2 Types of Knowledge and Their Practical Uses

As chapter 1 emphasized, it is ironic that there should be a chasm separating theorists and practitioners in a field explicitly designed to be policy-relevant little more than three generations ago. Since this gap is best explained *sociologically*, in terms of professional habits and reward structures, there may be no inherently *intellectual* reason why SIR should not address policy issues while maintaining or even enhancing the quality of scholarship. At the same time, since scholars may legitimately be interested in issues with few practical implications, not all scholarship can be directly relevant. Moreover, the forms of thinking appropriate to academic analysis and to policy guidance are not identical. Thus it is important to examine the intellectual foundations of relevant knowledge, asking what forms it may assume, what distinguishes that produced within academia from that typically employed by policymakers, and what comparative advantages the two communities have when it comes to policy-relevant thinking.

Types of Policy-Relevant Knowledge[1]

Typically, relevant knowledge is thought of as knowledge that sheds light on the means by which policy objectives can be attained, i.e., "if the end is y, the policy instrument should be x." Although this is the most obvious function of relevant knowledge, scholarship's purpose must be viewed more broadly. Knowledge is also relevant when it establishes the range of choices

and the consequences of action. For one thing, not all desirable policy objectives are equally feasible, and it may be difficult to find the means that will promote their attainment most effectively within certain ranges of possible conditions. Scholarship can help identify these means and the conditions within which they might best be employed. This requires, first of all, statements about the link between a policy instrument and a desired outcome, subject to certain qualifying conditions (specified in the form of control variables). All of the above may be subsumed under the rubric of *instrumental* relevance. But an appreciation of the range of the possible and the consequences of various policies also requires a grasp of the circumstances under which the policy instruments are available and malleable, and of the values that the pertinent control variables may assume. Knowledge of this sort will come under the heading of *contextual* relevance.

Instrumental[2] Relevance

The meaning of instrumental relevance may be illustrated with reference to the link between a specific type of foreign policy instrument and a specific category of foreign policy ends. The use of economic coercion as a tool of statecraft illustrates how sound instrumental knowledge could benefit policymakers. Sanctions, in Richard Haass's words, "are fast becoming the United States' [foreign] policy tool of choice."[3] Between 1993 and 1996 alone, 35 countries were targeted by U.S. sanctions.[4] Sanctions include such policy levers as foreign assistance reductions and cutoffs, export embargoes and import boycotts, the freezing of target actors' assets, increases in tariffs, reductions in import quotas, and revocation of most favored nation (MFN) trade status.

Sanctions have become popular because they allow governments to seek to enforce certain standards of behavior in a more measured and controlled manner than some other policy instruments seem to allow. On moral as well as political grounds, the prospect of applying coercion while avoiding the use of military force may be attractive. As a statement issued by the U.S. National Conference of Catholic Bishops put it, "Sanctions can offer a nonmilitary alternative to the terrible options of war or indifference when confronted with aggression or injustice."[5]

This observation leads naturally to the question of what sanctions can do, and the further question of when they work. The circumstances under which

sanctions are likely to work have been extensively debated within academia.[6] There is broad agreement that to change a target state's behavior, that target should not be able to absorb the costs of the disrupted relationship more easily, or for a longer period of time, than the initiator. This will depend in part on the objective magnitude of the economic benefits foregone on the two sides. It will depend on the domestic vulnerability of the respective governments, as this may determine their ability to absorb the domestic economic and political impact of such losses. Accordingly, the basic instrumental relationship could be expressed as follows: the ability to change a target's policies depends on the type and magnitude of the economic costs imposed on the target, controlling for the extent of the initiator's and target's respective economic dependence on each other and the comparative political vulnerability of the two governments.

Scholars have recently begun to further unpack the ceteris paribus clause in this model. One of them argues that a target's dependence on the initiator reflects not just its immediate vulnerability, but also, assuming incentives to resist a initiator's demands, its ability to find alternative suppliers and markets over time as well. Such an ability to adjust, he contends, is as fundamental an aspect of dependence as the initial distribution of economic resources in the target's economic relationship with the initiator.[7]

As the example suggests, scholarship can be instrumentally relevant by explaining why certain links should exist between contemplated policies and desired outcomes, and how these links are mediated by certain ceteris-paribus conditions. Nevertheless, even this knowledge may be an insufficient basis for sound policy, for it cannot be assumed that the right policy levers will be available and sufficiently malleable when needed, or that the ceteris paribus conditions will assume certain values in the short run. To determine whether such assumptions are tenable, policymakers must also understand the broader *context* within which instrumental relationships operate.

Contextual Relevance

Contextual knowledge tells us what conditions shape the availability or malleability of a policy instrument. It further alerts us to the circumstances that determine what values the ceteris paribus conditions assume.

The missions of instrumental and contextual knowledge are depicted in figure 1. *Y* (the dependent variable) represents the anticipated policy out-

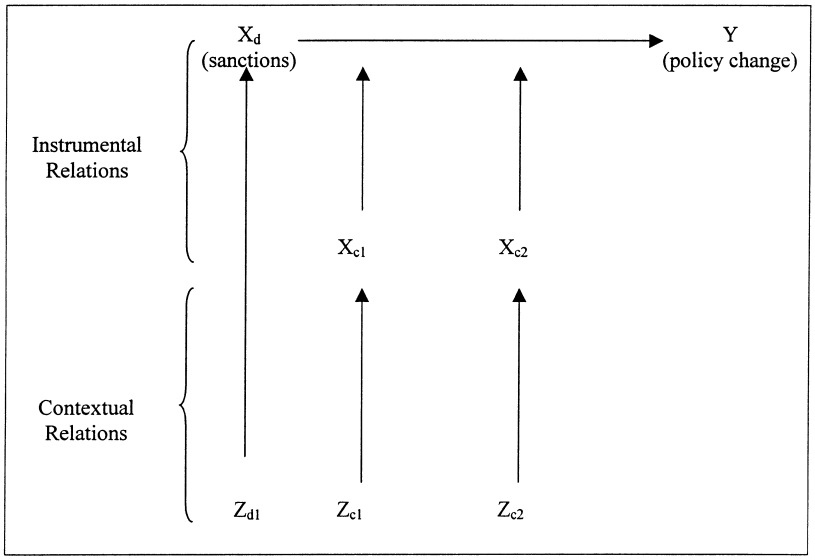

FIGURE 1 Instrumental and Contextual Knowledge

come (here illustrated by a change in the external behavior of a foreign government). The *X*'s are the variables involved in the instrumental relation. X_d is the policy designed to produce the altered behavior of the target government (here illustrated by the application of economic sanctions). X_{c1} and X_{c2} are control variables that qualify the policy's impact. They are illustrated here, respectively, by the relative political stability of initiator and target governments and by their relative economic dependence on each other. The *Z*'s are contextual variables. Z_d influences the availability or malleability of X_d, (illustrated here by the legal regime which determines what economic measures the initiator can legally take). Z_{c1} and Z_{c2} are variables affecting the values of X_{c1} and X_{c2}, respectively (for example, in the first case, the two governments' relative success in addressing key issues of domestic policy; in the second case, the factors determining the ratio of the value of the goods and services foregone by the two countries because of the disruption to their respective GNPs).

Policymakers may want to understand contextual relationships for a variety of reasons. If a particular policy instrument is unavailable or very costly

to use, perhaps due to international or domestic norms that sharply circumscribe its use, its theoretical suitability for the purpose at hand may be irrelevant practically. If so, some other policy option would have to be considered. For example, even if sanctions were in principle feasible, the initiator government's domestic political vulnerability may make it difficult to absorb the anticipated costs of the sanctions to the domestic economy.

Relevant contextual knowledge may also assume a predictive form. One can imagine propositions about the future status of policy instruments employed to pursue currently accepted policy objectives, or about the ceteris paribus conditions. Even if based only on an extrapolation of current trends, such analyses might be useful heuristically for long-term planning purposes. Edward Luttwak, for example, has argued that Americans' refusal to accept any significant military casualties likely precludes for the foreseeable future any large-scale use of American ground forces in combat.[8] The implication is that unless it could be applied in situations where technology can effectively substitute for manpower, large-scale force would be unavailable.

An understanding of the circumstances under which multilateral institutions can be used to impose economic sanctions illustrates the practical benefits of contextual knowledge. Aside from favorable domestic conditions within the initiating state, three factors affect this instrumental relationship.[9] One involves the nature of the international institutions through which multilateral sanctions are coordinated. Their substantive mandates, internal structures, or voting procedures often affect the kind of intra-coalitional bargaining, including issue-linkages, that allow a group of sanction-initiators to work together effectively. Second, the extent to which actors can cooperate often reflects the type of sanction imposed. Reduction of foreign aid is typically the least costly to sanctioners, unless it has been tied to purchases from donors; import or export restrictions tend to be costliest. Third, the distribution of power among sanctioning states may affect their ability to cooperate. The experience of the Gulf War suggests that a hegemonic state can coerce or bribe others to support sanctions it favors, especially if it commits itself early and irrevocably to costly actions in support of those policies.[10] On the other hand, such a state may be unable to prevent smaller states from riding free on its efforts, which could undermine domestic support for sanctions in the large state or render them so leaky as to be ineffective when applied.

Policymakers might also benefit from an ability to anticipate the values of the key control variables in a statement about instrumental relations. In

the case of sanctions, a target government's base of domestic political support might fall into this category. Initiators of sanctions rarely have much direct leverage over this factor, making it a reasonable candidate for them to set aside as part of relatively invariant ceteris paribus clause. But if sanctions that harm the general population in a target state have the effect of actually strengthening its government, as a population rallies "round the flag," officials in the sanctioning state would presumably want to know that in time to head off the worst effects.

In two different ways, policymakers may find contextual knowledge especially useful when the international environment is in a state of flux. First, expected instrumental relationships may no longer apply, and revising them would require an appreciation of the new context. The post-cold war period illustrates this point. Long-held assumptions about the purpose and cohesion of alliances, the strategic importance of nuclear weapons, and the uses of military power more generally—assumptions on which many policies rested—were thrown into question when the Soviet Union collapsed. Reevaluating how such foreign policy tools might now be used requires analysts to understand the central tendencies of the present era, a task that now occupies much work in SIR. A recent article about unipolarity, for example, contends that the U.S. lead in material resources over other states is now so large that key changes in the international power structure are unlikely in the "the policy-relevant future."[11] That claim attempts to rebut a number of influential scholarly arguments to the effect that unipolarity is likely to be ephemeral.[12] Policymakers will want to know which position is correct, since the answer could affect their willingness to invest in developing certain policy instruments rather than others.

Second, key changes in the international environment can affect the goals that are considered feasible or desirable. That, in turn, can spur fresh thinking about instrumental relationships. For example, even though Western calls for democratization in the Communist bloc during the cold war may have been sincere, the goal was then so infeasible that they often assumed a ritualistic, if not propagandistic, air. Once the Berlin Wall fell and the promotion of democracy became a top policy priority in many capitals, discussions on how to achieve that goal occupied foreign policy journals and captured the interest of many social scientists.

The need for adequate forecasts notwithstanding, scholars should be cautious about their ability to predict outcomes very far into the future, even if their basic explanatory model is largely correct. Because causal propositions

extrapolate what has been seen to hold true in the past into the future, they assume that known causal relationships will remain approximately constant over time. Unless this assumption is correct—and in many cases it is not—forecasts will fail when important thresholds that change the basic nature of the causal relationship are crossed. Many forecasts ultimately fail because it is often impossible to predict beforehand when such a threshold will be crossed.[13]

Anticipating Costs and Consequences

Policymakers are rarely content to grasp the objectives they can achieve via certain policy instruments. Typically, they want to know what impact their actions might have beyond those that are directly intended. Lyndon Johnson gave up the option of winning the Vietnam War through a general military mobilization and a major tax increase, even though these might have substantially increased the chances for a U.S. victory, because he feared the consequences for his domestic programs. Social scientists have likewise deemed it important to understand the direct and indirect consequences of action. As one of them put it, "the practical utility of social research consists not only of finding means to achieve stated goals, but also of discovering unanticipated consequences and ramifications of policies and other social actions."[14]

One kind of consequence involves the costs associated with policy choices. Almost all policies impose *direct* costs, of which the resources expended often are the most visible. The budget outlays associated with military preparedness or foreign assistance are obvious examples. But not all direct costs are paid in tangible resources: a leader who twists an ally's arm for a particular concession may be using up goodwill that will then be unavailable later for other purposes. Most policy choices also entail *indirect*, or secondary, costs: these result from the policy, though they are not linked to that instrument. One important kind of indirect cost is the opportunities foregone by some choice. Any use of economic sanctions, for instance, deprives the sanctioner of the benefits it derives or might derive in the future from commercial or financial ties with the target. More specifically, secondary sanctions—those the initiator of the sanctions applies to third parties who continue dealing with the target of the original sanctions—may damage relationships with those other states. Not only do the

others tend to retaliate, further eroding economic relationships, but attempts to coerce unwilling states to join in punishing some target may set back efforts to liberalize the overall international trade regime, a key U.S. objective.[15] Indirect costs may also result from the objective's attainment. Because the United States allowed its Western European allies and Japan to discriminate against American exports during the early cold war era as a way to rebuild these countries' economies after the devastation of World War II, domestic support for open trade with these same states eroded over time, as Americans in less competitive economic sectors came to increasingly resent the effects of the one-sided concessions.

Indirect consequences can imply benefits as well as costs. At times, military investment can have positive effects on the domestic economy. The United States' tremendous lead in metallurgy and commercial internet technology grew out of work done initially for the Pentagon. Economic sanctions designed to weaken an adversary's economy may also strengthen the initiator's broader diplomatic position, assuming that a major portion of the international community agrees with the need to confront the target of the sanctions.

To summarize: knowledge is policy-relevant if it addresses the instruments, context, and/or consequences of policy. Inasmuch as these are categories of issues dealt with by SIR, it can benefit policymakers in ways that reach well beyond establishing direct relationships between policy instruments and expected outcomes. Nevertheless, the reluctance of policymakers to rely on the products of academia results not only from the sociologically based impediments to communication between the two worlds of endeavor, but also from the fact that those entrusted with the conduct of foreign policy do not normally seem to consider the ways in which noninstrumental knowledge can help them. One reason for this pattern is that policymakers may simply not realize that a well-supported generalization on an issue they care about may be very helpful to them.

Despite these problems, professional scholars can produce work that could (and should) have an impact on foreign policy decisionmaking. Relevant knowledge can be applied to two, conceptually distinct, but in practice overlapping, purposes that are central to policymaking: diagnosis and prescription. Diagnosis consists of defining the sources and parameters of a challenge. Prescription is the business of determining the best apparent response to the challenge, given the diagnosis. Each of the three forms of

relevant knowledge can inform both tasks, but the purpose and emphases differ in the two cases.

When *diagnosing* the origins of a challenge, generally one must know whether and how it can be attributed to the actions of other nations and to the preferences behind those actions. It may also be necessary to appreciate to what extent this situation may have been produced by one's own actions. In either case, the instrumental link (the direct link and the ceteris paribus conditions) between the behavior and policy challenge must be understood. Diagnosing a situation does not reduce to determining how it came about; it is also, and significantly, a matter of assessing how it affects a government's ability to realize its aims. The link behind these aims and elements of the situation must be established. For example, it is an aim of U.S. policy to ensure secure and affordable sources of oil from abroad, a goal partially pursued via a policy of firm and secure relations with Arab nations in the Gulf area. Regional stability and peace are ceteris paribus conditions qualifying the U.S. ability to pursue its aims via this policy. A grasp of how local conflict and instability can jeopardize U.S. ability to meet its objectives follows from a good diagnosis of the regional situation. An appreciation of other, perhaps indirect, costs and consequences of local turmoil is also part of what a comprehensive diagnosis would produce. As an illustration, unrest in the Arab world may make it harder for the U.S. simultaneously to pursue its traditional policy of staunch support for Israel.

When *prescribing* policy responses to external challenges, the likely impact of any contemplated course of action must, of course, be assessed and the qualifying circumstances affecting its impact must be considered. In the preceding example, having decided that local turmoil is a threat to oil supplies, the U.S. might contemplate military action to impose order and stability in the Gulf. The goal is stability, the tool is armed force. One might ask whether military power is, in principle, instrumentally related to the sort of local problem involved. A circumstance qualifying the promise of this policy might be the diplomatic support the United States would receive from its major allies, leading one to ask whether such support would be offered. The policy instrument's availability must also be considered (a matter of contextual relevance). Will public and/or congressional opposition preclude dispatching U.S. forces to the area? Moreover, would the policy have certain secondary costs, e.g., harming relations with Russia or China?

If diagnosis and prescription employ similar intellectual ingredients, their purposes and analytical emphases differ. Diagnosis tends to focus on the

calculations of others and on their consequences. Prescription emphasizes one's own calculations and their likely consequences. Diagnosis seeks to characterize an existing situation; prescription emphasizes ways of changing it. Effective prescription assumes sound diagnosis; both require a sound foundation of relevant knowledge.

Explanation, Scientific Method and Ordinary Knowledge

The credibility of policy-relevant knowledge rests, in the final analysis, on its ability to explain why particular policies stand to produce certain effects, why some contextual circumstances may affect their likelihood of doing so, and why certain costs and consequences, either direct or indirect, are implied by these policies. It may be thought that an ability to predict is all that is required—that no explanation is needed as long as a statement of what can be anticipated is provided. But this is not so. As we will explain in chapter 4, prediction, per se, is not a very impressive intellectual achievement in the absence of explanation. It is, moreover, hard to convince anyone that a prediction would be borne out if no credible reason can be provided. Whether the policy-relevant proposition deals with instrumental or contextual statements, or with costs and consequences, it will be valuable in direct proportion to the quality of the explanation it provides.

The Nature of Explanation

Although the notion of explanation can be interpreted in various ways, the dominant interpretation among philosophers of science is the *nomological-deductive* view. The root of the first term in this phrase, nomos, is the Greek word for law. In this sense, "to explain [i.e., deduce] something is to exhibit it as a special case of what is known in general." One shows that some phenomenon or outcome is to be expected, given some general proposition (typically in the form of an "if → then" statement) and a particular set of circumstances, known as initial conditions.[16] The specific form an explanation takes depends on whether the phenomenon to be accounted for is singular in nature (e.g. "why don't Britain and France wage war against each other") or an empirical generalization (e.g. "why don't democracies ever fight one another?").

Explaining a singular statement requires that it be identified as a specific instance of a more general proposition. To do that, an argument would have to include among its premises at least one generalization (G) or "covering law," and at least one singular statement that specifies an initial condition (I). From these premises, it is possible to infer the singular statement (C) that we seek to explain. Consider the following example:

(1) Democracies never fight each other (G)
Britain and France are democracies (I)

Britain and France never fight each other (C)

In this sense, we might also say that the *cause* of the fact that Britain and France do not fight is that both are democracies, since democracies do not fight each other.

There is a strain within the philosophy of science, associated with "scientific realism," that denies that particular events can be explained by subsuming them under a general proposition. In this view, to explain an event is to describe the mechanism—the structured set of processes—leading to its occurrence, Thus, Mario Bunge feels that "In all cases, we explain facts by invoking some mechanism or other, perceptible or hidden, known or suspected."[17] Similarly, John Elster argues that, "Usually, and always ultimately, [explaining an event] takes the form of citing an earlier event as the cause of the event that we want to explain, together with some account of the causal mechanism connecting the two events."[18]

We do not dispute the explanatory value of mechanisms. Quite the contrary, it is often helpful to know, particularly if the goal is policy-relevant knowledge, *how* the outcome was generated, whatever its trigger. We nonetheless believe that the ability to explain in this manner assumes that we have in mind some general and lawlike statement relating the mechanism in question to the occurrence of some event. Plainly, we cannot assume that the mechanisms leading from cause to effect operate in an ad-hoc manner. It is the regularity with which the mechanism produces the effect (given certain antecedent conditions) that allows us to invoke it as a basis for explanation. Thus, while we are alert to the value of describing causal mechanisms, we believe that for this to lead to useful knowledge, generalizations of the covering-law variety are required.

General propositions can be produced in three basic ways. In some cases, a general proposition, such as the first premise in argument (1), can be

derived from a covering law of an even higher level of generality, in addition to at least one antecedent condition at the same level of generality as the first premise in (1). In this case, the explanatory argument is simply an extension of argument (1). For example,

(2) Governments responsive to public opinion never fight others so responsive (G)
Democratic governments are responsive to public opinion (I)

Democracies do not fight each other (C)

In other cases, a general proposition is produced without recourse to a statement involving an initial condition. In this type of explanation, two or more equally general propositions constitute the premises of an argument, producing a generalization as a conclusion. For example,

(3) Public opinion in democracies disapproves of war against other democracies (G1)
Democratic governments act in accordance with public opinion (G2)

Democracies do not fight each other (C)

No initial condition needed to be specified here, since the phenomenon to be explained was general rather than singular. As such, the reasoning that forces the conclusion is logical in nature, provided by the conjunction of the two general premises.

Generalizations can also be produced in a purely inductive fashion, by noting a correlation between changes in the values of different variables. Provided that reasonable care is taken to rule out the possibility that the association is spurious, such generalizations may be useful as premises in an explanatory argument, even if they cannot be derived deductively in one of the ways just discussed.

It is typically assumed that one of the main contributions scholars can offer policymakers is *generalizations* that shed light on instrumental and contextual relationships, or on the secondary consequences of action. Scholars can, of course, also provide information of a factual nature—in other words, the "initial conditions" in the nomological-deductive model of explanation. However, since theory is their primary stock in trade, it seems

that their comparative advantage is more pronounced with regard to empirical generalizations, while that of policymakers rests in access to specialized factual knowledge.[19] However, this does not imply that government officials do not rely on generalizations; just like anyone else, they would find it impossible to reason without them. Even a prototypical "historical" explanation—one that is rich in context and relies little on overt generalizations—implicitly invokes generalizations "of some sort" to explain specific behavior.[20]

Thus, while scholars appear more suited to producing generalizations than policymakers, the latter do so to a significant extent as well. If so, we must ask whether the explanations produced by social scientists should be considered superior to that possessed independently by the government decisionmakers?

If many academics consider self-evident the superiority of scholarly knowledge, its value is much less apparent to many policymakers. For example, Paul Nitze, one of the most experienced of the nation's foreign policy statesmen tells us that

> It is my view that most of what has been written and taught under the heading of "political science" by Americans since World War II has been contrary to experience and common sense. It has also been of limited value, if not counterproductive, as a guide to the conduct of actual policy.[21]

Plainly, scholars would disagree, at least with the first of these assertions. Whichever of these views is correct, the costs to policymakers of ignoring scholarship would depend on the respective qualities of the explanations, principally the generalizations, that academics and policymakers are in a position to produce. In turn, this quality depends on the modes of analysis they bring to bear to the analytic task: scholars are, in principle, guided by an ideal of scientific method, policymakers by what may be described as specialized ordinary knowledge.

Scientific Method and Ordinary Knowledge

The Ideal of Scientific Method Unlike the humanities, science (social or natural) concerns itself with verifiable knowledge about the empirical world, aiming to establish the factual bases of truth.[22] This truth may be descriptive,

or it may be analytical. If descriptive, its purpose is to characterize the state of affairs with regard to one or several variables viewed independently of each other (for example, the frequency of armed conflicts in the post–cold war era, the attitudes of men and women toward the United Nations). If analytical, the aim is to account for the manner in which the values of some variables are influenced by the values of others (for instance, how the frequency of international conflicts is affected by the state of the global economy). Whichever type of knowledge one is concerned with, for it to be scientific it must rest on certain principles of inquiry that are deemed to define the scientific community.[23] Admittedly, we lack a perfect consensus on these rules at the margins, and not all social scientists adhere to them uniformly. Nevertheless, these principles represent an ideal toward which scholarly endeavors tend and one that distinguishes scientific inquiry from ordinary knowledge.

Adherence to several principles of inquiry qualifies the resulting knowledge as scientific.[24] It must be based on rules of inferential thinking that apply to any scientific endeavor, and that encompass rules for collecting and assessing evidence and for making inferences. These rules must follow recognized principles of deduction or induction. Concepts must be unambiguously defined and empirically meaningful. Data on which scientific conclusions rest must, in principle, be available to other investigators. Measurement must adhere to recognized rules of reliability and validity. The common theme of scientific principles is *inter-subjectivity*: idiosyncratic judgment must play a minimal part in the argument behind the conclusion, since objective principles of inquiry are more likely to yield empirical truth than the vagaries of individual judgment.

In short, by relying on explicit and professionally accepted rules of inquiry, scientific knowledge reduces the analyst's subjective judgment to a minimum. Ordinary knowledge, by contrast, does not do this. Consequently, even though differences with respect to the truth of claims rooted in ordinary knowledge cannot be resolved within the terms of reference of this knowledge, those associated with scientific knowledge usually can be resolved within its own terms of reference.

Ordinary Knowledge: Its Value and Pitfalls The ordinary knowledge of policymakers is not the same as that of "ordinary people." While it is based on a very considerable foundation of specialized factual knowledge, policymakers' grasp of the issues is also influenced by a variety of professional

incentives and perceptual frameworks that shape the way they interpret and draw inferences from the facts. Accordingly, it is not to the ordinary knowledge of the person in the street to which SIR should be compared, but to the ordinary knowledge of policymakers. In particular, attention should be drawn to some of the aids to reasoning that policymakers may rely on, and some of the organizational constraints on their analysis.

Cognitive Dispositions and Analytical Shortcuts: An absence of explicitly accepted rules of inference and research within ordinary knowledge implies, by default, a substantial role for rules rooted in cognitive processes and beliefs. Some of these involve responses to recognized psychological needs. For example, the need for consistency among one's various cognitions (beliefs and opinions) often leads people to redefine some subset of their cognitions so as to bring them into balance with others. In the process, some violence can be done to the truth of the cognitive element that has been modified, imparting a perceptible bias to the attitudes that spring from the cognitive equilibrium thus established.[25] Consider, for instance, Ole Holsti's analysis of the thinking of John Foster Dulles. Holsti sought to identify the various components of the negative image that Dulles held of the Soviet Union and to examine how that image correlated to actual evidence regarding Moscow's behavior.[26] Through a careful quantitative analysis of Dulles' speeches and writings, Holsti managed to map out the structure of a belief system that, as far as the Soviet Union was concerned, consisted of one core element and three related perceptions. The core element was the Secretary of State's intense dislike for the Soviet system; the three related perceptions were (1) his view of the degree of Kremlin *hostility* toward the United States, (2) the extent of Soviet foreign policy *success*, and, (3) an assessment of Soviet *capabilities* for pursuing its external objectives.

Shifts in each of these component perceptions were monitored to evaluate their stability and the extent to which they covaried. The study revealed that Dulles' appraisal of the Soviet Union was remarkably resistant to change. When Soviet hostility seemed to decrease, Dulles would either infer that Moscow's prior policy had been less successful (temporarily causing the Soviets to reassess their behavior), or that Soviet power capabilities had decreased (leaving the Kremlin no choice but to act in a more cooperative manner). In no case did he seriously consider that Soviet objectives might have changed in any significant way. The implication drawn by Dulles was that there was never any reason to behave in a conciliatory fashion toward the Soviets.[27]

While dissonance theory examines the way in which people resolve cognitive clashes and how they adapt their attitudes accordingly, it says little about how they go about analytical problem solving, i.e., how intellectually they establish connections between a challenge and the manner of dealing with it. Because policymaking often involves attempts to influence the behavior of others, it is often important to know to what the decisions and activities of others should be attributed. Attribution Theory, a subfield of social psychology,[28] seeks to explain by what logic people establish such attributions. One of its tenets is that, lacking the guidance of scientific epistemology and acting as "naïve scientists," people tend to account for undesirable conduct of their own, or of those with whom they identify, in terms of external duress. By contrast, the misbehavior of others—especially those to whom they feel ill-disposed—is more apt to be explained by the latters' inherent negative traits. Thus, the military growth of an adversary would be interpreted in terms of naturally expansionist designs, while one's own would be explained in terms of the externally-imposed demands of security. A careful examination of early U.S. cold war policy concluded that U.S. policymakers' made attributions about Soviet intentions and actions in a way that coincided with psychologists' expectations.[29]

Another of attribution theory's findings is that people neglect the importance of nonoccurrences in explaining situations or behavior. This inference pattern violates a core logical and scientific principle: if an outcome (y) is to be linked to a cause (x), it must be shown: (1) that occurrence of x coincides with occurrence of y and (2) that the absence of x coincides with the absence of y. Causality cannot be established unless both associations are demonstrated. Thus, if the occurrence of lung cancer were proven equally likely when the assumed cause (smoking) was present as when it was absent, no link between smoking and cancer could scientifically be claimed. However, attribution theory indicates that ordinary knowledge often involves disregarding the causal meaning of a nonoccurrence of x, leading to dubious attributions. For example, during the coldest years of the cold war, examples of Soviet attempts to act on an expansionary advantage made a deep impression on leading U.S. policymakers; by contrast, instances where Moscow refrained from pursuing such advantages did not significantly undermine the official view on Soviet expansionism.

Quite apart from psychological mechanisms that encourage fallacious inferences from available data, faulty conclusions may also be rooted in the way inferences are drawn from inadequate substantive understanding, within

the context of ordinary knowledge. While decisionmakers typically have access to much factual information about policy problems, that knowledge may be partial and specialized, linked to a policymaker's particular functions, responsibilities, and organizational identity. If so, there may be a surfeit of partial data and a correspondingly impaired grasp of the policy challenge. Even apart from a possible inadequacy of factual data, decisionmakers may not possess authoritative *general* propositions through which to make analytic sense of that information. Under the circumstances, a variety of aids to reasoning, in the form of "cognitive heuristics" or substantive "schemas," typically attend the interpretation of information. Such aids may involve an excessive reliance on simple rules of thumb, such as benchmarks or analogies, a tendency to think of the policy challenge in terms of a single value although several are affected, or an inclination to think in terms of simple bivariate cause-effect relations although causality is multiple and complex.[30]

The use of analogical reasoning by decisionmakers (the Munich Analogy, the Vietnam Analogy) has been extensively documented, and the analytical mistakes that this use produces have also been examined.[31] The problem is that analogies often provide only a shaky foundation for understanding, while the use of other cognitive heuristics often compounds the problem. Kahneman and Tversky have stressed the importance of two such heuristics: the "availability heuristic" and the "representativeness heuristic."[32] The former implies that, in seeking to predict the consequences of a situation or the behavior of an individual, people tend to predict the outcome that is most easily drawn from memory. The latter implies that the outcome most likely to be predicted is that which seems to represent the most salient features of the situation or behavior in question. An implication of the availability heuristic is that recent events are more likely to affect prediction than more distant events, whether or not there is any logical or substantive foundation for this choice. An implication of the representativeness heuristic is that policymakers are most likely to form their predictions around definitions of the situation related to their own particular responsibilities. Both heuristics also imply a tendency to place greater emphasis on specific examples than on systematic empirical generalizations when seeking to predict outcomes.[33] To the extent that generalizations provide the foundation for adequate explanations, explanatory ability is correspondingly undermined.

So far we have discussed only biases stemming from habitual cognitive shortcuts, not those resulting from emotion or vested interest, which may distort may analysis just as badly. While the latter's impact can also be min-

imized by properly applied procedures of empirical inquiry, we note that cognitive biases, i.e., those not rooted in emotion or interest, may be more insidious because they are less easily recognized.

While we have focused on some of the typical forms of naïve epistemology that guide decisionmakers' thinking about foreign policy challenges, more sophisticated analytical categories are also sometimes encountered under the general heading of ordinary knowledge—especially when policymakers themselves have an academic background. Even when this is the case, however, it appears that the thinking involved, and thus the associated policy, would have benefited from a more thorough or rigorous evalutation of the issues involved.

Henry Kissinger, for example, had relatively developed thoughts on the logic of linkage policies in international relations, and these provided a basis for they way he dealt with the Soviet Union. In order to elicit Soviet cooperation on arms control, and in facilitating a face-saving extrication from Vietnam, Kissinger dangled the promise of improved economic relations with the United States, and he brandished the threats implicit in U.S. rapprochement with China. He explained that

> One of the principal tasks of statesmanship is to understand which subjects are truly related and can be used to reinforce each other . . . in other words to create a network of incentives and penalties to produce the most favorable outcome.[34]

And he observed that, "Nixon and his advisers did succeed in making the various strands of policy support each other."[35] However, when George Shultz became President Reagan's Secretary of State, he stated equally firmly that,

> we needed to get away from the old concept of "linkage," of thinking that by exerting pressure or offering rewards in one area, particularly trade, we could induce a change in Soviet behavior in a regional conflict or in some other area. . . . we were taking the position that regional conflicts had to be confronted on their merits . . . just as arms control agreements had to be worked out on their merits.[36]

Both statesmen considered regularities of international politics, they reasoned in terms of a similar conceptual framework, yet they reached opposite conclusions.

Problems of this sort do not spring from cognitive shortcuts. Their source may lie in the way logical inferences are drawn from certain common postulates, or from the different (and necessarily subjective manner) in which relevant evidence is evaluated. Such subjective differences cannot and should not be entirely eliminated, since democratic societies may prefer different policy values at different times. But systematic scholarship can make the differing policy conclusions reached less arbitrary. For example, neither Kissinger nor Shultz operated from a clearly reasoned model of the logic of linkage policies, of the assumptions on which it might based, and on the implications for the situations in which these policies were or were not likely to be effective. Political scientists, on the other hand, have developed much of the logic involved in linkage situations. For example, one useful analysis of linkage policies starts with a statement of the assumptions that can be made about the interests of the parties across various issue areas, their ability to communicate this information to each other, and the implications for the outcomes that may be reached.[37] On this basis, the analysis distinguished between the likely outcomes of situations where, on the one hand, only one of the two parties seeks to apply a linkage across issue domains, and, on the other hand, where both parties practice linkage politics vis-à-vis the other. With regard to the former, the study distinguishes situations where the first side threatens to make the other side worse off in the related issue area, from situations where the former promises not to make the latter any worse off, and it derives the likely outcomes for each context. Armed with such deductively rigorous reasoning, both Kissinger and Shultz might have had clearer and more realistic expectations concerning policies of linkage toward the Soviet Union.[38]

If a comparison of social science and ordinary knowledge reveals some of the latter's shortcomings, it does not fully encompass the constraints on the reasoning of policymakers, which may also be rooted in the specific organizational setting within which they operate.

Organizational Constraints on Analysis: The way challenges are perceived and solutions are considered by policymakers often depend on the place each occupies within the decisionmaking machinery. Habits of thought, including the salient aspects of foreign policy issues, the links of causation involved, and so forth are likely to emerge from thinking related to the structure and missions of the organization with which the policymaker is affiliated, and this too may become part of the policymaker's ordinary knowledge, resulting in a constrained ability to interpret foreign policy chal-

lenges and to propose appropriate solutions. This point is summarized in the pithy observation, "Where you stand depends on where you sit."[39] By this reasoning, salient facets perceived of any situation vary depending on the purpose of the specific institution involved—each individual focusing on the aspects most relevant to his unit's responsibilities. Policy preferences are often molded accordingly. The Secretary of Commerce and the Secretary of Defense are likely to direct their analytical lenses at the features of a problem (for example, India's or Pakistan's decision to test nuclear weapons) most relevant to the responsibilities with which they are charged. Similarly, the responses they advocate are most likely to follow from the sorts of responses their institution is in a position to make.

In this regard, it is interesting to note the sources of the views held by Joseph Kennedy, a former banker and head of the Securities and Exchange Commission, of Hitler's Germany at the time when Kennedy was ambassador to Great Britain:

> His primary interest lay in economic matters. . . . The revolutionary character of the Nazi regime was not a phenomenon that he could grasp. . . . It was far simpler, and more in accord with his own premises, to explain German aggressiveness in economic terms. The Third Reich was dissatisfied, authoritarian, and expansive largely because her economy was unsound.[40]

Thinking constrained by bureaucratic blinders may be a common characteristic of the policymaking process. For instance, an analysis of decisions preceding the April 1979 attempt to rescue U.S. hostages in Iran found that altogether nine individuals participated in the meetings and that in the "key meetings that led to the decision to undertake the rescue mission, the evidence . . . suggests that the participants adopted positions that reflected their location in the bureaucratic structure."[41]

When policymakers move from one institutional setting to another, their thinking on how policy should be structured is likely to shift as well. Thus, when Winston Churchill was First Lord of the Admiralty (1911–1915), one of his early actions was to press for increased levels of naval expenditure. However, when he became Chancellor of the Exchequer (1921–1929) he urged substantial reductions of naval spending. Similarly, Casper Weinberger favored hefty increases in military outlays when he was Secretary of Defense. By contrast, while Director of the Office of Management and

Budget, he was known for his eagerness to slash government budgets (he was then referred to as "Cap the Knife").[42]

Although reasoning colored by institutional positions often is important in shaping substantive policy preferences, it also affects thinking in more general ways. Henry Kissinger, with experience both in the White House and The State Department, observed that:

> Institutionally, the Foreign Service generates caution rather than risk-taking; it is more comfortable with the mechanics of diplomacy than with its design, the tactics of a particular negotiation rather than an overall direction, the near term problem rather than the longer-term consequences.[43]

Not only does institutional context impose perceptual constraints on policymakers; but also their decisions often are guided by their organization's substantive interests. Officials must compromise between the institutional needs of the various units for which they are responsible, and they often feel compelled to promote the interest of their own organization as a whole (the latter generally defined as a quest for expanded missions and budgets). For all these reasons, foreign-policy problems may be perceived through organizational filters and responses to them may reflect relatively parochial organizational filters, and responses to them may reflect relatively parochial organizational concerns. Either way, "objective" knowledge brought in from the outside may have relatively little bearing on policy choices.

This caveat aside, no matter how it fits into the structure of foreign-policymaking, scholarship's ultimate value flows from the scientific epistemology that, as an ideal, reduces subjectivity to a minimum, maximizing the likelihood that both descriptive and analytical knowledge would be empirically correct. In this regard, it is generally more reliable than psychologically-driven cognitions and "naïve epistemologies," or the occasional reliance on quasi-scholarly scholarly concepts, that furnish the foundation for much foreign policy decisionmaking. It also makes it possible to cut through reasoning that is bent around institutional blinders and interests. It would be equally naïve, of course, to argue that use of social scientific work will necessarily produce better policy. But the process by which decisions are made should improve insofar as officials make their assumptions, beliefs, and inferences as explicit as possible. Careful use of social-scientific SIR should help achieve this goal. To the extent that this is the case, the

quality of policymaking stands to benefit from reliance on scholarly knowledge.

The Limitations to Policy Relevant Scholarship

While policy relevant knowledge may benefit the policymaking process in a number of ways, a realistic assessment of the role it can play must also include an appreciation of its limitations. Even if the partial superiority of scientific method over ordinary knowledge is recognized, and even if the need for rigorous generalizations is understood, it remains that there are tight limits to the extent to which policymakers are likely to rely on the insights of scholarship. Such limitations have two general sources. The first involves the motivations of *policymakers*; the second concerns the limitations of *social science*.

Limitations Rooted In the Incentives of Policymakers

The attainment of policy objectives depends more than on the awareness that even the best scholarship can produce, because policy decisions are only partly driven by the objective that is their professed purpose. *Political* problem solving, for needs ranging from electoral advantage to interorganizational jockeying, is often as important a part of policy choices as the international stakes involved. Firm action in a crisis can be meant to boost presidential popularity, the decision to procure some military system may be a partial response to the pressures of domestic lobbies, the choice of one policy instrument over another (e.g., economic over diplomatic) may reflect the relative power of their respective bureaucratic constituencies, and so forth. Plainly, the impact of analytical knowledge that seeks to link policy to its professed objective is reduced if that objective is not its true purpose.

Even where the attainment of the apparent policy objective *is* government's main purpose, success depends on more than just the understanding directly relevant to the challenge: it depends as much on the power and commitment of the interests with which policymakers must contend. Attaining policy goals depends not just on understanding the likely outcomes of policy, but also on dealing with interests that might not be well served by the policy. Interest-based opposition to the policy may originate within the political system, or it may be found abroad, and strategies involving

compromise, inducements, or pressure, may be more effective in dealing with these interests than the force of arguments rooted in even a very good scholarly understanding of the problem. In this way, the requirements of political problem solving may trump those of good policymaking.

It is also necessary to understand that policymakers, or their political opponents, do not always seek scholarly analyses for the purpose of improving understanding. For example, such analyses may be sought simply as political ammunition. Although the use of scholarship as political ammunition may appear to preclude its ability to inform policy, it could be argued that this need not invalidate its usefulness. Even if knowledge is used mainly for political purposes, it may nevertheless improve the quality of policy through the clash of competing explanations and perspectives marshaled in the context of political confrontation. If each of the opposing scholarly arguments has merits, the result of such competition may be a synthesis that yields improved understanding. Alternatively if the confrontation proves that one point of view is clearly superior to the other, then rejecting the inferior argument advances understanding. Thus, even where scholarship is invoked initially for political ends, it can still encourage the growth of knowledge, and the quality of policy may benefit accordingly.

This reasoning may seem plausible in the abstract; in fact, this is not how knowledge is likely to advance. The reasoning assumes that the clash of perspectives would be resolved on the quality of the opposing intellectual arguments, using acknowledged standards of evidence and logic. In practice, and except perhaps in the very long term, the way such differences are settled within the context of political confrontation depends far more on the parties' relative political power than on the intellectual merits of their arguments. Thus, when the products of scholarship are used as political ammunition, not with the primary end of informing effective policy, neither the quality of knowledge nor the effectiveness of policy is likely to benefit. Only if senior policymakers insist on resolving disagreements based on the cogency of arguments and quality of the evidence—and they may have a high enough stake in effective policy outcomes to do this—SIR may be able to contribute a good deal.

Limitations Stemming from the Character of Scholarship

So far, we have implicitly assumed that policymakers would probably be able to find SIR work pertinent to their needs if they chose to use it. That

may not be so. One limitation on social science's impact on policymaking comes from an insufficient volume of potentially relevant scholarship, which falls far short of the amount needed to guide the conduct of foreign affairs. Correspondingly, the ordinary knowledge of policymakers will continue to dominate decisions, if only by default. To some extent, the quantitative shortfall in relevant academic work arises because policy-relevant scholarship is not sufficiently highly regarded within universities, where the "disinterested" quest for pure science generally benefits academic careers more than does the pursuit of policy-relevant knowledge. Academics' willingness to devote much effort to being useful declines accordingly. Even if the pattern of academic incentives were altered to favor relevant work, the costs and time required to produce authoritative and usable knowledge might very often cause it to fall short of the need.

The problem with pertinent SIR is not limited to quantity. Policy-relevant scholarship often is simply not authoritative enough to provide a reliable basis for policymaking.[44] Plainly, social science is not of uniformly good quality, and its epistemological canons are unevenly applied. As important, while scientific methods may ensure that many of the mistakes associated with ordinary knowledge will be avoided, it does not guarantee conclusive propositions about the phenomena it studies. Its purpose is to debunk as much as to provide positive conclusions, and even the conclusions provided, being of a very contingent nature, may furnish no affirmative guide to action. Caveats can be enormously useful, but the pressure to "do something" often leads policymakers to want immediate and positive guidance, not advice that does not reach beyond counsels of prudence.

Related to this is the fact that one purpose of research is to *raise* questions, even if immediate answers are not available. Both the natural and social sciences engage in exploration and discovery, a result of which is to identify an expanding number of phenomena, as well as an increasing number of facets of a given phenomenon, requiring description and explanation. As Thorstein Veblen accurately observed, "the outcome of any serious research can only be to make two questions grow where one question grew before."[45] Raising good questions can help thoughtful policymakers over the long run, even this provides no assistance when some action must be taken quickly.

A further constraint on the authoritativeness of social science is that scholars often disagree among themselves. The lack of credible axiomatic postulates in the social sciences, the indirect nature of measurement, and the probabilistic and contingent quality of many of the conclusions drawn, ensure that consensus on the credibility of various knowledge-claims is often

lacking. Challenges to extant scholarship are a necessary stimulus to its growth, and to the development of academic careers, but the character of the social sciences ensures even greater room for disagreement than in the natural sciences. Obviously, the rigor of inference and accuracy of evidence are greater in the latter than in the former, but even where research techniques appear most advanced, knowledge is not automatically authoritative. In any case, ongoing and unresolved scholarly debates may cause policymakers to tire of academic discourse, and to feel that it reflects academic gamesmanship with no clear bearing on their practical concerns.

Sophisticated exercises in mathematical deduction often produce conclusions that, where not self-evident (as often they are), are nevertheless based on a foundation of axioms and theorems that are, in fact, largely conjectural, raising the possibility of disagreement about the *truth* of associated conclusions. The problem is different with *inductive* social science, especially that which relies on advanced statistical tools, since the structure of statistical reasoning often diverges from that of even the most sophisticated ordinary knowledge. Accordingly, what may be authoritative from the perspective of conventions adopted within the social sciences may appear too meaningless to the decisionmaker to serve as a credible basis for decision.[46]

Rules of reasoning applied in SIR (especially its technically more esoteric variants) are often so different from the rules proper to ordinary knowledge that policymakers often find the former incomprehensible or meaningless within their own frame of intellectual reference. Regression analysis, probably the most widely used statistical tool in the social sciences, illustrates the problem. Regression's principal purpose is to allow us to assess the impact upon the values of an outcome variable (e.g., public support for presidential foreign policy) of one or more explanatory variables (e.g., presidential popularity, the perceived costs of the foreign policy, the perceived stakes of the policy). In the social sciences, this is usually done by estimating: (1) the coefficient values (usually by the least squares method) associated with each explanatory variable, (2) their respective standard errors, and, (3) the t-statistics expressing the ratio of the former to the latter. On the basis of the t-statistic, the researcher decides whether or not to reject the "null" hypothesis that the actual (not estimated) value of the coefficient is zero (i.e., that the independent variable has no impact on the outcome variable), a decision made subject to some accepted probability of a "type I" error (falsely rejecting a true hypothesis).

Even if the statistical procedures themselves were explained clearly, this frame of reference may not be meaningful to a policymaker. When trying to decide what weight to assign to some causal influence, few people (policymakers or otherwise) think in terms of comparing that weight to zero, then deciding whether to accept or reject the possibility that the two values may be statistically different. In any case, it makes little sense by many standards to think of the credibility of a statistical hypothesis in binary terms (accept or reject). Most policymakers, indeed most people, naturally think of their hypotheses in terms of a continuum of credibility determined by the strength of the evidence. Thus, on the basis of the available evidence, they may be moderately confident that a policy (e.g., economic sanctions) would produce its desired policy effect. As the character of the evidence changes (say, new information about the target government's domestic vulnerability), the extent of their confidence may increase. But, they rarely decide to think that either the policy will succeed or fail, subject to a 95 percent probability of falsely rejecting a true hypothesis!

Thus, there is substantial gap between statistical thinking and the thinking that guides most real activity. Substituting for the binary form of statistical tests concepts that reflect this sort of continuum—for example, confidence intervals bracketing coefficient estimates or Bayesian probability models—could mitigate the problem. Nevertheless, some part of statistical reasoning may have come to diverge too much from thinking associated with ordinary knowledge to provide meaningful criteria for determining, from a policymaker's perspective, how authoritative the knowledge claim really is.

Even when authoritative enough, the knowledge furnished by academia may shed little or no valuable light on policy issues. The problem sometimes flows from the self-evident nature of the scientific propositions involved—providing no increment to what policymakers already know. The banality of many claims and findings within the social sciences is often recognized,[47] and, as we discussed in chapter 1, it is frequently attributed to the fact that the reward structure of many universities places far greater weight on the techniques employed than in the substantive importance of scholarly findings.[48]

If scholarship confined to the restatement of the trivially obvious contributes little to policy-relevant knowledge, a number of nonobvious general propositions simply do not encompass policy problems. They may deal with matters of no interest to anyone but some subset of the academic community. They may be too abstract to reflect the challenges we encounter, or they

may diverge too much from what policymakers have come to believe. As one practitioner-scholar observes: "The major obstacle to imparting abstract conceptualizing ability so needed by practitioners is that the vast majority of what passes for IR and comparative theory appears to such individuals to be so abstract or distorting of the real situation that it is useless."[49]

As we will argue in the following chapter, academic work need not address policy-relevant matters in order to be meaningful or interesting, since many things are worth knowing even if no practical utility follows from that knowledge. Of course, the lack of practical utility does not guarantee that the work will be meaningful or interesting, but it does justify efforts guided by no thought of application, and it further accounts for our restrained estimate of the likely scope of policy-relevant scholarship.

Conclusions

Contrary to the typically held conceptions of it, policy-relevant knowledge reaches well beyond establishing direct relations between policies and their desired outcomes. It also sheds light on the ceteris paribus conditions that qualify such relations, and it establishes the circumstances under which the policy instruments will be available and malleable, as well as the considerations that govern the values of the ceteris paribus circumstances. Finally, it alerts policymakers to the various consequences of their actions beyond those that the policy is directly intended to produce.

When policy-relevant knowledge is rooted in scholarly activity, its primary purpose is to establish explanatory propositions bearing on the above kinds of issues. Doing this involves both pertinent generalizations and apposite initial conditions. Both can benefit from academic rigor, but the scholarly community's greatest comparative advantage lies in the provision of generalizations rooted in the canons of scientific method. Although the ordinary knowledge of policymakers will always provide much of the foundation for the thinking behind their decisions, the flaws inherent in casual empiricism and the analytical habits shaped by professional incentives and perceptions imply that policy would often benefit from greater reliance on relevant scholarship. These benefits notwithstanding, it is important to appreciate the limitations on the ability of policy-relevant scholarship to inform the conduct of foreign policy-limitations that stem both from the character of the academic enterprise and from the incentives of government leaders.