CASE STUDIES

AND

THEORY DEVELOPMENT

in the
Social Sciences

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Appendix

Studies That Illustrate Research Design

We have emphasized that phase one of theory-oriented case studies is of critical importance. Inadequate research design is likely to lead researchers to undertake the case studies in ways that will make it difficult to draw robust implications from case study findings and achieve the objectives of the study. Of course, even a well-developed design cannot ensure a successful study, since that also depends on the quality of the individual case studies (phase two) and on effective use of the findings of the case studies to achieve the objective of the study in phase three.[548]

In this Appendix we review a large number of studies to demonstrate the variety of research designs that have been employed in the past. The selection of these studies for presentation here is intended to illustrate the flexibility and variety of methods for case research.

These studies are not representative of all case studies, which number, no doubt, in the hundreds. Many other studies could be cited, but space limitations require that we restrict the number described here. We use these studies to illustrate how case research has either made explicit use of the method of structured, focused comparison or has approximated it. Our commentary on the design of these studies is selective; to give a full description of the research strategies these studies employ would require much more space. If our brief account of a study is of particular interest to a reader, he or she will want to turn to the book in question.

The studies we review use the within-case approach to causal analysis and employ process-tracing for this purpose. A few of these books make use of the congruence method as well as process-tracing.[549] In almost all of these studies,[550] the author chose a research objective that focused on a particular subclass of a broader phenomenon and contributes to the

development of middle-range theory.[551] Choosing to focus on a particular subclass has two important implications: it determines the type of case to be selected for study and it circumscribes and delimits the scope of the findings and theory. This can be depicted as follows:

Figure A.1. Implications of Subclass Selection for Middle-Range Theory.

Choice of Research Objective ------------→ Choice of Subclass --→ Choice of Cases --------------→ Delimitation of the Scope of the Findings

In most of the studies reviewed, it should be noted that the author or authors carefully specified a subclass and justified it with reference to the research objective of the study. A number of authors called attention to the limited scope of their findings and cautioned against generalizing them to the entire class of the phenomenon (e.g., all revolutions, all interventions).[552] Others implied as much and avoided overgeneralization of their findings.

In these commentaries, we focus largely on research design; we do not attempt to evaluate the overall merit of the studies. The commentaries focus on research design because of its importance. Inadequate research design is likely to make it more difficult to select appropriate cases and to study them in ways that will produce case findings that will enable the investigator to draw robust implications for the study's research objectives. Three of the studies report research in the field of American politics, eleven are in comparative politics, and nineteen are from the field of international relations.[553] In addition to the cases reviewed here, a large number of case studies in international political economy are briefly noted by John S. Odell, a former editor of *International Studies Quarterly* (which published many articles in the field of international political economy) in his article, "Case Study Methods in International Political Economy." He states that "research on the world political economy relies heavily on qualitative methods" and urges greater use of "thoughtfully designed case studies."[554]

JOHN LEWIS GADDIS, *STRATEGIES OF CONTAINMENT.* NEW YORK: OXFORD UNIVERSITY PRESS, 1982.

This book, written by a leading diplomatic historian and specialist in American foreign policy, is a study of several variants of containment strategy employed by the United States since the beginning of the Cold War. It employs structured, focused comparison and makes use of process-tracing to elaborate the five distinct types of containment that were employed. It also makes an important general point that characterizes not only the concept of containment but all other strategies that states employ in the conduct of foreign policy.

Containment—like all other "strategies" such as deterrence, coercive diplomacy, détente, conciliation, etc.—is a general, abstract concept. Such general concepts do little more than to identify, as best one can, the critical variables embraced by a concept, and some identify the general logic associated with successful uses of that instrument of policy. Several characteristics of such strategic concepts limit their immediate usefulness for policymaking. The concept itself is not a strategy but merely the starting point for converting the concept into a strategy. The concept identifies only the general logic—that is, the desired impact that certain means can have on the adversary's calculations and behavior—that needs to be achieved if a strategy is to be successful. But it does not indicate precisely what the policymaker must do to induce that reasoning into the adversary's behavior. To achieve the goal of containment, deterrence, coercive diplomacy, or détente, etc., the policymaker must convert the abstract concept into a specific strategy for the particular situation at hand, carefully taking into account the behavioral characteristics of the particular adversary.[608]

Gaddis' study is an effort to show how the general concept of containment was converted into five distinctive types of containment strategy during the course of American foreign policy. An important objective of his study is to explain "the successive mutations, incarnations,

and transformations that concept [containment] has undergone through the years."[609]

Gaddis identifies "five distinct geopolitical codes" among American foreign policy specialists since the beginning of the Cold War. He uses these codes (beliefs) to explain the choice of particular containment strategies over time by different U.S. leaders. The choice of a new containment strategy was influenced also by lessons drawn from the experience with preceding versions of containment, by efforts to adapt the strategy to new geopolitical developments, and by constraints of domestic and international politics.

The analytical and methodological issues embedded in this study of containment strategies has broad relevance for the study of the other strategic concepts already mentioned and also for the contemporary discussions of engagement as an alternative to containment. Engagement, too, is a general concept that must be developed into one or another specific strategy of engagement. We are not aware of any systematic study of various ways in which the general concept of engagement can be converted into alternative strategies of engagement.

DEBORAH WELCH LARSON, *ANATOMY OF MISTRUST: U.S.-SOVIET RELATIONS DURING THE COLD WAR.* ITHACA: CORNELL UNIVERSITY PRESS, 1997.

Larson addresses the question of whether the United States and the Soviet Union missed important opportunities to reduce Cold War tensions and better manage the arms race. This historical problem is addressed within a broad theoretical framework of international cooperation, and Larson presents her study as the first systematic study of missed opportunities for international cooperation. The focus on U.S.-Soviet relations is a subclass of this general phenomenon.[647] The author regards the Cold War era as a least-likely case for U.S.-Soviet cooperation and a good test of cooperation theory in international relations.[648]

Larson focuses on the importance of trust as a central variable in her research strategy, a factor inadequately developed in international relations research. She discusses and synthesizes what various social science literatures have to say about the nature of trust and distrust, how they emerge, and what role they play in interpersonal and interstate relations. Her study also incorporates disciplined counterfactual analysis to make the case that opportunities existed but were "missed."

Trust is usually regarded as being a necessary condition, though not a sufficient one, for states to cooperate.[649] However, trust should not be viewed as a dichotomous attribute with complete trust being a necessary condition; rather, the amount of trust required for an agreement varies greatly.[650] For example, states "must [also] have a shared interest in controlling their competition, adequate domestic support, and the ability to verify an agreement."[651]

A "missed opportunity" for an agreement is defined as "a situation in which there was at least one alternative that parties to a conflict preferred or would have preferred to nonagreement."[652] To make the case that a missed

opportunity existed "entails showing that both sides wanted an agreement, that history need not be completely rewritten to end up with a different outcome—in other words, that a plausible sequence of events could have led to an agreement."[653] This analytical standard is employed to guide the study of a variety of available data.

Larson examines five periods in which there was a major policy shift by one or both of the superpowers—a change she regards as being of critical importance for creating the possibility of a significant cooperative agreement. These were periods that had the potential for being "branching points" at which U.S.-Soviet relations could have taken or did take a different path. Although Larson compares cases of successful and ineffective cooperation, she makes it clear that they should not be viewed as independent of each other. Each leader's efforts to improve relations drew on earlier experience. [654]

Citing David Collier's statement that "causal inferences about the impact of discrete events can be risky if one does not have an extended time series of observations," Larson engages in extensive process-tracing of developments in each period.[655] "Process-tracing," she maintains, "is essential for uncovering the causal mechanism—in this case, cognitive processes [by the actors] of interpretation and inference."[656]

Her case studies lead to an important finding: "Where the superpowers successfully reached cooperative agreements—the Limited Test Ban Treaty, the first Strategic Arms Limitations Treaty (SALT I), the Intermediate-Range Nuclear Forces (INF) Treaty—one side demonstrated its good intentions through several conciliatory actions, and it is difficult to envision how a cooperative outcome could have been achieved otherwise."[657] Here and elsewhere she documents the role of trust-building measures.

In cases of missed opportunities, she notes, "one must study non-events —things that did not happen… . To explain the causes of non-events, the analyst will have to vary initial conditions mentally … one should identify the critical turning points and consider whether alternative actions might have made a difference."[112]

D. MICHAEL SHAFER, *DEADLY PARADIGMS: THE FAILURE OF U.S. COUNTERINSURGENCY POLICY.* PRINCETON, N.J.:PRINCETON UNIVERSITYPRESS, 1988.

The puzzle that motivated this study was Shafer's observation that "despite changes in the international distribution of power, presidential administrations, bureaucratic coalitions and capabilities, the locale of the conflict and nature of the insurgencies, and the governments they threaten," there existed a continuity in U.S. policymakers' assessments of the sources of insurgency and prescriptions for assisting governments threatened by it during the period from 1945 to 1965. Explaining this continuity is the major research objective of this study.[685] Accordingly, the subclass of all counterinsurgency efforts singled out for the study is appropriately limited to U.S. efforts during the period; this, of course, limits the scope of the findings, though it generates important hypotheses for consideration in other studies.

A complex research strategy is developed that makes explicit use of the method of structured, focused comparison and relies on process-tracing in the case studies to supplement use of the congruence method.

Shafer assesses the contribution of four theories—realism, presidential politics, bureaucratic politics, and "American exceptionalism"—to the explanation of the puzzle. The argument he develops is that while these approaches indeed contribute to understanding the problem, they are insufficient for explaining the puzzle. This makes necessary a fifth approach that focuses on cognitive variables—U.S. policymakers' strategic codes, assumptions about American interests in the world, perceptions of political threats, and feasible responses.

To test and support his argument for the fifth approach, Shafer selects several cases that provide tough tests. The cases chosen "had to be 'critical cases,' those in which my explanation was either least or most likely to

hold. By this logic, if the explanation applied where [it was] least likely, then it had promise; conversely, if it could be disproved where most likely to fit, then it offered little [promise]."[686]

Two cases of U.S.-supported counterinsurgency efforts, in Greece and the Philippines, constitute the most-likely "type of tough test in that since they constitute counterinsurgency successes they were most likely to give support to the reliance and effectiveness of American counterinsurgency doctrine."[687] Thus, to be able to claim, as Shafer does, that U.S. counterinsurgency policy was "irrelevant or counterproductive [in these cases] … constitutes the strongest possible test of my explanation" and supports it.[688]

The Vietnam case does not serve as a tough test and has a different purpose. Shafer's argument is that because the failure of U.S. counterinsurgency in Vietnam is so often attributed to the cognitive model he advances, "it is essential to demonstrate that other models do not offer better explanations and that mine applies."[689]

Shafer 's book is marked by an unusual degree of methodological self-consciousness. He remarks on why reliance on Mill's methods is unsatisfactory, which makes it necessary to undertake process-tracing in each case.

Also interesting is the similarity of his research design in some respects to Graham Allison's three accounts of the Cuban Missile Crisis in *Essence of Decision.* Shafer presents "three very different, equally plausible accounts … by asking different questions of different kinds of evidence" that allow analysts to reach very different conclusions.[690] Also noteworthy is Shafer's methodology, which combines the congruence method with process-tracing.

DAN CALDWELL, *AMERICAN-SOVIET RELATIONS: FROM 1947 TO THE NIXON-KISSINGER GRAND DESIGN*. WESTPORT, CONN.: GREENWOOD PRESS, 1981.

A major objective of this study was to analyze U.S.-Soviet interactions from 1947 through 1976. Caldwell divided this era into three periods: the acute Cold War (1947-1962), the limited détente (1963-1968), and the détente period (1969-1976). This division facilitates an assessment of the effect of variance in the overall U.S.-Soviet relationship on interactions between them.

The author chose to focus on interactions in three issue areas: crisis management, economic relations, and arms control. These issue areas were chosen for several reasons, among them their high degree of salience in the overall relationship.

Part Two of the study employed structured, focused comparison to assess the ways in which U.S.-Soviet interactions in these three issue areas varied under different systemic conditions. To highlight the comparison, Caldwell selected cases from the first and third periods. This enabled the author to make a sharper assessment of the importance of the shift from acute Cold War to détente on their interaction in the three issue areas. (A number of other criteria also entered into case selection). After identifying all significant U.S.-Soviet interactions during these two periods, Caldwell selected one major case in each issue area for each of the two periods:

The comparison of matched cases enabled Caldwell to identify the extent to which U.S. and Soviet interaction differed in each issue area in each period and to develop plausible explanations for the contrasting outcomes. A variety of factors were considered in explaining outcomes.[691] Caldwell gave particular attention to the development of procedures, rules, and new U.S.-Soviet institutions over the course of the entire period that led to at least a partial regime for each issue-area.[692] A number of reasons for

differences in U.S.-Soviet crisis management behavior in the Cuban Missile Crisis and October War cases are discussed.[693] Following the onset of the Cold War, several important norms were developed for managing crises to prevent unwanted escalation.

Figure A.3. U.S.-Soviet Interactions Under Different Systemic Conditions

ISSUE AREA	PERIOD 1947-1962	PERIOD 1969-1976
Economic	Trade Negotiation 1958-1961	Trade Agreement 1972
Arms Control	London Subcommittee Negotiations, 1955-1957	Strategic Arms Limitations Treaty 1969-1972
Crisis Management	Cuban Missile Crisis, 1962	Middle East October War, 1973

Since Caldwell was writing on recent, often controversial aspects of superpower relations, very little classified data was available. Therefore, he worked with a range of readily available sources and he interviewed former U.S. policymakers.[694]

THOMAS F. HOMER-DIXON, *ENVIRONMENT, SCARCITY, AND VIOLENCE*. PRINCETON, N.J.: PRINCETON UNIVERSITY PRESS, 1999.

This book synthesizes the findings of a large number of research projects Homer-Dixon has directed since 1989 that involved more than one hundred experts from fifteen countries. These studies, together with research by other groups, reveal a clearer picture of the links between "environmental stress" and "violence" that the author presents in this most recent of his many publications. Homer-Dixon emphasizes the difficulty of identifying the causal role that environmental scarcity plays in social breakdown and violence. The picture he provides in this book is "still, in some ways, only a preliminary sketch," though useful observations are presented in detail.

Homer-Dixon stresses that the research program did not aim to identify all the factors that cause violent conflict around the world; "rather it sought to determine whether a specific factor—environmental scarcity—can be an important cause of conflict."[695] This required careful clarification of key concepts and a focus on the possible causal roles of environmental scarcity. The author also found it advisable to narrow the scope of the problem in several ways. First, he moved from the very broad class of events identified as "environmental security," which "encompasses an almost unmanageable array of sub-issues," to a narrower focus on how environmental stress affects conflict rather than security. But this, he finds, still leaves the problem "too vast," and he narrows it further by focusing only on "how environmental stress affects violent national and international conflict."[696] Therefore, Homer-Dixon follows the procedure of defining an important subclass of a larger phenomenon in order to undertake useful research.

Homer-Dixon relies on process-tracing "to identify general patterns of environment-conflict linkages across multiple cases."[697] Researchers in the project "used an exacting, step-by-step analysis of the causal processes

operating in each of our regional and country cases." He identifies seven variables that affect the causal relationship between political-economic factors, environmental scarcity, social stress, and violent conflict.[698] He also provides an unusually detailed discussion and defense of his approach to "hypothesis testing and case selection."[699]

Homer-Dixon notes that a number of methods are available for testing hypotheses in environment-conflict research. Two are conventional quasi-experimental methods (correlational analysis of a large number of cases, and controlled case comparison). The third is process-tracing of the kind described by Alexander George and Timothy McKeown.[700] Homer-Dixon defends his reliance on process-tracing by noting that "the stage of research strongly influences the method of hypothesis testing a researcher can use to best advantage."[701] He believes that process-tracing is advantageous particularly in the early stages of research on highly complex subjects. In these circumstances "hypotheses are liable to be too crude to support testing that involves quantitative analysis of a large number of cases." Research resources are used to best advantage "by examining cases that appear, *prima facie,* to demonstrate the causal relations hypothesized."[702]

It is in this context that Homer-Dixon provides a detailed argument for selecting on the dependent as well as the independent variables. He recognizes that this could lead to criticisms of biased case selection, but defends the procedure by noting that process-tracing was used mainly on cases characterized as having both environmental scarcity and violent conflict (rather than cases in which environmental scarcity was neither a necessary nor sufficient cause of violent conflict). In response to criticism of his focus on cases embracing both environmental scarcity and violent conflict, Homer-Dixon argues that in the early stages of research, such a procedure is often the best and sometimes the only way to begin. For particular cases it can show whether or not the proposed independent variable is a cause of the dependent variable. That is, by making use of process-tracing, it answers the question of whether there are "any cases in which the independent variable is causally linked, in a significant and important way, to the dependent variable."[703]

Homer-Dixon notes that in highly complex systems, such as the ecological-political systems he has studied, it is not likely that the proposed independent variable (environmental scarcity) will be a sufficient cause of the dependent variable (violent conflict). Rather, it will be necessary to identify and add "numerous and detailed scope conditions"—i.e., conditional generalizations. Without including adequate scope conditions, "a statistical analysis of the distribution of cases … will probably reveal little correlation, even though there might be important and interesting causal links between environmental scarcity and conflict" (i.e., a false negative).[704]

Homer-Dixon notes that in such circumstances "careful process-tracing, involving close examination of the causal process" operating in the cases in which both the independent variable and the dependent variable were present "will help identify the relevant scope conditions."[705] The author notes that researchers can then ask whether the scope conditions and intermediate variables identified via process-tracing were present, and why in other cases in which environmental scarcity existed violent conflict did not ensue. If these factors were present in a case, researchers could attempt to determine what other factors prevented environmental scarcity from causing violent conflict.[706] Thus, Homer-Dixon suggests, researchers can develop from the findings presented more sophisticated hypotheses, and can test them using a broader range of methodologies, including cross-national statistical analysis, counterfactual analysis, and carefully controlled comparisons of cases varied on both the dependent and independent variable. Of particular interest are cases that exhibit all the conditions hypothesized to produce violence (including environmental scarcity) that do not result in violence.[707]

In summarizing the findings of this research program, Homer-Dixon emphasizes that "environmental scarcity by itself is neither a necessary nor a sufficient cause of violent conflict … when it does play a role, it always interacts with other contextual factors—be they physical or social—to generate violence." To gauge the relative causal contribution of environmental scarcity "is especially intractable… . I therefore try to avoid entangling myself in the metaphysical debate about the relative importance

of causes." But Homer-Dixon is able to show that for many conflicts around the world, violence "cannot be properly understood or explained without taking account of the causal role of environmental scarcity."[708]

Homer-Dixon subscribes to the emphasis we have given to the diagnostic rather than the prescriptive contribution that policy-relevant research can make. Each case of environmentally induced conflict "is complex and unique… . Policy tools available in one case will not be available in another… . Successful policy intervention thus requires customization based on a careful analysis of the character of the specific case and of the policy tools available in that case." In this book, Homer-Dixon emphasizes, "I can do no more than give policymakers a rough understanding of key causal processes and of useful intervention points in these processes."[709]