Images in International Relations: An Experimental Test of Cognitive Schemata

RICHARD K. HERRMANN
The Ohio State University

JAMES F. VOSS
The University of Pittsburgh

TONYA Y. E. SCHOOLER
The University of Pittsburgh

AND

JOSEPH CIARROCHI
The University of Pittsburgh

We build on the tradition of studying images in international relations by developing a theory of perceived relationships and their associated images. The psychological theory is connected to a set of assumptions drawn from international relations theory that suggest perceived strategic relationships can be conceived of as a function of perceived relative power, perceived culture, and the perceived threat or perceived opportunity that a subject believes another actor represents. We hypothesize that perceived relationships evoke both cognitive and affective processes that lead to at least four ideal typical images. We further hypothesize that enemy, ally, colony, and degenerate images have identifiable and interrelated components. We test to see if the component parts of these images are related to each other, if the overall image affects the processing and interpretation of new information, and if strategic foreign policy choices follow from the cognitive and affective aspects of the image. The findings indicate that three of the four images are unified schemata, used even by inexperienced analysts. We find further that affect in combination with cognition does predict policy choice in the case of the enemy image. We suggest that image theory is a promising means by which foreign policy and international relations may be fruitfully studied.

Many scholars have developed arguments for using cognitive concepts to help explain foreign policy decision making and international relations (Holsti, 1967; Jervis, 1976; Cottam, 1977; George, 1980; Bueno de Mesquita and Lalman, 1986; Kim and Bueno

de Mesquita, 1995). Whether models of decision making emphasize rational information processing and optimizing choices or concentrate on cognitive biases and various types of reasoning, their empirical foundation is rooted in claims about a subject's perceptions, that is, the foreign policy decision maker's construction of reality. These perceptions, however, are difficult to identify. First, a decision maker's world view has many parts and one must ask: which ideas are the most important to concentrate on? What concepts best capture strategic calculations? Second, if we agree on what concepts within constructions of reality are most important, then we need to know what operational indicators will help us to determine if these concepts accurately identify the perceptions of any specific decision maker. Finally, there is the question of how are the concepts we use to describe constructions of reality related to the behavioral choices people make?

Previous studies have examined the relationship between cognition and foreign policy choice. Although early advocates of the operational code approach did not predict a direct causal nexus, subsequent scholars in this tradition have found behavioral effects of philosophical and instrumental ideas about world affairs (Holsti, 1970; McLellan, 1971; Walker, 1977; George, 1979; Starr, 1984). Jerel Rosati (1987) has made a case for linking ideas about issues and actors to policy choice in the Carter administration, while Jon Hurwitz and Mark Peffley (1987, 1990, 1992) have explored the relationship between core values, perceptions of the Soviet Union, and policy choice. Several psychological studies have outlined the relationships between cognitive complexity and policy choices (Tetlock, 1984; Tetlock and Boettger, 1989). Scholars using a cognitive mapping strategy have induced causal reasoning chains that link goals, objectives, policy alternatives, and choices (Axelrod, 1976; Bonham and Shapiro, 1977). Meantime, a host of country and elite specific studies have argued that world views and ideological beliefs shape foreign policy decision making (Herrmann, 1985; Larson, 1985; Khong, 1992; Blum, 1993; Wolhforth, 1993; Cottam, 1994).

Although the body of research linking cognition and foreign policy choice is now fairly large, important problems and shortcomings remain. First, much is as descriptive as it is theoretical. Often the frameworks involve a host of cognitive items, describing in idiographic detail the world views of specific elites. These schemes may provide convenient post hoc descriptions of world views but provide rather little in the way of explanation. While concepts from cognitive theory, such as scripts and schema, have been used in cognitive analyses of foreign policy, the integration of psychological-level theory and theory at the level of international relations is still quite incomplete.

Second, some work that is theoretical remains excessively abstract, explaining everything and nothing at the same time. Herbert Simon (1985, 1995) has criticized rational choice frameworks in this regard. Simon might agree the choices people make reflect estimates of likely payoffs and likely costs modified by some sense of the risk perceived. This insight, however, explains very little. Political analysis requires specific estimates for the subject's goals, perceptions, and risk-taking propensities. When these estimates, which should be based upon empirical facts, are provided, they do the explanatory work. The quality of the science is then a product of how well established the estimates are. Too often, Simon fears, these empirical claims rest either on evidence that does not measure cognition in a valid way, or on auxiliary assumptions—in which case the exercise is one of ideology more than science. Simon's empirical challenge applies to prospect theory as well, implying that prospect theorists need to establish empirically how decision makers in the natural setting frame the circumstance as one of potential loss or gain, what they take to be the initial status quo, and what risks they assume are involved in not acting (Levy, 1992a, 1992b).

Finally, most cognitive models that predict foreign policy choice have only partially integrated emotion and affect. Typically, these factors have not received the attention they deserve, especially given the persistent interest in perceptions and war, ethnic conflict, and conflict resolution. Likewise, although learning and change have received theoretical attention in the literature, most of these efforts have sought to establish how new information is processed, how prior cognition inhibits change, and how memory or analogies are evoked and lessons drawn (Beer et al., 1987; Koopman, Snyder, and Jervis, 1989, 1990; Sylvan, Ostrom, and Gannon, 1994). Emotion and affect have typically not been integrated into these studies. (For a recent study of the linkage between emotion and learning in American politics see Marcus and MacKuen, 1993). Moreover, political scientists have, at times, relied rather heavily on research done in psychology related to non–foreign policy issues to make a case by analogy for the effect of prior cognition on learning and change in international relations (Jervis, 1976; Khong, 1992). Given the methodological obstacles inherent in studying cognition and learning in the natural foreign policy setting (Breslauer and Tetlock, 1991), there are good reasons to rely on psychological research. It makes sense, however, to design experiments with the explicit purpose of testing the internal validity of the cognitive models being employed in foreign policy studies. That is what we intended to do in the research reported in this paper.

We are not going to test all the cognitive theories being used in foreign policy analysis; instead, we examine the strength of one particular theory that rests on the concept of images. In Part 1, we develop this theory of images and explain where it came from in terms of previous foreign policy efforts, international relations theory, and cognitive psychology. Our notion of imagery aims to capture the essential strategic judgments that lead to foreign policy choices and integrates cognitive as well as affective components. We argue that these images provide the substantive definitions of situations in international relations that give meaning to more abstract concepts like benefits and costs and thus meet Simon's empirical challenge.

In Part 2, we test the internal validity of the theory experimentally. This involves a series of three experiments designed and conducted by a team of political scientists and cognitive psychologists. Experiment 1 tests the cognitive theory which claims that cognitive items in a world view are related and cluster together in identifiable schemata and that these schemata can be analyzed along dimensions familiar to international relations theory. Experiment 2 explores the effect imagery has on: (1) the processing of new information—including what pieces of it are remembered accurately or with predictable distortion, (2) the inferences about the intentions of other countries and the meaning observers attach to the actions other countries take, and finally (3) the expectations about what other actors will do, both in general and more specific terms. In experiment 3 we test if the information, inferences, and expectations affected by cognitive imagery affect policy choices in predictable ways and what role emotion and affect, particularly perceived threat, play in this decision-making process.

In the final section of the paper, we speculate on the implications of our study for cognitive approaches to foreign policy analysis.

Part 1. Image Theory in International Relations

In 1976 Ole Holsti reviewed cognitive perspectives on foreign policy formulation identifying five different approaches to the role of the decision maker and more than twenty ongoing research projects (pp. 40–1). Most of these projects built upon research related to belief systems that had been conducted in the late 1950s and

1960s (Snyder, Bruck, and Sapin, 1962; Kelman, 1965). The trend in the 1970s was to disassemble the broad and ill-defined notions of beliefs and belief systems. Holsti (1976), for instance, recounted more than thirty-three illustrative concepts that were being used to deal with foreign policy cognition in more specific and detailed ways. Behavioral research had cast doubt on the coherence of integrated belief systems and increasingly quantitative methodologies required more sharply defined concepts and measures (Converse, 1964). The notion of attitude was subdivided into cognitive, affective, and behavioral components, while the ten questions associated with the operational code were connected to an elaborate content analysis scheme (Holsti, 1977; Oskamp, 1977; Walker, 1977). Cognitive mappers, like Robert Axelrod (1976:77–95), used more than thirty specific cognitive items, five connecting linkages, and four different British utility variables to describe London's decision for neoimperialism. Axelrod's colleagues Matthew Bonham and Michael Shapiro (1976) proposed four types of cognitive concepts (policy alternatives, policy objectives, policy values, and descriptive cognition) and more than seventy specific cognitive items within them to explain Syria's intervention in Jordan in 1970.

While the proliferation of concepts reflected important intellectual cumulation, it made testing the causal effect of cognitive models more complicated. It also came at a time when neorealists were promoting the advantages of theoretical parsimony (e.g., Waltz, 1979), thus widening the gap between cognitive theories of foreign policy and prominent theories of international relations. In the 1980s, cumulation in cognitive approaches produced a move toward fewer and larger concepts and the explicit identification of the relationships both between these larger knowledge clusters and among their component parts. As psychologists promoted the idea that cognition was organized into clusters or schemata that integrated in systematic ways a set of items, political scientists tried to return to earlier notions of belief systems but this time with both definitional and methodological rigor.

Psychologists have used the word *schema* in different ways. One definition defines a schema as a "cognitive structure that represents knowledge about a concept or type of stimulus, including its attributes and the relations among these attributes" (Fiske and Taylor, 1991:98). Schema theory, while often vague, implies not only that a person's knowledge about a given actor is organized, but that it influences the selection, interpretation, and memory of information pertaining to the actor in question (Northway, 1940; Alba and Hasher, 1983; Fiske and Taylor, 1991). We will use the term to also include what Johnson-Laird (1983) calls a mental model, which is a cluster of knowledge that permits individuals to process information under the constraint of a limited working memory.

There are a number of reasons why political scientists might be anxious to avoid a semantic debate about schema and explore the basic point that many individual cognitive items are organized in larger knowledge clusters. At an operational level, for instance, clusters of ideas make empirical research easier. Rather than needing to empirically identify every aspect of a subject's perceptions, once several pieces of it are identified the rest might be inferred. Just as a psychologist might infer a good bit about a subject's view of another race from a few telltale signs that the subject operated with a classic stereotype, so might a foreign policy analyst fill in a good bit of information about a leader's world view from telltale signs of schematic patterns. More importantly, however, the cluster of knowledge can provide the theoretical basis for predicting policy choice. While a single item might not correlate with choice, clusters of ideas and perceptions may (Herrmann, 1986; Hurwitz and Peffley, 1987). Knowing that certain ideas and parts of cognition are related also provides insight into how a subject processes new information, draws inferences from it, and develops expectations about the behavior of other actors. This richer notion of cognitive structure

might also be attached to specified affective and emotional components (e.g., Fiske and Pavelchak, 1986; Eagly and Chaiken, 1993) and thus not only facilitate decision making by the subject but also make it easier for the scholarly observer to understand the subject's logic and choice.

The theoretical advantage of schema theory has been recognized by political scientists (Sniderman, Brody, and Tetlock, 1991), although the practical value of its application in political analysis remains contested. In the study of domestic American politics, where attitude research has prevailed, skeptics complain that scholars using the concept have not demonstrated the interrelationships among the component parts and have looked at only two or three attitudes using a new name for rather old practices (Kuklinski, Luskin, and Bolland, 1991). Skeptics also want to see more direct concentration on information processing and cognitive process (e.g., memory) and explicit connection made between these mental operations and affect. All of this, they argue, also needs to be defended with solid experimental evidence, not simply argument by analogy to preexisting psychological research.

In foreign policy studies the move toward schematic concepts has been pronounced. The importance of metaphors, analogies, heuristics, and even story lines or scripts in organizing cognition has been recognized and explored (George, 1980; Jervis, 1986; Alker, 1987; Vertzberger, 1990; Khong, 1992). There have been preliminary experiments testing whether case-based analogies or explanation-based heuristics are more often used when people think about foreign events, and several computer simulations have been developed to explore the implications of competing models of cognition (Hudson, 1991; Mefford, 1991; Sylvan, Ostrom, and Gannon, 1994). All of these efforts have sought to borrow ideas about mental models and schemata from the cognitive sciences and to employ them in the foreign policy setting. The theory we propose moves in this same direction and aims to connect the trend toward knowledge clusters in cognitive psychology with basic concepts in international relations theory.

More than three decades ago, Kenneth Boulding used the concept of image to analyze international systems (Boulding, 1956, 1959). He defined an image as "the total cognitive, affective, and evaluative structure of the behavior unit, or its internal view of itself and its universe." "The images which are important in international systems," Boulding argued, were "those which a nation has of itself and of those other bodies in the system which constitute its international environment" (Boulding, 1959:120–1). He felt that perceived hostility or friendliness and the perceived strength or weakness of a unit were central features of a subject's image of that unit (Boulding, 1959:124–5). Subsequent scholars disassembled Boulding's general notion into different types of images, with the enemy image and its component parts receiving a great deal of attention during the Cold War (Broffenbrenner, 1961; White, 1965, 1968; Holsti, 1967; Cottam, 1977; Stuart and Starr, 1982; Silverstein, 1989; Shimko, 1991). Some metaphors associated with the enemy image, like paper tiger and falling dominoes, became subjects of research in their own right, as did common attributes of the enemy schemata such as the inclination to see the adversary's decision-making process as highly unified and conspiratorial (Jervis, 1976; Jervis and Snyder, 1991).

The image concept captures the schema notion popular in cognitive psychology, but to be useful in foreign policy analysis needs to be more sharply defined. Various types of images need to be specified as do their component parts and the relationship among these parts. Moreover, we need to spell out the logic of how images influence policy choice and test the empirical strength of this logic. The first step in this process is to articulate a theory of strategic decision making that identifies the central judgments that guide basic foreign policy choices toward other actors. We assume that there are three such judgments: (1) the perceived relative capability

of the other actor, (2) the perceived threat and/or opportunity another actor represents, and (3) the perceived culture of the other actor.

While the claim that these three judgments are central to strategic perceptions is a basic assumption or axiom, these judgments are all tightly connected to large bodies of theoretical work. The first two judgments are related to Boulding's components and follow closely well-known international relations theory. The importance of perceived relative power is at the foundation of realist theory. It constrains the options decision makers can seriously consider pursuing.

Perceptions of threat and opportunity, on the other hand, reflect the motivating power of national interests. Hans Morgenthau argued that deciding whether another actor was a status quo state or a revisionist state was the most fundamental judgment analysts and policy makers faced (Morgenthau, 1973:64). Getting it wrong, he lamented, had often meant war and even national destruction. Robert Jervis (1976) has made a related point, contrasting spiral and deterrence models of conflict in terms of the assumptions protagonists make about their adversary's motivations.

We assume that strategic choices follow not only from estimates of another actor's intentions as either status quo or imperialist, but also by a judgment relating this estimate to the interests of the observer. For any particular observer the question becomes, Do the other actor's intentions threaten to reduce my country's current achievement of valued objectives or does the other actor present an opportunity for me to advance and expand my country's interests? If it does represent an opportunity for gain, it can do so in two ways: the other actor can represent a direct opportunity that the observer's country can exploit in a zero sum sense, or the other actor can represent an opportunity for allied cooperation that benefits both parties in absolute terms. While studies of nineteenth-century imperialism demonstrate the importance of perceived opportunities to exploit (Cottam, 1977), recent studies that promote a conception of liberal institutionalism highlight the significance of perception of the opportunity for mutual gain (Keohane, Nye, and Hoffmann, 1993).

While perceived threat and opportunities may motivate policy, and perceptions of relative power may determine the set of options available, we assume that policy choice will also be affected by judgments regarding the relative cultural sophistication of other actors. We expect cultural assessments to affect estimates of relative strength, as well as affect the norms of conduct that are accepted as constraints on policy options. Perceptions of the cultural advancement or backwardness of other actors has been a central concept in sociological and psychological studies of racial and ethnic conflicts (Triandis, 1972, 1980; Horowitz, 1985). It has played an important role in studies of imperialism and war, but until recently has not been widely used as a central explanatory concept in international relations theory (Cottam, 1977; Dower, 1986; Huntington, 1993; Juergensmeyer, 1993). We suspect that judgments about the cultural sophistication of other actors affect estimates of their power and the threat or opportunity they pose. If another actor is seen as culturally backward, for instance, their relative power may be discounted by an assumption that they cannot manage complicated technology and organization. The perceived threat, on the other hand, might increase as observers conclude that civilized norms of restraint and reciprocity will not apply in this relationship.

If for the sake of theoretical parsimony we assume that judgments about relative power, culture, and threat or opportunity are at the core of strategic choices and for the sake of presentational clarity we limit the possible values of these three variables to three each, then we can imagine twenty-seven possible perceived relationships. Table 1 summarizes these potential perceived relationships allowing the perceived power and perceived culture of the other actor to be greater than, lesser than, or equal to the observer's perception of self. Other actors in Table 1 can

TABLE 1. Perceived Relationships and Images in International Relations

Foreign Policy Challenge

THREAT

		CULTURE		
		Superior	Similar	Inferior
	Superior	(1)	(2) Imperialist	(3) Barbarian
CAPABILITY	Similar	(4)	(5) Enemy	(6)
	Inferior	(7)	(8)	(9)

MUTUAL GAIN

		CULTURE		
		Superior	Similar	Inferior
	Superior	(10)	(11)	(12)
CAPABILITY	Similar	(13)	(14) Ally	(15)
	Inferior	(16)	(17)	(18)

OPPORTUNITY TO EXPLOIT

		CULTURE		
		Superior	Similar	Inferior
	Superior	(19)	(20)	(21)
CAPABILITY	Similar	(22)	(23) Degenerate	(24)
	Inferior	(25)	(26)	(27) Colony

be seen as representing a threat, an opportunity to exploit, or an opportunity for mutual gain. It is important to note that we do not treat the judgments about threat and opportunity as representing points on a continuous scale. A scale representing the degree of perceived threat or the degree of perceived opportunity could be introduced but we will not do so here. In Table 1 we assume perceptions of threat, opportunity to exploit, or opportunities for mutual gain are at the ideal typical extreme and in combination with assessments of relative power and culture produce what Solomon Asch (1952:215–7) called integrated gestalts and we call images.[1]

Asch argued that components of an impression of another actor are not typically independent of each other. Nor do they fit together in a simple additive fashion. Rather, the pieces of an impression of another actor interact and produce whole gestalts, or what psychologists today might call schemata. This psychological perspective leads to two analytical tasks: the first is to identify the conceptual architecture or components of strategic perceptions, while the second is to deduce the integrated images these components create when combined in various fashions. Table 1 treats the key judgments as components of a gestalt and uses common metaphors as labels for the stereotypical integrated images that are produced.

Image theory does not assume that integrated gestalts will form in all twenty-seven possible conditions. In Table 1 we propose images for six of the twenty-seven cells and contend that these six combinations capture an important part of the universe of commonly perceived relationships in international relations. Our experiments concentrate on four of these images, (1) enemy, (2) ally, (3) colony, and (4) degenerate. We suspect these are likely to be relevant patterns in American world views. Enemies and allies, of course, were central to the Cold War and while the direct colonial experience worldwide has ended, the legacy of imperialism is not

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[1] The argument here is not that people see other actors only in terms of stereotypes. Rather the argument is that like Max Weber's types of authority, images can serve as templates against which to measure a subject's actual perception (Weber, 1964:110, 324–86).

gone. The colony image and the dichotomy between "moderate responsible" leaders and "agitators" which is one of its chief characteristics has played an important role in the study of imperial behavior. (For more on this image and its association to perceived opportunity and threat, see Cottam, 1977, and Herrmann, 1988.) The degenerate image was used by European fascists in the 1930s and 1940s. Hitler, for instance, described France this way. Although many Americans feared that Soviet communists saw the United States as decadent, degenerate imagery may not be as familiar to Americans as the other three images.

   We doubt that many Americans see other countries as vastly stronger than the United States. Consequently, we have not explored the imperialist and barbarian images in our experiments that employ only U.S. subjects. We imagine these other images would be salient if our subject pool included Islamic fundamentalists from Iran looking at the United States or Chinese nationalists looking at the British in the late 1900s.

   It is important to emphasize that the strategic judgments that give shape to Table 1 are abstract constructions. We propose them as conceptual descriptors. They should not be reified or treated as if they existed in the minds of decision makers. At times, critics of cognitive approaches in political science argue that it is impossible to "get into the minds" of policy makers. This complaint misses the intent of most cognitive theory and misunderstands its epistemological premise. The cognitive architecture outlined in Table 1 represents a theory of how strategic images form. If it is useful and accurate, then in the ideal typical case we ought to see the images or stereotypical schemata labeled in various cells of Table 1 appear in the verbal behavior of subjects. No one can observe cognition any more than they can observe traits, legitimacy, or power for that matter. What we can observe are the consequences our theory says should be produced if the theory is useful. In more straightforward terms, we need to deduce operational indicators for our cognitive concepts, and we have done this in Table 2.

   Given the insight Asch captured in his studies of gestalts and the large body of research on schemata that has followed, it does not make sense to look for separate operational indicators for each of our three key judgments. Instead, it is necessary to operationalize the integrated images produced from ideal typical combinations of the three key judgments. To systematize our description of these images we outline them in three parts: (1) the motivation they attribute to the observed country, (2) the capability attributed to the observed country, and (3) their picture of the decision process in the observed country. Because the intent is to operationalize the images and not each basic strategic judgment separately, the specific attributes outlined in Table 2 are not organized around the same three judgments that appear in Table 1, although the resemblance of two of them, perceived motivation and perceived strength, to threat and opportunity and capability, respectively, is apparent.

   Our task below is twofold. First, we explore whether the images described in Table 2 are schemata. Second, we explore whether the images are associated with the three strategic judgments we suggest they are in Table 1. In this article we examine this second question only in the context of the enemy image.

   If our four images are schemata, then the descriptive attributes assigned to each image in Table 2 should be related to one another. In other words, subjects should see the pieces of each image as fitting together into a gestalt and not as interchangeable across images. Operationally, this means that the block of information related to a subject's description of a target's motivation presented in the enemy image column of Table 2 should be related to the blocks of information about the target's capability and the target's decisional process that also are in the enemy image column. The blocks of descriptive information in the ally column should also be related to one another as should the blocks in the respective degenerate and colony

TABLE 2. Ideal Typical Images of Target Actors
(Components Defined for Description of Target's Motivation, Capability, and Decisional Process)

	Enemy	*Ally*	*Degenerate*	*Colony*
Subject's description of target's motivation	Motives are judged to be evil and unlimited. They can include a variety of imperial interests in economic, ideological, and communal domination.	Ready to pursue mutually beneficial economic relations and to cooperate in peaceful joint efforts to protect and improve the global environment. Motivated by altruism as much as by self-interest.	Leaders are more concerned in preserving what they have than with a vision for the future and have accepted their fall from greatness, only wanting to make it less painful.	*Good forces* • Paternal leader • Progressive modernizer • Nationalist • Leader driven by interest of the people *Bad forces* • Radical fanatic demagogue • Xenophobic racist extremist • Evil dictator • Puppet of great-power enemy
Subject's description of target's capability	If aggressor is met with strong opposition, it will be exposed as a paper tiger. This domestic weakness overrides the empirical evidence of substantial capability.	Military is defensive in orientation and pursues governmental policies willingly; a large, patriotic public is willing to make sacrifices to protect the nation's freedom and the government's institutions. The popularity of the government enhances its capability.	Country is less strong than it might be, its available power instruments are discounted due to its unwillingness to actively defend itself or enter into confrontations.	*Good forces* • Well-meaning children who need tutelage • Can use equipment with supervision, but lack discipline and skill needed to operate and maintain infrastructure, technology, and weapons • Hopelessly disorganized and ascriptive in organization • Children in need of leadership *Bad forces* • Untalented children who have the advantage of external support and advice • Terrorists whose actions reveal their moral weakness • Immature agitators who are arrogant and closed-minded and who confuse slogans and dogmas with intelligence • Conspirators who are cunning and clever at deception and terror • Agents whose real reasons for success come from ties to foreign masters
Subject's description of target's decisional process	Leaders are bound by a common cause and are able to plot and execute complex, sinister plans.	The system is well-managed and organized but is tremendously complicated and sometimes slow-moving because of the many services it delivers to an advanced and complex economy and society.	Decision making is confused and perhaps anarchic; the country lacks focused leadership, organization, and discipline.	*Good forces* • Try hard but simply cannot manage national affairs in an efficient way *Bad forces* • Well organized into highly disciplined units that follow a very strict top-down process of decision making

columns. Moreover, if a subject is given information about one aspect of the target country, for example, the country's capability, then they ought to use the ideal image to fill in the information they lack about motivation and decision process for that particular image. This filling-in should produce descriptions of motivation and capability that resemble the blocks of information in the image-consistent column. Even though there may be no logical reason to expect an actor's motivation or decision process to vary with its capability, if the images are schemata then subjects will draw stereotypical conclusions just the same. Our first experiment tests this point directly.

Once established, schematic images should interpret incoming information in directions consistent with the characteristics of the ideal stereotype. Moreover, images should incline subjects to attach schema-consistent meaning to actions by the target actor, reading aggressive intentions into ambiguous action by actors seen in enemy terms and reading benign intentions into similar actions taken by countries previously described as allies. We explore the effects of imagery upon information processing and inference generation about intentions in experiment 2.

In experiment 3 we turn to the question of whether the images relate to the strategic judgments outlined in Table 1. Herrmann (1985, 1988) spells out the deductive logic connecting conceptual judgments (Table 1) and the operational imagery (Table 2) for the six images. In each case, the deduction rests on a theoretical claim indicating that the cognitive attributes a subject associates with an observed target will be in harmony or balance with the emotional affective sentiment the subject feels toward the observed target. Perceived threat and perceived opportunity are treated as generating emotion and affect which in combination with capability and culture judgments leads to cognitive pictures that make it easier for the subject to deal with the threat or seize the opportunity. In the ideal typical case, they generate a stereotype that justifies action, partially releases the subject from moral constraints that would otherwise pertain, and provides reasons to anticipate success.

For instance, when subjects perceive intense threat from an actor of comparable strength, they are likely to feel that the threat must be dealt with, and at the same time feel that doing so is dangerous given the adversary's capability. They may also feel moral inhibitions about using force to directly eliminate the threat. In the ideal typical case this combination produces an enemy image that first describes the adversary as so uniformly evil that destruction is appropriate and moral constraints are relaxed. Moreover, the image describes the adversary as powerful but weak internally, that is, a "paper tiger" which if confronted with resolution and strength will quickly fold. The evilness of the enemy will be reinforced by a picture of the adversary's domestic decisional process that highlights a dictatorial, conspiratorial, and monolithic nature. This picture of decision process reinforces the "paper tiger" idea by describing the adversary's government as ruling only by coercion and thus unable to count on high levels of public support. It also paints the entire leadership as uniformly evil. This eliminates any likelihood that noncoercive options would produce positive change and thus also contributes to the conclusion that using force to deal with the threat is morally appropriate.

If image theory is correct, then an increase in the threat a subject perceives from another actor that is judged to be comparable in capability and culture should associate with an increase in the resemblance between the subject's observable description of that actor and the stereotypical enemy image outlined in Table 2. Because the imagery integrates expectations about how the target will respond, the relative power available to the target and thus its range of options, and the affect or emotional charge of threat or opportunity felt by the subject, it should also correspond to strategic policy choice. Image theory contends that the more intense the affect becomes the more stereotypical the cognitive schemata will be, and, in

turn, the more predictable the policy choice (Mackie and Hamilton, 1993). Experiment 3 explores whether perceived threat, operationalized as negative affect, is related to more stereotypical enemy imagery, and in turn to more coercive policy choices.

The experiments described below were designed to evaluate the internal validity of image theory, not its external validity. While popular in psychology, the testing of hypotheses via experiment is not a common research method in political science. Despite the methodological strengths of experimentation, generalizing from the university laboratory to the world of elite foreign policy decision making is problematic. It is not, however, as implausible as it might seem. First, a good deal of previous work in both psychology and political science has found that experts are often more likely to be theory-driven problem-solvers than novices (Steinbruner, 1974; Voss, Greene, Post, and Penner, 1983; Koopman, Snyder, and Jervis, 1990). If we find that even our novice subjects are familiar with the stereotypical images, then it is reasonable to assume that experts would be even more familiar with them.

Second, experts are more likely to be affectively engaged. Their imagery may be more complicated in the sense that it includes more pieces of information but just as ideal typical as less politically sophisticated subjects in terms of the basic structure of the image. In other words, experts might provide an enemy image richer in detail, but quite similar in terms of the three dimensions we concentrate upon. Moreover, if they are more deeply involved in decision making than novices, then it is likely experts will be more affectively and emotionally engaged than our subjects and experience even stronger pressures to bring emotion and cognition into balance using stereotypical images.

Finally, the external validity and usefulness of any cognitive theory will be judged by substantive foreign policy analysis. A number of scholars have already explored image theory in that regard, but without direct evidence supporting the psychological foundation of the model (Cottam, 1977; Herrmann, 1985; Cottam, 1986, 1994; Shimko, 1991). It is a test of those foundations that we turn to next.

Part 2. Is Image Theory Valid? Three Experimental Tests

Experiment 1

The primary goal of experiment 1 was to determine whether enemy, ally, colony, and degenerate images operate as schemata and whether they have the components parts specified in Table 2. Specifically, the hypothesis was that if these images are unified structures, then when exposed to only one piece of a given image, such as information about a country's decision process, subjects could infer what the country's attributes on the other two parts of the image were, that is, its motivation and relative capability. Moreover, the proposition was that this process of inference and filling in information about the country that was not provided would follow a pattern consistent with the ideal typical images. In other words, if subjects were given one piece of an ally image, they would infer that the other attributes of the ideal ally image also applied.

Psychologists have devised a number of methods for identifying schema. Marcus (1977) defined individuals as schematic or aschematic via answers to questions and subsequent performance of tasks. Hamill, Lodge, and Blake (1985) followed this procedure in previous political research. Another procedure has relied on the "false recognition" paradigm in which individuals, after being provided with input information, make schema-consistent errors in recognition performance, "recognizing" schema-consistent information not in the text. Still other methods include the demonstrating of schema-related recall of information by high- and low-knowledge

individuals (Spilich, Vesonder, Chiesi, and Voss, 1979). Our approach was akin to that of Bransford and Johnson (1972) and Anderson and his colleagues (e.g., Anderson and Pichert, 1978; Anderson, Spiro, and Anderson, 1978), who inferred the existence of schematic differences via experimental manipulation. These authors presented text or pictorial stimuli and identified the existence of schema from measures involving inferences based upon the interpretation of information related to the stimuli.

   Our procedure consisted of having a subject read a one-paragraph scenario describing one component of a particular image involving a fictitious country "A." Immediately after reading the paragraph the individual was given four four-choice multiple-choice questions, each question about one of the other two image components. A second set of four four-choice multiple-choice questions was then given about the remaining dimension. Thus, if reading about the decision process in an enemy image, the subject received four questions about country A's capability and four questions about country A's motivation. Of the four alternatives of each question, one item was correct, that is, was correct for the image being tested, while each of the other three choices referred to one of the other images. Thus, the chance performance level was 25 percent correct. For an example of a stimulus paragraph we used and the twelve follow-up multiple-choice questions see Appendix A.

   The above procedure was repeated twelve times, with each subject receiving scenarios that defined each of the three attributes of each of the four images. In each case, subjects were given multiple-choice questions, as described above. The order of presentation of the twelve scenarios was counterbalanced via a twelve-by-twelve Latin square. Thirty-six subjects, college students, participated in the experiment.

   Table 3 presents the proportion of correct responses for each image and attribute condition. All mean proportions were above .25, thereby indicating performance was above chance in all conditions. This conclusion is supported by t tests indicating performance significantly above chance for each image condition, t values varying from 15.09 to 24.82, with $p < .0001$ in all cases.

   Analysis of variance indicated that image condition was significant, $F(3,105) = 14.96$, $p < .0001$, with subsequent comparisons indicating that while performance in the enemy and ally conditions did not vary significantly, both of

TABLE 3. Proportion of Correct Responses in Experiment 1 for Each Image and Attribute Presentation Condition

	Ally	*Degenerate*	*Enemy*	*Colony*	*Mean*
Given DECISION PROCESS, Answer MOTIVATION	.67	.72	.63	.73	.69
Given DECISION PROCESS, Answer CAPABILITY	.71	.51	.69	.68	.70
Given CAPABILITY, Answer DECISION PROCESS	.67	.47	.67	.43	.56
Given CAPABILITY, Answer MOTIVATION	.83	.52	.85	.63	.71
Given MOTIVATION, Answer DECISION PROCESS	.72	.50	.74	.59	.64
Given MOTIVATION, Answer CAPABILITY	.83	.57	.72	.75	.72
Mean	.74	.55	.72	.64	.67

these conditions yielded performance significantly better than obtained in the colony condition, $p < .0001$, and all three conditions, enemy, ally, and colony, yielded significantly better performance than found in the degenerate condition, $p < .0001$ in all cases. These findings support the idea that for each of the four images, the attributes defined in Table 2 as characteristic of that ideal typical image were significantly interrelated.

The second phase of experiment 1 involved giving the subjects all twelve scenarios with the four scenarios describing only capability in one pile, the four decision process scenarios in a second pile, and the four scenarios describing only a target country's motivation in a third pile. Subjects were then asked to indicate which scenarios went together, being instructed to select one description from each pile. Twenty-eight of the thirty-six subjects correctly matched all three parts of all four images. Most subjects who made mistakes confused the attributes of the degenerate and colony images.

In the third phase of the study, on one page subjects were given all three scenarios describing one particular image of another country, that is, the scenarios describing the country's motivation, capability, and decision process, and asked on the subsequent page to rate their affect, that is, their like or dislike, of the country described in the scenario, using a 5-point, $+2$ (strongly like) to -2 (strongly dislike), scale, 0 being neither like nor dislike. The results of these ratings are shown in Table 4. Subjects showed a strong dislike for the enemy country, a liking of the ally country, a somewhat negative feeling about the colony country, and a little less negative feeling about the degenerate country. Analysis indicated a significant difference of image condition, $F(3,105) = 129.55$, $p < .0001$, with subsequent comparisons indicating the rating for ally was significantly different from that for colony, degenerate, and enemy, and the rating for enemy was significantly different from the other three conditions, $p < .0001$. Ratings of the colony and degenerate conditions did not differ significantly.

Another analysis indicated that the mean rating of each of the four image conditions differed significantly from 0.0, t values ranging from 4.06 to 18.79, $p < .0001$ (.003 in one case). The colony and degenerate ratings were thus significantly negative, that is, the countries were significantly disliked, as opposed to a neutral rating. These findings thus support the idea that affect and perhaps emotion are

TABLE 4. Proportion of Like and Dislike Ratings for Each of the Four Scenarios

Scenario Type	(−2) Strongly Dislike	(−1) Slightly Dislike	0 Neutral	(+1) Slightly Like	(+2) Strongly Like	Mean Rating
Ally						
Experiment 1	0.00	0.00	.08	.16	.75	1.66
Experiment 1A	0.00	0.00	.03	.14	.83	1.80
Degenerate						
Experiment 1	.19	.31	.41	.08	0	−0.61
Experiment 1A	.08	.50	.33	.08	0	−0.60
Colony						
Experiment 1	.19	.39	.36	.06	0	−0.72
Experiment 1A	.36	.31	.27	.03	.03	−0.94
Enemy						
Experiment 1	.89	.04*	.06	.01*	0.00	−1.81
Experiment 1A	.94	.06	0.00	0.00	0.00	−1.94

*The subject said he liked the people but disliked the government.

part of the image schema or at least related to it, with ally being positively valued and enemy being negatively valued.

In a follow-up study, termed experiment 1A, another group of thirty-six subjects was given scenarios containing descriptions of two of the three components of a particular image, subsequently being tested with the same multiple-choice test for the third component of the image used in experiment 1. The purpose of this study was to test the hypothesis that providing information regarding two components of a given image, as for example being given capability and motivation and being asked about decision process, would produce more image-consistent inferences regarding the third component than when being given information regarding only one component, as in experiment 1. Each subject received the twelve possible sets (four images by three conditions) with each set followed by four multiple-choice questions pertaining to the third component. Each of the four choices in the multiple-choice test again referred to a different image of the four images. Order of presentation was again counterbalanced via a twelve-by-twelve Latin square.

Table 5 presents the summary data for correct identifications. Comparing the Table 5 data with those of Table 3, subjects made more correct responses when given two components of the image than when given only one, the overall proportion correct being an increase from .67 to .77, $t(70) = 3.35$, $p < .001$.

Analysis again indicated that performance in all conditions was significantly above chance, with t values ranging from 16.06 to 30.84, $p < .0001$ in all cases. There also was a significant effect of image condition, $F(3,105) = 9.83$, $p < .0001$, with the ally and enemy image performance not differing significantly and the colony and degenerate image performance not differing significantly. Ally performance was significantly better than the colony and degenerate performance, $p < .001$ in each case, although enemy image performance was not.

Also as in experiment 1, subjects in experiment 1A were given the capability, motivation, and decision process scenarios in three piles, being asked to select one scenario from each pile that would go with one from each other pile. Twenty-nine of the thirty-six subjects correctly matched the scenario paragraphs. Of those who did not, six confused two images, and one confused three. Only one error was duplicated, that was confusing the motivation of the colony and the degenerate images.

As in experiment 1, subjects were also given the three scenarios pertaining to each of the respective images and asked to rate the country on the 5-point like–dislike scale. The results are presented in Table 4. The results were the same as those found in experiment 1, with enemy and ally ratings each differing respectively from those of the other three conditions, while the colony and degen-

TABLE 5. Proportion of Correct Responses in Experiment 1A for Image and Condition

	Ally	Degenerate	Enemy	Colony	Mean
Given DECISION PROCESS and CAPABILITY, Answer MOTIVATION	.89	.83	.86	.72	.83
Given DECISION PROCESS and MOTIVATION, Answer CAPABILITY	.89	.64	.86	.74	.78
Given CAPABILITY and MOTIVATION, Answer DECISION PROCESS	.77	.62	.69	.67	.69
Mean	.85	.70	.80	.71	.77

erate ratings did not differ significantly from each other, $p < .001$ in all cases of significance. Also, as in experiment 1, all means were significantly different than 0.0, t values ranging from 5.02 to 50.22, $p < .0001$.

Taken as a whole, the data of experiments 1 and 1A provide substantial support for the idea that the specific components said to characterize each ideal typical image in Table 2 are in fact related to one another and that each image is a schema organizing a cluster of knowledge in a systematic way. Support for this assertion is found in the findings that correct responding was significantly above chance for all four image conditions. Moreover, the data indicated that when subjects are given information pertaining to two of the three dimensions rather than one of the three, performance was enhanced. That significant differences were obtained among the four image conditions is not surprising. This is because although the above-chance performance supports subjects' gestalt-like perception of each of the four images, the subject's exposure to and familiarity with each image need not be equivalent. It would seem reasonable that the most common images would be the enemy and the ally, with less familiarity for the colony, and much less for the degenerate. Furthermore, the like–dislike rating data support the notion that the images have affect components that vary with the nature of the image.

One point of interpretation that may be raised is whether subjects had a "mental model" of each of the four respective images prior to participating in the experiment or whether the "mental model" was generated only as the task was performed. Even if one argues that the responses were generated by "logical thinking" at the time of the experiment, the question still remains regarding why the particular alternatives were selected. It would seem that subjects would need to have had some prior knowledge of what attributes "go together" in order to make the appropriate judgments. This, of course, is precisely the role we hypothesize that ideal typical images play. In a sense, then, the images were "primed" by the experimental procedure.

Experiment 2

The purpose of this experiment was to investigate how the induction of an image of a given country influences the memory and the interpretation of information provided about that country (for a review of related psychological research see Sherman, Judd, and Park, 1989). The experiment involved inducing an image of a fictitious country, B, providing policy information about B, and then asking the subjects to answer a set of questions involving the interpretation of that information.

One scenario was constructed for each of the enemy, ally, colony, and degenerate images. The first part of the scenario was approximately one and one-half pages in length. Subjects were told that they were citizens of country A, one of five countries shown on a map of a fictitious world. One set of subjects received a version of the scenario that began with a detailed description of a country, B, that was designed to induce one of the four images. The next part of the scenario contained information about six conditions and actions of country B.

For each image there was an experimental and a control condition, thereby establishing eight conditions. Control scenarios were identical to scenarios of the experimental conditions, with the exception that they lacked the early paragraphs that were used to induce the particular image. There were a total of ninety-six subjects, with twelve serving in each condition. Texts used in the experimental and control conditions are presented in Appendix B.

After the first phase of the experiment, in which subjects were presented with the scenario and the related slides, the subjects were asked a series of questions that examined their memory and interpretation of the information they had received.

For example, the experimental and control groups, after receiving the scenario for the enemy image, were asked the questions listed in Table 6.

The hypothesis being tested was that in the experimental conditions, the respective images would be induced, and that compared to the control condition, the subjects' interpretation of the presented information would be consistent with the induced image. The focus on threat was expected to be evident in the interpretations asked for in questions 1 through 6. Subjects in the image-induced conditions were expected to interpret country B's military actions as excursions and not defensive moves to protect an ally, to interpret the revolution in country B as a partial product of country B's behavior, to view speeches on economic human rights as simply diversions, and to regard those in jail in country B as political prisoners and not

TABLE 6. Questions Following Enemy Scenario in Experiment 2

1. In his speech, the leader of country B said country B sent its military to country X to protect an ally. Do you think it's more likely that country B was trying to protect an ally or more likely that country B was putting a good face on its military excursion in country X? Circle your answer on the scale below.
   — A 10-point scale ranging from extremely likely military excursion (1) to extremely likely protecting ally (10) followed this question.

2. Do you think it is likely or unlikely that the government of country B will close down the leading opposition newspaper in the near future? Circle your response on the scale below.
   — A 6-point scale from highly unlikely (1) to highly likely (6) followed the question.

3. What is the likelihood that country B (as opposed to any other country) was involved in the revolution of country E? Circle your answer on the scale below.
   — A 6-point scale from highly likely (1) to highly unlikely (6) followed.
   — In the scenario subjects were told about a revolution in country E, but there was no mention of outside influence.

4. Country B's leader made a speech on the economic aspects of human rights. Is it more likely that country B is really concerned about economic problems, or more likely that country B focused on economic rights to divert attention away from political rights? Circle your answer on the scale below.
   — An 8-point scale followed, ranging from extremely likely divert attention (1) to extremely likely concerned (8).

5. The League for Democracy rates on a 5-point scale. Where do you think the League for Democracy would place country B on its scale measuring democracy? Circle your answer.
   — A 5-point scale ranging from not democratic (1) to completely democratic (5) followed.

6. An international human rights organization has identified 100 people it believes are political prisoners in country B. Country B's leaders say those 100 people are psychologically disturbed, not political prisoners. Do you think it's more likely those 100 people are political prisoners, or psychologically disturbed? Circle your answer on the scale below.
   — An 8-point scale ranging from extremely likely political prisoners (1) to extremely likely psychological (8) followed.

7. What do you think the overall goals and intentions of country B are with respect to country A?
   — Open-ended answer.

8. Write one or two sentences saying what country A's policy should be toward country B.
   — Open-ended answer.

9. What are your feelings about country B?
   — A 7-point scale followed ranging from strongly dislike to strongly like.

mental patients. Image inducement was also expected to influence judgments about country B's tolerance for an opposition newspaper and country B's democracy.

In Appendix B the questions we asked after presentation of the other three scenarios are listed. We also, in Appendix B, outline the theoretically expected effects and interpretation for each question.

The rating scores in items 1 through 6 were standardized by equating all items on a 1–10 scale, and the data of the experimental and control group for each image were compared. The results indicated that in three of the four image conditions, the image-induced subjects answered the questions in the predicted direction to a greater extent than did the control subjects, for that respective image. Specifically, significant differences in performance were obtained between the experimental and control conditions for the enemy image, $F(1,22) = 5.30$, $p < .03$, the ally image, $F(1,22) = 9.89$, $p < .005$, and the colony image, $F(1,22) = 7.56$, $p < .01$. In the enemy image, the mean experimental group score was 3.16 with the mean control condition score of 4.29. (Low scores are related to the support of the image hypothesis. Score is mean rating per subject per item.) The respective experimental and control condition scores for the ally, colony, and degenerate images were 4.82 and 6.42, 3.35 and 4.27, and 4.84 and 5.40. Performance of experimental and control conditions did not differ significantly for the degenerate image, $F < 1$.

Two points are noted regarding these findings. One is that the hypothesis that interpretation of the information given about country B would be influenced by the respective image-inducing procedure was supported for three of the four images. The other point is that the results related to the degenerate image, in this experiment as well as in experiment 1, suggest that our subjects were less familiar with the degenerate image than the other images or that the induction of that image was more difficult than the others. However, as noted, the degenerate image has quite likely not been an important part of the socialization experience of young Americans. It may, nevertheless, have been an important image in other communities, especially those that have been led by fascist parties or religious fundamentalist movements. Just as we feel the colony image is integral to the study of imperialism, we suspect the degenerate image is important in the study of expansionist nationalistic or fascist foreign policy. Taken as a whole, however, the findings demonstrate quite clearly that given the indication of particular images, presentation of limited pieces of information, our subjects recognize integrated patterns and add a good deal of theory-driven information to fill out their mental constructions, to produce interpretations, and to make policy choices.

Experiment 3

The purpose of this experiment was to examine the relationship between images and policy choice and to explore the role affect and emotion play in conjunction with the cognitive processes. Given limited resources we could only do this in one image condition and decided to explore the effects of threat and fear in the enemy image condition. The basic question was whether increased perceived threat and negative affect would relate to increased inclination to describe a target in more stereotypical enemy terms and to choose more coercive policy options vis-à-vis that target. We hypothesized that if subjects felt responsible for their country and were in this position more aware of possible negative events in the country, they would feel more intense threat and negative affect. This in turn would relate to relatively greater enemy-based interpretation of the actions of that country and to more coercive policy choices (Judd and Johnson, 1982). In previous experiments, the induction of perspectives and affect in this way has produced quite substantial effects on the interpretation of situations (e.g., Pichert and Anderson, 1977; Anderson and Pichert, 1978; Bower, 1978).

Three conditions were created. In a Control condition, subjects were given general information about country B that was designed to be neutral. We especially attempted to neutralize information that all three groups received. In a second condition, termed the Adversary condition, we added enemy image descriptions of country B to the information provided in the Control condition. Our intent was to induce an enemy image in this condition, as was done in experiment 2. In the third condition, the More Intense Adversary condition, the subjects were given the same information as in the Adversary condition, but in addition each subject was asked to assume the role of president of country A and be responsible for its foreign policy. Moreover, we gave subjects in the More Intense Adversary condition additional information about country B designed to generate negative affect and fear. Our purpose thus was to determine whether subjects in this condition would depict a stronger enemy image and choose more coercive policies than did subjects in the Adversary condition. There were sixty subjects, with twenty subjects randomly assigned to each of the three conditions, the subjects participating on an individual basis.

In each condition, an experimenter read the text of the scenario as the subject followed reading a copy. The Control text began with instructions to look at the first slide, the slide providing a diagram of five countries, A, B, C, D, and E of a hypothetical world. The subject was told he or she was a citizen of country A, a democracy, and that forty years ago A and B had been allied in a war against C. Since that time A and B have generally been on good terms. At this point the Control text stopped while in the Adversary condition, subjects were given additional paragraphs indicating that country A and country B share a border and on country A's side are mineral deposits and valuable farmlands. Furthermore, it was indicated that about 27 percent of country A's gross national product comes from that area and that about 18 percent of country A's population is in that area, with all people being citizens of A and sharing A's cultural heritage, including language. It was also stated that country B has a different religion than country A, has a dictator who has been in power for fifteen years, and that B is a strong industrialized state with a powerful military. People in the Adversary condition were also provided with information that B has claimed the boundary between countries A and B is illegitimate and that B should have control over the minerals and farmlands. It was also pointed out that country B a few years ago took over country C via invasion. The Adversary condition text stopped at this point.

In the More Intense Adversary condition, individuals received the information in the Adversary condition and additional information designed to induce more emotional involvement, fear, and negative affect. Each subject was told that he/she was the president of country A, and as such was the person responsible for making its foreign policy decisions, and that in recent months "you" have been criticized for being indecisive, even by members of your own party. In addition, it was indicated that "you," as president, had just received an intelligence report that country B is on the verge of invading your country. The plan, as related, is for B to make a thrust into the designated territory that it has claimed, driving out your forces. Your intelligence agents are highly placed in B's government, and the estimate is that there is a 70 percent chance the intercepted plans are authentic. It is also pointed out that your country's newspapers may learn of the possible invasion plan at any minute. You consider options, and you think of a preemptive strike, especially since B has a slight military advantage, or, you think about moving your army into the area desired by B, although this could provoke country B, giving an excuse for an attack. Or, you could simply maintain the status quo. In addition, you want to think of other alternatives, and so you look up reports on country B.

From this point on, subjects in the three conditions received the same text, receiving information about country B, including B's steel production in the last two

years, the rumor of country B possibly closing the main opposition newspaper, the possible involvement of B in a revolution in a distant country, X, the contents of a U.N. speech on human rights by B's leader, B's estimated military expenditures, the holding of twenty-one political prisoners by B with eighteen to be released, a League of Democracy report on the state of democracy in various countries, including B (the results not stated), and the occurrence of a revolution in country D that had some outside support.

After reading through the text that contained the above eight items about B, subjects rated their like or dislike of country B on a 1–10 scale, and then were given 1–10 scales answering questions that required interpretation of the text information in the same way as in experiment 2. In addition, subjects marked graphs of steel production figures and military expenditures, being requested to reproduce the levels of production and expenditures they had observed. Individuals were also asked a question about country A's policy choices, that is, what action should country A take regarding country B. There were ten choices given, plus an "other" category. The choices included maintaining present military conditions, giving the disputed land to B, increasing trade with B, moving A's army into the disputed area, requesting U.N. sanctions against B, having the president of B assassinated, increasing diplomatic relations, launching a preemptive strike, and breaking off diplomatic relations.

Two sets of results are particularly germane to our hypotheses. The first pertains to whether the three experimental conditions produced differences in the composite interpretation ratings. All rating questions were standardized on a 1 to 10 scale, and the subsequent analysis indicated that the effect of condition did not reach significance in a standard analysis of variance, $F(2,57) = 1.83$, $p < .16$, while in a regression analysis, involving the two experimental conditions compared to the control, a significant difference was obtained, $F(1,58) = 4.75$, $p < .03$. The mean rating values for the More Intense Adversary, Adversary, and Control conditions were, respectively, 3.5, 3.9, and 4.2, with a "1" rating most consistent with an enemy interpretation and a "10" rating least consistent with it.

Other results, however, indicated rather strongly that affect, as measured by like–dislike judgments, had an important relation to the meaning and interpretation measure. The correlation of the like–dislike ratings and the interpretation score was $r(58) = .44$, $p < .01$, a quite significant relationship. A regression analysis performed with the interpretation item rating score as the target variable and the affect ratings and the experimental condition as predictor variables indicated that with effects of the Control, Adversary, and More Intense Adversary variables removed, affect significantly influenced performance, $t(59) = 3.20$, $p < .002$. However, when affect was removed, the experimental manipulation did not have a significant effect, $t(59) = 0.85$, $p < .39$.

These results suggest that while the three experimental conditions yielded results consistent with the hypothesis, that is, with more enemy-type interpretations being an increasing function of the Control, Adversary, and More Intense Adversary conditions, the more important variable is the feelings or affect toward the target country that is induced by the task. Evidently, some subjects in the Adversary and even Control conditions developed negative affective feeling toward the target as much as did subjects in the More Intense Adversary condition where we tried to induce these feelings with our manipulations. The results point to the conclusion that it was the emotional affect induced during the experiment that was critical, rather than the experimental manipulation per se, but that the negative affect is related to the interpretation of information about the target country, as indicated by the significant positive correlation.

Experiment 3 also demonstrated a relationship between cognition, affect, and policy choice. Each of the nine alternative policy choices and eight "other" responses

was rated by two experimenters on a 1–10 scale with respect to aggressiveness, with "1" being most and "10" least aggressive. The mean ratings for the Control, Adversary, and More Intense Adversary conditions are, respectively, 6.3, 5.9, and 4.5 yielding a significant effect, $F(2,57) = 3.39$, $p < .04$, with aggressiveness of the policy choice increasing from the Control to the More Intense Adversary condition. A Tukey test indicated that only the Control and Intense Adversary groups differed significantly. The policy choice scores also yielded significant correlations with the interpretation rating score, $r(58) = .60$, $p < .01$, and with affect, $r(58) = .40$, $p < .01$. Regression analyses indicated that, with the enemy variable removed, affect had a significant relation to the policy choice score, $t = 2.66$, $p < .01$, while with affect removed, enemy condition had a t value of 1.58, $p < .11$. Thus, with respect to what action should be taken with respect to B, affect was a better predictor than was the enemy variable manipulation per se, indicating that while the experimental manipulation was significant, it was the affect induced during the experiment that was critical. When affect was engaged, it drove cognition toward more ideal typical imagery and policy choices toward more aggressive and coercive options.

Part 3. Conclusions About Image Theory

Image theory suggests that ideas and cognition about other actors in world affairs are organized into clusters. Moreover, it assumes that these clusters of knowledge reflect three strategic judgments about the other actor. Judgments about another actor's relative capability and culture along with a judgment about the threat or opportunity the other actor represents give rise to images which in the ideal typical case operate like stereotypes. While our three experiments have not tested the axiomatic assumptions that tie the three dimensions of judgment to international relations theory, they have tested the subsequent theoretical claims that (1) define the sub-components of each image, (2) spell out the relationship among the components as expected in schema theory, and (3) establish the relationship between these images, emotional and affective feelings, and policy choice. We have found strong support for the claim that the enemy, ally, and colony images are schemata and that they have the specific sub-parts that we define in Table 2. The degenerate image may also operate as a schema in some communities but is not as familiar to our American subjects as the other three.

We found from the results of experiments 1 and 1A that subjects did draw inferences about another actor's capability from a picture of its intentions or, vice versa, drew conclusions about its intentions from a picture of the other actor's capability. Subjects were also inclined to use information about another actor's capability or motivation to draw inferences about the actor's decision-making process. Perceptions of decision-making processes also led to conclusions about intentions, typically associating democratic decision making with more benign intentions. Subjects may have been guided by empirically based theories while making some of these inferences. For instance, they may have learned that democracies rarely fight one another and from this concluded they have benign intentions. For the most part, however, the conclusions they drew about the characteristics of the other actor that were not presented in the experiment had no empirical bases and we suspect reflected the predictable biases of operating ideal typical schemata. Our results suggest that it is not only propaganda that paints other actors as good, bad, or backward across a host of independent components. Cognitive processes and affect also contribute to this effect (Heider, 1958).

There are several advantages of theoretically recognizing that a number of cognitive patterns that have traditionally been treated as separate items, like the idea the other actor is a paper tiger or has a monolithic decision-making process, are part of an integrated cluster or system of knowledge. First, it makes empirical

identification easier, suggesting multiple related indicators of the image patterns. Second, it provides a parsimonious but richer conception of the logic from which inferences and expectations derive. Finally, it provides a more clear picture of the logic connecting the subject's overall image and the subject's strategic policy choice vis-à-vis the other actor.

Some international relations theorists are inclined to treat cognition as an epiphenomenon determined by structural factors (Krasner, 1993). Our second and third experiments suggest that imagery and policy choice are associated with an affective or emotional component that might be acting as an indicator of self-interest. We have not delved into the question of whether affect precedes cognition, follows it sequentially, or happens simultaneously in a dual processing mode (Zajonc, 1980; Fiske and Pavelchak, 1986; Brewer, 1988; Fiske and Neuberg, 1990). Our tests found a strong association between affect and image, but from this we cannot sustain a causal claim. Our results are consistent with arguments that cognition is related to affect, which may include self-interest (Cottam, 1977; Lebow, 1981; Snyder, 1992).

Interests or core values may shape our images of other actors (Hurwitz and Peffley, 1987, 1990). Images of other actors, however, can at the same time shape perceived interests in at least two ways. First, an image of an enemy can create instrumental needs such as for allies and colonies. The enemy image thus produces interest in other countries that would not follow from the intrinsic qualities of the other country and may disappear as soon as the enemy image erodes. Second, and perhaps more important, core values do not directly lead to policy choice but must be put into a context. For instance, while many people morally oppose the use of force, they also believe in a number of "just war" scenarios (Walzer, 1977). Against an ally the use of force might be unthinkable and a violation of core values. Against an enemy, colony, or degenerate, on the other hand, this core value might produce different behavioral effects. The critical difference would be the image of the other actor and the norms this image defines as relevant.

The methodological difficulties inherent in trying to establish where images come from are very formidable. The potential causes of cognition are many and disentangling their independent effect, even in the laboratory, is nearly impossible (Tetlock and Levi, 1982). In the natural setting, many arguments about what caused images can be made in a post hoc fashion, looking backward and claiming that the images that evolved are consistent with what appear in hindsight to be causes. Few of these arguments, however, can be sustained with any convincing methodological rigor (Dawes, 1993). The cognitive revolution swept American psychology and displaced situationism precisely because predicting cognition from environmental conditions was so difficult (Gardner, 1985). Images may be intervening variables between more basic causes of action and policy choice, but there is no substantiated theory that explains how to predict cognition from these more basic causes. As Herbert Simon (1985, 1995) has argued, despite the penchant in political science for setting cognitive variables by assumption, assertion, or ideological fiat, there is still no scientific substitute for their empirical identification.

Our experiments treat image as a causal variable and have found that some images are schemata and, once formed, affect the processing of new information, the memory of this information, inference about the meaning of action, and policy choice. While our third experiment examined only the effects of perceived threat and fear, the more general theory of images we explored has the advantage of identifying multiple ideal typical images. Obviously, if cognitive perspectives develop only the enemy image, then they will need to assume that all relationships are perceived in threat-based terms. This may be consistent with the assumptions of neorealism, but fails to capture the variation in both motivation and behavior that

characterizes foreign policies. If cognitive approaches aim to explain diverse strategic choices, then developing a theory of multiple perceived relationships and various schematic images is necessary. Testing the validity of the four ideal typical images examined in our experiments contributes to this task, but clearly other images and relationships should be explored. For image theory to contribute fully to international relations theory this needs to be done on a multinational basis, identifying perhaps one day the universe of ideal typical relationships and images and the popularity of various ones in specific communities.

Appendix A
Questions Used in Experiments 1 and 1a

In experiment 1 subjects were given a stimulus paragraph describing one feature of the target country, its motivation, capability, or decision process. These paragraphs were based on the blocks of information in Table 2. For example, the following paragraph was used to reflect the information in Table 2 related to the decision process in the enemy image. Comparable stimuli paragraphs were created for each of the other eleven blocks of information in Table 2.

> Country A is ruled by a dictator, who is surrounded by a set of loyal lieutenants who serve only at the leader's pleasure. The government is set up in a very strictly disciplined hierarchy that operates in lock step with the orders issued from the top. The government tolerates no dissension within its ranks and operates as a monolithic front. A totalitarian system has been established.

After subjects read the stimulus paragraph they answered eight multiple-choice questions, four related to each of the dimensions of the image not given. Following the above paragraph of decision process, for instance, subjects answered the four questions below related to the motivation and capability of the target country. If either motivation or capability had been given in the stimuli paragraph subjects would have answered the four questions below related to decision process.

Questions related to motivation of target country

Which of the following best describes the primary goal of country A?
   a. Primary goal is to preserve current lifestyle, which is excessively (even unjustly) materialistic.
   b. Primary goal is to expand power around the world and destroy other social systems.
   c. Primary goal is protection of its own shores, and improvement of its global environment.
   d. Primary goal is economic development and modernization, though small group of radicals see power and personal gain.

Which of the following best describes country A's attitude toward the rest of the world?
   a. Has concern about effects of modernization on own culture, although benefits from foreign technology and aid.
   b. Has desire for superiority.
   c. Has realized and accepted decline of status in world.
   d. Has actively worked to promote international cooperation.

Which of the following best describes the major, predominant characteristic of country A?
   a. Country is prosperous and thriving.
   b. Country is polarized, with major divisions between moderates and radicals, each promoting its own brand of nationalism and its own vision of the future.
   c. Country is decadent, hedonistic.
   d. Country is aggressive, plans to attack others with force.

Which of the following best describes the actions of country A?
   a. Actions unjustifiable to noncitizens, cause great harm/injury to other countries.
   b. Actions intended to improve society, though often perceived as destroying the country's culture and traditions.
   c. Actions intended to benefit global community as well as own country.
   d. Actions self-serving, though not directly harmful to others.

Questions related to capability of target country

Which of the following best describes the kind of public you would expect country A to have?
   a. People support government and government's military program, contributing to the government's prestige in the international community.
   b. People unskilled, backward, and naive and uniformed about politics.
   c. People lost sense of national purpose, resist military spending, preferring material gains.
   d. People *not* enthusiastic about politics or their government though actual attitudes difficult to measure because strong internal police suppress dissent.

Which of the following best describes the strength of the economy in country A?
   a. Economy is in poor shape, with weak agricultural sector and lack of advanced technology development.
   b. Economy troubled, though orientation toward military sector makes country extremely powerful internationally.
   c. Economy is strong, vibrant.
   d. Economy is well developed, though shrinking resources are leading to a loss of competitiveness and diminishing investment in the military.

Which of the following best describes the will power of the leaders of country A?
   a. Leaders are aggressive, inflexible, and believe in own and country's superiority.
   b. Leaders are determined to protect their country, would never give in to terrorism/blackmail.
   c. Leaders are cowards lacking both sense of purpose and resolution (determination).
   d. Leaders are well intentioned and driven by progressive goals, but hampered by internal divisions and violence and rebellion of radical elite.

Which of the following best describes the orientation of the military of country A?
   a. Military is well equipped, but focus is to avoid fighting even in self-defense.
   b. Military is poorly equipped, largely concerned with internal matters.
   c. Military is well equipped and extremely powerful, is aggressive although avoids opponents of comparable ability; opponents are generally weak.
   d. Military is well equipped and prepared; has defensive orientation.

Questions related to decision process in target country

Which of the following best describes the kind of government country A has?
   a. Democratic.
   b. Previously democratic, but the process is now corrupt.
   c. Totalitarian.
   d. Moving toward democracy, but movement threatened by radicals.

Which of the following best describes the degree of unity within the leadership of country A?
   a. Moderate leadership divided, though share overarching goals, including a desire to defeat the threat posed by radicals.
   b. Leadership divided, can be bought, driven by self-interest rather than national policy goals.
   c. Leadership unified behind policy, faces no opposition.
   d. Leadership works out agreed-upon policy through standard procedures and stands by it.

Which of the following best describes how effective the government of country A is at implementing policies?
   a. Policies effectively, though not rapidly, implemented by complex, well-managed bureaucracy.
   b. Policies effectively implemented through rigidly hierarchical governmental bureaucracy.
   c. Policies difficult to implement because policies vacillate, governmental processes corrupt.
   d. Policies poorly implemented because of governmental mismanagement and reliance on traditional patterns.

Which of the following best describes the leaders of country A?
   a. Leaders are cunning, conspiratorial, secretive.
   b. Leaders are highly motivated and qualified.
   c. Leaders lack direction, sense of national purpose.
   d. Leaders have good intentions, but need direction, support.

Appendix B
Questions Following the Scenarios in Experiment 2

Questions following the ally scenario

1. In his speech, the leader of country B said country B sent its military to country X to protect an ally. Do you think it's more likely that country B was trying to protect an ally or more likely that country B was putting a good face on its military excursion in country X? Circle your answer on the scale below.
   — A 10-point scale ranging from extremely likely military excursion (1) to extremely likely protecting ally (10) followed this question.
   — Ally image should incline subjects to attribute action to defensive motives and affect interpretation in direction of protecting ally.

2. How likely is it that the government of country B will join the many countries that are criticizing your country's attack on the terrorist camp in country E? Circle your answer on the scale below.
   — A 6-point scale ranging from highly unlikely (1) to highly likely (6) followed.
   — Ally image should affect expectations in direction of unlikely to criticize.

3. One goal of country B is to improve education. What do you think the average level of education is for citizens of country B now, before the improvements begin? Circle your answer on the scale below?
   —A 6-point scale followed, ranging from no formal education (1), to some elementary school, to finished elementary school, to finished junior high, to finished senior high, to college graduate (6).
   —Ally image should lead to memory in direction of higher education levels.

4. Why do you think country B's leader made his speech on the economic aspects of human rights? Is it more likely that country B needs the aid that would come from increased emphasis on economic problems or that country B is willing to help solve the problems of poverty? Circle your answer on the scale below.
   —An 8-point scale followed ranging from extremely likely needs aid (1) to extremely likely will help solve problems (8).
   —Ally image should affect interpretation in direction of helping to solve problems.

5. The League for Democracy rates on a 5-point scale. Where do you think the League for Democracy would place country B on its scale measuring democracy? Circle your answer.
   —A 5-point scale ranging from not democratic (1) to completely democratic (5) followed.
   —Ally image should affect expectation in direction of democratic government.

6. Do you think it likely that the government of country B was responsible for the assassination of the opposition politician, or was someone else responsible? Circle your answer on the scale.
   —An 8-point scale followed, ranging from extremely likely someone else (1) to extremely likely country B (8).
   —Ally image should affect interpretation in direction of likely someone else was responsible.

7. What do you think the overall goals and intentions of country B are with respect to country A?
   —Open-ended answer.
   —Ally image should lead to defensive and altruistic motivational attributions.

8. Write one or two sentences saying what country A's policy should be toward country B.
   —Open-ended answer

9. What are your feelings about country B?
   —A 7-point scale followed ranging from strongly dislike (1) to strongly like (7).

Questions following the colony scenario

1. One goal of country B is to improve education. What do you think the average level of education is for citizens of country B now, before the improvements begin? Circle your answer on the scale below.
   —A 6-point scale followed, ranging from no formal education (1), to some elementary school, to finished elementary school, to finished junior high, to finished senior high, to college graduate (6).
   —Colony image should affect memory in direction of lower education levels.

2. How important is foreign aid to country B's economic plan? Circle your answer on the scale below.
   —A 6-point scale followed ranging from highly unimportant (1) to highly important (6).
   —Colony image should affect interpretation in direction of highly important.

3. The defense minister of country B claims that the military is on the verge of winning its war against the rebels in country B, despite requests for increased military aid from other countries. Do you think country B truly will be able to defeat the rebels soon, or will the war drag on for many years? Circle your answer on the scale below.
   —An 8-point scale followed, ranging from extremely likely defeat soon (1) to extremely likely war drags on (8).
   —Colony image affects expectations in direction of likely to defeat rebels soon.

4. Indicate below the level of hardship you expect country B to suffer. Circle your answer.
   —A 5-point scale followed, ranging from no hardship (1) to great hardship (5).
   —Colony image affects expectations in direction of more hardships.

5. Based on the President's report on the drug war would you say the war on drugs has been ineffective and the drug lords have increased their earnings in spite of a few arrests, or very effective, and the drug lords have lost substantial amounts of money and men? Circle your answer on the scale below.
   —An 8-point scale followed, ranging from extremely likely ineffective (1) to extremely likely effective (8).
   —Colony image affects interpretation in direction of ineffective policy implementation.

6. What do you think the overall goals and intentions of country B are with respect to country A?
   —Open-ended answer.
   —Colony image produces inclination to see country B as motivated to become like country A. Emphasis on developmental motivations and intentions to change and become like A.

7. Write one or two sentences saying what country A's policy should be toward country B.
   —Open-ended answer.

8. What are your feelings about country B?
   —A 7-point scale followed ranging from strongly dislike (1) to strongly like (7).

Questions following the degenerate scenario

1. There are many reasons why country B might cut foreign aid. Do you think it is more likely country B wants to respect the sovereignty (independence) of foreign governments as the foreign secretary said, or more likely country B wants to find a way to cut spending in light of a budget crunch? Circle your answer on the scale below.
   —A 10-point scale follows, ranging from extremely likely respects sovereignty (1) to extremely likely cut spending (10).

— Degenerate image affects interpretation in direction of wants to find a way out of the budget crunch.

2. How likely do you think it is that country B paid country D a ransom for the release of the hostages as opposed to securing their release in some other manner? Circle your answer on the scale below.
   — A 6-point scale followed, ranging from highly unlikely (1) to highly likely (6).
   — Degenerate image affects interpretation in direction of likely to pay ransom.

3. How likely is it that country B, as opposed to any other country, was involved in the revolution in country E? Circle your answer on the scale below.
   — A 6-point scale followed ranging from highly unlikely (1) to highly likely (6).
   — Degenerate image affects interpretation in direction of unlikely to be involved in country E's revolution.

4. Are the citizens of country B remembering the good old days in their "feel good" movies, or are the movies a reflection of the kind of life the citizens of country B hope someday to achieve?
   — An 8-point scale followed, ranging from extremely likely old days (1) to extremely likely hope to achieve (8).
   — Degenerate image affects interpretation in direction of remembering good old days.

5. Compared to other countries, what is the level of drug use in country B today?
   — A 5-point scale followed, ranging from below average (1) to much above average (5).
   — Degenerate image affects memory in direction of greater drug use.

6. Circle the answer below that best indicates the kind of economic conditions economists believe country B will experience over the next five-year period.
   — An 8-point scale followed, ranging from great decline (1) to great growth (8).
   — Degenerate image affects expectation in direction of great decline.

7. What do you think the overall goals and intentions of country B are with respect to country A?
   — Open-ended answer.
   — Degenerate image affects interpretation in direction of self-serving and hedonist motives.

8. Write one or two sentences saying what country A's policy should be toward country B.
   — Open-ended answer.

9. What are your feelings about country B?
   — A 7-point scale followed ranging from strongly dislike (1) to strongly like (7).

References

ALBA, J. W., AND L. HASHER (1983) Is Memory Schematic? *Psychological Bulletin* **93**:203–231.

ALKER, H., Jr. (1987) Fairy Tales, Tragedies and World Histories: Towards Interpretative Story Grammars as Possiblist World Models. *Behaviormetrika,* no. 21, 1–28.

ANDERSON, R. C., AND J. W. PICHERT (1978) Recall of Previously Unrecallable Information Following a Shift in Perspective. *Journal of Verbal Learning and Verbal Behavior* **17**:1–12.

ANDERSON, R. C., R. J. SPIRO, AND M. C. ANDERSON (1978) Schemata as Scaffolding for the Representation of Information in Connected Discourse. *American Educational Research Journal* **15**:433–440.

ASCH, S. (1952) *Social Psychology*. Englewood Cliffs, NJ: Prentice-Hall.

AXELROD, R., ED. (1976) *The Structure of Decision: The Cognitive Maps of Political Elites.* Princeton, NJ: Princeton University Press.

BEER, F., A. HEALY, G. SINCLAIR, AND L. BOURNE (1987) War Cues and Foreign Policy Acts. *American Political Science Review* **81**(3):701–716.

BLUM, D. (1993) The Soviet Foreign Policy Belief System: Beliefs, Politics, and Foreign Policy Outcomes. *International Studies Quarterly* **37**(4):373–394.

BONHAM, M., AND M. SHAPIRO (1976) "Explanation of the Unexpected: The Syrian Intervention in Jordan in 1970." In *The Structure of Decision: The Cognitive Maps of Political Elites,* edited by R. Axelrod, pp. 113–141.

BONHAM, M., AND M. SHAPIRO (1977) *Thought and Action in Foreign Policy*. Basel: Birkhauser Verlag.

BOULDING, K. (1956) *The Image*. Ann Arbor: University of Michigan Press.

BOULDING, K. (1959) National Images and International Systems. *Journal of Conflict Resolution* **3**:120–131.

BOWER, G. H. (1978) Experiments on Story Comprehension and Recall. *Discourse Processes* **1**:211–231.

BRANSFORD, J. D., AND M. K. JOHNSON (1972) Contextual Prerequisites for Understanding: Some Investigations of Comprehension and Recall. *Journal of Verbal Learning and Verbal Behavior* **11**:717–726.

BRESLAUER, G., AND P. TETLOCK (1991) *Learning in U.S. & Soviet Foreign Policy.* Boulder, CO: Westview Press.

BREWER, M. (1988) "A Dual Process Model of Impression Formation." In *Advances in Social Cognition*, vol. 1, edited by T. K. Srull and R. S. Wyer, Jr., pp. 1–36. Hillsdale, NJ: Lawrence Erlbaum.

BROFFENBRENNER, U. (1961) The Mirror Image in Soviet-American Relations: A Social Psychologist's Report. *Journal of Social Issues* **17**:45–56.

BUENO DE MESQUITA, B., AND D. LALMAN (1986) *War and Reason.* New Haven, CT: Yale University Press.

CONVERSE, P. (1964) "The Nature of Belief Systems in Mass Publics." In *Ideology and Discontent,* edited by D. Apter. New York: John Wiley.

COTTAM, M. (1986) *Foreign Policy Decision Making: The Influence of Cognition*. Boulder, CO: Westview Press.

COTTAM, M. (1994) *Images & Intervention: U.S. Policies in Latin America*. Pittsburgh, PA: University of Pittsburgh Press.

COTTAM, R. (1977) *Foreign Policy Motivation: A General Theory and a Case Study*. Pittsburgh, PA: University of Pittsburgh Press.

DAWES, R. (1993) Prediction of the Future Versus an Understanding of the Past: A Basic Asymmetry. *American Journal of Psychology* **106**(1):1–24.

DOWER, J. (1986) *War Without Mercy: Race and Power in the Pacific War*. New York: Pantheon.

EAGLY, A. H., AND S. CHAIKEN (1993) *The Psychology of Attitudes.* New York: Harcourt Brace Jovanovich.

FISKE, S., AND S. NEUBERG (1990) "A Continuum of Impression Formation, from Category-based to Individuating Processes: Influences of Information and Motivation on Attention and Interpretation." In *Advances in Experimental Social Psychology,* vol. 23, edited by M. P. Zanna, pp. 1–74. New York: Academic Press.

FISKE, S., AND M. PAVELCHAK (1986) "Category-based vs. Piecemeal-based Affective Responses: Developments in Schema-triggered Affect." In *Handbook of Motivation and Cognition,* edited by R. Sorrentino and E. T. Higgins. New York: Guilford Press.

FISKE, S., AND S. TAYLOR (1991) *Social Cognition*. New York: Random House.

GARDNER, H. (1985) *The Mind's New Science: A History of the Cognitive Revolution.* New York: Basic Books.

GEORGE, A. (1979) "The Causal Nexus Between Cognitive Beliefs and Decision-Making Behavior: The 'Operational Code.'" In *Psychological Models in International Politics*, edited by L. S. Falkowski. Boulder, CO: Westview Press.

GEORGE, A. (1980) *Presidential Decision Making in Foreign Policy: The Effective Use of Information and Advice*. Boulder, CO: Westview Press.

HAMILL, R., M. LODGE, AND F. BLAKE (1985) The Breadth, Depth, and Utility of Class, Partisan, and Ideological Schemata. *American Journal of Political Science* **29**:850–870.

HEIDER, F. (1958) *The Psychology of Interpersonal Relations.* New York: John Wiley.

HERRMANN, R. (1985) *Perceptions and Behavior in Soviet Foreign Policy*. Pittsburgh, PA: University of Pittsburgh Press.

HERRMANN, R. (1986) The Power of Perceptions in Foreign-Policy Decision Making: Do Views of the Soviet Union Determine the Policy Choices of American leaders? *American Journal of Political Science* **30**:841–875.

HERRMANN, R. (1988) The Empirical Challenge of the Cognitive Revolution: A Strategy for Drawing Inferences About Perceptions. *International Studies Quarterly* **32**:175–203.

HOLSTI, O. (1967) "Cognitive Dynamics and Images of the Enemy." In *Enemies in Politics*, edited by D. Finley, O. Holsti, and R. Fagen, pp. 25–96. Chicago: Rand McNally.

HOLSTI, O. (1970) The "Operational Code" Approach to the Study of Political Leaders: John Foster Dulles. Philosophical and Instrumental Beliefs. *Canadian Journal of Political Science* **3**:123–157.

HOLSTI, O. (1976) "Foreign Policy Viewed Cognitively." In *Structure of Decision*, edited by R. Axelrod, pp. 18–54. Princeton, NJ: Princeton University Press.

HOLSTI, O. (1977) *The "Operational Code" as an Approach to the Analysis of Belief Systems*. Final Report to National Science Foundation (Grant # SOC75-15368). Duke University.

HOROWITZ, D. (1985) *Ethnic Groups in Conflict*. Berkeley: University of California Press.

HUDSON, V., ED. (1991) *Artificial Intelligence and International Politics.* Boulder, CO: Westview Press.

HUNTINGTON, S. (1993) The Clash of Civilizations? *Foreign Affairs* **73**(3):22–49.

HURWITZ, J., AND M. PEFFLEY (1987) How Are Foreign Policy Attitudes Structured? A Hierarchical Model. *American Political Science Review* **81**:1099–1119.

HURWITZ, J., AND M. PEFFLEY (1990) Public Images of the Soviet Union: The Impact on Foreign Policy Attitudes. *Journal of Politics* **52**:3–28.

JERVIS, R. (1976) *Perception and Misperception in International Politics*. Princeton, NJ: Princeton University Press.

JERVIS, R. (1986) Representativeness in Foreign Policy. *Political Psychology* **7**(3):483–506.

JERVIS, R., AND J. SNYDER (1991) *Dominoes and Bandwagons: Strategic Beliefs and Great Power Competition in the Eurasian Rimland*. Oxford: Oxford University Press.

JOHNSON-LAIRD, P. N. (1983) *Mental Models*. Cambridge, MA: Harvard University Press.

JUDD, C. M., AND J. JOHNSON (1982) "The Polarizing Effects of Affective Intensity." In *Affect and Cognition: The Seventeenth Annual Symposium on Cognition*, edited by M. Clark and S. Fiske. Hillsdale, NJ: Lawrence Erlbaum.

JUERGENSMEYER, M. (1993) *The New Cold War? Religious Nationalism Confronts the Secular State.* Berkeley: University of California Press.

KELMAN, H., ED. (1965) *International Behavior: A Social-Psychological Analysis*. New York: Holt, Rinehart and Winston.

KEOHANE, R., J. NYE, AND S. HOFFMANN (1993) *After the Cold War: International Institutions and State Strategies in Europe, 1989–1991*. Cambridge, MA: Harvard University Press.

KHONG, Y. (1992) *Analogies at War: Korea, Munich, Dien Bien Phu, and the Vietnam Decisions of 1965*. Princeton, NJ: Princeton University Press.

KIM, W., AND B. BUENO DE MESQUITA (1995) How Perceptions Influence the Risk of War. *International Studies Quarterly* **39**(1):51–65.

KOOPMAN, C., J. SNYDER, AND R. JERVIS (1989) American Elite Views of Relations with the Soviet Union. *Journal of Social Issues* **45**:119–138.

KOOPMAN, C., J. SNYDER, AND R. JERVIS (1990) Theory-Driven vs. Data-Driven Assessment in a Crisis. *Journal of Conflict Resolution* **34**:694–722.

KRASNER, S. (1993) "Westphalia and All That." In *Ideas and Foreign Policy Beliefs, Institutions, and Political Change*, edited by J. Goldstein and R. Keohane, pp. 235–264. Ithaca, NY: Cornell University Press.

KUKLINSKI, J., R. LUSKIN, AND J. BOLLAND (1991) Where Is the Schema? Going Beyond the "s" Word in Political Psychology. *American Political Science Review* **85**:1341–1356.

LARSON, D. (1985) *Origins of Containment: A Psychological Explanation*. Princeton, NJ: Princeton University Press.

LEBOW, R. (1981) *Between Peace and War: The Nature of International Crisis*. Baltimore, MD: Johns Hopkins University Press.

LEVY, J. (1992a) An Introduction to Prospect Theory. *Political Psychology* **13**:171–186.

LEVY, J. (1992b) Prospect Theory and International Relations: Theoretical Applications and Analytical Problems. *Political Psychology* **13**:283–310.

MACKIE, D., AND D. HAMILTON, EDS. (1993) *Affect, Cognition, and Stereotyping: Interactive Processes in Group Perception*. San Diego, CA: Academic Press.

MARCUS, G., AND M. MACKUEN (1993) Anxiety, Enthusiasm, and the Vote: The Emotional Underpinnings of Learning and Involvement During Presidential Campaigns. *American Political Science Review* **87**(3):672–685.

MARCUS, H. (1977) Self-Schemas and Processing Information About the Self. *Journal of Personality and Social Psychology* **35**:63–78.

MCLELLAN, D. (1971) The "Operational Code" Approach to the Study of Political Leaders: Dean Acheson's Philosophical and Instrumental Beliefs. *Canadian Journal of Political Science* **4**:52–75.

MEFFORD, D. (1991) "Steps Toward Artificial Intelligence: Rule-Based, Case-Based, and Explanation-Based Models of Politics." In *Artificial Intelligence and International Politics*, edited by V. Hudson, pp. 56–96. Boulder, CO: Westview Press.

MORGENTHAU, H. (1973) *Politics Among Nations: The Struggle for Power and Peace*, 5th ed. New York: Alfred A. Knopf.

NORTHWAY, M. L. (1940) The Concept of the "Schema." *British Journal of Psychology* **31**:22–36.

OSKAMP, S. (1977) *Attitudes and Opinions*. Englewood Cliffs, NJ: Prentice-Hall.

PEFFLEY, M., AND M. HURWITZ (1992) International Events and Foreign Policy Beliefs: Public Response to Changing Soviet–U.S. Relations. *American Journal of Political Science* **36**(2):431–461.

PICHERT, J. W., AND R.C. ANDERSON (1977) Taking Different Perspectives on a Story. *Journal of Educational Psychology* **69**:309–315.

ROSATI, J. (1987) *The Carter Administration's Quest for Global Community: Beliefs and Their Impact on Behavior*. Columbia: University of South Carolina Press.

SHERMAN, S., C. JUDD, AND B. PARK (1989) Social Cognition. *Annual Review of Psychology* **40**:281–326.

SHIMKO, K. (1991) *Images and Arms Control: Perceptions of the Soviet Union in the Reagan Administration*. Ann Arbor: University of Michigan Press.

SILVERSTEIN, B. (1989) Enemy Images: The Psychology of U.S. Attitudes and Cognition Regarding the Soviet Union. *American Psychologist* **44**:903–913.

SIMON, H. (1985) Human Nature in Politics: The Dialogue of Psychology with Political Science. *American Political Science Review* **79**:293–304.

SIMON, H. (1995) Rationality in Political Behavior. *Political Psychology* **16**(1):45–62.

SNIDERMAN, P., R. BRODY, AND P. TETLOCK (1991) *Reasoning and Choices: Explorations in Political Psychology*. Cambridge: Cambridge University Press.

SNYDER, J. (1992) *Myths of Empire*. Ithaca, NY: Cornell University Press.

SNYDER, R., H. BRUCK, AND B. SAPIN (1962) *Foreign Policy Decision-Making: An Approach to the Study of International Politics*. New York: Free Press.

SPILICH, G. J., G. T. VESONDER, H. L. CHIESI, AND J. F. VOSS (1979) Text Processing of Domain-related Information for Individuals with High and Low Domain Knowledge. *Journal of Verbal Learning and Verbal Behavior* **18**:275–290.

STARR, H. (1984) *Henry Kissinger: Perceptions of International Politics*. Lexington: University of Kentucky Press.

STEINBRUNER, J. (1974) *The Cybernetic Theory of Decision*. Princeton, NJ: Princeton University Press.

STUART, D., AND H. STARR (1982) Inherent Bad Faith Reconsidered: Dulles, Kennedy, and Kissinger. *Political Psychology* **3**:1–33.

SYLVAN, D., T. OSTROM, AND K. GANNON (1994) Case-Based, Model-Based, and Explanation-Based Styles of Reasoning in Foreign Policy. *International Studies Quarterly* **38**(1):61–90.

TETLOCK, P. (1984) Cognitive Style and Political Belief Systems in the British House of Commons. *Journal of Personality and Social Psychology* **46**:365–375.

TETLOCK, P., AND R. BOETTGER (1989) Cognitive and Rhetorical Styles of Traditionalist and Reformist Soviet Politicians: A Content Analysis Study. *Political Psychology* **10**(2):209–232.

TETLOCK, P., AND A. LEVI (1982) Attribution Bias: On the Inconclusiveness of the Cognition-Motivation Debate. *Journal of Experimental Social Psychology* **18**:68–88.

TRIANDIS, H. (1972) *The Analysis of Subjective Culture*. New York: Wiley-Interscience.

TRIANDIS, H. (1980) *Handbook of Cross-Cultural Psychology*. Boston: Allyn and Bacon.

VERTZBERGER, Y. (1990) *The World in Their Minds: Information Processing, Cognition, and Perception in Foreign Policy Decisionmaking*. Stanford, CA: Stanford University Press.

VOSS, J. F., T. R. GREENE, T. A. POST, AND B. C. PENNER (1983) "Problem Solving Skill in the Social Sciences." In *The Psychology of Learning and Motivation: Advances in Research Theory*, vol. 17, edited by G. H. Bower, pp. 165–213. New York: Academic Press.

WALKER, S. (1977) The Interface Between Beliefs and Behavior: Henry Kissinger's Operational Code and the Vietnam War. *Journal of Conflict Resolution* **21**:126–168.

WALTZ, K. (1979) *Theory of International Politics*. Reading, MA: Addison-Wesley.

WALZER, M. (1977) *Just and Unjust Wars*. New York: Basic Books.

WEBER, M. (1964) *The Theory of Social and Economic Organization* (trans. A. M. Henderson amd T. Parsons). New York: Free Press.

WHITE, R. K. (1965) "Images in the Context of International Conflict." In *International Behavior: A Social-Psychological Analysis,* edited by H. C. Kelman. New York: Holt, Rinehart and Winston.

WHITE, R. K. (1968) *Nobody Wanted War: Misperception in Vietnam and Other Wars.* Garden City, NY: Doubleday.

WOLHFORTH, W. (1993) *The Elusive Balance: Power and Perceptions During the Cold War.* Ithaca, NY: Cornell University Press.

ZAJONC, R. (1980) Feeling and Thinking: Preferences Need No Inferences. *American Psychologist* **35**:151–171.