel (1997) and Evangelista (1999; see also Larson and Shevchenko 2003) have been the most consistent users of this explanatory framework:

> These resources, idiosyncratic in nature, are necessary but not sufficient conditions for successful entrepreneurship. Two situational factors are also essential. Are there problems whose resolution would be assisted by the implementation of the entrepreneur's ideas? Are there leaders in power who recognize that resolution would be assisted by the implementation of the entrepreneur's ideas? Are there leaders in power who recognize that such problems exist? Taken together, these two factors create an opportunity – a policy window – for the aspiring entrepreneur to sell a particular idea, intellectual outlook, or policy. (Checkel 1997: 9–10)

> Nevertheless, they [transnational actors] succeeded in implementing some major initiatives, thanks to the peculiar nation of the Soviet domestic structure and the confluence of several policy windows – the severity of the economic crisis, the challenges of the Reagan administration, and, most important, the advent of a strong reformist leader. (Evangelista 1995: 36).

Beyond this Checkel (1997) has chapter titles stressing the centrality of the window of opportunity idea: "Entrepreneurs looking for a window" (chapter 3), "Windows opening" (chapter 4) and "Open windows, new ideas, and the end of the Cold War" (chapter 5).

It is important to note that it is the material factors emphasized by the realists like Brooks and Wohlforth that tend to define the presence of an open window. When those that stress the importance of individuals or ideas include factors like material decline into their explanations it is most often via something like the window of opportunity.

In the context of World War I we see this same sort of idea expounded by well-known scholars:

> Germany and Austria pursued bellicose policies in 1914 partly to shut the looming "windows" of vulnerability which they envisioned

> lying ahead, and partly to exploit the brief window of opportunity which they thought the summer crisis opened. This window logic, in turn, grew partly from the cult of the offensive, since it depended upon the implicit assumption that the offense was strong. (Van Evera 1984: 79)

Van Evera (1984) constantly uses the window of opportunity idea to explain how the cult of the offensive was an important cause of World War I, and in a subsequent book he generalizes the argument about the importance of windows and extends it to other cases (Van Evera 1999). Also, domestic politics (in both Austria-Hungary and Russia) play a key role in two key causal streams in Lebow's model of open windows. Open windows, prerequisites, permissive causes, and the like set the stage for the event to happen. Without these favorable circumstances, the catalyst can have no effect. Specifically, "possible" often refers to necessary conditions while "probable" invokes sufficiency. Open windows make the event possible: the occurrence of other contributing factors can make the event quite likely.

Powder keg explanations

> The figure of exploding powder is probably the most common of those employed by historians who try to account for the occurrence of events; and therefore it is well to have in mind the logical structure of this constantly used scientific model or metaphor, to say nothing of that other favorite, the fertile soil that flowers when seeded.
>
> *Morton White*

The situation in Europe pre-1914 has often been described as a powder keg that was set off by the catalyst in the form of the assassination of Archduke Ferdinand. Almost as frequent is the idea that there were windows of opportunity opening and closing during this period that explain the actions of various governments.

Window of opportunity causal explanations are very often coupled with a catalyst or spark causal factor. To use Aristotle's language, the catalyst is the proximate cause of the event while the window of opportunity is the prerequisite condition that gives the catalyst its causal efficacy. The title of Lebow's 1984 article - "Windows-of-opportunity: do states jump through them?" - illustrates how the window of opportunity and catalyst metaphors often go together to form a sufficiency-like explanation.

Individually, window or catalyst arguments form univariate explanatory strategies. Together they form a multivariate explanation of events

like World War I. Because the window must be open when governments jump through it we call these "synchronic" multivariate necessary condition explanations. This presents a contrast with the diachronic, chain of necessary or sufficient conditions discussed above.

If windows of opportunity are typically background causal factors then catalysts are usually about the action, events, and decisions of individual people or governments. Windows of opportunity are usually structure; catalysts are agents.

In Kingdon's model we see this quite clearly. The political and problem streams form the window of opportunity, the actions of policy entrepreneurs are the catalyst that gets the item onto the agenda. Similarly in World War I the catalyst will be a crisis such as the one provoked by the assassination of Archduke Ferdinand. Because Lebow has been the most vigorous recent promoter of the importance of this catalyst it is useful to see how he thinks of catalysts in necessary condition terms:

> In the absence of a catalyst, several more years of peace could have altered the strategic and domestic contexts of the great powers and made war less likely. There was a two-year window when the leaders of at least two great powers thought their national or dynastic interests were better served by war than peace. (Lebow this volume, p. 86)

> To recapitulate, the Sarajevo assassinations changed the political and psychological environment in Vienna and Berlin in six important ways, all of which were probably necessary for the decisions that led to war. (Lebow this volume, p. 99)

Of course, those who focus on the chain of decisions leading to World War I will also see the catalyst event or decisions as important. What these scholars are missing is the emphasis on the structural, window factors that give the catalyst its causal efficacy. For example, Schroeder criticizes Remak for this sort of thing when he says that Remak argues that "Only the particular events of 1914 caused this particular quarrel and this diplomatic gamble to end in world war" (Schroeder 1972: 319).

Powder kegs go along with sparks to form a multivariate explanation of World War I. It is when both factors are simultaneously present that the event occurs. A key part of the causal explanation is that both necessary conditions must occur at the same time: it is the *conjunction* of the two that explains the outcome. Not surprisingly, Kingdon too uses the same explanatory framework:

> [T]he rise of an item [on the agenda] is due to the joint effect of several factors coming together at a given point in time, not to the

> effect of one or another of them singly ... It was their *joint* effects that were so powerful. (Kingdon 1984: 188)

It is the requirement that the two necessary conditions occur at the same time which gives these window-catalyst explanations the characteristic of *contingency*. Just as Kingdon talks about "streams" coming together, Lebow talks about the confluence of causes: "A confluence envisages a multiple stream of independent causes that come together to produce an outcome" (this volume, p. 90). He sees World War I as the result of a contingent confluence of multiple causal chains:

> World War I is probably best understood as a nonlinear confluence in which multiple, interrelated causes had unanticipated consequences. Three causal chains were critically important. First and foremost was Germany's security dilemma, caused by the prospect of a two-front war ... The second causal chain consisted of all the Balkan developments that threatened the external security and internal stability of Austria-Hungary ... The third chain centered on St. Petersburg and was itself a confluence of external setbacks (defeat in [the] Russo-Japanese War of 1904–5, ...) and internal weaknesses (the revolution of 1905, ...). (Lebow this volume, p. 91)

The same powder keg appears in the end of the Cold War literature. In fact, we think that it is the dominant multivariate explanatory framework for those who stress the importance of ideas. As we have seen above, the ideas scholars stress that materialist explanations are not sufficient to explain the end of the Cold War. They all recognize the importance of material decline as a powder keg situation. To achieve something like a sufficiency explanation, however, one needs to include other factors, notably those related to new thinking. It is the coming together of these new thinking policy entrepreneurs with an open policy window that gives a relatively complete explanation of the end of the Cold War.

The powder keg or window of opportunity-policy entrepreneur explanatory framework has a number of key characteristics:

1. The explanatory model is conjunctural. Necessary condition hypotheses virtually always imply conjunctural theories.

2. The model is very nonlinear since the outcome is *not the sum* of the individual effects.

3. The process is often contingent in nature: only when the necessary conditions happen to be present together does the outcome occur.

4. Most applications of this model have two kinds of variables: (1) structural, background, contextual and (2) catalysts such as individual agency, decisions, events.

The relative importance of necessary conditions in multivariate causal explanations

> "Newman, I shouldn't be surprised if my brother were dead." "I don't think you would, "said Newman quietly. "Why not, sir?" demanded Mr. Nickelby. "You never are surprised," replied Newman, "that's all."
>
> Charles Dickens in *Nicholas Nickelby*

While historians and political scientists may agree that X_1 and X_2 are (necessary condition) causes of World War I, they may still do battle over the relative importance of the two. In this section we analyze the kinds of arguments that scholars have used to say that X_1 is more important than X_2, or to say that X_2 is not important in some absolute sense.

Specifically, with regard to necessary conditions, one way of downplaying the causal weight of a factor X_2 is to claim that the factor is a trivial necessary condition. One concedes the necessity of X_2 but argues that it is nevertheless trivial.[23]

But what is a trivial necessary condition? Downs illustrates the most common view:

> The search for necessary conditions is problematic because the utility of a necessary condition is contingent and poorly understood. There are an infinite number of necessary conditions for any phenomenon. For example, it is true that all armies require water and gravity to operate, but the contribution of such universals is modest. (Downs 1989: 234)

To make explicit Downs's criterion for trivialness we can say that X is a trivial necessary condition because the condition is always present. In Downs's view armies are a necessary condition for war, but trivial because virtually all states have had armies. In statistical terms, trivial necessary conditions are those where the independent variable is constant for all cases. A variation on this would be events, e.g., crises, that occur with great frequency.

The issue of "relative frequency" is key in the weighting of individual factors even in single case studies. In the examples above the trivial

[23] As Braumoeller and Goertz (2000) stress, the question of the necessity of a factor is distinct theoretically and methodology from questions about its trivialness.

necessary conditions are ones which always are present, hence they have a very high relative frequency. This will be true beyond the limited context of necessary conditions. The following principle is key for most arguments in case studies that give more weight to one cause than another:

> The rarer the necessary condition cause, relatively, the more important it is.

Hence a necessary condition for war like "has an army" is trivial given that this factor is extremely common.

Take the powder keg metaphor, one might say that since both the spark and the keg are necessary they have equal causal weight: how can X_1 and X_2, which are after all both necessary, have unequal causal weights? Since the window-catalyst model is conjunctural - i.e., involves interaction terms - we can ask the same question of "$2 * 3 = 6$." Which is more important in producing 6, the 2 or the 3?

The answer to these two questions is the relative frequency with which X_1 and X_2 occur. Thus if 2's are rarer than 3's then 2 is a more important cause of 6. We take the least common factor to be the more important cause. To see this intuition take some powder keg scenarios which vary the relative frequency of the spark and the keg. A smoker lights up and there is a gas leak in his house; the result is the explosion of his house. Lighting a match and the presence of gas due to the leak (like 2 and 3 in the production of 6) are both causes of the explosion. Yet when asked for *the* cause of the explosion people will say it was a gas leak. Gas leaks are relatively rare while the smoker has lit thousands of matches. On an oil rig, where gas is often present, the cause of an explosion will be the careless worker who lights a cigarette.

Honoré and Hart (1985) show how this principle is embodied in most Western legal systems. Courts have to decide in many individual cases that are causally complex. While it is not the only causal principle used, the relative frequency rule plays a key role. Normal events, situations, and occurrences are not seen as important causes, rare and unusual actions much more often are seized upon as the main cause.[24]

As the reader has already realized, this is the sort of argument that has been used in the World War I case to deny importance to the assassination as a key cause. Everyone agrees that the assassination was a link in the causal chain leading to World War I, but not everyone thinks it was an important link. Before 1914 there were many crises

[24]The result is supported by two related propositions about the availability of counterfactual alternatives: (1) exceptions tend to evoke contrasting normal alternatives, but not vice versa, and (2) an event is more likely to be undone by altering exceptional than routine aspects of the causal chain that led to it (Kahneman and Miller 1986: 143).

and wars, if the July 1914 crisis had not produced the war then another of the crises that would have inevitably arisen could have done the job. Notice how this argument invokes frequency notions, the argument is that there were and would have been many crises like that of July 1914, hence one should not give too much causal weight to the specific crisis that actually did set off the war.

Lebow has been in the forefront of recent attempts to argue that the assassination was an important cause of World War I. What kind of explanatory strategies does he employ to make his argument? He too uses relative frequency tactics. His first relative frequency argument disagrees with the proposition that there were many possible sparks. Not just any crisis will do, it needs to be a special kind of crisis with a variety of distinctive characteristics. The appropriate spark is thus a rare event, so its actual occurrence makes it an important cause of World War I:

> To recapitulate, the Sarajevo assassinations changed the political and psychological environment in Vienna and Berlin in six important ways, all of which were probably necessary for the decisions that led to war. (Lebow this volume, p. 99)

War needed a crisis with at least six key characteristics, which all were important (even necessary) to make it the sort of crisis that would lead to world war (see Lebow's chapter in this volume for a discussion of these six characteristics). Thus, it is unlikely that more crises with the required characteristics would arise. Clearly, Lebow is following the relative frequency strategy in making his case.

A second strategy employed by Lebow is to decrease the temporal duration of the window variable. For many analysts the keg is ready to explode during an extended period, say, 1912–18. Lebow says that the window for the war was much shorter, only a couple of years. This makes it much harder for a spark to occur because it must do so in a much shorter time. Again this reduces the frequency of potential matches that set off the world-wide fire.

In short, Lebow exploits two variants of the relative frequency principle in making his case for Sarajevo as an important cause of World War I. The first variant says that only special – and by implication rare – crises can do the job. The second variant reduces the duration of the window, again reducing the population of crises that can start the war.

The same issue comes up in terms of how one views individual decision-making. If a leader is doing what any rational leader would do, his decisions are often seen as less important causes. For example, in the end of the Cold War if leaders are merely doing adaptive learning in

response to structural change then one would place little weight on the learning variable. If, on the other hand, leaders' idiosyncratic beliefs lead them to interpret a changing environment in different ways, then we would give more causal weight to learning (see Bennett 1999 for an extensive discussion of this point). Similarly, in the case of World War I, Levy (this volume) argues that although political leaders had choices, they had very little room to maneuver, so that the probability of avoiding a war, while not nonexistent, was very slim. Typically, as Honoré and Hart (1985) analyze in detail, we do not attribute blame if the person had no choice. While we recognize that the decision did lead to the outcome we tend to minimize its importance.

Schroeder quite explicitly refers to Hexter's essay on galloping gertie in his discussion of Fischer's views on World War I. The example of gertie is that of a bridge that collapsed once oscillations got out of control and became self-reinforcing. Schroeder thinks that this is a good metaphor for what happened in World War I. It makes sense because it is no longer the confluence of *independent* chains à la Lebow but rather a series of self-reinforcing chains. Because these chains are self-reinforcing, the events like the assassination are no longer separate catalysts but rather are endogenously produced by the structural, system factors. Levy (this volume) makes a similar argument. The rise of Russian power in the context of a two-front war gave Germany an incentive for preventive war and consequently an incentive to create or provoke an event that provided a convenient justification for war.

The galloping gertie framework illustrates another kind of critique that one can make when several factors, e.g., streams, come together to cause an event. "Endogeneity" is a good, if two-bit, name for this criticism. Instead of assuming that each causal chain or stream is independent, one might argue that one chain is an *effect* of the other. This is typical of structural explanations. We can see this strategy used both in the World War I and end of the Cold War cases. Thompson takes this as a core part of his explanation of World War I. One effect of the the intersection of several serious major power rivalries is severe crises. The assassination of Archduke Ferdinand is thus the result of more basic causal factors. Similarly, the realists suggest that leadership and policy change was a result of more basic structural and resource constraint problems. It is the endogeneity position that is vividly expressed by the famous streetcar (not of desire) aphorism: "Pleikus are streetcars. If you are waiting for one, it will come along." (Bundy as cited in Halberstam, 1972: 646).

In summary, there are various strategies for trying to evaluate the relative importance of causal factors in case studies. We have

seen that in the explanation of individual events involving multiple necessary conditions relative frequency considerations play a key role in assessing causal importance. Of course, these relative frequency ideas are closely tied to counterfactuals since the event only occurs once. Nevertheless, they are useful and valid considerations when trying to understand or explain individual historical events. A second kind of strategy endogenizes factors the causal importance of which one is trying to minimize. This can work across streams or chains of events or within them. Recall that the issue of relative importance within sufficiency-like chains says that the effects (e.g., British declaration of war) are less important when there are strongly linked causes (e.g., German invasion of Belgium).

Conclusion

> The disaster of 1914 did not derive therefore from a failure by industrialists to understand the political logic and requirements of economic integration or even the failure or refusal of politicians, military men, various interest groups, and broad publics to appreciate the long-range advantages of peaceful international cooperation over unrestrained competition and conflict. It lay rather in the structure of international politics – the fact that its component individual states would not and could not, either separately or together, leap from a power-based competitive international system to a rule-based one. For governments and peoples effectively to realize that an international system dominated by power-political competition is in the long run incompatible with real, durable international economic integration and its benefits, and for them genuinely to opt for the latter rather than merely wish for it, they must first be convinced that the power-political game has become intolerably expensive and dangerous and must be abandoned and also persuaded that another more cooperative system is available, or at least possible and that the other important players will try it as well or, if not, that some other player or players will protect them and their interests if they alone defect from the competition. None of these essential conditions prevailed before 1914.
>
> *Paul Schroeder*

Schroeder's language – "must first be convinced," "must be abandoned," and "essential conditions" – is typical of much of the literature on the explanation of historical events. Necessary conditions along with their related counterfactuals provide an essential theoretical tool for explaining individual events. We have surveyed some of the theoretical and methodological dimensions of such explanations, both at the univariate and multivariate levels.

Necessary conditions imply major counterfactual claims as we have seen in the literature about the causes of World War I and the end of the Cold War. However, the converse is not true: not all counterfactuals imply a necessary condition explanatory framework. One reason why counterfactuals remain an important topic for historians is because they often make necessary condition claims: so in this respect the importance of counterfactuals is an *effect* of a particular kind of explanatory strategy.

In both the causal chain and window-catalyst frameworks we have a situation where multiple necessary conditions are jointly sufficient for the outcome. If the study in question is really a univariate one, then we see the claim that X is necessary but certainly not sufficient for the outcome.

Before moving on to more complex dynamic explanations à la galloping gertie, historians and political scientists need to be more conscious of the theoretical and methodological issues that appear in virtually any causal explanation of a single case.

Fischer (1970: 186) finds the following as the main kinds of causal explanation given by historians:

1. All antecedents
2. Regularistic antecedents
3. Controllable antecedents
4. Rational and/or motivational antecedents
5. Abnormal antecedents
6. Structural antecedents
7. Contingent-series antecedents
8. Precipitant antecedents

From our point of view necessary antecedents are notably absent from the list. On the other hand, we have found important links between necessary condition explanations and (5) abnormal antecedents, (6) structural antecedents, (7) contingent-series antecedents, and (8) precipitant antecedents. We suggest that the underlying logic of these kinds of antecedents uses a counterfactual necessary condition form.

We have used the end of the Cold War and World War I as our main examples. Many influential scholars have made an appearance as an example in our discussion. We hope that our methodological and theoretical analysis provides insights into these causal claims and also

suggests ways that they can be evaluated. Our goal has been to elucidate the structure and implications of arguments about World War I and the end of the Cold War, not to adjudicate between conflicting perspectives on the war. Having summarized the causal logic underlying statements of necessity and sufficiency, and noted the different ways in which those statements are expressed, we now turn to more detailed analyses of the outbreak of World War I and the end of the Cold War.