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Stability and Change in Belief Systems

The Operational Code of George W. Bush

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Cognitive frameworks and belief systems are the primary lenses through which presidents view the world. Two important questions are whether these beliefs ever change significantly, and if so, what causes these changes? This article develops empirical data on the strategic and operational beliefs of President George W. Bush (GWB) as a means of examining the theoretical basis for how and why core beliefs change. The author analyzes the foreign policy operational code of President Bush in four separate phases of his political career: the immediate prepresidential phase; his nine months in office prior to September 11, 2001; the six months immediately following the 9/11 terrorist attacks; and his last year in office as a second-term president. The results of this article allow us to address several recurring questions that concern the Bush administration and presidents' belief systems and decision making. They challenge traditional interpretations of the Bush presidency and provide some insights into the causal mechanisms that underlie belief change.

Keywords: *operational code; belief stability; belief change; George W. Bush*

Those who study international politics and foreign policy decision making are faced with a paradox. On one hand, the beliefs of leaders seem critical to understanding their foreign policy decisions. Empirically, they are important because of the utility they provide to political leaders by—among other things—suggesting ready frameworks for analyzing both novel and common situations and imposing order on what would otherwise be overwhelming amounts of information. On a theoretical level, they are important because of the influence they exert on many facets of international politics, from how leaders think about and respond to public opinion (Foyle 1999) to what type of international system is constituted by the mutually reinforcing beliefs of world leaders (Wendt 1992). There is also

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evidence that beliefs are relevant on multiple levels of analysis, from the individual to the cultural level (Johnston 1995). In fact, unless one denies the importance of looking at anything beyond objective capabilities, beliefs must take a central place in one's analysis as either independent or mediating variables.

On the other hand, despite its central importance, our understanding of when and why beliefs change is far from perfect. A survey of the relevant literature in fields of social and cognitive psychology, behavioral economics, and political psychology reveals a surprising lack of attention paid to the question of when and why beliefs change. Do beliefs shift imperceptibly over time? Do they change instantaneously in response to traumatic events? Must a cluster of related beliefs change at the same time? Or can specific beliefs change in isolation (implying a more fragmented belief system)?

In this article, I examine the issue of belief change by using the "operational code" construct. Operational codes are a particular subset of an individual's beliefs—those focused on the political universe. These beliefs structure and order reality for decision makers and help them to sort the signals in their environment from the noise. They exert a tremendous influence on how leaders interpret information, perceive the social environment, and make decisions. As such, they have a prima facie claim to relevance in political leadership and decision making.

This article analyzes the foreign policy operational code of George W. Bush (GWB) over four distinct time periods: (1) prepresidential beliefs, (2) pre–September 11th beliefs, (3) post–September 11th beliefs, and (4) end-of-term presidency beliefs. These four periods constitute a natural experiment of sorts in which we can examine the effects of three classes of events (three independent variables) on presidential beliefs. The transition from Phase 1 to Phase 2 represents a change in GWB's political role from governor and presidential candidate to president and thus allows us to examine whether beliefs change when one's role changes substantially. The terrorist attacks of September 11, 2001, are representative of a second class of belief-changing event: the traumatic shock. The third class of potential belief-changing event is one that can be termed the "learning in office" model of belief change. In this case, we can see the effect of roughly six years of time spent as president of the United States and examine how belief change might occur in the absence of sudden shocks or role changes. In effect, this functions as a control variable, as well as allowing us to examine how stable beliefs are over longer periods of time.

This article has both a substantive and theoretical focus. Substantively, the empirical analysis of President Bush's operational code and strategic beliefs will contribute to a greater understanding of some of his more consequential and controversial decisions. On a theoretical level, I hope to further our understanding of whether beliefs change and what types of events are likely to effect that change. Although several operational code analyses in the past have indirectly examined some of these questions and provided some relevant findings, we are still left without a theoretical basis

for understanding how and why beliefs change. The results of this analysis provide some surprising perspectives on these crucial questions.

What Are Beliefs? And Why Are They Important?

Before proceeding to the analysis of GWB's belief system, it is worthwhile to briefly situate the operational code construct within the larger study of beliefs. In doing so, there are several questions relevant to this study: What are beliefs? Why are they important in the context of political decision making? And finally, what do we know about how, when, and why they change?

First, we must take care to clearly define what we mean when we say "belief." What is a belief? Beliefs are, in essence, that which we hold to be true. They may be propositions about causal relationships or fundamental assumptions about the way the world operates. There is also a strong element of probability in beliefs. That is, there are varying degrees of certainty in beliefs; individuals believe some propositions to be valid at a level approaching certainty while they may have relatively less confidence in the validity of other propositions but still believe them to be generally true (Fishbein 1967, 258). Beliefs are also distinct from both schemas (Larson 1994) and attitudes (Krech and Crutchfield 1948; Katz and Stotland 1959; Katz 1960). Attitudes have a tripartite structure that includes a cognitive component (beliefs) but also include conative (behavioral) and affective components, whereas schemas differ from beliefs in being more "inclusive and individualistic" (Larson 1994, 18-19).

The Importance of Beliefs

One main finding over the past half-century has been that individuals tend to filter new information through their pre-existing beliefs in such a manner as to maintain the consistency of their beliefs (Jervis 1976, 117; 2006, 651). Yet even more important than the assumed outcome (belief stability) is the fact of the process itself: beliefs act as a primary filter through which other perceptual processes operate, whether the effect is to maintain the stability or not (Lane 1962; Knutson 1972). In the context of political decision making, leaders react not to an objective reality but to a subjective reality that is filtered through their belief system (Holsti 1962, 244; Boulding 1969, 423).

Individuals do so because the world that they face is inherently complex. It is full of contradictions, ambiguity, and surprises. Because of their relatively limited ability to process the vast amounts of information that they are faced with, humans are, by necessity, theory driven (Fiske and Taylor 1991; Simon 1985). Beliefs provide essential utility for decisions makers and facilitate decision making by providing ready frameworks for analyzing novel situations and provide answers to fundamental questions about the

way the world works and the sources of human behavior (Tetlock 1998; Rosati 2000). In short, they do nothing less than help to impose meaning and order on what would otherwise be a "confusing and overwhelming array of signals" picked up from our senses and the environment (George 1980, 57).

Belief Stability

Despite the central importance of beliefs in social and cognitive psychology, we are still far from understanding how, when, and why beliefs change.[1] This is because the study of beliefs has mostly focused on the mechanisms that individuals use to maintain stability in their beliefs and the debate over the extent to which beliefs systems are internally coherent. The study of beliefs has long been dominated by the premise of cognitive consistency. The important features of this model of cognition are that beliefs are stable over time, internally consistent and interdependent, and hierarchical.

Cognitive consistency predicts the relative stability of core beliefs over time, as a result of the strong tendency for people to assimilate new information in such a manner as to conform with their preexisting beliefs (Jervis 1976, 118; also see Deutsch and Merritt 1965, 145). If beliefs act as a lens through which we view reality, then that lens does not seem to be readily altered. Confirming evidence is easily assimilated into our preexisting beliefs, whereas dissonant information is discredited, minimized, or ignored altogether (for more on strategies individuals use to maintain belief stability, see Nisbett and Ross 1980; for studies in the political context illustrative of this concept, see Holsti 1967; and Carretta and Moreland 1982). The tendency to assimilate information in this particular way has the effect of keeping beliefs relatively consistent over time.

The tendency for beliefs to remain stable has been demonstrated convincingly in the laboratory. For instance, studies of belief perseverance have noted the tendency for individuals to rigidly adhere to their initial beliefs about a given proposition or causal relationship. Under experimental conditions, individuals were given initial data about some casual relationship (e.g., a firefighter's risk propensity and one's success as a firefighter) upon which they based their beliefs. Even when individuals are told or shown that the initial data were fictitious, they largely cling to their beliefs despite the new information (Anderson, Lepper, and Ross 1980; Anderson 1983).

In addition to temporal stability, cognitive consistency also assumes a belief system that is internally consistent. That is, different beliefs are consistent (or logically coherent) with one another. Much of the research in this area has focused on the strategies that individuals use to maintain internal coherence in their belief systems (Festinger 1957; Heider 1958; Abelson 1967). More recently, a debate has opened on whether individuals can be viewed as "consistency seekers" (who are motivated to reduce discrepancies among beliefs) or "cognitive misers" who are likely to have more internally fragmented belief systems.

Of course, to some extent, the issues of internal and temporal consistency are interrelated. The same strategies that individuals use to maintain internal consistency (to the extent that they strive to do so) at any given moment have the effect of producing beliefs that are relatively stable temporally as well.

The last significant aspect of the cognitive consistency model is that beliefs are hierarchical. This means that any given belief can be thought of as on a continuum between core (more important and fundamental) and peripheral (less important and fundamental). More fundamental, core beliefs are highly resistant to change and help to structure other, peripheral beliefs, which are more prone to change. When a core belief does change, other peripheral beliefs should change as well to maintain internal consistency.

The Operational Code Construct

The concept of the operational code has a long history in the social sciences. The term was first coined by Nathan Leites in his two now classic works, *The Operational Code of the Politburo* (1951) and *A Study of Bolshevism* (1953). Leites conceptualized the responses of the Politburo to political decisions as a series of decision-making rules and axioms that constituted their worldview. He then drew on psychoanalytic theory and social psychology to account for this worldview and analyze the primary motivations and goals of Soviet leaders.

The concept of the operational code languished for a decade and a half until Alexander George (1969) resurrected it in his seminal article, "The 'Operational Code': A Neglected Approach to the Study of Political Leaders and Decision-Making." Noting that Leites's original work was "unusually complex," George extracted the key feature of interest to political scientists—the operational code itself—from the "social-psychological account of the historical origins and meanings of Bolshevism" (p. 193). George's goal in separating the operational code from Leites's "psychoanalytic hypotheses" was to make it more amenable to investigation using the type of methods and data that are generally available to political scientists (p. 195).

The operational code does not encompass all the beliefs that influence the behavior of a given individual. And though the term itself perhaps conjures up a set of routine procedures or rules to apply mechanistically to political life, it is instead a subset of political beliefs that are especially relevant in the context of political decision making. George divided these beliefs into the philosophical beliefs (general assumptions regarding the fundamental nature of politics, conflict, and the individual) and instrumental beliefs (more specific beliefs concerning the methods leaders should use to attain the ends they desire). An individual's operational code is composed of his or her answers to the questions in table 1.

The operational code as conceptualized by George (1969) fit into the cognitive consistency model described above. George (and others in the first generation of

Table 1
The Operational Code

Philosophical
P-1: What is the essential nature of political life? Is the political universe essentially one of harmony or conflict? What is the fundamental character of one's political opponents?
P-2: What are the prospects for the eventual realization of one's fundamental political values and aspirations? Can one be optimistic, or must one be pessimistic on this score; and in what respects the one and/or the other?
P-3: Is the political future predictable? In what sense and to what extent?
P-4: How much control or mastery can one have over historical development? What is one's role in moving and shaping history in the desired direction?
P-5: What is the role of chance in human affairs and in historical development?
Instrumental
I-1: What is the best approach for selecting goals or objectives for political action?
I-2: How are the goals of action pursued most effectively?
I-3: How are the risks of political action calculated, controlled, and accepted?
I-4: What is the best timing of action to advance one's interest?
I-5: What is the utility and role of different means for advancing one's interests?

Source: George 1969.

operational code researchers) assumed that the operational code of individuals would be both internally coherent, and that when core beliefs did change, the peripheral beliefs that they affected would change as well (George 1969, 218; Holsti 1970, 154; Holsti 1977).[2] Building on the psychological work of Converse, George and Holsti went a step further by positing the first two philosophical beliefs ("What are the sources of conflict?" and "What is the fundamental nature of the political universe?") as "master beliefs" that acted as a primary constraint on the operational code and behavior of leaders (George 1969; Holsti 1977). More recently, research has shifted from the qualitative operational code analyses of Holsti and George to quantitative analyses based on the Verbs in Context System (VICS) used in this article and developed by Walker, Schafer, and Young (1998; for more on the development of the operational code research program, see Walker 1990, 2003).

Stability and Change in Operational Codes

Despite its clear importance for the study of politics, the questions of whether beliefs change, and if so, what causes them to do so, has produced very little in the way of empirical research or theoretical development in political science. Because the operational code is quantifiable and the results of its analysis are reproducible, the examination of it can contribute a great deal to our basic understanding of belief change. Before proceeding to our analysis, it will be useful to summarize the results of the few studies that have examined how (and whether) operational codes change.

However, the reader will notice that few of these studies summarized below provide concrete or generalizable hypotheses about the nature of belief change (i.e., which beliefs change, when they are likely to change, and why they change).

In the past, change has generally been conceptualized as any statistically significant shift in the operational code. The statistical significance reveals whether a change has occurred, and the magnitude of the change reflects how big a change has occurred. However, there is a third dimension that is relevant but often overlooked: the type of change. Beliefs can change in one of two ways; they can be reinforced, or they can be reversed. Both types of change are important and worthy of our attention, yet there is a clear difference between the two. In one case, prior beliefs (''the world is friendly'') are reinforced (''the world is *very* friendly''), whereas in the other case, they are changed in the opposite direction (''before I thought the world was friendly; now I believe it to be more hostile'').[3]

The literature on operational code change can be divided into two major groups: those that evaluate a given leader's operational code longitudinally (and are interested in how their beliefs evolve over time) and those that examine the effect of specific events (e.g., the end of the cold war) on the leader's beliefs. In the first group, the most important trend to note is that operational codes (i.e., beliefs) can change over time. Over the period between the 1970s and 1990s, for instance, the philosophical beliefs of both Yitzhak Rabin and Shimon Peres changed significantly: their generally pessimistic views of the world were ameliorated over the course of the two decades (Crichlow 1998, 695). In a similar vein, Malici and Malici (2005) found that the end of the cold war had no discernable effect on the operational code of Kim Il Sung and a very small effect on that of Fidel Castro (in P-4, control over historical development, and I-5, promise and appeal/support; see Appendix A and the Method section for details on the indices measured by quantitative operational code analysis).

More recently, several scholars have examined the effects of specific events on a leader's operational code. Walker, Schafer, and Young (1998) analyzed the operational code of President Jimmy Carter both before (1977-1979) and after (1980) the Soviet invasion of Afghanistan. They found a large and statistically significant decrease in his cooperative view of the political universe (P-1) and in his optimism concerning the realization of his goals (P-2; Walker, Schafer, and Young 1998, 185-86). This pattern illustrates a reversal of beliefs in which Carter's previously cooperative and friendly view of the political universe in 1977 to 1979 changed in the opposite direction in 1980, becoming notably more pessimistic and conflictual.

Walker and Schafer (2000a) found that the operational code of President Lyndon B. Johnson did shift between two phases of planning for the war in Vietnam in 1964 and 1965. Specifically, he exhibited a loss of control (P-4), attributed a greater role to chance (P-5), and became more risk averse (I-3; Walker and Schafer 2000a, 537).

And most recently, Feng (2005a) found that the Korean War affected all five of Mao's philosophical indices, which became more hostile and confrontational during the conflict. These changes are illustrative of the reinforcement of prior beliefs. Mao's views of the political universe were already on the hostile and conflictual end of the spectrum, but these beliefs were reinforced and strengthened in wartime.

These earlier research projects provide a significant empirical foundation for this project to build upon. The findings suggest that individuals' operational codes can change and that they can do so in a rather limited time frame (one to two years). Yet, although they provide an important foundation, it is easy to see that there are still vast gaps in our understanding of how operational codes change. Only a small handful of these projects were designed in such a way so as to distinguish between multiple potential causes of belief change. So although they were able to provide support for the notion that operational codes were more flexible than originally believed (a crucial first step in this research), they were unable to suggest how and why these changes occurred. This article builds on those works and the small number of recent projects that have examined potential belief-changing events (such as the Korean and Vietnam wars) to suggest several independent variables drawn from psychological theories of belief change and operational code analysis.

The Stability of Instrumental Beliefs

An interesting trend that emerges from these studies concerns which beliefs were stable and which were prone to change. The results above indicate that philosophical beliefs are more prone to change than instrumental beliefs (Walker and Schafer 2000b, 4). This pattern was found in analysis of the operational codes of Bill Clinton, Mao Zedong, Deng Xiaoping, Jiang Zemin, and Hu Jintao (Schafer and Crichlow 2000, 563; Feng 2005a, 657; Feng 2005b, 21).[4] When instrumental beliefs did change along with philosophical beliefs, as they did in the operational code of Jimmy Carter, Lyndon Johnson, and Fidel Castro (Walker, Schafer, and Young 1998, 185; Walker and Schafer 2000a, 537; Malici and Malici 2005, 403), the changes tended to be of a very low magnitude.[5]

What is particularly interesting about these findings from operational code research is that they directly contradict the social psychological theories of belief change. Tetlock (1991), for instance, argued convincingly that foreign policy belief systems are organized hierarchically. At the top are fundamental assumptions, below which are "strategic policy beliefs" and then tactical beliefs. He argues that learning takes place mostly at the lowest level (that of tactical beliefs) and that higher level beliefs are much less prone to change (Tetlock 1991, 27-31; also see Larson 1994, 26-27; Rokeach 1968; Vertzberger 1990, 118). If this were correct, we would expect change in beliefs to be relatively less likely in philosophical beliefs than in instrumental

Table 2
Time Periods Under Examination

Phase	Time Period
1. From governor to president—the campaign	1998 → January 19, 2001 (day prior to Inauguration Day)
2. Pre–September 11th presidency	January 20, 2001 (Inauguration Day) → September 10, 2001
3. Post–September 11th presidency	September 11, 2001 → March 11, 2002 (six-month period following September 11th)
4. End-of-term presidency	January 20, 2007 (two years into second term of presidency) → July 20, 2007

beliefs; however, exactly the opposite pattern has been found thus far. This pattern and its implications for this article's results will be taken up in greater detail in the Discussion section.

Hypotheses

The results noted above from both psychology and operational code analysis are of minimal help in suggesting possible hypotheses concerning the change in GWB's beliefs over the four periods examined in this article (see table 2). In some cases, such as the issue of central versus peripheral beliefs, they suggest directly opposite predictions as to which beliefs are likely to change, whereas in others—such as the effect of specific factors on belief change or whether beliefs are likely to be reversed or reinforced—they suggest almost nothing at all. I put forward some hypotheses based on the available research and relevant literature:

Hypothesis 1a: There will be no major shifts in President Bush's operational code from Phase 1 to Phase 2.

Hypothesis 1b: To the extent that President Bush's operational code does shift from Phase 1 to Phase 2, the shifts will be in the philosophical beliefs (not the instrumental beliefs) and the changes will reinforce, rather than reverse, his prior views of the political universe as a friendly and cooperative place.

Rationale. As noted, the vast majority of evidence from psychology suggests the overall stability of beliefs. Here, the question is whether a change in role—from governor of Texas to president of the United States—is likely to significantly alter GWB's foreign policy operational code.

Feng's results (2005b) bear mentioning again here. She coded four Chinese leaders at different points in their political careers and found that changes in their political role did correlate with significant alterations in their operational codes (Feng 2005b, 12). And though it is not directly comparable to the quantitative studies,

Holsti (1970) found some evidence suggesting that J. F. Dulles's beliefs were influenced by his role (155-56).

All available sources on the initial months of the Bush presidency agree, however, that the president was not particularly focused on foreign policy issues prior to September 11, 2001 (see Daalder and Lindsay 2003a; Hermann and Reese 2004; Suskind 2004, 45). In addition, a change in instrumental beliefs (i.e., tactics) would imply that GWB's prior instrumental beliefs had been tested and found to be lacking in some way. Yet, both the relative lack of attention paid to issues of foreign policy in his first nine months in office and the short time span of Phase 2 (precluding unambiguous feedback on the usefulness of various tactics) suggest that GWB's instrumental beliefs are likely to remain stable between Phase 1 and Phase 2.

Feng's (2005b) analysis suggests that GWB's philosophical beliefs might become more conflictual upon taking office as president. However, observers of the Bush presidency have noted his surprisingly cooperative approach to international politics in his first nine months in office. Illustrative of this was Bush's stance toward Russia. While key foreign policy advisors Donald Rumsfeld, Paul Wolfowitz, and Condoleeza Rice were busy "lambasting" Russia (Daalder and Linsday 2003a, 64; Perlez 2001), Bush took a dramatically more cooperative stance. During a personal meeting with Premier Vladimir Putin, the two leaders discussed religion and Bush famously "got a sense of his [Putin's] soul" (Tyler 2001). Thereafter, it became clear that the Bush Administration's policy toward the United States' historical adversary would be much more cooperative and trusting than most had expected (Mazzarr 2003; Daalder and Lindsay 2003a).

Furthermore, optimism seems to be a key component of GWB's personality. Most of those who have spent time in his company have come away with the impression of a confident, optimistic person (Frum 2003; Bruni 2002).[6] Observers and scholars have agreed with this character assessment of the president, despite the antipathy some of them have expressed toward him (Mazzarr 2003; Moens 2004; Mitchell 2000; Kristof 2000). It is thus possible that attaining the office of president of the United States, arguably the most powerful position in the world, might have exacerbated or intensified those qualities. For a man so confident in his own abilities and optimistic about his future, gaining more power to accomplish his goals would likely have the effect of reinforcing his prior beliefs about the cooperative and friendly nature of the political universe.

Role theory supports this hypothesis as well. In novel situations, actors are likely to use a familiar role until events either reinforce that role conception or a new role is learned (Walker 1979, 177). In the case of GWB, his new role as president of the United States was sufficiently novel that he was unlikely to have at his disposal a role conception appropriate to his new office and therefore likely to retain his old role conception (including his old beliefs) after taking office.

Hypothesis 2a: There will be statistically significant shifts in GWB's operational code between Phase 2 and Phase 3.

Hypothesis 2b: The shifts will be in philosophical (and not instrumental) beliefs, making his diagnosis of the political universe more conflictual and less optimistic, reversing his prior beliefs.

Rationale. There has been considerable debate over the extent to which the events of September 11th "changed" President Bush. Initially, both GWB and his wife, Laura Bush, denied that the events had changed him in any significant way (Hume 2002; also see Hughes 2004, 252).[7] Some scholars have agreed, arguing that the attacks merely confirmed GWB's prior strategic beliefs (Daalder and Lindsay 2003b, 101). Others have argued that although his public persona was certainly transformed, the terrorist attacks gave him a sense of purpose rather than truly changing any fundamental aspects of his beliefs about the world (Draper 2007, 166). Still, others argued that the terrorist attacks had not only given the president a new sense of purpose but had also dramatically shifted his views about the fundamental nature of international politics (Heclo 2003, S. Renshon 2004, 152; Jervis 2005, 39).

Support for the notion that Bush changed significantly after 9/11 is also found by Robison (2006) in his operational code analysis of GWB and his advisors. Robison found several statistically significant changes in GWB's operational code, indicating that he became more conflictual, saw the world as more hostile, and was less optimistic in achieving his political goals (119).

On the psychological side, the predictions are equally mixed. On one hand, most theories of belief stability admit that beliefs do change sometimes and suggest that large "spectacular events" might be a mechanism for that change (Deutsch and Merritt 1965, 137; Jervis 1976, 218, 262). For instance, Peffley and Hurwitz (1992) examined the effects of the 1987 and 1988 Arms Control summits between U.S. and Soviet leaders. They found that public opinion polls revealed that U.S. beliefs concerning the nature of the Soviet Union, which had been relatively stable prior to these events, changed significantly, becoming more trusting and "dovish" (Peffley and Hurwitz 1992).

Conversely, Tetlock (2005) found in a longitudinal study that the classification of an event as an "exogenous shock" (i.e., something dramatic and unexpected) served as a defense mechanism for belief systems and acted to consolidate prior beliefs rather than changing them in any way (Tetlock 2005, 131-32). Individuals in his study claimed that the nature of the surprise event placed it outside of their model (framework of analysis, beliefs, etc.) and that thus they were not responsible for predicting it and should not incorporate it into their model by changing their beliefs.

The debate mentioned earlier between those who see individuals as consistency seekers and those who posit a more fragmented belief system also has relevance here. If belief systems are generally internally coherent, then anything that produced a change in a central or core belief would be likely to cause substantial

changes throughout the belief system. In other words, this theory would predict generally stability and small shifts in beliefs, but once change comes, "it will come in large batches. Several elements will change almost simultaneously" (Jervis 1976, 170). Here again, there is conflicting evidence. Although Ben-Zvi (1978) found dramatic shifts in the images of Japan held by American leaders after WWII, only one operational code analysis has come close to finding such wholesale changes in a leader's operational code. Even in that case, Malici (2006) found that Ronald Reagan's operational code in his last year in office evinced statistically significant changes in only in two of the five philosophical indices and seven of the eleven instrumental indices (140).

Clearly, mixed and contradictory predictions abound if one takes into account all the relevant literature. However, the balance of the evidence (including GWB's own views on the matter) suggests that the events of September 11th caused some fundamental change in GWB's beliefs about the world. As for the nature of the change in his operational code, it seems highly likely that to the extent that change did occur, it would be a reversal of his prior beliefs, and GWB would see the world as a more dangerous, conflictual place and have less optimism for the prospects of accomplishing his goals. I do not predict wholesale change in the entire code, however, and believe that the change will be confined to the philosophical indices.

Hypothesis 3: There will be no statistically significant shifts in President Bush's operational code from Phase 3 to Phase 4.

Rationale. At issue here is whether President Bush's operational code changed between March of 2001 (the end of Phase 3) and the end of his second term (January through July 2007). During this six-year period, there were no large exogenous shocks on the scale of the 9/11 attacks, and President Bush's role remained the same. In essence, the change from Phase 3 to Phase 4 serves to some degree as a control, allowing us to examine belief stability or change in the absence of a change in role or an exogenous shock.

On another level, we can further investigate the "learning in office" hypothesis suggested by Schafer and Crichlow (2000, 562). That is, to what extent did GWB's foreign policy beliefs shift as he gained experience in office? No other job is adequate preparation for the presidency, especially in an age of increased global interconnectedness and American dominance. Thus, it is plausible to expect that as presidents (and other high-level leaders) gain greater exposure to international politics and have to exercise greater command responsibility, their views on how the international political system works and the best tactical means to accomplish their goals might change.

However, the "cognitive consistency" argument that has dominated the study of beliefs for several decades suggests a different prediction. This model would predict that new information would be assimilated in such a way as to maintain the

stability of President Bush's belief system. If this were true, we would expect Bush to minimize the importance of dissonant information and interpret ambiguous information in a manner consistent with his prior beliefs. In fact, this behavior is precisely the pattern exhibited by President Bush with respect to Iraq. Although eventually admitting some misjudgments (particularly with regard to the lack of adequate planning for Iraq's reconstruction), he has been adamant in defending the major decisions in this foreign policy area.

In addition, President Bush seems to have used several cognitive and rhetorical strategies for maintaining his belief system in the face of dissonant information. For instance, he has lengthened the relevant time frame (thus minimizing the importance of immediate setbacks) and focused on historical analogies that confirm the wisdom of his decisions (e.g., the reconstruction of Japan after WWII; Sanger 2005a, 2005b). And although he has seemed open to changing strategy within the context of Iraq, his overall message has remained constant: the decision to go to war in Iraq was the correct decision (despite the difficulty of the occupation and the failure to find weapons of mass destruction) because his essential view of the international system—in particular, the most dangerous threats to the United States—has not changed ("The Candidates' 2nd Debate," 2004; Bush 2004). As a result, Hypothesis 3 is that President Bush's operational code will not change significantly from Phase 3 to Phase 4.

Method

For this analysis, the program *Profiler Plus v. 5.7.0* was used, along with the "Operational Code" scheme, which used the VICS. Both were provided by Social Science Automation, Inc. A full explanation of VICS is outside of the scope of this article, but a brief overview is useful (for a full overview, see Walker, Schafer, and Young 1998; Schafer and Walker 2006). The core of operational code analysis lies in inferring a leader's beliefs about the nature of the political universe and the use of power. When should it be used? In what circumstances is it useful or necessary? To do so, VICS focuses on verbs in the speech acts of those individuals that are the subject of analysis. One can conceptualize VICS as working in two separate stages. In the first stage, "utterances" (sentences that contain verbs) are coded for directionality (+ for cooperative or – for conflictual) and then for intensity (as either *deeds* or *words*). *Deeds* indicate the exercise of power in a relationship, as in "The United States is attacking China." *Words* represent the promises or threats to use power, or the support of or opposition to an "other." In the sentence "the United States condemns China," the word "condemns" is a *word* (Schafer and Walker 2006, 31). Intensity is scaled from −3 (*punish*) to +3 (*reward*).

The second stage of VICS coding is the attribution of the verbs. Sentences in which the subject (or an in-group) refers to himself or herself represent his or her

beliefs with respect to the exercise of power (or in other words, his or her instrumental beliefs). Sentences that refer to an "other" represent beliefs about how others exercise power in the international system and are indicative of the subject's philosophical beliefs (Schafer and Walker 2006, 32). A guide to verbal descriptors for VICS' numerical scores is in Appendix A. To briefly illustrate the coding system, consider the following sample sentence: "Russian military forces have invaded India." The subject of this sentence is "Russian military forces," which would be coded as referring to an "other." The verb phrase "have invaded" is in the past tense, and the directionality is negative and high in intensity. Thus, this verb phrase would be coded as "*punish*" (−3).

Content

Content was gathered from public speeches made by President Bush.[8] In cases where GWB answered questions from reporters or the audience after a speech, only the prepared remarks were used, following the precedent of Dille (2000) and Schafer and Crichlow (2000), who found that spontaneous and prepared statements generated slightly different results. For Phases 2, 3, and 4, all speeches were obtained from the White House Press Office (www.whitehouse.gov/news). All speeches made during the designated time period that met the following two criteria were used. Each speech must meet the minimum requirement of 1,500 words,[9] and all speeches must focus primarily on foreign policy issues, following Walker, Schafer, and Young (2003), who found that operational codes may be domain specific. There was no single, authoritative source for the speeches President Bush made during the time period examined in Phase 1, so speeches that met the same two criteria listed above for this phase were compiled from a number of different sources (a list of sources for these speeches is available from the author on request).

Results

Table 3 contains the results of the operational code analysis. It shows the significant differences in philosophical and instrumental beliefs for GWB across four phases: (1) pre-election, (2) pre–9/11, (3) post–9/11, and (4) to the end of his second term in office.[10] The differences mark the effects of role change (Phase 1/Phase 2), exogenous shock (Phase 2/Phase 3), and learning in office (Phase 3/Phase 4). Each of these effects is summarized below.

The Effect of Role Change (Phase 1 → 2)

As Table 3 indicates, there were statistically significant changes in two operational code indices: P-1 (Nature of the Political Universe) and P-2 (Realization of

Table 3
The Operational Code of George W. Bush

		Phase 1 ($n = 4$)	Phase 2 ($n = 6$)	Phase 3 ($n = 15$)	Phase 4 ($n = 13$)
P-1	Nature of the Political Universe	+.37	**+.51** (**−2.18***)	**+.21** (**3.82*****)	+.29 (−1.22)
P-2	Realization of Political Values	+.20	**+.29** (**−1.84***)	**+.06** (**3.54*****)	+.13 (−1.15)
P-3	Predictability of Political Future	.12	.14 (−1.60)	**.11** (**1.84***)	.11 (−0.21)
P-4	Control Over Historical Development	.33	.33 (−.14)	.32 (.49)	**.25** (**2.51****)
P-5	Role of Chance	.96	.95 (1.22)	.96 (−1.28)	.97 (−1.11)
I-1	Strategic Approach to Goals	+.51	+.53 (−.09)	+.40 (1.29)	+.49 (−1.10)
I-2	Tactical Pursuit of Goals	+.29	+.25 (.40)	+.13 (1.70)	+.19 (−1.14)
I-3	Risk Orientation	.14	.19 (−.70)	.21 (−.32)	.26 (−1.18)
I-4	Timing of Action				
a.	Cooperation/Conflict	.49	.49 (.09)	.59 (−1.25)	.51 (1.06)
b.	Words/Deeds	.38	.58 (−1.57)	.65 (−.59)	.53 (1.32)
I-5	Utility of Means				
a.	Reward	.14	.18 (−1.49)	.17 (.49)	.15 (0.58)
b.	Promise	.26	.13 (1.57)	.05 (1.67)	.04 (0.64)
c.	Appeal/Support	.36	.46 (−.92)	.48 (−.37)	.56 (−1.49)
d.	Oppose/Resist	.11	.08 (.55)	.08 (.05)	.11 (−1.26)
e.	Threaten	.09	.05 (1.22)	.07 (−.53)	**.02** (**2.56****)
f.	Punish	.05	.11 (−.97)	.16 (−.98)	.12 (1.19)

Note: Data in bold denote significant results. Values in parentheses are t-statistics for change from previous phase.
*$p \leq .10$. **$p \leq .05$. ***$p \leq .01$.

Political Values). The results indicate that President Bush's view of the political universe became more optimistic in Phase 2, when he took office. P-1 changed from +.37 to +.51, which in the verbal descriptor categories (Appendix A) would be a shift in his view of the political universe from *somewhat friendly* to *definitely*

friendly. P-2 changed from +.20 to +.29, both of which indicate that Bush was "somewhat optimistic" concerning the realization of his political values. Aside from these two indices, no other aspect of GWB's operational code shifted significantly from Phase 1 to Phase 2.

Because of the relatively small magnitude of the changes in P-1 and P-2, we cannot classify this as a "major" shift in beliefs, but the fact that the changes in both P-1 and P-2 were significant and in the same direction indicates that a shift did occur and that the effect was to reinforce GWB's prior beliefs about the world. As such, Hypothesis 1a seems to be only partly supported: A detectable shift does occur in President Bush's philosophical beliefs, but we cannot definitively declare this to be a major shift in his belief system. Hypothesis 1b is supported: to the extent that GWB's operational code did shift in Phase 2, the only statistically significant shift was in the philosophical (not instrumental) indices, and the changes were in the optimistic and cooperative direction.

Traumatic Events and Belief Change (Phase 2 → 3)

The next substantive question concerns the impact of traumatic events on GWB's belief system. Table 3 indicates significant shifts in President Bush's operational code from Phase 2 to Phase 3. The first three philosophical indices—Nature of Political Universe, Realization of Political Values, and Predictability of Political Future—all changed significantly. In addition, the changes in the first two philosophical indices were of a substantial magnitude. P-1 decreased from +.51 (*definitely friendly*) in Phase 2 to +.21 (*somewhat friendly*) in Phase 3, decreasing even past his initial score when he took office (when it was +.37). GWB was significantly more pessimistic in his beliefs concerning the prospects for the realization of his political goals, the VICS index decreasing from +.29 to +.06 in Phase 3. In addition, his belief in the predictability of the political future also declined significantly (from +.14 to +.11), though the shift was of a smaller magnitude.

Both Hypotheses 2a and 2b are supported, and the evidence suggests that traumatic shocks do have the capacity to effect fundamental change in individuals' belief systems. Furthermore, the change was a reversal; whereas GWB viewed the world has friendly and cooperative before 9/11, those views became significantly more conflictual and hostile after 9/11.

This finding provides further support for those who argued that President Bush's beliefs were significantly altered by the terrorist attacks of September 11th (e.g., Heclo 2003; S. Renshon 2004; Jervis 2005). Conversely, it is difficult to interpret this finding as supporting the hypothesis that 9/11 "confirmed" Bush's prior beliefs (Daalder and Lindsay 2003b) or that 9/11 simply gave him a "sense of purpose" (Draper 2007).

However, although the first three philosophical indices are clearly quite important—they are at the heart of how the individual views the political universe—it is notable that

they are the only indices that experienced a statistically significant change. As a result, these changes, significant though they may be, do not wholly disconfirm models that predict consistency in beliefs. Bush's overall operational code can still be described as relatively stable, with only three out of ten indices experiencing a statistically significant change.

Learning in Office (Phase 3 → 4)

The change from Phase 3 to Phase 4 is notable for the lack of any major shifts in President Bush's operational code. Although P-4 (Control Over Historical Development) did decrease slightly (from .32 in Phase 3 to .25 in Phase 4; significant at $p \leq .05$), the likely explanation for this is that several years as president diminished GWB's belief in his personal ability to influence historical events and outcomes. In addition, I-5 (Threaten) decreased from .07 to .02 in Phase 4 and was also significant at $p \leq .05$.

Yet, both of these changes, though significant in the statistical sense, were not significant in any practical or substantive sense. The change in P-4 was not of a large enough magnitude to shift the verbal descriptor category (it remained low in both Phase 3 and 4), whereas in I-5, the rank order of tactical preferences remained identical to Phase 3 save for the switched positions of "promise" and "threaten."

The very small magnitude of these changes indicates that though there may have been some minor shifts in President Bush's beliefs, we cannot conclusively state that any major shift in his belief system took place. Thus, Hypothesis 3 (no learning in office) is supported. It is important here to note that "learning" is used here strictly in the descriptive (and not normative) sense of the term. It simply means that President Bush's foreign policy operational code did not change significantly (after September 11, 2001) while in office. Here, we encounter a potential disconnect between *learn*, as used in political science literature and the term as it is generally understood. In the general sense, President Bush may have "learned" many things while in office. For instance, he is likely to have acquired new information (he undoubtedly had more knowledge of international affairs after six years in office, for instance). However, because there is no shift in his operational code, we can conclude that he did not "learn" in the sense that the new information effected a change in his operational code beliefs.

Discussion

We can now turn to the broader picture of how the beliefs of President Bush changed over time and how these results fit (or do not) with social psychological and operational code theories of belief change. Table 3 indicates that President Bush's beliefs changed significantly in two out of the possible three time periods in

which change could have occurred. These two shifts occurred when he took office in early 2001 and in the aftermath of the terrorist attacks of September 11th, 2001. In the first case, changing role reinforced and strengthened GWB's existing beliefs, while in the latter case, the events of September 11th reversed his beliefs, pushing them in the opposite direction (negative, in this case).

Temporal Stability

Although these two major shifts seem contrary to the predictions made by social psychological theories of belief stability, it is difficult to assess with any degree of certainty how contrary these findings truly are. Much of this has to do with the frustratingly vague predictions of the theories, which seem to predict that beliefs generally remain stable, except when they do not. For instance, one could make the case that the results presented in this article are evidence for belief stability. Evidence for this interpretation is that despite the many important changes in his life (being elected president, taking office, the surprise terrorist attacks, launching a preventive war in Iraq, etc.), only seven changes in GWB's operational code occurred out of a possible forty-eight (sixteen indices multiplied by the three phases in which change could have occurred). Discounting the relatively insignificant changes in Phase 4, this becomes even starker: only five changes out of a possible forty-eight. By and large, GWB's operational code remained relatively stable over the tumultuous period under observation.

However, this interpretation—although technically correct—is also somewhat misleading. This is because the five belief changes that did occur were of some substantive significance. The shifts in GWB's operational code in Phases 2 and 3 were changes in his most basic conception of the political universe: the nature of the political world (whether hostile or friendly), the prospects for the realization of his political goals (optimistic or pessimistic), and the extent to which the future is predictable.

Furthermore, the shifts were significant in the practical sense as well, particularly in Phase 3. In Phase 2, upon assuming the presidency, the change in P-1 was of sufficient magnitude to shift its verbal descriptor category from "somewhat" to "definitely" friendly (see Appendix A). In Phase 3, after the 9/11 attacks, the changes in P-1 and in P-2 were both of sufficient magnitude to shift its verbal descriptor (from "definitely" to "somewhat" friendly, respectively, and from "somewhat optimistic" to "mixed").

To see the broad trends in GWB's operational code, we can also examine his *z* scores (contained in Appendix B), which are standard deviations from the mean values for a norming group of Post–WWII U.S. leaders.

In addition to underscoring the dramatic belief reversal caused by 9/11, GWB's *z* scores illustrate several other notable trends. For instance, Bush's belief in his ability to control historical events is a full two standard deviations above the norming group

Table 4
The Operational Code of George W. Bush: Phase 3 (Extended)

		Phase 2	Phase 3	Phase 3 Extended
P-1	Nature of the Political Universe	**+.51**	**+.21**	**+.27**
		(**−2.18***)	(**3.82*****)	(**3.67*****)
P-2	Realization of Political Values	**+.29**	**+.06**	**+.11**
		(**−1.84***)	(**3.54*****)	(**3.47*****)
P-3	Predictability of Political Future	.14	**.11**	.12
		(−1.60)	(**1.84***)	(1.21)
P-4	Control Over Historical Development	.33	.32	.31
		(−.14)	(.49)	(.56)
P-5	Role of Chance	.95	.96	.96
		(1.22)	(−1.28)	(−.85)
I-1	Strategic Approach to Goals	+.53	+.40	+.47
		(−.09)	(1.29)	(.69)
I-2	Tactical Pursuit of Goals	+.25	+.13	+.17
		(.40)	(1.70)	(1.32)
I-3	Risk Orientation	.19	.21	.26
		(−.70)	(−.32)	(−1.04)
I-4	Timing of Action			
a.	Cooperation/Conflict	.49	.59	.53
		(.09)	(−1.25)	(−0.64)
b.	Words/Deeds	.58	.65	.56
		(−1.57)	(−.59)	(.13)
I-5	Utility of Means			
a.	Reward	.18	.17	.15
		(−1.49)	(.49)	(1.48)
b.	Promise	.13	.05	.06
		(1.57)	(1.67)	(1.34)
c.	Appeal/Support	.46	.48	.52
		(−.92)	(−.37)	(−.94)
d.	Oppose/Resist	.08	.08	.09
		(.55)	(.05)	(−.29)
e.	Threaten	.05	.07	.05
		(1.22)	(−.53)	(.25)
f.	Punish	.11	.16	.13
		(−.97)	(−.98)	(−.50)
Dates of Analysis		1/20/01–9/10/01	9/11/01–3/11/02	9/12/01–3/11/03

Note: Data in bold denote significant results. Values in parentheses are t-statistics for change from previous phase.
*$p < .10$. **$p < .05$. ***$p < .01$.

mean but declines over the course of his tenure in office. His belief in his ability to realize his political values increase significantly between Phase 1 and Phase 2 and then declines to well below the mean in the aftermath of September 11th. This is

consistent with the argument mentioned earlier that the change in role (and accompanying power associated with the presidency) would interact with Bush's already optimistic personality.

It is interesting that GWB's belief in the utility of promises as a tactic is extremely high, almost five standard deviations above the mean before he takes office, but declines continuously throughout his tenure, ending well below the mean. In addition, GWB's risk orientation also undergoes a steady transformation from Phase 1 through Phase 4. He begins (as governor) as more risk averse than the norming group of leaders but becomes steadily more risk acceptant throughout his two administrations, ending almost a full standard deviation above the norming group.

Related to the issue of temporal stability is the question of how individuals respond to traumatic shocks over the long term. That is, do beliefs that are reversed by traumatic events eventually rebound to pre-event levels, or are the changes permanent? In the initial data analysis, Phase 3 was from September 11, 2001, to March 11, 2002, a six-month period. To examine the longer term effects of 9/11 on GWB's belief system, I have extended Phase 3 to cover the eighteen-month period from September 11, 2001, to March 11, 2003, using the methods for data collection and analysis described earlier in the Method section. The results of this analysis are described in Table 4.

The results of this reanalysis suggest that traumatic events can permanently alter belief systems, rather than simply causing a fleeting shift. Both P-1 and P-2 rebound slightly in the extended Phase 3 from their more depressed levels in the shorter Phase 3. However, the changes in these indices from Phase 2 are still of a considerable magnitude and statistically significant at $p < .01$. The value of P-3 (predictability of the political future) also rebounds slightly from Phase 3 levels, though this change is no longer statistically significant (unsurprising, given the relatively small magnitude of the change that occurred in this index in Phase 3). All major indices seem to support the notion that traumatic events may cause a severe reversal of certain key beliefs in the shorter term and that those initially severe changes may become slightly attenuated as the new belief system is consolidated over a longer period of time.

The Internal (In)Consistency of Beliefs

Beyond the empirical question of how the beliefs of President Bush shifted (or remained constant) over time, the data from this operational code analysis give us some insight into the theoretical questions raised in the sections on "What Are Beliefs? And Why Are They Important?" and "The Operational Code Construct," on the second aspect of belief consistency: internal coherence. That is, to what extent are different component parts of a belief system or operational code logically coherent with one another? Recall that earlier social-psychological accounts of beliefs assumed individuals to be "consistency seekers" who by and large held

beliefs that were consistent with one another (McGuire 1967; Bem 1970, 13). Early operational code analyses also operated under this assumption, assuming, for instance, the direct link between philosophical and instrumental beliefs (George 1969; Holsti 1970, 154; Holsti 1977). An additional part of this model was the assumption that core beliefs ordered and structured peripheral beliefs and that these core beliefs were more resistant to change (Tetlock 1991; Rokeach 1968; George 1969, 217). How does GWB fit into this paradigm?

Before answering this question, we must be explicit about what is being measured in the VICS system. In fact, VICS was explicitly constructed so that the philosophical beliefs would represent attributions about the "other" and instrumental beliefs would represent attributions of the "self" (Walker, Schafer, and Young 1998; Schafer and Walker 2006, 31). That is, scores for the philosophical indices represent beliefs about the nature of the political system insofar as it is shaped by the actions and beliefs of other actors. Instrumental indices in VICS represent a leader's beliefs about how he should or does act in the international system.

The data from this project clearly suggest that the different beliefs that individuals hold are not necessarily internally consistent. If a primary mechanism for belief change is the drive to maintain internal coherence and reduce dissonance, then we would have expected to see the instrumental and philosophical indices change in tandem when change occurred. We would expect, for instance, that as GWB's view of the nature of the political universe (P-1) became significantly more negative in Phase 3, then his preferred tactics would change accordingly (with perhaps a tactical orientation weighted further toward conflict than cooperation). Yet, it does not. Even if we took the position that beliefs should remain internally coherent only within either the philosophical or the instrumental indices, this hypothesis could not be supported by the results.

What Table 3 indicates is that the events of September 11th produced a fundamental change in GWB's views of the world, but that he did not adjust his tactics in any way in response to this. These data seem to contradict the notion that individuals' beliefs are internally consistent. If this had been the case, then we should have seen significant changes in the instrumental indices in Phases 2 and 3. In addition, given that the perceived utility of threats decreased in Phase 4, we would have expected to see a somewhat different (perhaps more optimistic or friendly) view of the political universe as well. In fact, no operational code analysis to date—this one included—has found the wholesale changes in beliefs that are predicted by cognitive consistency theory.

The next question concerns the relationship between the philosophical and the instrumental indices in the operational code. Of the seven statistically significant changes in the periods covered in this article, six were shifts in philosophical beliefs: two shifted in Phase 2, two shifted in Phase 3, and one changed (minimally) in Phase 4. The only statistically significant change in an instrumental belief was in Phase 4.

The obvious question that arises from this pattern—found in other operational code analyses as well—is why are philosophical beliefs volatile while instrumental beliefs are relatively stable over time? To make sense of this pattern, we must remember that the distinction between philosophical and instrumental beliefs in the VICS indices is not the distinction between fundamental and derivative beliefs. Rather, the distinction between instrumental and philosophical beliefs in the VICS system reflects the attribution of behavior. As already mentioned, the VICS was explicitly constructed so that the philosophical beliefs would represent attributions about the "other" and instrumental beliefs would represent attributions of the "self" (Walker, Schafer, and Young 1998; Schafer and Walker 2006, 31). In other words, the philosophical beliefs in Table 3 represent GWB's beliefs about the behavior and actions of other actors in the international system, whereas the instrumental indices reflect GWB's beliefs about how he acts.

With this understanding, we can approach the puzzle of the volatile philosophical beliefs and stable instrumental beliefs from a new angle. We can now conceive of the instrumental aspects of the operational code as comprising part of an individual's identity, with the philosophical beliefs being the results of "reality-testing" and "lessons-learned" about the nature of the political universe (this possibility is suggested by Walker and Schafer 2000b, 4). In this model, it is GWB's identity and beliefs about himself that remained relatively stable, while his conception of the "other" shifted dramatically.

Conclusion

This analysis has examined GWB's operational code within the larger framework of social psychological theories of belief consistency. The findings presented here cast further doubt on many aspects of the cognitive consistency model. In fact, the results suggest that individuals' belief systems are not as interdependent as has often been assumed: the significant changes in what seem to be key or core beliefs do not seem to affect other, derivative beliefs at all. As for overall temporal consistency, the results make clear that belief systems can and do experience major changes. Yet, the results also suggest the durability of many beliefs over time, perhaps providing some confirmation that beliefs are, overall, relatively stable.

However, the primary purpose of this article has not been to add to the cognitive consistency debate, but rather to take a first step in considering explicitly the causes of belief change. Three potential causes were explored: role change, traumatic events, and learning in office. Of these, support was found for the first two. There seems to be substantial support for the importance of traumatic events in changing beliefs. GWB's view of the political universe and other related philosophical beliefs all reversed direction, becoming more negative and conflictual after the terrorist attacks in 2001. The change in role also had an effect on GWB's beliefs,

though it seemed to reinforce his prior beliefs, and strengthen them in certain cases, rather than changing them.

Clearly, there is much scope for future research on this important subject. How beliefs change has implications not just for the study of political leaders and decision making but also how we attempt to persuade others in the international system. For instance, the United States has evinced a desire for China to become more democratically accountable and to accept the responsibilities of being a world power. Coercion might change their behavior, but it is obviously preferable to effect a change in Chinese leaders' beliefs about how they should act. Yet, we still understand very little about whether such change is even possible, let alone what policy offers the best hope of accomplishing these goals.

For such research to be useful, we must start to explicitly consider the possible causes of belief change. Three candidates were explored in this article, but more remain: How effective is persuasion, for instance, in changing beliefs? How effective are threats? Furthermore, we must begin to consider the interaction between personality and belief stability. It seems likely, for example, that some individuals are more closed to new information and resistant to belief change than others. Some causes of belief change may be more effective on certain personality types and less effective on others. Any of these, and many others, would be fruitful avenues for further research in this area. It is my hope that this article serves as a useful first step.

Appendix A
The Operational Code (Verbs in Context System Indices)

P-1: Nature of the Political Universe

Hostile								Friendly
Extremely	Very	Definitely	Somewhat	Mixed	Somewhat	Definitely	Very	Extremely
−1.0	−.75	−.50	−.25	0.0	+.25	+.50	+.75	+1.0

P-2: Realization of Political Values

Pessimistic								Optimistic
Extremely	Very	Definitely	Somewhat	Mixed	Somewhat	Definitely	Very	Extremely
−1.0	−.75	−.50	−.25	0.0	+.25	+.50	+.75	+1.0

P-3: Predictability of Political Future

Very Low	Low	Medium	High	Very High
0.0	.25	.50	.75	1.0

P-4: Control Over Historical Development

Very Low	Low	Medium	High	Very High
0.0	.25	.50	.75	1.0

(continued)

Appendix A (continued)

P-5: Role of Chance

Very Low	Low	Medium	High	Very High
0.0	.25	.50	.75	1.0

I-1: Direction of Strategy

Conflict								Cooperation
Extremely	Very	Definitely	Somewhat	Mixed	Somewhat	Definitely	Very	Extremely
−1.0	−.75	−.50	−.25	0.0	+.25	+.50	+.75	+1.0

I-2: Intensity of Tactics

Conflict								Cooperation
Extremely	Very	Definitely	Somewhat	Mixed	Somewhat	Definitely	Very	Extremely
−1.0	−.75	−.50	−.25	0.0	+.25	+.50	+.75	+1.0

I-3: Risk Orientation

Risk Averse				Risk Acceptant
Very Low	Low	Medium	High	Very High
0.0	.25	.50	.75	1.0

I-4a: Flexibility of Tactics (between Cooperation and Conflict)

Very Low	Low	Medium	High	Very High
0.0	.25	.50	.75	1.0

I-4b: Flexibility of Tactics (between Words and Deeds)

Very Low	Low	Medium	High	Very High
0.0	.25	.50	.75	1.0

I-5 Utility of Means (Appeal/Support, Promise, Reward, Oppose/Resist, Threaten, Punish)

Very Low	Low	Medium	High	Very High
0.0	.08	.16	.24	.32

Source: Walker, Schafer, and Young 2003.

Appendix B
The Operational Code of George W. Bush (*z* Scores[a])

		Phase 1	Phase 2	Phase 3	Phase 4
P-1	Nature of the Political Universe	0.53	1.26	−0.32	0.11
P-2	Realization of Political Values	0.50	1.14	−0.50	0.00
P-3	Predictability of Political Future	1.50	2.50	1.00	1.00
P-4	Control Over Historical Development	2.00	2.00	1.83	0.67
P-5	Role of Chance	−2.00	−3.00	−2.00	−1.00
I-1	Strategic Approach to Goals	0.59	0.68	0.09	0.50
I-2	Tactical Pursuit of Goals	1.00	0.73	−0.07	0.33

(continued)

Appendix B (continued)

		Phase 1	Phase 2	Phase 3	Phase 4
I-3	Risk Orientation	−0.63	0.00	0.25	0.88
I-4	Timing of Action				
a.	Cooperation/Conflict	−0.59	−0.59	0.00	−0.47
b.	Words/Deeds	−0.72	0.39	0.78	0.11
I-5	Utility of Means				
a.	Reward	0.17	0.83	0.67	0.33
b.	Promise	4.75	1.50	−0.50	−0.75
c.	Appeal/Support	−1.09	−0.18	0.00	0.73
d.	Oppose/Resist	−0.60	−1.20	−1.20	−0.60
e.	Threaten	1.25	0.25	0.75	−0.50
f.	Punish	−0.75	0.00	0.63	0.13

Note: *z* scores are standard deviations from the mean values of a norming group of Post WWII U.S. leaders.

Notes

1. Related to the concept of "belief change" is learning. Some have used that term to refer to changes in the overall posture of states over time (e.g., the Soviet Union toward the end of the cold war, see Breslauer 1987), whereas others have used it to refer to the particular lessons that decision makers learn from history (Khong 1992). In a review article, Levy (1994) defined *learning* as "a change of beliefs (or the degree of confidence in one's beliefs) or the development of new beliefs, skills, or procedures as a result of the observation and interpretation of experience" (283). This is a useful and concise definition, though the emphasis of this article is on a concept that Levy does not address: what causes learning or changes in beliefs.

2. George did note the possibility that operational codes of leaders might undergo change over time (1969, 216-19). Later analyses have generally argued that beliefs may be less consistent, structured, and more subject to change over time (Walker, Schafer, and Young 1998). This issue is taken up in more detail in the Discussion section.

3. Although the explicit distinction between belief reversal and belief reinforcement is introduced in this article, it is presaged by earlier studies that found patterns consistent with this theoretical distinction. For instance, Walker, Schafer, and Marfleet (2001) discuss how the cooperative beliefs of Chamberlain and Halifax differentially adjusted over the period 1937 through 1939, sometimes being weakened and other times being strengthened by their understanding of current events.

4. Although not directly comparable to the modern quantitative studies, it is perhaps suggestive that Johnson (1977) discovered the same pattern of belief modification in his qualitative examination of Senator Frank Church's operational code (112).

5. That is, the changes either (a) did not change the "rank order" of the utility of means (I-5) or (b) did not move the Verbs in Context System (VICS) score into a different verbal category (e.g., "cooperative" to "very cooperative").

6. During the 2000 campaign, one Republican advisor to GWB even voiced concern about the President's "excessive optimism" (quoted in Bruni 2000).

7. Although GWB did later change his stance, commenting, "Prior to September 11th, we were discussing smart sanctions . . . After September 11th, the doctrine of containment just doesn't hold any

water . . . *my vision shifted dramatically after September 11th, because now I realize the stakes, I realize the world has changed"* [emphasis added] ("Facing 'Common Enemy,'" 2003).

8. A common criticism of operational code analysis is that public speeches may not reflect the true personal beliefs of leaders. One can respond to this on three levels: practical, theoretical, and empirical. On the practical level, for most leaders, the public record is far more extensive than the private. We often have to wait years or decades for private material to become available (the *Foreign Relations of the United States* series, for instance, waits roughly thirty years before declassifying and publishing its documents). Thus, if one wishes for any substantive reason to focus on a leader who still occupies or has recently left political office, there are few alternatives but to rely on the available public record. The second is the theoretical assumption of operational code analysis that "a leader's public behavior is constrained by his public image and that, over time, his public actions will consistently match his public beliefs" (Walker, Schafer, and Young 2003, 223). That is, although beliefs and actions might diverge for a short time, the norm is for beliefs and actions to converge. The third rationale is recent evidence that suggests that the public statements of leaders may reflect their true beliefs to a greater extent than skeptical observers would predict. J. Renshon (forthcoming) examined the operational code of President Kennedy during the summer of 1962 based on (a) public statements and (b) transcripts made from the secret taping system the president had installed in the Oval Office. The results indicate that the two operational codes—public and private—were nearly identical. There is also evidence suggesting that public speech can betray some types of information that leaders might consciously try to suppress. For instance, there is evidence that the integrative complexity of leaders (which tends to decline in the lead up to wars) also declines prior to surprise attacks, unknowingly giving clues to the impending attack to those who know where (and how) to look (Suedfeld and Bluck 1988).

9. The first standard for operational code analysis was 1,500 words as a minimum length for each speech act used. This was used so that the mean score for the combined speeches would not weigh one speech more heavily than another. More recent efforts have preaggregated the speeches into one "big speech," and as such are not so concerned about individual speech length (as long as each speech act contains between 10 and 15 verbs that can be coded in VICS; Schafer and Walker 2006, 43-44). The methodological issue of how one should compile content data for operational code analysis reflects an important substantive issue. Operational codes can be conceptualized as either a stable "personality trait" or a more transient "state of mind." If it is conceptualized as a stable personality trait, it is defendable to aggregate many smaller speech acts for purposes of analysis, because there should not be significant shifts in the operational code over time. Because the purpose of this article is to investigate whether there is change in GWB's operational code, the stability of these beliefs cannot be taken for granted. For this reason, and because it allows the use of statistical analysis, mean scores were used instead of aggregate scores.

10. It is worth noting here that the changes in Bush's operational code described in this section do not correspond to changes in his speechwriting staff, ruling out one plausible alternative explanation. GWB's chief speechwriter, Michael Gerson, worked for President Bush from his first presidential campaign until June of 2006. Another significant influence on the GWB's public communication, Karen Hughes, worked for the president from his campaign through April of 2002 (Rutenberg 2006; Burke 2004; Gerson 2007). The departures of these two administration officials do not correspond to the phases examined in this analysis and are thus unlikely to be confounding factors in the results. In fact, these personnel shifts correspond inversely to changes in GWB's operational code. The only phase in which there were not significant changes (Phase 4) was also the only phase in which President Bush's public communications were not influenced by either Michael Gerson or Karen Hughes.

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