

The Role of Belief Systems and Schemas in Foreign Policy Decision-Making

Author(s): Deborah Welch Larson

Source: *Political Psychology*, Vol. 15, No. 1, Special Issue: Political Psychology and the Work of Alexander L. George (Mar., 1994), pp. 17-33

Published by: International Society of Political Psychology

Stable URL: <https://www.jstor.org/stable/3791437>

Accessed: 17-10-2019 05:16 UTC

## REFERENCES

Linked references are available on JSTOR for this article:

[https://www.jstor.org/stable/3791437?seq=1&cid=pdf-reference#references\\_tab\\_contents](https://www.jstor.org/stable/3791437?seq=1&cid=pdf-reference#references_tab_contents)

You may need to log in to JSTOR to access the linked references.

---

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



*International Society of Political Psychology* is collaborating with JSTOR to digitize, preserve and extend access to *Political Psychology*

# **The Role of Belief Systems and Schemas in Foreign Policy Decision-Making**

**Deborah Welch Larson**

*University of California, Los Angeles*

---

*Whereas the study of elite political belief systems such as the operational code continues to be popular in political science, social psychologists have neglected belief systems in favor of schemas. This article compares and contrasts belief systems and schemas. Whereas both constructs are cognitive, structured, and vary with expertise, schemas are at a higher level of generality and are more closely related to complex cognitive processes. The article discusses the potential advantages of using schemas to analyze various topics in foreign policymaking, such as information processing, memory biases, and the effects of expertise.*

---

**KEY WORDS:** schemas; belief systems; foreign policymaking.

## **INTRODUCTION**

Since the seventies, social psychologists have studied schemas, which mold a person's general knowledge of concepts and situations. Political scientists studying foreign-policy making have, on the other hand, focused on elite belief systems, without referring to the overlying structures, with a few exceptions (Axelrod, 1973; Jervis, 1976, p. 127; Khong, 1991; Larson, 1985). A political belief system refers to the individual's beliefs about the political world. Alexander George (1969, 1979) was a pioneer in identifying elite political belief systems and outlining their role in foreign-policy making.

Do schemas help to explain aspects of foreign-policy making which are not accounted for by current decision-making theories such as the belief systems approach? I shall argue that schemas offer several advantages for the study of foreign-policy making. As a metaconstruct (Fiske & Linville, 1981) at a higher level of analysis, schemas encompass belief systems as well as specific examples and analogies. As such, schemas can help to bridge the gap in research on

cognitive structures between political science and social psychology. Schema theory can explain analogical thinking as well as abstract reasoning. Located within a general theory of the storage and use of knowledge in memory, schema approaches suggest many hypotheses about policy-makers' interpretation and use of information. Schema theory can explain data-driven as well as theory-guided information processing. Schema theory also affords more specific predictions about when cognitive structures change than does belief systems theory. Finally, schemas encourage investigation of individual differences in belief abstractness, complexity, and constraint.

To lay the basis for these arguments, I shall first compare and contrast belief systems with schemas, a distinction that is often fuzzy in the literature. I shall then highlight the potential advantages the schema concept has to offer. Finally, I shall discuss some methodological problems associated with using schemas to explain foreign policy and suggest areas where further research would be useful.

## **BELIEF SYSTEMS AND SCHEMAS**

### **Definition**

Milton Rokeach (1968, pp. 123–24) defines a belief system as “the total universe of a person’s beliefs about the physical world, the social world, and the self.” The operational code belief system is a set of beliefs about the political world, including philosophical beliefs about the nature of politics and instrumental beliefs about the best way to achieve one’s goals (George, 1969). George abstracted and synthesized the writings of Nathan Leites on the Bolshevik operational code into 10 belief categories that were applied to analyze the beliefs of other leaders, such as Henry Kissinger (Walker, 1977; Walker & Falkowski, 1984; Starr, 1984).

Like belief systems, schemas contain general information about the world. A schema is defined as a “cognitive structure that represents knowledge about a concept or type of stimulus, including its attributes and the relations among those attributes” (Taylor & Fiske, 1991; cf. Crocker, Fiske & Taylor, 1984; Hastie, 1981; Rumelhart & Ortony, 1977; Taylor & Crocker, 1981). It is an abstraction from experience with a subject, rather than a definition or a collection of cases (Fiske & Linville, 1980).

Because schemas superficially resemble previous concepts, critics (Kuklinski et al., 1991) have charged that they are merely a rephrasing for “cognitive maps” (Tolman, 1948), “stereotypes” (Allport, 1954), “personal constructs” (Kelly, 1955), “inferential sets” (Jones & Thibaut, 1958), or “attitudes.” Both schemas and belief systems should be distinguished from attitudes. Whereas attitudes include both cognitive and evaluative components, schemas and belief

systems are purely *cognitive* (Taylor & Crocker, 1981; Conover & Feldman, 1984). On the other hand, schema researchers concede the relationship to other constructs. Social psychologists enthusiastically borrowed the schema construct from cognitive psychology precisely because it resembled concepts that they had long been using. By taking previous psychological variables and interpreting them in terms of schema theory, researchers conceived of new hypotheses and methods of testing them. Schemas have had considerable heuristic value in stimulating productive lines of research and more fine-grained hypotheses about information processing (Markus & Zajonc, 1985).

Belief systems and schemas have many similarities: both are structured, simplify information, and vary with expertise and involvement. Schemas, however, are more inclusive, individualistic, and clearly linked to complex cognitive processes.

### Structure

What makes the beliefs a system is that the ideas somehow “go together” or, in Philip Converse’s (1964, p. 207) words, have “constraint.” Constraint is operationalized by our ability to predict given knowledge of an individual’s belief on one issue, that he holds other attitudes and beliefs. In developing the operational code construct out of Leites’s writings, George (1969) showed how the beliefs were related to each other and constituted a system.

Similarly, each schema consists of interrelated knowledge about a concept or stimulus. Indeed, it is the organization of a schema, by spatial, temporal, or logical criteria, that distinguishes schemas from categories, which contain a list of attributes regarded as typical of category members (Wyer & Gordon, 1984).

Belief systems are organized in concentric rings, from more central to more peripheral beliefs and opinions. “Central” beliefs are connected to a greater number and variety of other beliefs. For example, all beliefs seem to rest on a prior conviction either in the validity of sensory data or the credibility of external authority (Rokeach, 1968; Bem, 1970). Values such as equality or freedom also appear to be related to a whole range of other beliefs and opinions (Rokeach, 1968, 1979).

Within political belief systems, George (1969) hypothesized that the first operational code belief about the nature of political life and the “image of the opponent” was central. For example, much of the traditional Bolshevik operational code derived from the belief that the enemy was ineradicably hostile. In his study of elite belief systems in Italy and Britain, Robert Putnam (1973) found that the belief about whether politics was conflictual or harmonious was correlated with many other beliefs, including willingness to compromise with political opponents.

Like belief systems, schemas are structured hierarchically, from general to specific (Cantor & Mischel, 1979; Fiske & Taylor, 1991; Hastie, 1981; Rumelhart & Ortony, 1977; Taylor & Crocker, 1981). General schemas at the top summarize abstract knowledge, while more specific examples are nested underneath. A person may have a schema for "robin" embedded in a "bird" schema, which is further nested inside an animal schema and so on.

Just as the beliefs in a system are interdependent, so some schemas may be correlated with others in a rich web of associations (Taylor & Crocker, 1981). More specific schemas or exemplars, such as that for Munich, might be linked to several general schemas, such as appeasement or World War II. Schemas may also have horizontal connections with schemas on other issues. In their study of the organization of thinking among the public, Conover and Feldman (1984) found that the schema concerning human nature (Hobbesian, altruistic, or individualistic) was related to other schemas. For example, individuals who had a "Hobbesian-Freudian" perspective on human nature tended to interpret foreign affairs information in terms of a "nationalism-ethnocentric" schema. This schema resembles the operational code belief about whether political life is conflictual or harmonious (George, 1969).

On the other hand, whereas a central belief is by definition connected with more peripheral beliefs in the belief system, a general schema may be unrelated to other schemas. Schema theory thus allows for the possibility that an individual might have organized but atomized schemas about politics, rather than having a coherent belief system in which several ideas are interrelated (Conover & Feldman, 1984). Just because a person does not organize knowledge along an ideological dimension not mean that he is unable to grasp political information in any terms other than the most concrete and proximate. Schemas furnish that structure. Schemas are therefore more comprehensive; they include belief systems as well as isolated knowledge structures.

### Generality

Schemas may differ from belief systems not only in organization but in content. Schemas include specific instances, exemplars, and analogies as well as the more abstract knowledge found in belief systems. Schema theory recognizes that people frequently approach problems not by applying abstract propositions but by drawing examples from their experience (Read, 1983, 1984; Wyer & Gordon, 1984). Ronald Reagan, for example, conceived of political issues and problems in terms of simple stories or scripts. He liked to compare the Soviets to various Hollywood producers he had negotiated with as head of the Screen Actors Guild (Cannon, 1991, p. 304).

Even knowledgeable experts sometimes resort to historical analogies or

simplistic slogans. Yuen Foon Khong (1991) found that brilliant men such as Robert McNamara and McGeorge Bundy often used historical analogies during the Vietnam War. Dean Rusk, Bundy, Walt Rostow, Arthur Schlesinger, and James Thomson had been teachers of history and politics before taking power but nevertheless made misleading comparisons of Vietnam to Korea, Munich, or Malaya. The obvious objection would be that these officials used analogies because they believed they had to simplify the situation for the president and others. But Khong shows that officials continued to use analogies even when relevance of the latter was persuasively refuted by others.

Thus, a schema is more comprehensive than a belief system, including specific exemplars as well as abstract propositions. The schema concept is a metaconstruct (Fiske & Linville, 1980), at a higher level of generality. The schema notion fills in previous gaps in conceptualization and explains phenomena which were either ignored or uninterpretable from the standpoint of belief systems theory.

### Relationship to Ideology

Belief systems are often associated with collective bodies of thought, such as ideologies, whereas schemas are idiosyncratic. George (1987, p. 1) defines ideology as “a belief system that explains and justifies a preferred political order for society, either one that already exists or one that is proposed, and offers at least a sketchy notion of strategy . . . for its maintenance and attainment.” Although belief systems could be organized along other dimensions, researchers studying belief systems have typically focused on whether beliefs were located along a liberal-conservative pole. Converse was also concerned with ideological constraint.

George (1987) suggests that the operational code belief system may help to operationalize the general beliefs and values of the ideology in real-world situations. The op code would then mediate the impact of ideology on foreign policy behavior. The philosophical beliefs of the operational code identify the enemy and predict the prospects for achieving a preferred political order, while the instrumental beliefs of the operational code prescribe strategies and tactics for achieving ideological values. Instrumental beliefs are affected by experience, learning, and political socialization.

Ideological schemas are also derived from an individual's direct experience or secondhand information conveyed by others. But because they have different backgrounds, education, and expertise, people differ in the content and organization of their schemas. For example, an ideological schema might include information about liberals' personal characteristics—for example, that they are caring, humane, and idealistic—as well as comprising their issue positions—such

as being prochoice, antinuclear, favoring defense spending cuts, and so on (Milburn, 1987).

### Efficiency

What the new and older research traditions share is the assumption that people use their previous knowledge and experience to reduce complexity and make sense out of reality. Earlier work on belief systems (George, 1969; Holsti, 1962, 1967) suggested that they orient the individual to the environment and serve as a prism in interpreting experience. By screening out inconsistent or irrelevant information, belief systems cut down what would be an overwhelming number of stimuli impinging on the senses. Finally, belief systems suggest norms, standards, and guidelines that help the perceiver choose among strategies and tactics.

Schemas also help the individual to construct meaning out of the environment. Research on reading comprehension shows that people can understand what would otherwise be impenetrable prose passages once they are given contextual knowledge so that they can interpret a passage in terms of a schema (Bransford & Johnson 1971). Schemas direct attention to the ideas that are most important to the meaning of a story (Owens, Bower & Black, 1979). Schemas structure situations by imposing a cast of characters and their relationships to one another. For example, a circus schema includes a ringmaster, clowns, acrobats, and elephants (Taylor & Crocker, 1981).

Schemas enable people not only to organize a complex stimulus so that they can better comprehend it, but to make additional inferences using preexisting knowledge and concepts. Schemas include variables with default values on various attributes (Minsky, 1975). For example, we assume that a bird has two legs, feathers, and a beak (Rumelhart & Ortony, 1977; Taylor & Crocker, 1981). The default assignments help the person "to go beyond the information given" (Bruner, 1957) to make inferences about unseen characteristics when the data is incomplete or ambiguous (Minsky, 1975). For example, because Stalin reminded him of Boss Tom Pendergast from Missouri politics, Truman inferred that the Soviet leader would have enough sense to stage rigged elections in Eastern Europe: "Any smart political boss will do that" (Larson, 1985, pp. 177–78).

The efficiency of schemas originates in inherent human cognitive limitations. Schema theory is closely tied to the notion that limits on the capacity of short-term memory affect how knowledge is organized and used. Belief system theorists did not speculate on how knowledge was structured and ordered in memory, whether via associative links or templates, but instead concentrated on belief stability and change. Our ability to hold information in short-term memory is severely constrained, whereas long-term memory has vast storage space. Using stored knowledge about situations and people to interpret similar situations

and people is a means of economizing on the material that must be held on-line (Fiske & Taylor, 1991). People can ignore details that are common to many situations and focus on novel or unusual aspects. Human beings can make judgments more rapidly when information fits preexisting schemas (Markus & Sentsis, 1982). Organizing material schematically increases subjects' memory for details (Markus & Zajonc, 1985). Typical features of a situation need not be encoded or stored because they can always be retrieved later from the schema (Schank & Abelson, 1977). Instead of trying to remember a complete copy, the individual stores a partial trace under the schema label (Rummelhart & Ortony, 1977). Schemas then help people retrieve particular features from memory by "reconstructing" what they saw, using a blend of remembered details and general knowledge. Unseen material may then "intrude" into the perceiver's memory because it is consistent with the evoked schema. In short, we are "cognitive misers," who try to make the most efficient use of our limited facilities for storage and retrieval (Taylor, 1981). In contrast, whereas belief systems are also an efficient way of processing information, any economy of storage that results from linking beliefs is incidental.

### **Effects of Expertise**

Finally, both belief systems and schemas vary in complexity and structure by level of expertise. Converse (1964) originally hypothesized that elites have more articulated, elaborate, richer, and better connected sets of beliefs than the mass public. Although Converse's argument has been challenged on both methodological (Achen, 1975; Smith, 1980) and theoretical grounds, there is substantial evidence that experts have more constrained belief systems (Stimson, 1975). Similarly, experts' schemas have a more complex organization, with more links among elements (Chase & Simon, 1973; Fiske & Taylor, 1991).

In sum, while both schemas and belief systems are organized representations of the world that perform important functions in information processing, the schema concept is at a higher level of analysis and makes more specific predictions about human cognitive processes. With these similarities and differences between belief systems and schemas in mind, we may go on to examine the relative advantages of using schemas to study foreign-policy making.

## **THE UTILITY OF SCHEMAS FOR UNDERSTANDING FOREIGN-POLICY MAKING**

### **Information Processing**

George (1969) cautioned that the term "operational code" is a misnomer, insofar as it implies that the beliefs are a recipe for action. Beliefs are but one of a



cluster of variables influencing choice. The complex relationships that we are likely to find between beliefs and behavior are unlikely to be revealed by simple correlations between broad categories of situations and beliefs. Rather than using beliefs to map out detailed behavior predictions, George (1979) and Holsti (1976) have suggested that the analyst should focus on how beliefs shape and influence decision-making tasks, such as definition of the situation, search and analysis of options, prediction of outcomes. Psychologists as well now recognize that perception is a multistage process (Erdelyi, 1974).

The schema concept focuses our attention on these intervening processes, rather than direct belief-behavior linkages (Conover & Feldman, 1984; Fiske & Linville, 1980). Schema researchers have made finer distinctions in studying how knowledge affects our current understanding, distinguishing categorization, selection, encoding, inference, storage, and retrieval.

Schemas influence initial encoding of information. People interpret the same remarks as more analytic and assertive when delivered by a male than a female (Taylor et al., 1978). Similarly, observers view the same shove as violent when carried out by a black but as playful or teasing when made by a white (Duncan, 1976). In the realm of international relations, Secretary of State Dean Rusk, influenced by the Korean analogy, interpreted intelligence to infer that the Vietnam War was a case of communist aggression directed from North Vietnam, whereas Under Secretary of State George Ball, who was conscious of the French experience in Indochina, saw the conflict as a civil war (Khong, 1991). When information is ambiguous, policy-makers code it in terms of an accessible schema.

When information is lacking, people may use the default values of the schema to fill in the gaps (Markus & Zajonc, 1985; Rumelhart & Ortony, 1977). During the Cold War, the domino theory (Jervis, 1991) was used to interpret ambiguous situations. The U.S. intervention in Vietnam was guided by the belief that the fall of Vietnam would lead to the loss of Southeast Asia, Asia, and ultimately Europe. Yet there was never any intelligence proving that a communist victory in Vietnam would have repercussions extending beyond Cambodia and Laos. Indeed, a CIA analysis specifically argued that the loss of Vietnam would not lead to the inexorable spread of communism (Gelb & Betts, 1979, pp. 190, 229–30).

Schemas for events, called “scripts” (Abelson, 1981; Schank & Abelson, 1977), provide rules for handling particular types of situations. Cognitive psychology distinguishes between procedural and declarative knowledge. Scripts provide both (Fiske & Linville, 1980). Scripts help the observer grasp the essential features of situations and may trigger a series of actions. For example, when a friendly government is under attack by guerrillas, a military intervention schema might first call for sending military assistance, then undertaking covert operations on behalf of the government, then consulting with the United Nations

and friendly countries, then undertaking bombing missions, and finally sending in U.S. troops.

Schemas help a policy-maker select from the available alternatives by generating expectations about how the other side will react to various policy options. To illustrate, the Korean analogy gave Rusk confidence that despite initial setbacks, the United States would eventually achieve its objectives in Vietnam (Khong, 1991). As this example suggests, the use of schemas may account for many errors in U.S. foreign policy during the Cold War. But it would be going too far to say that schemas always lead to inaccurate judgments.

### Theory vs. Evidence

Social psychologists discovered schemas in the seventies when researchers were studying errors and biases in human judgment. Schema research assumed that schemas screened out and distorted information, and that information processing was influenced more by the perceiver's intuitive theories than the stimulus information. Researchers are now concluding that the external situation can have more impact on inferences than internal knowledge structures. When the data has stronger effects on judgments than the perceiver's cognitive structures, information processing is "bottom-up" rather than "top-down" (Fiske & Taylor, 1991; Higgins & Bargh, 1987).

Schema research suggests that people will *not* interpret information so that it supports their schemas when the evidence contradicting the schema is unambiguous and obviously relevant (Fiske & Taylor, 1991). Locksley et al., (1980) found that subjects used irrelevant or consistent information in line with stereotypes about female passivity. However, assertive female actions did have an impact on subjects' evaluations of the target although such behavior violated their stereotypes. The strongest schema cannot stand up to unambiguously incongruent information or a competing schema which fits the data better (Markus & Zajonc, 1985). On the other hand, evidence which irrefutably contradicts policy-makers' schemas is highly rare in international relations. Even the adversary's conciliatory behavior can be viewed as a trick or an attempt to lull one's state into complacency.

Psychological research suggests that individuals are more likely to use schemas when under time pressure (Jamieson & Zanna, 1989), there is a need for cognitive closure (Kruglanski, 1989), or they must communicate their judgments to others (Higgins, et al., 1982), all conditions likely to be found in foreign policy-making.

In sum, there is no evidence that schemas misrepresent the information available, either in perception or storage in memory. On the other hand, schemas have much greater impact on the inferences and evaluations drawn from available

evidence, going “beyond the information” (Markus & Zajonc, 1985). Such inferential elaboration is pervasive in foreign policy-making, where current situations are ambiguous, direct evidence is lacking, and outcomes are murky.

### Schemas and Memory

Whereas belief systems theory viewed beliefs as a prism and concentrated on theory-driven selection and encoding of information, schema theory encompasses storage and retrieval from memory as well (Miller, 1991). After people integrate an event into a schema, their recollection of it may include elements of the schema that did not appear in the original situation. For example, Truman later “remembered” that he had given Stalin a nuclear ultimatum to withdraw his troops from Iran in March 1946. But State Department records and public sources provide no evidence of any U.S. threats; the Soviets withdrew because Iran had promised them an oil concession and a buffer state in Iranian Azberbaijan. Truman’s memory of the crisis was assimilated to, and made consistent with, the script he had derived from his other experiences with the Soviet government: “getting tough” contained Soviet aggression (Larson, 1985, pp. 53–54).

Skeptics argue that intrusions into memory of unrepresented material are relatively rare in the laboratory (Alba & Hasher, 1983; Higgins & Bargh, 1987). On the other hand, the introduction into memory of schema-related but false information may be more common in foreign policy-making because the meaning of such complex events as the Korean War, Vietnam, or even the Persian Gulf War is up for grabs. Current events place historical cases in a new light. The Korean War, although it ended in a stalemate, looks like a victory in comparison with Vietnam. The retrospective adoption of a new schema for an event may affect retrieval of what actually happened (Alba & Hasher, 1983). Historians have long recognized that interviews with officials are usually unreliable. It would be interesting to compare archival documents with interview material to see if there are any systematic discrepancies which might be attributed to officials’ use of schemas to reconstruct past events in which they were involved.

### Schema Change

Belief system theory suggested that central beliefs should be especially resistant to discrepant information because their revision would entail altering many other associated beliefs and convictions (Bem, 1970; Rokeach, 1968). For example, if the “image of the opponent” is central, then it should be relatively immune to change. Consistent with this hypothesis, Ole Holsti (1962, 1967)

found that Secretary of State John Foster Dulles interpreted Soviet conciliatory gestures as signs of weakness and failure in order to preserve his image of the Soviets as fundamentally hostile.

Just as central beliefs resist change, so schemas endure. The cognitive economy of schemas would be lost if the individual had to reevaluate them for every discrepant piece of information received. As in belief systems, schema change is most likely to occur at the periphery. A person may add specific examples or subtypes to the schema to deal with incongruent information without changing it fundamentally (Weber & Crocker, 1983)—the “exception that proves the rule.”

Schema theory also makes more specific predictions about when schemas change. If people tend to classify deviant cases as a special subtype of a schema, then contradictory evidence dispersed across many instances should have a greater impact on schemas than a few isolated examples (Weber & Crocker, 1983). Thus, for example, Soviet leader Mikhail Gorbachev had to make many unilateral concessions to undermine the distrust of first Ronald Reagan and then George Bush.

Our highly developed explanatory abilities help schemas persevere despite contradictory information. For example, Ross et al. (1975) asked subjects to discriminate real from fictitious suicide notes. In the experimental debriefing, subjects were informed that the feedback about their performance was contrived by the experimenter and was entirely fictitious. Yet, even after learning that they had no basis for any inferences about their abilities, the subjects continued to believe either that they did or did not have an innate sensitivity to suicidal cases. The experimenters speculated that the subjects had generated plausible stories and additional evidence to account for their success or failure, and this supplementary data was still salient when the original feedback was discredited.

Subsequent experiments showed that people perceive as more probable events that they have explained (Ross et al., 1977; Anderson, 1983). It follows that schemas can be undermined by asking subjects to explain the opposite event, to engage in counterfactual reasoning (Anderson, 1982, 1983).

### Individual Differences

Schema theory not only allows for but *predicts* individual differences in the level, organization, and content of knowledge. Researchers using schemas may differentiate subjects by whether they are schematic or aschematic in that issue domain, then further break down schematic individuals into experts and novices (Conover & Feldman, 1984).

Experts would include such influential foreign policy officials as Dean

Acheson, Bundy, or Kissinger. Kissinger had well-developed, complex schemas for leader personality types, classifying foreign leaders as Revolutionary, Patriot, Personal Friend, or Able Adversary (Swede & Tetlock, 1986). Presidents who were novices on foreign policy include Truman, Lyndon B. Johnson, and Reagan. Foreign policy officials selected for their loyalty or intimacy with the president typically have had little foreign policy experience.

Belief systems theory predicts differences in the structure and organization of beliefs for elites and the mass public. Schema theory, on the other hand, has generated research on not only structural variation but differences in the way experts and novices use information to make judgments. Experts' more complex, tightly organized schemas can process information more rapidly and efficiently (Fiske et al., 1990; Fiske & Taylor, 1991). Because interpreting and integrating inconsistent evidence requires more mental effort, experts are better able to notice and use incongruent information than novices (Crocker et al., 1984; Fiske & Kinder, 1981; Fiske & Taylor, 1991). Aware of alternative interpretations, experts make more moderate judgments (Fiske & Kinder, 1981; Fiske et al., 1983).

On the other hand, because experts have more relevant information, organized along more dimensions, they can readily incorporate inconsistent data as exceptions, so that incongruent information has less impact on their schemas (Fiske & Taylor, 1991; Higgins & Bargh, 1987). Further, deviant cases must confront a greater wealth of evidence stored under well-developed schemas (Crocker et al., 1984). Paradoxically, then, informed people can better use contradictory information but are less likely to be influenced by it (Crocker et al., 1984; Fiske & Taylor, 1991). This might explain, for example, why hard liners in the State Department and National Security Council were less swayed than was Reagan by evidence that the Soviet Union had changed under Gorbachev.

### **Problems of Measurement and Evidence**

Critics have charged that existing measures of schemas are inadequate (Kuklinski et al., 1991). Schema research is no more guilty of this shortcoming, however, than studies employing other psychological variables. Beliefs, attitudes, and schemas are all constructs which cannot be observed but must be inferred from the data (Conover & Feldman, 1991). Ultimately, the best test of a measure or operational indicator is the accuracy of the theory's predictions.

In an important contribution, George (1979) discusses the logic of two methods for testing whether cognitive variables influence behavior. The process-tracing method studies how beliefs enter into the decision-making process, including definition of the situation, and identification and evaluation of the options. The congruence procedure in George's terminology tries to determine

whether political decisions are consistent with the subject's beliefs. Of the two methods, process-tracing is more appropriate for uncovering the influence of schemas on information processing.

The international relations scholar does not have available such indicators of schemas as reaction time or recognition and recall tests. Foreign policy analysts must use the subject's public or private statements as a basis for inferring his or her schemas. It is rare, however, that officials have no other motives than self-revelation in presenting their ideas. A politician will try to persuade domestic or foreign audiences by using whatever arguments seem most forceful or appealing (Holsti, 1976, pp. 43–44). In intragovernmental meetings, a foreign-policy maker will select evidence and logic to convince others, in particular the president.

How can we separate the cognitive use of schemas from advocacy or self-justification? The analyst should also look for evidence that the president or his adviser invoked an analogy *before* committing himself to a policy. The investigator might compare public and private statements or statements before different audiences to look for consistency (Holsti, 1976) over time or across situations. The observer may choose features of content over which the subject has no control or no reason to manipulate (George, 1959, p. 38) as a base for inferences about the target's schemas. Thus, for example, a president has no motive to select one persuasive analogy (Munich) over another (Vietnam). Finally, the investigator could compare archival documents with subjects' memories to look for schema-based discrepancies.

## CONCLUSIONS

Schema theory has the potential to uncover the relationship between policy-makers' knowledge and experience and their decisions on current foreign policy issues. The schema concept has wider applicability than belief systems because it includes specific examples and analogies as well as abstract generalizations. It applies to policy-makers with coherent, articulate philosophies as well as those with only rudimentary understanding of foreign affairs.

Part of a general theory of memory and its influence on cognitive processes, schema theory yields many hypotheses about how foreign-policy makers achieve cognitive economy. Schema theory can account for policy-makers' tendency to draw inferences about current situations unwarranted by the available data and then to maintain these erroneous hunches in the face of discrepant facts. Schema theory not only explains but predicts how policy-makers' memories are likely to diverge from reality, even apart from their concerns for presenting themselves favorably to history. Finally, schema theory suggests that policy-makers' schemas about another state will change gradually in response to contradictory evidence over time, rather than undergoing sudden conversion.

Topics for the post-Cold War era include the content and structure of schemas about troublesome foreign leaders, such as Slobodan Milosevic or Saddam Hussein (Stein, 1992), and ethnic groups such as the Muslims, Croats, and Serbs. Is biased interpretation of information a relic of the Cold War? Do schemas continue to distort reception of intelligence about other states? In making judgments and decisions, do policy-makers go beyond the evidence they have available?

The president's advisers may have a major influence on policy. One possible area for further research is the interaction between advisers and presidents, between experts and novices. How do politicians who have only recently entered the foreign policy arena differ from advisers whose entire careers have been spent addressing such questions? What kinds of arguments do expert advisers such as Kissinger or Zbigniew Brzezinski use in order to appeal to less knowledgeable leaders? Because leaders have many beliefs, the schema that an adviser uses to classify a foreign policy situation may help to determine which of his opinions the president regards as relevant. How are advisers subsequently constrained by their own reasoning? Do experts come to believe in the schemas that they use for policy advocacy (Higgins & Rholes, 1978)?

Schema theory may help to bridge the gap between political scientists and social psychologists by showing the relationship between schemas and belief system structure. Evoking an ideological schema increases the consistency of beliefs for individuals who view themselves as conservative or liberal (Milburn, 1987). A schema which is either automatically activated by the situation or chronically accessible may channel a policy-makers' thinking about a current issue, leading to more congruent beliefs. For example, when military officials draw comparisons between current crises and Vietnam, their beliefs about the appropriate conditions for use of military force may become more coherent and categorical.

The study of belief systems has yielded many insights into why the Cold War lasted so long, and schema theory promises to be fruitful in understanding not only the past but foreign-policy making in the post-Cold War era as well.

## ACKNOWLEDGEMENTS

I am grateful to Alexander L. George and Janice Gross Stein for comments on an earlier draft of this manuscript. Research for this article was supported by a UCLA Academic Senate Grant. Kristen Williams provided research assistance.

## REFERENCES

- Alba, J. W. & Hasher, L. (1983). Is memory schematic? *Psychological Bulletin*, 93, 203–231.  
 Allport, G. W. (1954). *The nature of prejudice*. Reading, MA: Addison-Wesley.

- Abelson, R. P. (1981). The psychological status of the script concept. *American Psychologist*, 36, 715–29.
- Achen, C. (1980). Mass political attitudes and the survey response. *American Political Science Review*, 64, 1199–1219.
- Anderson, C. A. (1982). Inoculation and counter-explanation: Debiasing techniques in the perseverance of social theories. *Social Cognition*, 1, 126–139.
- Anderson, C. A. (1983). Abstract and concrete data in the perseverance of social theories: When weak data lead to unshakeable beliefs. *Journal of Experimental Social Psychology*, 19, 93–108.
- Anderson, C. A., Lepper, M. R. & Ross, L. (1980). The perseverance of social theories: The role of explanation in the persistence of discredited information. *Journal of Personality and Social Psychology*, 39, 1037–49.
- Axelrod, R. (1973). Schema theory: An information processing model of perception and cognition. *American Political Science Review*, 67, 1248–1266.
- Ball-Rokeach, S. J., Rokeach, M. & Grube, W. (1984). *Great American values test*. New York: Free Press.
- Bem, D. J. (1970). *Beliefs, attitudes, and human affairs*. Belmont, CA: Brooks/Cole.
- Bransford, J. D. & Johnson, M. K. (1972). Contextual prerequisites for understanding: Some investigations of comprehension and recall. *Journal of Verbal Learning and Verbal Behavior*, 11, 717–26.
- Bruner, J. S. (1957). Going beyond the information given. In H. E. Gruber, K. R. Hammond, & R. Jessor (Eds.), *Contemporary approaches to cognition* (pp. 41–69). Cambridge, MA: Harvard University Press.
- Cannon, L. (1991). *President Reagan: The Role of a Lifetime*. New York: Simon and Schuster.
- Cantor, N. & Mischel, W. (1979). Prototypes in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 12, pp. 3–52). New York: Academic Press.
- Chase, W. G., & Simon, H. A. (1973). The mind's eye in chess. In W. G. Chase (Ed.), *Visual information processing* (pp. 215–281). New York: Academic Press.
- Conover, P. J. & Feldman, S. (1984). How people organize the political world: A schematic model. *American Journal of Political Science*, 28, 95–126.
- Conover, P. J. & Feldman, S. (1991). Where is the schema? Critiques. *American Political Science Review*, 85, 1364–69.
- Converse, P. E. (1964). The nature of belief systems in mass publics. In D. E. Apter (Ed.), *Ideology and discontent* (pp. 206–61). London: Collier-Macmillan.
- Crocker, J., Fiske, S. T. & Taylor, S. E. (1984) Schematic bases of belief change. In J. R. Eiser, (Ed.), *Attitudinal judgment* (pp. 197–226). New York: Springer-Verlag.
- Duncan, S. L. (1976). Differential social perception and attribution of intergroup violence: Testing the lower limits of stereotyping of blacks. *Journal of Personality and Social Psychology*, 34, 590–98.
- Erdelyi, M. H. (1974). A new look at the new look: Perceptual defense and vigilance. *Psychological Review*, 81, 1–25.
- Fiske, S. T. & Kinder, D. R. (1981). Involvement, expertise and schema use: evidence from political cognition. In N. Cantor & J. F. Kihlstrom, (Eds). *Personality, cognition and social interaction* (pp. 171–90). Hillsdale, N.J.: Lawrence Erlbaum.
- Fiske, S. T., Kinder, D. R. & Larter, M. (1983). The novice and the expert: Knowledge-based strategies in political cognition. *Journal of Experimental Social Psychology*, 19, 381–400.
- Fiske, S. T., Lau, R. R. & Smith, R. A. (1990). On the varieties and utilities of political expertise. *Social Cognition*, 8, 31–48.
- Fiske, S. T. & Linville, P. W. (1980). What does the schema concept buy us? *Personality and Social Psychology Bulletin*, 6, 543–57.
- Fiske, S. T. & Taylor, S. E. (1991). *Social Cognition*, 2nd ed. New York: McGraw-Hill.
- Gelb, L. H. & Betts, R. K. (1979). *The irony of Vietnam: The system worked*. Washington, D.C.: Brookings.
- George, A. L. (1958). Comment on 'opinions, personality, and political behavior.' *American Political Science Review*, 52, 18–26.
- George, A. L. (1959). *Propaganda analysis: A study of inferences made from Nazi propaganda in World War II*. Westport, CONN: Greenwood Press.



- George, A. L. (1969). The 'operational code': A neglected approach to the study of political leaders and decision-making. *International Studies Quarterly*, 23, 190–222.
- George, A. L. (1979). The causal nexus between cognitive beliefs and decision-making behavior: The 'operational code' belief system. In L. Falkowski (Ed.), *Psychological models in international politics* (pp. 95–124). Boulder: Westview Press.
- George, A. L. (1987). Ideology and international relations: A conceptual analysis. *Jerusalem Journal of International Relations*, 9, 1–21.
- Hastie, R. (1981). Schematic principles in human memory. In E. T. Higgins, C. P. Herman, & M. P. Zanna, (Eds.), *Social cognition: The Ontario Symposium* (pp. 39–88). Hillsdale, NJ: Lawrence Erlbaum.
- Higgins, E. T., McCann, C. D., & Fondacaro, R. (1982). The 'communication game': Goal-directed encoding and cognitive consequences. *Social Cognition*, 1, 21–37.
- Higgins, E. T. & Rholes, W. S. (1978). "Saying is believing": Effects of message modification on memory and liking for the person described. *Journal of Experimental Social Psychology*, 14, 363–78.
- Holsti, O. R. (1962). The belief system and national images: a case study. *Journal of Conflict Resolution*, 6, 244–52.
- Holsti, O. R. (1967). Cognitive dynamics and images of the enemy: Dulles and Russia. In D. J. Finlay, O. R. Holsti, & R. Fagen, (Eds.), *Enemies in politics* (pp. 25–96). Chicago: Rand McNally.
- Holsti, O. R. (1976). Foreign policy formation viewed cognitively. In R. Axelrod, (Ed.), *Structure of decision: The cognitive maps of political elites* (pp. 18–54). Princeton: Princeton University Press.
- Jamieson, D. W. & Zanna, M. P. (1989). Need for structure in attitude formation and expression. In A. R. Pratkanis, S. J. Breckler, & A. G. Greenwald (Eds.), *Attitude structure and function* (pp. 383–406). Hillsdale, NJ: Erlbaum.
- Jervis, R. (1976). *Perception and misperception in international politics*. Princeton: Princeton University Press.
- Jervis, R. (1991). Domino beliefs and strategic behavior, In R. Jervis & J. Snyder (Eds.), *Dominoes and bandwagons* (pp. 20–50). New York: Oxford.
- Jones, E. E. & Thibaut, J. W. (1958). Interaction goals as bases of inference in interpersonal perception. In R. Tagiuri & L. Petrullo (Eds.), *Person perception and interpersonal behavior* (pp. 151–178). Palo Alto, CA: Stanford University Press.
- Kelly, G. A. (1955). *The psychology of personal constructs*. New York: Norton.
- Kruglanski, A. W. (1989). *Lay epistemics and human knowledge*. New York: Plenum.
- Kuklinski, J. H., Lusk, R. C., & Bolland, J. (1991). Where is the schema? Going beyond the "s" word in political psychology. *American Political Science Review*, 85, 1341–1356.
- Larson, D. W. (1985). *Origins of Containment: A Psychological Explanation*. Princeton, Princeton University Press.
- Locksley, A. Borgida, E. Brekke, N., & Hepburn, C. (1980). Sex stereotypes and social judgment. *Journal of Personality and Social Psychology*, 39, 821–31.
- Markus, H. & Senti, K. (1982). The self in social information processing. In J. Suls (Ed.), *Psychological perspectives on the self* (Vol. 1, pp. 41–70). Hillsdale, NJ: Lawrence Erlbaum.
- Markus, H. & Zajonc, R. B. 1985. The cognitive perspective in social psychology. In G. Lindzey & E. Aronson (Eds.), *The handbook of social psychology* (3rd ed.) (Vol. 1, pp. 137–230). New York: Random House.
- Milburn, M. A. (1987). Ideological self-schemata and schematically induced attitude consistency. *Journal of Experimental Social Psychology*, 23, 383–98.
- Miller, A. H. Where is the schema? Critiques. *American Political Science Review*, 85, 1369–80.
- Minsky, M. (1975). A framework for representing knowledge. In P. H. Winston (Ed.), *The psychology of computer vision* (pp. 211–277). New York: McGraw-Hill.
- Owens, J., Bower, G. H., & Black, J. B. The "soap-opera" effect in story recall. *Memory & Cognition*, 1979, 7, 185–91.
- Putnam, R. D. (1973). *The beliefs of politicians: Ideology, conflict, and democracy in Britain and Italy*. New Haven: Yale University Press.

- Read, S. J. (1983). Once is enough: Causal reasoning from a single instance. *Journal of Personality and Social Psychology*, 45, 323–334.
- Read, S. J. (1984). Analogical reasoning in social judgment: The importance of causal theories. *Journal of Personality and Social Psychology*, 46, 14–25.
- Rokeach, M. (1968). *Beliefs, attitudes, and values*. San Francisco: Jossey-Bass.
- Rokeach, M. (1979). From individual to institutional values: With special reference to the values of science. In M. Rokeach (Ed.), *Understanding human values: Individual and societal* (pp. 47–70). New York: Free Press.
- Rokeach, M. (1984). Belief system theory of stability and change. In S. J. Ball-Rokeach, M. Rokeach, & J. W. Grube (Eds.), *The great American values test: Influencing behavior and belief through television* (pp. 17–38). New York: Free Press.
- Ross, L., Lepper, M. R., and Hubbard, M. (1975). Perseverance in self-perception and social perception: biased attributional processes in the debriefing paradigm. *Journal of Personality and Social Psychology*, 32, 880–892.
- Ross, L., Lepper, M. R., Strack, F. & Steinmetz, J. L. (1977). Social explanation and social expectation: The effects of real and hypothetical explanations upon subjective likelihood. *Journal of Personality and Social Psychology*, 35, 817–29.
- Rummelhart, D. E., & Ortony, A. (1977). The representation of knowledge in memory. In R. C. Anderson, R. J. Spiro, & W. E. Montague (Eds.), *Schooling and the acquisition of knowledge*. Hillsdale, NJ: Lawrence Erlbaum.
- Schank, R. C. & Abelson, R. P. (1977). *Scripts, plans, goals and understanding*. Hillsdale, NJ: Erlbaum, 1977.
- Smith, E. (1980). The levels of conceptualization: False measures of ideological sophistication. *American Political Science Review*, 74, 685–96.
- Starr, H. (1984). *Henry Kissinger: Perceptions of international politics*. Lexington, KY: University Press of Kentucky.
- Stein, J. G. (1992). Deterrence and compellence in the Gulf, 1990-91: A failed or impossible task? *International Security*, 17, 147–79.
- Stimson, J. (1975). Belief systems: constraint, complexity and the 1972 election. *American Journal of Political Science*, 19, 393–417.
- Swede, S. W., & Tetlock, P. E. (1986). Henry Kissinger's implicit theory of personality: A quantitative case study. *Journal of Personality*, 54, 617–46.
- Taylor, S. E. (1981). The interface of cognitive and social psychology. In J. Harvey (Ed.), *Cognition, social behavior, and the environment* (pp. 189–211). Hillsdale, NJ: Lawrence Erlbaum.
- Taylor, S. E. & J. Crocker (1981). Schematic bases of social information processing. In E. T. Higgins, C. P. Herman, & M. P. Zanna, (Eds.), *Social cognition: The Ontario Symposium* (pp. 189–213). Hillsdale, NJ: Lawrence Erlbaum.
- Taylor, S. E., Fiske, S. T., Etcoff, N., & Ruderman, A. (1978). Categorical bases of person memory and stereotyping. *Journal of Personality and Social Psychology*, 36, 778–793.
- Tolman, E. C. (1948). Cognitive maps in rats and men. *Psychological Review*, 55, 189–208.
- Walker, S. G. (1977). The interface between beliefs and behavior: Henry Kissinger's operational code and the Vietnam War. *Journal of Conflict Resolution*, 31, 129–68.
- Walker, S. G. & Falkowski, L. (1984). The operational codes of U.S. presidents and secretaries of state: Motivational foundations and behavioral consequences. *Political Psychology*, 5, 35–51.
- Weber, R. & Crocker, J. (1983). Cognitive processes in the revision of stereotypic beliefs. *Journal of Personality and Social Psychology*, 45, 961–67.
- Wyer, R. S. & Gordon, S. E. (1984). The cognitive representation of social information. In R. S. Wyer, Jr., & T. K. Srull (Eds.), *Handbook of social cognition* (Vol. 2, pp. 73–150). Hillsdale, NJ: Lawrence Erlbaum.