Learning and foreign policy: sweeping a conceptual minefield  Jack S. Levy

If men could learn from history, what lessons it might teach us! But passion and party blind our eyes, and the light which experience gives is a lantern on the stern, which shines only on the waves behind us.

—Samuel Coleridge

Do political leaders learn from historical experience, and do the lessons of history influence their foreign policy preferences and decisions? It appears that decision makers are always seeking to avoid the failures of the past and that generals are always fighting the last war. The “lessons of Munich” were invoked by Harry Truman in Korea, Anthony Eden in Suez, John Kennedy in the Cuban Missile Crisis, Lyndon Johnson in Vietnam, and George Bush in the Persian Gulf War. The “lessons of Korea” influenced American debates about Indochina, and the “lessons of Vietnam” were advanced in debates about crises in the Persian Gulf and in Bosnia. Statesmen at Versailles sought to avoid the mistakes of Vienna and those at Bretton Woods, the errors of the Great Depression. Masada still moves the Israelis, and Kosovo drives the Serbs. Inferences from experience and the myths that accompany them often have a far greater impact on policy than is warranted by standard rules of evidence. As J. Steinberg argues, in words that apply equally well to the Munich analogy and the Vietnam syndrome, memories of the British capture of the neutral Danish fleet at Copenhagen in 1807 (the “Copenhagen complex”)

Because much (but not all) of the important work on foreign policy learning has appeared in the form of articles rather than in books, and because several books that provide key insights about learning focus primarily on other subjects, I will depart from the traditional format of framing a review essay around a handful of key books. I thank a number of scholars for their enormously helpful comments and suggestions on this essay: Sanjoy Banerjee, Andrew Bennett, George Breslauer, Alexander George, Lori Gronich, Rick Lau, Richard Ned Lebow, Cliff Morgan, John Mueller, John Odell, Ed Rhodes, Jack Snyder, Janice Stein, Yaacov Vertzberger, Tom Walker, and participants at panels at the 1992 International Studies Association and American Political Science Association meetings and at seminars at Indiana, McGill, and Rutgers universities.

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“seeped into men’s perceptions and became part of the vocabulary of political life,” and it influenced German decision making for a century.\(^1\)

Although we can enhance our understanding of world politics by incorporating historical learning into models of foreign policy decision making, we must first deal with some important conceptual and methodological problems. It is one thing to say that historical learning often occurs but quite another to specify when certain actors learn what types of lessons from what events, and under what conditions this leads to policy change. The concept of learning is difficult to define, isolate, measure, and apply empirically, and scholars have only recently begun to investigate these questions in a rigorous and systematic way.

After the pathbreaking work on foreign policy learning by Ernest May and by Robert Jervis in the 1970s, there has been a recent resurgence of interest in learning by scholars from a variety of theoretical and methodological perspectives.\(^2\) Some of this recent work has been motivated by the belief that structural models cannot fully explain the end of the cold war or other important instances of foreign policy change. Scholars have applied learning models in an attempt to explain Soviet foreign policy in general and the revolutionary changes under the regime of Mikhail Gorbachev in particular.\(^3\) There have


been case studies of the role of learning in imperial overextension, U.S. military intervention, and U.S.–Soviet cooperation during the cold war, and there are quantitative empirical studies of the impact of historical learning on crisis bargaining behavior and on alliance formation. Others have examined the role of institutions in facilitating learning by providing new information, changing belief systems, creating focal points, and coordinating expectations. Research on epistemic communities focuses on how knowledge-based experts, operating with shared paradigms within transnational or domestic networks, influence policy by shaping political leaders’ knowledge of cause–effect relations and definitions of the national interest.

Other recent research on learning explicitly builds on theoretical concepts and analytical techniques from other disciplines. Some have applied cognitive scripts and heuristics from social psychology to examine the role of analogical reasoning in decision making through both artificial intelligence models and case study methods. Applied game theorists have examined patterns of learning in iterated prisoners’ dilemma games and in sequential games with incomplete information, and others apply models from evolutionary biology to explain collective learning in foreign policy.


Although these studies provide additional reason to believe that learning plays an important role in the formulation of foreign policy, we need to address several important analytical problems before we can make further progress in the theoretical construction and empirical testing of models of learning. Some equate learning with policy change. Others fail to differentiate learning from alternative sources of policy change (including structural adjustment, evolutionary selection, and political change) or to specify the interaction effects among these different variables. Some scholars restrict learning to empirically correct or normatively desirable lessons, as defined by their own analytic or normative biases. Others fail to conceptualize collective learning in a way that acknowledges the differences between individual and collective learning and that might facilitate the analysis of the relationships between learning at the individual, organizational, and governmental levels. Some fail to differentiate between genuine learning and the rhetorical or strategic use of historical lessons to advance current preferences or fail to construct research designs that expedite the empirical distinction between these causal processes.

Each of these practices impedes our understanding of the role of learning in foreign policy, but scholars have devoted only scattered attention to these issues. My primary aim in this study is to explore these analytical problems and to suggest some of the most useful ways in which the study of foreign policy learning might proceed. I draw extensively on the emerging literature on learning but do not attempt a comprehensive review of it.

To give adequate attention to the most critical issues, I must limit the scope of this essay. Although I draw on the theoretical insights of learning-related research on international political economy, institutions, and epistemic communities and also draw on comparative politics and organizational theory, most of my applications are in the area of international security. This literature is quite substantial, and the conceptual and methodological problems that it raises are very general and applicable across issue-areas. I give some attention to the psychology of learning, but I make no attempt to provide a comprehensive analysis of the conditions under which and processes through which learning occurs. I focus on learning from experience but do not explore the relationship between experiential learning and deductive learning. Finally, I do not examine social learning theory (which is primarily behavioral rather than cognitive in orientation), theories of attitude change or socialization, or related theories of learning in social psychology.


Definition of learning

I define experiential learning as a change of beliefs (or the degree of confidence in one’s beliefs) or the development of new beliefs, skills, or procedures as a result of the observation and interpretation of experience. This definition differs from a number of alternative conceptions that one can find in the literature in that it does not require that learning involve policy change, an improved understanding of the world, or an increasingly complex cognitive structure. Learning also differs from structural adjustment, evolutionary selection, and turnover. I will elaborate on each of these points and in the process deal with possible objections to my definition of learning. First, however, let me emphasize other aspects of this definition.11

Learning is not a passive activity in which historical events generate their own lessons that actors then absorb. Learning is active in several respects. First of all, learning is an analytic construction. People interpret historical experience through the lens of their own analytical assumptions and worldviews. As Barbara Levitt and James March conclude, what an actor learns may be influenced “less by history than by the frames applied to that history.”12 The different frames that people apply generally result in variations in learning across individuals in the same situation. This is a working assumption of learning models, and its validity is a central question for empirical research with respect to particular issues or cases. If political leaders all draw the same inferences from experience, and if similar experiences lead to similar inferences, learning would be epiphenomenal and would explain little of the variation in policy outcomes.

Second, actors actively search for the information they believe is necessary for a valid interpretation of historical experience.13 Actors also conduct experiments to “test” their assumptions: they implement small policy changes,


13. Organizational search is a central concept in organizational theory, and information search is central to rational choice theories of politics.
observe their effects, learn through trial and error, and proceed incrementally. The strategy of limited probes of adversary intentions and resolve, for example, involves experimentation and trial-and-error learning.14 When experience provides few cases to analyze directly, actors conduct simulations (military maneuvers, for example) or analyze “near-histories” or hypothetical histories in order to learn from them, as in the analysis of false nuclear alerts or near misses in air traffic safety.15 Finally, interpretations of experience are taught as well as learned, and actors make great efforts to influence how others interpret experience. They promote their ideas and try to build internal coalitions around them, and through their statements and actions they try to influence how they are perceived by external adversaries.16

Analysts who focus on learning within epistemic communities emphasize the importance of both the conceptual framework through which actors interpret experience and the political process through which technical specialists attempt to shape the views of political leaders. It is important to note that not all learning takes place within epistemic communities, particularly with respect to issues of peace and war and particularly in centralized political systems. Adolf Hitler’s inferences about likely Western responses to his aggressive moves were not widely shared in the German military establishment, but his beliefs determined German policy. Joseph Stalin relied on an analogy from the Russian civil war rather than on the consensus of opinion of his military and political experts in assessing the purposes and chances for success in the Winter War with Finland in 1939.17 Similarly, an examination of epistemic communities within Iraq in 1990 would probably not be the best way to explain the Iraqi invasion of Kuwait. The inferences Saddam Hussein drew about U.S. resolve from the Vietnam War and about Iraqi capabilities from the Iran–Iraq War would be more relevant.18


What do people learn about?

Causal learning and diagnostic learning. The analysis of costs and benefits of alternative policies requires both causal laws and initial conditions, and people learn about both. "Causal learning" refers to changing beliefs about the laws (hypotheses) of cause and effect, the consequences of actions, and the optimal strategies under various conditions.19 "Diagnostic learning" refers to changes in beliefs about the definition of the situation or the preferences, intentions, or relative capabilities of others. The "Munich analogy" refers to causal learning about the likely consequences of appeasing an aggressor, whereas observation of the adversary's actions may lead to diagnostic learning about that adversary's preferences and intentions.

Beliefs about both initial conditions and causal laws can be probabilistic as well as deterministic, and this implies that learning can involve changes in the degree of confidence in one's beliefs about causal relationships or initial conditions, a point that is generally neglected in most conceptions of learning in the literature.20 Thus Bayesian probability updating, which involves the revision or updating of prior subjective probability assessments by combining them with observed events, is a form of diagnostic learning.21 In contrast with most of the literature on political learning, which assumes that learning is a "psychological" process driven by cognitive heuristics or perhaps affective biases,22 Bayesian learning is rational in the sense that it makes optimal use of available information.23 A particularly important set of models that incorporates Bayesian updating are models of sequential games with incomplete information, which emphasize (among other things) an interactive dimension of learning often neglected in the literature.24

19. Causal learning may be universal or restricted to certain categories of actors or spatial or temporal domains.
20. I thank Richard Hermann for emphasizing this point to me.
23. Bayesian learning involves an interesting conceptual problem. Probability updating follows directly from environmental stimuli, so that mediating cognitive variables have no independent causal impact. In this sense Bayesian updating is more like structural adjustment or adaptive learning, which I discuss later.
Levels of learning. Learning takes place at different levels. In "simple" learning new information leads to a change in means but not in ends, and in "complex learning" a recognition of conflicts among values leads to a modification of goals as well as means.\textsuperscript{25} This distinction has been extensively developed in the literature, and it provides the basis for hypotheses about the learning process. Philip Tetlock argues that foreign policy belief systems are organized hierarchically, with fundamental assumptions and policy objectives at the highest level, strategic policy beliefs and preferences at an intermediate level, and tactical beliefs at the bottom. He argues that most learning takes place at the tactical level, that political decision makers reconsider their basic strategic assumptions and orientation only after repeated failures to generate a tactical solution to their foreign policy problems, that policymakers reconsider their basic goals or objectives only after repeated strategic failures, and that fundamental learning is so psychologically difficult that it is likely to occur only in conjunction with massive personnel shifts.\textsuperscript{26}

The classification of changes in goals, philosophical assumptions, and more fundamental values is somewhat more problematic. Changes in one's conceptions of the national interest that are seen as instrumental to the achievement of higher order national values clearly fall into the category of learning. Many paradigmatic shifts, including Gorbachev's "new thinking," probably fit into this category. But if the new values are desired as ends in themselves, as in a religious revelation, rather than means to higher ends, then this should not be classified as experiential learning. Thus I would refer to normative change rather than normative learning, and I would categorize changes in Judith Goldstein and Robert Keohane's "principled beliefs" as such.\textsuperscript{27}

Learning to learn. In addition to learning about causal laws and initial conditions, individuals also learn how to learn. They learn new decision rules, judgmental heuristics, procedures, and skills that facilitate their ability to learn from subsequent experience. Chris Argyris and Donald Schon refer to this as "deutero learning." Individuals reflect on and inquire into previous contexts for learning. . . . They discover what they did that facilitated or inhibited learning, they invent new strategies for learning, they produce these strategies, and they evaluate and gen-


\textsuperscript{26} Tetlock, "Learning in U.S. and Soviet Foreign Policy," pp. 27–31.

eralize what they have produced. The results become encoded in individual images and maps and are reflected in organizational learning practice.28

The increased capacity for learning is reflected in organizational reform to enhance the quality of information search and analysis, to improve organizational memory, to incorporate new decision rules or analytic techniques, to utilize technical expertise or academic specialists, to expand the use of computers, or to develop new language capabilities.29

These various types of learning make it clear that learning should not be equated with the "lessons of history" or historical analogies. Although drawing lessons from key events or historical analogies is an important form of learning, particularly given the psychological tendency for people to overweight dramatic events and underweight statistical averages in their assessments of frequency and probability,30 learning can also involve probability updating, learning new skills or procedures, or the incremental change of beliefs over time as a result of the gradual cumulation of experience.

Organizational and governmental learning

I have defined learning as a change of beliefs at the individual cognitive level. This raises difficult questions about the meaning and relevance of the concepts of organizational or governmental learning.31 My argument is that the reification of learning to the collective level—and the assumption that organizations or governments can be treated as organisms that have goals, beliefs, and memories—is not analytically viable. Organizations do not literally learn in the same sense that individuals do. They learn only through individuals who serve in those organizations, by encoding individually learned inferences from experience into organizational routines.32

32. Routines refer to the forms, rules, procedures, conventions, strategies, and technologies around which organizations are constructed and through which they operate, as well as the organizational culture and paradigms through which they are interpreted. See Levitt and March, "Organizational Learning," p. 320.
This perspective is widely (but not universally) accepted in the literature on organizational learning. Argyris and Schon argue that "organizational learning is not the same thing as individual learning. . . . Organizations do not literally remember, think, or learn. . . . There is no organizational learning without individual learning. . . . Organizational learning is a metaphor." Similarly, Hugh Heclo suggests that "Social learning is created only by individuals," and Bo Hedberg suggests that "it is individuals who act and who learn from acting; organizations are the stages where acting takes place." Among foreign policy analysts, Earl Ravelan argues that the learning of a collective . . . is different from the learning of an individual. . . . Lessons must be internalized in some enduring, objective, consistent, and therefore predictable way. . . . Learning . . . means imposing upon the structure and process of policy choice a set of decision rules . . . that will dispose the system to respond in certain ways—presumably better than before—to future contingencies.

Similarly, John Lovell argues that organizations learn from experience "to the extent that policy experiences become assimilated into organizational doctrine, structures, decision-making procedures, personnel systems, and organizational commitments."

Not all organizational change derives from learning. The process involves learning only if it includes individual cognitive change and only if individuals' inferences from experience become embedded in organizational memory and procedures. Thus organizational learning involves a multistage process in which environmental feedback leads to individual learning, which leads to individual action to change organizational procedures, which leads to a change in organizational behavior, which leads to further feedback.

The process of organizational learning can be blocked at any point in the cycle. Individuals may fail to learn from the environment. They may learn but be deterred from attempting to institutionalize their new ideas. They may try but politically fail to change organizational procedures. They may effect organizational change but (in rare cases) such changes might not lead to a change in organizational behavior if those procedures are circumvented by . . .

33. The quotations are drawn from Argyris and Schon, Organizational Learning, pp. 9–11, 20, and 28; from Hugh Heclo, Modern Social Politics in Britain and Sweden (New Haven, Conn.: Yale University Press, 1974), p. 306; and from Hedberg, "How Organizations Learn and Unlearn," p. 3, respectively.
34. Ravelan, Never Again, pp. 27–28.
37. Etheridge argues that one of the reasons the U.S. government did not learn from the Bay of Pigs fiasco was that "subordinates were at personal risk if they told the truth"; see Can Governments Learn? p. 100.
organizational leaders in the future. Thus, individual learning is necessary but not sufficient for organizational learning, and studies of organizational learning should attempt to specify at what point in the cycle the learning process gets blocked.\textsuperscript{38}

In a similar way, we can conceptualize governmental learning in terms of individually or collectively learned inferences from experience that get encoded into governmental institutions and decision-making procedures. But the concept of governmental learning is even more problematic than that of organizational learning, because it involves the aggregation of learning by multiple organizations and by multiple individuals acting either through organizations or independently of them. Exactly how this works varies across different types of political systems.

Admittedly, my conception of governmental learning is a demanding one, for it involves more than the aggregation of individual learning or the development of new consensual knowledge. Unless new knowledge is institutionalized, it will not endure, and a change in personnel would immediately result in unlearning.\textsuperscript{39} But to speak of learning and unlearning as a function of personnel change is to blur an important distinction between political turnover and learning, which I discuss later. This raises an interesting question: under what conditions is organizational or governmental learning more important than individual learning by top governmental decision makers as a source of policy change? This depends on the degree of centralization and bureaucratization in the political system, the nature of the issue-area, and other variables. Organizational learning is probably more important than individual learning in international economic or environmental policy than in security policy and more important in arms control and issues relating to force structure and strategic doctrine than in decisions to use military force.

\section*{What learning is not}

\textit{Learning and policy change}

Implicit in the above discussion is the idea that learning is not definitionally equivalent to policy change. States alter their foreign policies because of changes in the external environment, a change in political leadership, a realignment of coalitions at the bureaucratic or societal levels, or a change in

\textsuperscript{38} My conception of organizational learning involves intendedly rational action by individuals to improve organizational routines and behavior. It differs from models of cybernetic learning, which emphasize preprogrammed responses rather than outcome calculations and the evolutionary selection of routines that work. See John Steinbrunner, \textit{The Cybernetic Theory of Decision} (Princeton, N.J.: Princeton University Press, 1974), pp. 78–79.

\textsuperscript{39} Haas and Evangelista each give less emphasis to the institutionalization of learning than I do. See E. Haas, “Collective Learning”; and Evangelista, “Sources of Moderation in Soviet Security Policy,” p. 272.
individual beliefs about policy goals or the optimal means to achieve them. Each of these variables may have an important impact on policy, but only the last constitutes learning. To explore the empirical relationships between learning and policy change, it is first necessary to distinguish between them analytically.

Learning clearly is not necessary for policy change. But neither is it sufficient for policy change, because not all learning gets translated into changes in policy. Actors may learn from experience but be prevented by domestic, economic, or bureaucratic constraints from implementing their preferred policies based on what they have learned. Some argue, for example, that by 1985 Gorbachev and his military and foreign policy advisers had concluded that a military solution to the problem in Afghanistan was impossible and that a military withdrawal was desirable, but that political conditions made it impossible to raise the issue publicly until 1987. Decision makers who learn certain lessons (or draw certain inferences from experience) may be replaced by others who either never learned that lesson or who drew a different set of inferences. Or statesmen may learn certain lessons without a situation ever arising in which those lessons are applicable. U.S. and Soviet leaders learned to manage their conflicting relationship over a divided Germany, but these lessons are no longer relevant to Russo–American relations. Finally, learning may reinforce decision makers’ current beliefs and actually inhibit policy change. This last point is particularly important, for a great deal of research suggests a strong tendency for people to interpret information in a way that conforms to their prior expectations and worldviews. This increases confidence in existing beliefs and thus reinforces continuity in behavior.

Some reject this analytical distinction between learning and policy change. William Jarosz and Joseph Nye define learning as “the acquisition of new knowledge or information that leads to a change in behavior.” The authors recognize the distinction between cognition and behavior but argue that “learning that does not affect behavior is not useful for developing a more general theory of foreign policy.” I disagree. If we study only learning that is followed by policy change, we cannot understand when individual learning gets translated into policy and when learning gets blocked by institutional or political constraints. This is important for normative or policy purposes as well as for the scientific study of foreign policy. For political leaders to make better foreign policies, it is useful to know what types of organizational arrangements facilitate the transmission of new information (learning) into effective policy.

42. See Jervis, Perception and Misperception in International Politics, chap. 4; and Nisbett and Ross, Human Inference.
43. The quotations are drawn from Jarosz with Nye, “The Shadow of the Past,” pp. 130 and 180, respectively.
Others focus not on individual learning but on governmental or social learning and equate it with policy change. Heclo, for example, focuses on social learning as "a relatively enduring alteration in behavior that results from experience." Peter Hall defines "social learning as a deliberate attempt to adjust the goals or techniques of policy in response to past experience and new information. Learning is indicated when policy changes as the result of such a process." Andrew Farkas suggests that "state learning is the process whereby states identify and respond to international change."  

Each of these conceptualizations raises difficult issues concerning the relationship between individual learning and collective learning and the dangers of reification of individual-level concepts to the collective level. In addition, with respect to the Farkas and Heclo definitions, let me note that there are several alternative models of the processes whereby states identify and respond to international change, that it is analytically useful to distinguish among these, but that Heclo and Farkas define social learning so broadly as to blur these important theoretical distinctions.  

Rather than equate learning with policy change, it is more useful to conceptualize a political learning model as involving a two-stage process or causal chain in which (1) the observation and interpretation of experience lead to a change in individual beliefs and (2) belief change influences subsequent behavior. Evidence that learning occurs is necessary but not sufficient to validate a learning model of foreign policy. We must also demonstrate the causal linkage between learning and policy change. This will be quite complex in all but the most highly centralized political systems.

The accuracy criterion  

Whereas I define any experience-induced belief change as learning, some impose a more restrictive accuracy criterion: actors must make the correct inferences from experience and acquire an improved understanding of how the world works. The accuracy criterion is central to what Tetlock calls the "efficiency definition of learning," in which "learning involves acquiring the ability to match means and ends more effectively." This definition includes three elements that are individually necessary and jointly sufficient for efficiency learning: (1) a change in the content of one’s beliefs that (2) is in the direction of greater accuracy about the world and that (3) facilitates the ability to achieve one’s goals. In contrast, my definition includes only the first.

44. The quotations are drawn from Heclo, Modern Social Politics in Britain and Sweden, p. 306; Hall, "Policy Paradigms, Social Learning, and the State," p. 278; and Farkas, "State Learning and International Change," p. 20, respectively.
45. In fact, Farkas constructs an evolutionary model of foreign policy change in which individual learning based on cognitive change does not necessarily play a central role.
46. Jervis, Perception and Misperception in International Politics, p. 222.
47. The quotation is from Tetlock, "Learning in U.S. Foreign Policy," p. 22; see also pp. 27–38. Tetlock classifies the first element as the “belief system” (or “cognitive psychological”) approach to
criterion, which is necessary but not sufficient for the second, which in turn is necessary but not sufficient for the third. Belief change is not always accurate, and knowledge does not always translate into skill. As George Breslauer emphasizes, greater realism about the world (learning that) is distinct from greater skill in advancing one’s interests (learning how).48

Let us leave the more demanding efficiency criterion aside and focus on accuracy. One advantage of the accuracy criterion is that it allows us to differentiate learning from the broader concept of belief change. If learning is equivalent to a change of beliefs but nothing more, why do we need the concept of learning? What is the value added? In addition, without something like the accuracy criterion we cannot distinguish learning from paranoid thinking, in which a person’s simplistic belief system leads her to perceive a world of enemies and to interpret all new information in a way that confirms that image. Janice Stein emphasizes these points in her argument that an “evaluation of the structure and content of cognitive change” is “inescapably built into the concept of political learning.”49

The obvious problem with this approach is that it requires a standard by which we can identify and measure the accuracy of learning. Tetlock concedes that the assessment of learning is straightforward only in “learner-friendly environments” in which there are well-defined evidential standards for determining success and failure, where it is possible to conduct controlled experiments to eliminate alternative causal hypotheses, where the instruments of measurement themselves can be based on well-established laws, and where there is quick and unambiguous feedback regarding the correctness of one’s predictions.50

Needless to say, such learner-friendly environments are far less common in “ill-structured” foreign policy contexts than in the highly structured contexts found in experimental laboratories, and we have few hypotheses that have sufficient empirical support to be widely accepted by scholars with differing theoretical and methodological perspectives.51 In the absence of a consensus on empirical laws by which the accuracy of learning can be assessed, there is a tendency for observers to evaluate learning in terms of their own causal assumptions and normative biases, which creates “effectiveness” and “evaluative” biases, respectively. Analysts disagree intensely about the correct

learning. Etheridge also defines learning in terms of accuracy and effectiveness. See Etheridge, *Can Governments Learn*, p. 66. Note that the efficient matching of means and ends can involve either the adoption of more effective strategies for pursuing one’s original goals or the redefinition of one’s goals in more realistic ways.


“lessons” of the Vietnam experience, for example, not only within the United States but also within the Soviet Union and between the two countries, and we have no criteria by which we might assert with confidence that one set of lessons is objectively superior to another. 52

To insist on an accuracy criterion would either result in research that is less rigorous, more subjective, and more dependent on the analytical and normative biases of the analyst or it would paralyze analysis because of the lack of measurement standards. The construction and confirmation of causal hypotheses is the goal of social science, and it is premature to treat such hypotheses as a prerequisite for the analysis of models of learning.

The epistemic community approach to learning, with its emphasis on a community of experts who share a common paradigm, does not resolve this problem. Although there may be some issue-areas for which a consensus may emerge among experts regarding causal laws (particularly with respect to technology, natural or biological science, or possibly some economic relationships), that is the exception rather than the rule in security policy. Moreover, the consensus of experts can sometimes be wrong, as was the Western consensus about Hitler’s intentions in the late 1930s and the consensus about Saddam’s intentions in 1990. Moreover, the question at hand is not whether there is a consensus of actors or knowledge-based experts within a particular epistemic community who can agree on causal laws and therefore on the standards by which learning can be measured, but whether there is a consensus on these questions among social science analysts.

Given the absence of agreed-upon standards by which the accuracy of belief change can be evaluated, it is better to exclude the accuracy criterion (and the more demanding effectiveness criterion as well) from the definition of learning and thus minimize the role of subjective effectiveness and evaluative biases. 53

The result may be that we have some difficulty distinguishing learning from paranoid thinking and that the distinction between learning and belief change is narrowed though not eliminated, but this trade-off is preferable to the alternative of greater subjectivity or the paralysis of research. This does not mean that the question of accuracy in the observation and interpretation of experience is unimportant, but rather that it should be resolved by empirical analysis rather than definition. If learning requires accuracy, we cannot empirically investigate the accuracy of learning or the conditions, issue-areas, and organizational structures that facilitate it. 54


53. Similarly, Haas argues that “Notions of affect, imitation, intelligence, effectiveness, and therapy must be banished from our discussion of learning”; see E. Haas, “Collective Learning,” p. 75. Keohane and Nye suggest that we “need not identify [learning] with morally improved action”; see “Power and Interdependence Revisited,” p. 749.

54. Moreover, our ultimate aim is to explain policy change, and incorrect learning is an important source of policy change.
There has, in fact, been considerable research on the accuracy of learning. Organizational theorists Pertti Lounamaa and James March find that learning is “myopic, incremental, and ignorant.”\textsuperscript{55} May concludes that “policy-makers ordinarily use history badly.”\textsuperscript{56} Jervis argues that

People pay more attention to what has happened than to why it has happened. Thus learning is superficial, overgeneralized, and based on post hoc ergo propter hoc reasoning. As a result, the lessons learned will be applied to a wide variety of situations without a careful effort to determine whether the cases are similar on crucial dimensions.\textsuperscript{57}

People often pick superficial or perhaps even irrelevant analogies, minimize the differences between the analogy and the current situation, fail to search for alternative analogies, and stick with the analogy in spite of increasing evidence of its flaws.\textsuperscript{58}

**Cognitive structure and learning**

An alternative approach to learning, which Tetlock and Lloyd Etheridge each advocate, focuses on the structure (rather than the content) of individuals’ beliefs. As Tetlock suggests, in the cognitive structural approach, “learning involves change in the cognitive structure of one’s image of the international environment . . . in the direction of greater complexity and greater capacity for self-criticism.” The dimensions of complexity include: the number of distinct arguments underlying a set of beliefs (cognitive complexity), the degree of inconsistency among them (evaluative complexity), the extent to which these distinct elements are integrated into a larger framework that resolves inconsistencies and value trade-offs (cognitive integration), and the degree of self-reflection about one’s assumptions and causal inferences. Cognitive structural learning consists of increasing complexity along any of these dimensions.\textsuperscript{59}

The conceptualization of learning as changes in beliefs within an increasingly differentiated and integrated cognitive structure has the merit of eliminating the problem of paranoid learning by excluding simplistic belief change, but it creates other conceptual problems.\textsuperscript{60} One is that it sneaks the accuracy criterion through the back door through the assumption that an increasingly complex belief system leads to an improved understanding of the world and an increased ability to match means and ends. This is not always true. A more


\textsuperscript{56} May, “Lessons” of the Past, p. xi.

\textsuperscript{57} Jervis, *Perception and Misperception in International Politics*, p. 228.

\textsuperscript{58} See Khong, *Analogies at War*, chap. 2; and Vertzberger, *The World in Their Minds*, chap. 6.


\textsuperscript{60} There are also important methodological problems. The operationalization and measurement of cognitive structure can be very difficult, time-consuming, and data-intensive.
complex cognitive structure does not always lead to a better understanding of the world or to better skill in advancing one’s own interests, and more accurate beliefs about the world do not always require cognitive complexity. One can be complex but wrong or simple but right. For example, Jimmy Carter was probably not thinking more complexly (or even accurately) when he claimed that he learned more about the Soviet Union on the day of the Soviet invasion of Afghanistan than in the previous three years. Those with more complex beliefs about Hitler in the late 1930s did not offer better policy prescriptions than did those with less complex beliefs.

The relationship between cognitive structure and the content and accuracy of beliefs is quite complex, and there are some theoretical reasons for expecting that under some conditions structural complexity might impede accurate learning rather than enhance it. More cognitively complex belief systems are less falsifiable and more resistant to change in the face of discrepant information because they make it easier for actors to assimilate inconsistent information into their existing belief structures as exceptions and special cases. In fact, increases in cognitive complexity may be a way of avoiding belief change rather than facilitating it, and people often develop more elaborate and perhaps tortuous justifications in support of their existing judgments and decisions. They engage in bolstering, belief system overkill, and various defense mechanisms to block or distort discrepant information and thereby avoid confronting value trade-offs that are cognitively difficult, emotionally wrenching, or politically costly. High complexity might also lead to confusion and paralysis if increases in evaluative complexity are not paralleled by an increase in cognitive integration.

Another problem is that cognitive complexity may be context-dependent; hence, we cannot assume that a single measure of the various dimensions of an individual’s cognitive complexity will be applicable to different problem domains, contexts, or emotional states. Tetlock suggests that complexity is a function of accountability: people who are in a position of needing to justify their views to others tend to exhibit greater cognitive complexity than those who do not, particularly if they do not know the views of their audience. Whether this observed association applies to internal cognitive structures as well as to rhetoric is another question. People may advance more complex arguments when they use lessons from history strategically to persuade others than when they engage in a purely intellectual process of making inferences.

from history, but whether their internal thought processes are more complex in the former case raises some difficult methodological questions.

Complexity is also a function of problem domain. Individuals may have complex views on some issues—particularly those with which they are familiar—but more simplistic views on other issues, and the accuracy and dynamics of information processing may be different in these different domains. This relates to the social psychology literature on experts and novices. There is some evidence that the relationship between the complexity of an information system and the degree of confidence in one's ideas corresponds to a U-shaped curve, where the tendency toward vacillation and indecisiveness is greatest for those with moderately complex belief systems.65

Thus, the relationship between complexity and knowledge is itself extraordinarily complex. Tetlock may be right that the development of more nuanced, differentiated, and integrated beliefs about the world increases the likelihood of achieving important and realistic goals, especially when the environment is highly complex and rapidly changing,66 but weak, probabilistic, conditional, and complex relationships are better left as empirical questions to investigate rather than definitional points of departure. Still another reason to exclude cognitive complexity from the definition of learning is that a change in one's definition of the situation (such as expectations of an adversary attack) based on probability updating is a potentially important form of learning but one that often occurs within a static cognitive structure.

In summary, the incorporation of elements of policy change, empirical accuracy or efficiency, or cognitive structural complexity into a definition of experiential learning creates a number of conceptual and methodological problems. I exclude those elements and prefer a minimalist definition of learning as a change of beliefs, skills, or procedures based on the observation and interpretation of experience. This conceptualization of learning suggests a research agenda that includes the empirical questions of how well political leaders learn from the past, how effectively they can utilize their inferences from experience to advance their interests, and whether more sophisticated or complex thinkers learn better than others.

Adaptation or structural adjustment

The analytic distinction between structural systemic explanations of foreign policy behavior and individual-level psychological explanations is widely accepted in the field of international relations, and it implies that learning models of foreign policy are distinct from models of structural adjustment or adaptation to environmental change.67

67. I prefer “structural adjustment” to “adaptation” to avoid any confusion created by the equating of adaptation and learned behavior in evolutionary biology or in cybernetics.
This distinction holds whether we focus on learning initial conditions or learning causal laws. In terms of initial conditions, the structural adjustment model suggests that all actors with identical preferences and information in identical circumstances will respond in the same way to environmental change, whereas the learning model posits differences in perceptions of environmental change and therefore in behavioral response. In terms of causal laws, a state that adapts to the environment will behave the same way under identical conditions at different times, whereas a state that learns will behave differently under identical conditions at different times because learning leads to different expectations regarding the consequences of one's behavior. 68

Structural adjustment models assume that individuals recognize changing environmental conditions but that there are well-defined and predictable relationships between structural antecedents and actor perceptions and between perceptions and behavioral responses, so that learning is epiphenomenal. Learning models assume that these intervening linkages are much less deterministic and that different individuals with different cognitive structures and beliefs behave differently.

The critical difference between the structural adjustment and learning models is not whether actors learn, because both satisfy my definition in terms of a change in beliefs as a consequence of the observation of experience. The difference is whether learning has a causal impact on behavior. Recall that learning posits a two-stage causal chain in which learning occurs and then causally influences behavior. In the structural adjustment model, learning occurs but has no causal impact on behavior, which permits analysts to ignore these intervening learning processes and thus construct more parsimonious models. In the learning model, the intervening perceptual variable is not epiphenomenal but varies across actors in terms of both the accuracy and rate of learning and consequently carries significant explanatory power. The difference lies not in the empirical behavior that occurs but in the models that we construct to explain that behavior. 69

The distinction between learning and structural adjustment models has important implications for the concept of "neorealist learning," which Tetlock identifies as one of five approaches to learning in the literature. The basic argument, as Nye suggests, is that "Realist theories maintain that states learn by responding to structural changes in their environment." 70

Nye is right that neorealist theories technically assume that states learn, but the main point is that learning has essentially no independent explanatory power in these theories. Neorealism is a structural theory that posits that a given international structure has a fairly well-defined set of consequences (or at

68. This is a refinement of Bennett's conceptualization in "Theories of Individual, Organizational, and Governmental Learning and the Rise and Fall of Soviet Interventionism, 1973–1983," p. 102.
69. We could distinguish the two by referring to learning through structural adjustment as "adaptive learning."
least a well-defined set of outcomes that is very unlikely to occur), so that structures determine or at least constrain outcomes. The theory assumes through the rationality postulate that political actors correctly understand the causal “laws” of international politics (however probabilistic and contingent) and correctly perceive initial conditions and any changes that occur in them. Thus, in neorealist theory the link between structure and behavior is invariant, and intervening perceptual variables carry no explanatory power.  

Kenneth Waltz and other neorealists allow for two forms of learning in international politics. One is the process of socialization in which states assimilate the norms of the system (i.e., learning). Systemic structure also acts as a selector by rewarding some behaviors and punishing others: states that fail to learn the causal laws or the norms of the international system cannot compete and so drop out of the system. This second process is better described as the selection of a system of rational adapters rather than learning. The fact that some fail to assimilate the norms of the system implies that learning varies across states, although the very low death rates of states implies that the variance in this particular form of learning is small.

Hence, neorealist theory and learning models provide different explanations for foreign policy change, and we should not confuse the two. Neorealists emphasize the rational and efficient adjustment to changing structural incentives, whereas learning theorists emphasize significant variations in individual responses to structural changes deriving from variations in cognitive structures, beliefs, and processes. Which model provides the best explanation for foreign policy change is, of course, an empirical question. It is one we can attempt to answer through research designs that compare how different states respond to changing international structures under different conditions at different times.

Selection, turnover, and political change

It is also useful to distinguish among experiential learning, evolutionary selection, and turnover. Learning involves cognitive change in individual units. Evolutionary selection involves the selection of certain actors (or ideas or


73. The death rates of regimes and individual leaders are much higher than for states. Waltz makes no attempt to explain this variation in learning, which reduces somewhat his ability to explain the patterns of interactions among states.

procedures) out of the system and their replacement by other actors who are better able to survive and thrive in a changing environment.\textsuperscript{75} Turnover in an institution—which results from generational change, political competition or realignment, or leadership succession—introduces new members with different goals, causal beliefs, and abilities. Turnover, along with a change in policy preferences derived from power-based bargaining, fits into a political model of policy change rather than learning, although the two may be mutually reinforcing.

A change in system-level patterns of great power behavior can result from learning-driven policy change by existing great powers or from the replacement of one or more great powers by others who have always pursued better policies and who better adjust to changing structural conditions. If cooperation arises in a system because those who pursue noncooperative strategies do poorly and are eliminated, leaving those who pursue cooperative strategies, then it is an example of the evolution of cooperation in the system, not learning. The emergence of cooperation in Robert Axelrod’s iterative prisoners’ dilemma game is driven by evolution rather than learning.\textsuperscript{76}

At the domestic level, if a leadership succession, election, or political realignment brings to power a new individual or regime with a different set of shared beliefs, then any subsequent policy change would derive from turnover rather than learning. But if external events lead individual political leaders to change their beliefs and consequently their policies, then a learning model would be appropriate. Turnover explains the Russian policy reversal toward Prussia in 1762, when the death of Czarina Elizabeth brought to power Peter III, who immediately ceased hostilities against the nearly defeated Frederick, restored all of his conquests, and then briefly joined him against Austria. Learning explains Chancellor Bethmann-Hollweg’s sudden policy reversal toward Austria on the evening of 29–30 July 1914. After receiving the message from his ambassador in London that, contrary to prior expectations, Britain would intervene in a continental war, Bethmann-Hollweg briefly attempted to pull Austria back from the brink of war rather than push Vienna into one.\textsuperscript{77}

How we explain Soviet foreign policy change under Gorbachev depends on whether Gorbachev changed his beliefs after coming to power and observing the failure of Soviet policies or whether domestic crises and political maneuvering brought to power a man with a different set of fairly well-developed beliefs.


\textsuperscript{76} Axelrod, \textit{The Evolution of Cooperation}. The second round of the tournament, wherein some players constructed new strategies after observing the results of the first round, involves learning.

In fact there was probably some combination of both, which brings us to the interaction effects between learning and politics.

Learning, politics, and external influences

Learning and domestic politics

We have seen that learning is neither necessary nor sufficient for policy change. Individual learning has little impact unless those who learn are in a position to implement their preferred policies or to influence others to do so. Different people learn different things and at different rates, and which ideas have the greatest impact is as much a political as an intellectual question. George Ball and William Bundy learned different lessons from Korea, for example, but Bundy’s lessons were more influential although arguably less correct. As Nye argues, “Shifts in social structure and political power determine whose learning matters.” 78 Although some debate the relative explanatory power of learning and political power, the key question is how intellectual and political processes interact to shape policy. 79

Shifts in political power determine when conditions are ripe for political leaders to put their ideas and policy preferences on the political agenda and effect a change in policy. Sarah Mendelson, for example, argues that Gorbachev began to learn from the failure of Soviet policy in Afghanistan by 1983 and that the basic ideas for change in foreign and economic policy were in place by the time he came to power in 1985. It was not until 1987, however, that it was politically feasible to put withdrawal on the policy agenda. Kaiser Wilhelm concluded before Bethmann-Hollweg did that Britain would intervene in a continental war, but the Chancellor was in a position to delay, distort, and undermine the Kaiser’s “Halt-in-Belgrade” proposal which might have facilitated crisis management. 80

Changes in political conditions that facilitate the implementation of policies based on learning are not exogenous. Political leaders actively promote their ideas among key governmental elites and social groups to create a coalition around those ideas, so that policy entrepreneurship plays a key link between learning and policy change. This involves political maneuvering as well as persuasion. To advance the “new thinking” in the Soviet Union, for example, Gorbachev replaced many “old thinkers” with “new thinkers” who could further promote those ideas in their agencies. Gorbachev recognized the political limits to his personnel reshuffling, however, and left the General Staff

79. See Hall, “Policy, Paradigms, Social Learning, and the State”; and Mendelson, “Internal Battles and External Wars.”
80. Mendelson, “Internal Battles and External Wars.” Mendelson argues that even before Gorbachev, Andropov had learned from policy failures and concluded that a withdrawal was necessary but politically infeasible (p. 347). See also Breslauer, “Explaining Soviet Foreign Policy Changes,” p. 211. On the 1914 case, see Levy, “Preferences, Constraints, and Choices in July 1914,” pp. 174–78.
untouched—at least until May 1987, when Mathias Rust succeeded in landing a plane in Red Square.81

Not all learning is from the top down, and political and technical specialists in certain policy communities attempt to sell their ideas to political leaders. Their success depends on the power of their ideas, their degree of consensus on those ideas, their access to people in leadership positions, their political skill in creating and exploiting that access, and particularly on the match between the ideas of the specialists and the interests of the leadership and the extent to which specialists are empowered by leaders.82 Several recent studies have emphasized the reciprocal interaction of the ideas of the specialists and the interests of the powerful in the Gorbachev revolution in Soviet foreign policy.83

Important linkages between ideas and politics in different issue-areas can also exist. Many argue that changing ideas about Soviet foreign policy under Gorbachev were ultimately driven by the failure of the Soviet economy. The need for the stabilization and revival of the economy, which was essential if Soviet elites were to maintain their positions of power, required a shift in resources away from military spending and external commitments, which in turn required a reevaluation of the cold war paradigm, Soviet state interests, and strategies to achieve them. Mendelson argues that Soviet economic reform and a reduction in military spending required U.S. cooperation, which required in turn Soviet withdrawal from Afghanistan. James Moltz argues that there were competing economic models (Gorbachev’s and Boris Yeltsin’s, for example) and that these models themselves derived from the differing political interests of their respective advocates. Celeste Wallander argues more generally that internal economic crises often played a critical role in Soviet foreign policy change.84

These arguments have led several Sovietologists to argue that Soviet foreign policy change under Gorbachev derived more from political change than from learning. Thus Matthew Evangelista suggests that “Learning metaphors obscure what is fundamentally a political process,” and Allen Lynch argues


82. Differences among technical experts give political leaders the opportunity to rely on those experts whose ideas are compatible with their own and who can be used to legitimize their own preexisting policy preferences or enhance their domestic power base. This point is often underemphasized in the theoretical literature on epistemic communities.

83. See Mendelson, “Internal Battles and External Wars”; Jeff Checkel, “Ideas, Institutions, and the Gorbachev Foreign Policy Revolution,” World Politics 45 (January 1993), pp. 271–300; and Stein, “Political Learning by Doing.” This constitutes an improvement on some of the early theoretical work on epistemic communities, which gave primary emphasis to the one-directional flow of information and influence from specialists to political leaders. See E. Haas, When Knowledge Is Power.

that the new thinking "is first of all a political rather than an intellectual or conceptual act." 85

This goes too far, however, because the relationship between politics and learning is usually reciprocal rather than unidirectional. A reevaluation of fundamental assumptions and interests may be unlikely to occur in the absence of a major crisis or policy failure, but once it occurs it often reshapes the political landscape in a way that leads to further change. Thus Breslauer argues that "political changes facilitate regime learning by providing the impetus, political incentive, and political opportunity for a significant revaluation of assumptions," and that "politics and learning... were mutually reinforcing" in the Soviet case. 86

The fact that Gorbachev and others had incentives to learn is not inconsistent with my conception of learning. We must distinguish between learning and its causes. Admittedly, the distinction between genuine learning (motivated or otherwise) and the instrumental adoption of ideas for strategic purposes is more difficult at the empirical than the analytic level, but it is not impossible. One criterion, based on the tendency of beliefs to persevere and be resistant to change in the face of discrepant information, is that the new ideas should persist over time even though interests may change. 87 A second criterion is that learning should be easier for those who are less committed to their existing beliefs. Unlearning is more difficult than learning. Thus Janice Stein argues that Gorbachev was an "uncommitted thinker" with respect to foreign policy and therefore open to new ideas. Policy failure and political necessity motivated him to learn, and the absence of deeply embedded ideas about security permitted him to learn. 88

This logic implies that those with more expertise and more entrenched beliefs on foreign and defense policy would have been less likely to change those beliefs, and that those with more expertise on domestic economic policy (including Gorbachev) would be psychologically less receptive to new ideas about the economy. These predictions suggest that a research design for testing hypotheses of motivated learning should include a longitudinal comparison of the relationship between interests and beliefs for a given individual over time and a cross-sectional comparison of different individuals with similar interests but different levels of expertise in different issue-areas.

87. See Nisbett and Ross, Human Inference; and Khong, Analogies at War, chap. 2.
88. Stein, "Political Learning by Doing."
The generational change hypothesis

Shifts in political power can also influence policy through long-term generational changes that bring to leadership positions a new cohort of political decision makers with a different set of shared formative experiences. Many Sovietologists, for example, trace Soviet foreign and economic policy change under Gorbachev to generational changes in Soviet political and military elites. A generation whose beliefs were formed during Stalin's forced collectivization, the great terror, and the Great Patriotic War was replaced by the "children of 1956" who came of age politically at the time of Nikita Khrushchev's denunciation of Stalin. 89

Some contrast generational change with learning as alternative models of foreign policy change. 90 This dichotomy is useful only if we restrict ourselves to learning that is temporally proximate to the behavioral change we are attempting to explain. Learning plays a central role in the generational change model, but much earlier on the path to policy change. The model's key hypothesis is that the shared experiences (and interpretations of them) of people at certain critical stages of their personal, intellectual, or political development have a powerful and enduring impact on their beliefs about the world, so that different generations learn different lessons. 91 This suggests a research design for an empirical test of the generational change model: a comparison of the variation of beliefs between generations of political elites with the variation of beliefs within generations. The former must be significantly larger than the latter to confirm a generational change model. 92

In the generational change model, learning occurs early in the causal chain and has a delayed impact on policy. Politics may also delay the impact of learning on policy, as Mendelson argues in the case of Gorbachev and the Soviet withdrawal from Afghanistan. In addition, a historical event may occur but not have a strong psychological impact until a subsequent event evokes certain parallels with the earlier event, implants or reinforces lessons from the first event, and leads to a change in beliefs and in policy. 93 Truman's reference to the Munich crisis after the North Korean attack and his sudden reversal of

92. It is also necessary to show that these shared beliefs, and not other variables, shaped policy change. For criticisms of the generational change explanation of Soviet foreign policy change under Gorbachev, see Stephen M. Meyer, "The Sources and Prospects of Gorbachev's New Political Thinking on Security," International Security 13 (Fall 1988), pp. 124–63; and Stein, "Political Learning by Doing."
93. The availability heuristic is important here, as are changing paradigms that make certain phenomena more salient. See Tversky and Kahneman, "Availability." See also Jervis's discussion of the evoked set in Perception and Misperception in International Politics, chap. 11.
his administration's previous policy position seem to approximate this pattern.94

Thus the key question is often not whether learning occurs but when it occurs. It is not enough to say that learning contributes to foreign policy change. We must specify where on the causal chain learning occurs and how it interacts with other variables. A key question to ask of a decision maker, then, is what did he learn and when did he learn it.

Learning from policy success and failure

There are some important relationships between learning and external variables, beyond the obvious point that external events are the primary source of learning about international politics.95 The success or failure of past policy is particularly important. One hypothesis that emerges from the literatures in social psychology and organizational theory is that people learn more from failure than from success. A corollary, framed in terms of policy impact, is that past success contributes to policy continuity whereas failure leads to policy change.96 This serves as the basis for a number of interesting and testable propositions in international politics. Dan Reiter, for example, tests a learning hypothesis against a balance-of-threat hypothesis by examining whether alliance choices are affected more by the success or failure of their alliance policies in the last war or by current external threats. His aggregate study of small powers for the period since World War I supports the learning hypothesis.97

People also attempt to learn from past successes in an attempt to replicate them. Militaries spend as much time studying successes as failures. But this does not necessarily lead to better policies. As Jervis argues, “Those who remember the past are condemned to make the opposite mistakes.” They tend to overestimate the extent to which their own policies were responsible for success, to neglect the importance of the contexts in which the success occurred, and to compare them with the current situation.98 Those who wish to generalize from the U.S. success in the Persian Gulf War, for example, should

94. See May, “Lessons” of the Past; Jervis, Perception and Misperception in International Politics; and Levy, “Learning from Experience in U.S. and Soviet Foreign Policy.” Thus I disagree with Snyder, who argues that Truman’s references to Munich were instrumental rather than manifestations of genuine learning; see Snyder, Myths of Empire, pp. 255–304.
95. Individuals may also draw foreign policy lessons from domestic events. Ronald Reagan’s firing of domestic air traffic controllers may have influenced others’ images of his resolve in international politics.
97. Reiter, “Learning, Realism, and Alliances.”
98. Jervis, Perception and Misperception in International Politics, pp. 275–79; the quotation is from p. 275.
consider Col. David H. Hackworth's warning that "Desert Storm was the mother of all military anomalies. It was a war unto itself, not a model for the future."  

Success and failure cannot always be measured in objective terms and are often influenced by expectation and aspiration levels. Outcomes that are consistent with expectations and achieve one's goals generate few incentives for a change in beliefs, whereas unexpected results and those that fall short of one's goals are more likely to trigger a change in beliefs and policy. Thus the most likely outcomes to trigger learning are failures that were either unexpected at the time or unpredictable in retrospect, though predictable failures are still more likely to lead to learning than are successes. Thus, how political leaders frame outcomes as losses or gains with respect to their expectation and aspiration levels constitutes an important variable.

There are other testable corollaries of the basic success-or-failure hypothesis. One is that people learn more from their own experiences than they do from the experiences of others ("vicarious learning"), although Munich is one notable exception. Some large-n studies suggest that states' bargaining strategies are influenced more by outcomes of previous crises in which they were involved than in crises in which they were not involved and that decisions for military intervention are influenced more by one's own earlier interventionist experiences than by others' experiences.

External events and the success or failure of past policies also influence the relationship between learning and domestic politics. They affect internal policy debates by affecting the plausibility of the "lessons of history" advanced by various factions. The Munich analogy, for example, was more influential in U.S. policy debates after the Japanese attack on Pearl Harbor (and after the North Korean attack on the South) than before. External events also influence the constellation of domestic political forces and hence the likelihood that certain ideas will influence policy. Successful diplomatic or military action generally

102. Bismarck suggested a more nuanced proposition: fools learn by experience while wise men learn by other people's experience; noted in Jervis, Perception and Misperception in International Politics, pp. 239–43. On vicarious learning, see Huber, "Organizational Learning," pp. 96–97.
helps to legitimize the elite in power and to reinforce the prevailing set of ideas. Unsuccessful policies can discredit a regime and bring to power a new elite with a different set of shared beliefs and a greater intellectual (and political) openness to new ideas.\textsuperscript{105} The political influence of individual advocates of a particular policy also is affected by policy outcomes.\textsuperscript{106} Confictual and cooperative actions by one's primary adversary can also be important, though the effect depends on who is in power domestically. As Jack Snyder argues, hard-line U.S. policies increased the leverage of Soviet soft-liners when they were out of power (for example, after the U.S. intervention in Korea and the Cuban Missile Crisis) but discredited Soviet soft-liners when they were already in power.\textsuperscript{107}

These considerations suggest that the impact of learning on foreign policy change may derive as much from its interaction effects with systemic and domestic political variables as from its individual effects. I will return to this point, but let me first consider some of the methodological problems involved in the empirical analysis of the causes and consequences of learning in international politics.

**Problems of inference and implications for research design**

The basic learning model assumes causal relationships between inferences from past events and current beliefs and between beliefs and policy preferences and decisions. It is possible, however, that under some conditions the causal arrows are reversed. Instead of genuinely learning from historical experience, individuals might use history instrumentally. They often select from historical experience those cases that provide the greatest support for their preexisting policy preferences, or they reinterpret a given case in a way that reinforces their views, so as to rally support for their preferred policies, whether they be driven by views of the national interest or partisan political interests.\textsuperscript{108} Thus A.J.P. Taylor states that "men use the past to prop up their own prejudices." Stanley Hoffmann cites John Fairbank in arguing that Americans in particular use

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106. Farkas incorporates this into his dynamic model of evolutionary state learning. Change in influence is a function of the distance of one's policy preferences from successful policies or from a new policy that emerges from the search and reevaluation following unsuccessful policies. See Farkas, "State Learning and International Change."


108. When political leaders use history instrumentally is an interesting question. Robertson argues that, "The use of lessons as leverage in political conflict pervades policy areas where facts are contested, values are complex, and partisan differences are sharp." See p. 55 of David Brian Robertson, "Political Conflict and Lesson-drawing," *Journal of Public Policy* 11 (January–March 1991), part 1, pp. 55–78. One testable implication is that the instrumental use of history is more common in security policy than in foreign economic policy. See Moltz, "Divergent Learning," pp. 304–6.
“history as a grabbag from which each advocate pulls out a 'lesson' to prove his point.” 109 Another possibility is that preexisting belief systems, operational codes, or interests shape both the interpretation of historical experience and current policy preferences. Learning would still occur and be correlated with policy preferences, but any inference of a causal relationship would be spurious.

Consider, for example, the relationship between the “lessons of Vietnam” and policy preferences in the Persian Gulf War. It is not clear whether either President Bush or his critics genuinely learned from the experience of Vietnam or whether they each strategically selected those arguments that reinforced their existing preferences. It is also possible that although the lessons different Americans drew from the Vietnam experience were highly correlated with their policy preferences in the Persian Gulf crisis, both sets of beliefs can be independently explained by individual worldviews existing prior to the Vietnam period (except perhaps for those baby boomers who had yet to develop their political beliefs). 110

One implication of the instrumental use of history hypothesis is that individuals, organizations, or governments may have incentives to conceal or distort what they have learned from their past decision-making experiences because of their current interests or roles, and this impedes the institutionalization of learning at the organizational or governmental level. Jarosz and Nye, for example, argue that President Kennedy and several other top decision makers learned about the effectiveness of timely, reciprocated concessions as well as the utility of coercive threats during the Cuban Missile Crisis, but that political pressures to avoid the image of weakness at the height of the cold war prevented them from articulating the first set of lessons. They note that the memoir accounts by Theodore Sorenson, Arthur Schlesinger, and Robert Kennedy deliberately omitted the Kennedys’ willingness to discuss the possibility of a public trade of Soviet missiles in Cuba for American missiles in Turkey. Whether U.S. decision makers actually learned from the crisis or whether that experience merely reinforced their earlier beliefs is more difficult to answer. Jarosz and Nye conclude that there is little evidence of any major changes of beliefs by any of the U.S. decision makers in the Cuban Missile Crisis. Robert McNamara, for example, conceded that his views were “pretty much set” before the crisis and did not change as a result. Whether such public self-appraisals constitute valid evidence may also be problematic. 111

These possibilities seriously complicate the task of identifying when learning occurs and whether it has a causal impact on policy. Empirical studies of learning must incorporate research designs that allow analysts to differentiate

110. The Vietnam War probably generated more learning about the conduct of war and the importance of domestic support than about the proper conditions (if any) for U.S. intervention.
between genuine learning and the instrumental use of history and to avoid spurious inferences of causality between historical learning and policy preferences and decisions. Although learning can occur in a wide variety of conditions, the rigorous analysis of learning models should proceed deductively and utilize research designs informed by reasonable hypotheses on the sources of learning.\textsuperscript{112}

Research designs should incorporate longitudinal studies of single individuals over time to determine whether (1) they experience key historical events firsthand or (2) during critical formative stages in their personal or political development, whether (3) they held certain beliefs prior to the occurrence of important historical events (such as wars, revolutions, or major crises) that are hypothesized to be the sources of learning and current policy preferences; whether (4) changes in beliefs are correlated with and in fact lag behind changes in interests or institutional roles; or whether (5) expressions of beliefs made in private deviate from those made in public. Designs should also include comparisons across individuals within the same country to determine if (6) the variation in particular beliefs across generations is greater than variations in beliefs within generations or if (7) the variation in beliefs is correlated with political position, institutional role, or economic interests.\textsuperscript{113} Ideally, they should also include comparisons across people in different countries to determine if (8) individuals from different political cultures and with different national interests make similar inferences from experience. Evidence consistent with (1), (2), (6), and (8) would support learning hypotheses—or perhaps adaptive learning for (8)—whereas evidence consistent with (4), (5), and (7) would support the instrumental use of history hypothesis. An affirmative answer to (3) would suggest that inferences that learning causally influences policy preferences are spurious.

Examples of research designs that incorporate many of these elements can be found in Yuen Foong Khong’s analyses of the use of historical analogies by U.S. political elites in the Korean War and the Vietnam War. Khong looks at both variations in individual beliefs over time and variations across individuals within the government. He finds that beliefs expressed in private memos and documents correspond with public statements and that beliefs varied with firsthand experiences. The Europeanist Ball, for example, worked more closely with the French during the Korean War than did President Johnson or Dean Rusk at the East Asian desk of the State Department and consequently was critical of any attempt to use the Korean analogy to support an interventionist policy in Vietnam. These and other considerations lead Khong to conclude that

\textsuperscript{112} For a good discussion of hypotheses on the sources of learning see Jervis, Perception and Misperception in International Politics, pp. 239–71.

\textsuperscript{113} These comparisons might include people who are in and out of positions of political power or who represent different functional and area ministries in the government, different states or districts with different economic interests, or different firms with different exposure to the global economy.
the public uses of historical analogies by U.S. decision makers in the 1965 Vietnam decisions reflected their true beliefs. He shows also that these historical analogies had a causal impact on policy outcomes. They help to explain not only the U.S. decision to escalate rather than to withdraw in 1965 but also why more extreme escalation measures were rejected (because of the image of China crossing the Yalu).114

Jack Snyder includes comparisons of decision makers in different states as well as different individuals in the same state and the same individuals at different times in his analysis of the role of myths in imperial overextension by Britain, Germany, Japan, the Soviet Union, and the United States. Snyder's case studies lead him to reject the learning hypothesis in favor of the instrumental use of history driven by the domestic interests of political elites in forming a stable ruling coalition.115 Although Snyder's research design is superb, his broader coverage of cases leaves less time to devote to each case, which is a problem given the amount of data required for conclusive tests of hypotheses relating to beliefs and belief change. Further investigation is necessary to determine whether the divergent conclusions of the Khong and Snyder studies derive from the fact that different causal processes operated in their different cases or from flaws in research design or interpretation.116

I have also referred to a handful of large-n quantitative studies of learning in crisis bargaining behavior or alliance behavior. These studies use hypotheses on the sources and consequences of learning to make predictions about current bargaining behavior or strategic choices from the behavior in past crises or wars, while abstracting from the details of the intervening learning process.117 These studies are based on well-constructed research designs and have produced results that are substantively as well as statistically significant. They demonstrate that current behavior is indeed influenced by important past events, that this behavior cannot be adequately explained by static structural models based on the distribution of military power or by current military threats, and that it is reasonably consistent with learning hypotheses.

More of these large-n studies are needed to confirm existing findings, to explore the various other ways in which past events influence current strategic behavior, and to determine what types of past events have the greatest impact on subsequent behavior. Many of the key events that are hypothesized to trigger learning—including success or failure, the last major war or revolution, firsthand versus vicarious experiences—are amenable to operationalization,

115. Snyder, *Myths of Empire*. Snyder's primary theoretical task is to construct a domestic political model of imperial expansion, and consequently his learning model is not as well-developed as Khong's.
116. In terms of Khong's study, it would be useful to extend the domain of comparison and explore whether hypotheses on learning can explain which U.S. decision makers were the first to shift away from a military solution as the war continued.
117. See Leng, "When Will They Ever Learn?"; Huth and Russett, "What Makes Deterrence Work?"; and Reiter, "Learning, Realism, and Alliances."
and the militarized interstate dispute data set for the period since 1815 is well-suited to this purpose.\textsuperscript{118}

One limitation of these studies is that there are other processes besides learning that might explain the observed empirical associations between past outcomes and current behavior. Policy failure might lead to a regime change. It might also lead to a determination of political leaders in power to recover past strategic, economic, or reputational losses or to regain domestic support through diversionary behavior. Each of these processes can lead to policy change, but the primary causal explanation would derive from turnover or changes in the international or domestic political situation rather than from learning.

Before we can make causal inferences from past outcomes to current behavior, we must rule out these alternative explanations. The use of objective indicators of the hypothesized antecedents and consequences of learning facilitates the systematic correlational analysis of the relationship between these variables over a large number of cases, but at the cost of being unable to differentiate among alternative intervening causal sequences. This problem of inference can be reduced by introducing additional variables (an intervening regime change or personnel replacement, for example) that might control for some of the other causal factors, but there is a limit to how well behavioral variables will be able to tap the intervening perceptual variables that are involved in the learning process.\textsuperscript{119}

Thus large-\textit{n} quantitative studies are potentially very useful in demonstrating the impact of past events on subsequent behavior, which is an important question in itself, but small-\textit{n} intensive case studies that utilize a methodology of process-tracing may be better able to explore the nature of the intervening learning process.\textsuperscript{120} This suggests that the combination of large-\textit{n} and small-\textit{n} studies—either through their incorporation within the same research design or through better communication among scholars who utilize these different methodologies—might be particularly useful in advancing our understanding of the role of learning in foreign policy.


Conclusions

I have defined individual learning as a change of beliefs, the degree of confidence in one's beliefs, or skills as a result of the observation and interpretation of experience and have defined organizational learning as the institutionalization of individually learned lessons into organizational routines and procedures. The extent to which learning generates accurate lessons about the world, enhances one's ability to achieve one's goals, or involves more complex cognitive structures is left as important empirical questions for further investigation. In the learning model of foreign policy, individuals learn from experience, and their inferences from experience influence their behavior. Evidence of individual learning is necessary but not sufficient to confirm a learning model of foreign policy change.

The points I have raised in this article suggest a variety of directions for further research on learning and foreign policy. One direction is to decompose the learning model and examine some of its component parts. An important set of research questions involves the sources of learning: From what types of events do political leaders learn? Do they learn more from failure than from success, more from their own experiences than from the experiences of others, or more from singular events than from the gradual accumulation of experience over time? Under what conditions is learning most likely? Are some types of people more likely to learn than others? Through what processes do political leaders learn? How well do they learn? How quickly do they learn? Is learning about causal laws different than learning about initial conditions? Is experiential learning different from deductive learning?

Social psychology provides some guidance on these questions, but it tends to neglect the role of the social and political context within which learning by political leaders takes place.121 Political scientists have advanced a number of plausible hypotheses and more recently have conducted some promising empirical studies utilizing small-n research designs to explore the conditions under which beliefs change, but much more work needs to be done. This work should be informed by research in social psychology and organizational theory but be sensitive to the social and political context of foreign policy learning.

Another approach is to focus on the impact of learning. This can be done through large-n designs that establish associations between antecedent conditions and their hypothesized consequences for behavior. These studies can tell us a lot about the impact of the past on subsequent events, which is an important question in itself, but much less about the intervening learning process. One can also examine the impact of learning through case study designs, which can better get at the intervening perceptual variables in the

learning model. One of the most fruitful directions for future research is to combine large-\( n \) and small-\( n \) studies to exploit the advantages of each.

Although studies of the impact of learning commonly contrast learning models with alternative explanatory models, as exemplified in the work of Khong, Snyder, and Reiter, in the long term this is not the most productive way to proceed. Learning models alone do not provide complete explanations for foreign policy change, because they fail to explain how and under what conditions individual learning is translated into policy change. Learning might directly affect individual policy preferences, but this needs to be incorporated into a theory of the foreign policy process that explains how individual preferences are transformed into governmental policy decisions.

Our understanding of the role of learning in foreign policy and of policy change more generally will be best served if we abandon the attempt to construct an analytically distinct “learning model” and focus instead on integrating learning processes into more comprehensive theories of foreign policy. These theories need to highlight the reciprocal interactions between learning and domestic politics and how those relationships are affected by external events and processes. They need to specify when on the causal chain learning occurs and under what conditions and through what mechanisms learning contributes to foreign policy change.