Abstract

The deleterious effects of stress on cognition have been well established, both experimentally and in archival research. Such effects are not universal, however, and individual differences in the susceptibility of senior political leaders to these effects are of considerable importance. The present study employs Integrative Complexity (IC) coding to investigate the relationship between stressful conditions and cognitive complexity in the case of U.S. President George W. Bush. In addition to assessing whether or not Mr. Bush shows unusual resistance to stress, as several contributors to the biographical and journalistic literatures concerning him and his presidency have suggested (Study I), the project was designed to also perform an initial test of the hypothesis that U.S. presidents' patterns of cognitive response to stress can be predicted by the patterns evinced during their first successful presidential campaign (Study II) and test theory which posits that conservatives show low IC across issues and conditions against the case of Mr. Bush (Study III). The strength of the results was attenuated by low inter-rater reliability in measurement of IC. However, the initial results, subject to revision pending re-coding of the materials studied, disconfirmed assertions that Mr. Bush shows unusual resistance to stress (Study I), found qualified support for the hypothesis that U.S. presidents' cognitive patterns under stress can be predicted by their patterns as presidential candidates (Study II), and showed significant differences in President Bush's IC across issue domains, lending support to the cognitive manager and value pluralism views of IC against the predictions of the ideologue and rigidity-of-the-right hypotheses. Further research is indicated, particularly with regard to studies I and II.
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“No passion so effectually robs the mind of all its powers of acting and reasoning as fear.”

~Edmund Burke, *A Philosophical Inquiry into the Origin of Our Ideas of the Sublime and Beautiful* (1756)

Chapter 1

Introduction

As the above quotation from Burke illustrates, the deleterious effects of psychological stress, often resulting from the perception of threat, on decision making have long been known. However, the above quotation masks the reality that susceptibility to these effects varies from person to person. Given the intimate connection between leaders' decisions and highly significant outcomes, such variability becomes an important subject for scholarly inquiry.

The present study employs the psychometric technique of Integrative Complexity (IC) scoring to investigate the cognitive complexity of U.S. President George W. Bush under conditions characterized by greater and lesser threat to important values, offering a rigorous test of assertions of unusual resistance to stress prevalent in the literature concerning this president (Study I). It has also been designed to offer an initial test of the similarity of leaders' patterns of stability or change in IC under conditions of high and low stress in political campaigns to the patterns that they show in office, which could yield an invaluable tool for the prediction of leaders' characteristic cognitive responses to stress prior to their taking high office (Study II). Finally, it will also probe differences in Mr. Bush's cognitive complexity across issue areas, with a view to both better
understanding this president’s cognition regarding certain issues and to testing predictions derived from models of the relationship between ideology and Integrative Complexity (Study III). While Mr. Bush’s position as a sitting president lends this study considerable practical value, particularly in light of persistent public questioning of the President’s intelligence and intellectual engagement, he is also a subject of particular theoretical importance. As will become clear, the allegations that he is particularly resistant to stress make him an invaluable subject for Study I, while his conservatism renders him of theoretical interest for Study III. Further, his alleged equanimity about the ultimate result of his presidential campaign (Hughes 2004, 170) may also make Mr. Bush’s case a particularly demanding test for Study II.

Integrative Complexity coding is a psychometric technique for assessing cognitive style from verbal materials by scoring increasing levels of differentiation among dimensions of or perspectives on the matter at hand and, at higher levels, dynamic integration among these dimensions or perspectives. For example, the argument that all taxes amount to theft and should be abolished would show low IC, while the argument that income, sales, and estate taxes vary in the extent to which they are justifiable intrusions on economic liberty would show higher IC, and an argument which added that economic conditions influence the necessity and effectiveness of different levels and forms of taxation would show higher IC still. Initially conceived of as a trait measure, “conceptual complexity,” this method of scoring was employed in laboratory settings to identify characteristic differences among subjects’ cognitive styles by scoring their

1 Thus, while there is some overlap between IC and other concepts, such as other-regardingness, it remains a distinct measure. While other-regardingness is likely correlated with higher levels of IC it is quite possible to exhibit high IC with an entirely egoistic perspective, recognizing the different elements of one’s own utility and relationships among them, as well as low IC despite other-regardingness, if others’ perspectives are viewed in an undifferentiated manner.
responses to the semi-projective Paragraph Completion Test (PCT). In 1976, a seminal study by Suedfeld and Rank (Suedfeld and Rank 1976), which scored the Integrative Complexity of leaders from five successful revolutions, proved that unlike several other measures of cognitive style such as the Embedded Figures Test, the Dogmatism Scale, and the Tolerance of Ambiguity scale, Integrative Complexity scoring is not confined to PCT scoring, but can also be applied to archival materials (Tetlock, Bernzweig and Gallant 1985, 1228). In the wake of this study, Integrative Complexity scoring has been applied to a broad range of materials, including military dispatches and orders (Suedfeld, Corteen and McCormick 1986), foreign policy pronouncements (Raphael 1982, Tetlock and McGuire 1984, Walker and Watson 1994, Tetlock 1985, Suedfeld and Bluck 1988, Suedfeld and Tetlock 1977, Suedfeld, Tetlock and Ramirez 1977), the published correspondence of eminent persons (Porter and Suedfeld 1981, Suedfeld and Bluck 1993, Suedfeld and Piedrahita 1984), records of private meetings among senior policymakers (Levi and Tetlock 1980, Walker and Watson 1994, Guttieri, Wallace and Suedfeld 1995), Supreme Court opinions (Tetlock, Bernzweig and Gallant 1985, Gruenfeld 1995), addresses to professional colleagues (Suedfeld 1985), political speeches (Tetlock 1981b, Tetlock 1983, Tetlock, Hannum and Micheletti 1984, Tetlock, Armor and Peterson 1994, Tetlock 1981a), negotiation sessions (Liht, Suedfeld and Krawczyk 2005), memoirs (Suedfeld and Granatstein 1995), editorials (Suedfeld 1980), and interviews (Tetlock 1984). It has been described as representing, “a ‘best-practice’ case of how content analysis can be used to assess complex cognitive styles in individuals” (Lee and Peterson 1997, 963), and has been applied to a range of topics, yielding findings published frequently in the Journal of Personality and Social Psychology and the Journal of

The benefits of such a technique are many. While rendering internal validity more problematic than is the case in experimental studies, archival work dramatically increases external validity, offering the opportunity to avoid the limitations (and analytic costs) associated with a need for conveniently available and cooperative subjects (Sears 1986) and to study the real-world behavior (Jervis 1989) of otherwise unavailable individuals, including those of particular practical and theoretical importance (Lee and Peterson 1997, 960). Indeed, variation in IC has shown considerable ability to predict outcomes of interest, such as the outbreak of armed conflict, including surprise attacks, and the conclusion of major international agreements. Further, as Michael Wallace and Peter Suedfeld explain, "...the integrative complexity technique, focusing on a single, clear-cut, but widely relevant variable, yields useful data with a far smaller sample of materials and considerably less analysis" than approaches such as operational code analysis of leaders' belief systems (Wallace and Suedfeld 1988, 442).

Indeed, it is this parsimony and rigor that is perhaps of greatest importance in demonstrating the value of this approach to political science in general and to presidency studies in particular. As Terry Moe has argued, "The problem is not the relevance of personal factors for presidential behavior. The problem is that the personal side of the presidency lends itself very poorly to theory. When the exercise is taken seriously, personal theories turn out to be extremely complex, difficult to construct, and quite limited in generality and scope" (Moe 1993, 379, Sinclair 1993, 230). Integrative
Complexity offers a simple but highly significant variable associated with both personal and institutional variables, thus offering many opportunities for presidency scholars to increase the psychological richness of their portraits of the institution and its occupants, without, as Moe fears, “opening the Pandora’s box of individual motivation and cognitive processes and orienting the field around untold causal mysteries” (Moe 1993, 343). It is hoped that, in addition to yielding substantive and methodological findings of interest, the present study may help to draw the attention of political scientists to the research potential offered by archival content analysis of Integrative Complexity.
Chapter 2

The Study of (Single) Political Leaders: Theoretical and Methodological Issues

Introduction

The present chapter will discuss issues arising in the study of single political leaders. It begins with discussion of theoretical objections to such study, drawing upon Fred Greenstein’s treatment of action and actor dispensability as necessary conditions for the study of political leaders, and seeks to establish the leverage of studies of this type over outcomes of interest. It then moves to a more methodological discussion of issues surrounding the so-called \( n = 1 \) problem, and seeks to demonstrate that these issues do not pose problems for the present study.

Action Dispensability

Greenstein defines action dispensability as “the degree to which actions are likely to have significant impacts” (Greenstein 1975, 41). Action dispensability varies with three factors: “(1) the degree to which the actions take place in an environment which admits of restructuring, (2) the location of the actor in the environment, and (3) the actor’s peculiar strengths or weaknesses” (Greenstein 1975, 42). Thus, leverage over outcomes is increased to the degree that each of these criteria is satisfied.

Studies of U.S. presidents involve two environments: the domestic and the international. The view that the U.S. federal government is capable of wielding considerable influence in both of these environments is fairly unproblematic. Further, the domestic environment may have been particularly ripe for change as Mr. Bush took office, given the presence of Republican congressional majorities which had been
checked by a Democratic president for six years. With regard to the international environment, it has been argued that actors find more flexibility in this domain in the contemporary era than they had during the Cold War (Jervis 1994, 775, Walker, Schafer and Young 1999, 623).

Greenstein's next factor in action dispensability is the position of the actor in the environment. In the present case, this position is the U.S. presidency, the power of which can be considered in terms of the power of the United States, the power of the U.S. federal government, and the power of the president within that government (King 1993). The first of these dimensions deals with the international environment. Here it can be noted that the United States, as the sole remaining superpower, has been viewed as the state best able to resist external pressures and exert pressure on other states (Peterson 1994a, 6, Peterson 1994b, 217-218). The power of the U.S. federal government, acting together, is also considerable. The most contentious of these dimensions is the power of the president within the U.S. federal government (King 1993). While the presidency was long viewed as one of three “separated institutions sharing powers,” such that presidential power found its basis in the persuasion of other actors (Neustadt 1990), this portrait is contested by both more recent presidential scholarship and the actions of presidents themselves over the last several decades (Branum 2002, Howell 2005, Howell and Mayer 2005, Mayer and Price 2002, Cooper 2002, Howell 2003, Mayer 2001)

Given the focus of the present study on foreign and security policy, which accounts for two of the three issue domains included in Studies I and III (and part of the third), the president's power in this area is of particular significance. Foreign, and particularly security, policy has long been viewed as a domain of particular presidential
strength, a view associated with Aaron Wildavsky's "two presidencies" thesis (Wildavsky 1991 [1966]). Wildavsky's argument spawned a vast literature (Shull 1991), which some have argued casts doubt on the contemporary relevance of this thesis (Fleisher and Bond 1991, LeLoup and Shull 1991, Edwards, George C., III 1989, 64 Table 4.7, 66-67, Siegelman 1991). However, this literature has been plagued by both myriad methodological issues and a focus on presidential success on congressional votes, which represents a deeply impoverished view of presidential power (Lindsay and Steger 1993). Other scholars have argued that presidents retain the freedom to act without congressional approval to a greater extent in foreign than domestic policy, particularly as regards the conduct of diplomacy and national security operations (Krent 2005, LeLoup and Shull 1991, Lindsay and Steger 1993, Rockman 1994). It is also the area in which presidents' informational advantage over legislators is most salient, particularly given presidential control of security classification policy by executive order (Cooper 2002, 27, Howell 2003, 103, Lewis 2003, 74, Mayer 2001, 6, 138-139, 142-143).

Within the foreign policy presidency, the War Power, which the U.S. Constitution explicitly divides between the president and Congress, is of particular significance to present study given the robust links between shifts in IC and the outbreak of armed conflict (discussed further below). The constitutional assignment of the power to declare war to the Congress has not stopped presidents from initiating military action without congressional approval. Further, the War Powers Resolution, passed by Congress over President Nixon's veto in an effort to reassert congressional influence over military action, has done nothing to stop this presidential practice, and has arguably legitimized

The characteristic strengths and weaknesses of the individual decisionmaker considered for analysis represent the final component of action dispensability. President George W. Bush initially appears to present both. In terms of strengths likely to enhance his ability to influence outcomes, Bush’s administration quickly established itself to be “about as single-minded in pursuit of its agenda as any on record” (Campbell 2004, 2). Bush and his administration have also worked assiduously, if not audaciously, not only at ambitious policy initiatives (among them tax, Social Security, defense, and energy policy), but also at enhancing presidential power (Aberbach 2004), with the President often leading the charge, as in the case of his substantial investment of time and political capital on the 2002 mid-term elections, which enhanced his ability to influence outcomes by increasing both Republican control of Congress and his own supply of political markers for future use.

Bush also initially appears to bring unusual weaknesses to the question of actor dispensability, as his presidency has been dogged by allegations that he is not in control of his administration. The debate over this issue first arose during the 2000 presidential campaign, amid questions about the candidate’s preparedness for the presidency in terms of knowledge, experience, and dependence on advisers (see for example Daalder and Lindsay 2003, 17-18). These concerns persisted among many as the administration took office. Indeed, a CBS News survey conducted early in January 2001 found that only 38 percent of respondents believed that Bush would be in control of his administration, while some 53 percent felt that others would hold the reins (Dimock 2004, 74). In
particular, Washington mused that the vastly more experienced Vice President might function as a prime minister with Bush performing a ceremonial role as head of state (Campbell 2004, 4), and questioned which of the two was in control of cabinet nominations and other organizational issues (Hult 2003, 51). This perception has remained tenacious. Eighteen months into the administration, well after September 11, 2001 had increased Bush’s apparent engagement with his administration’s foreign and security policy (Greenstein 2003, 14, Bruni 2002, 248), the public remained “evenly split on whether Bush or his aides were running the government” (Edwards 2004, 29).

Nonetheless, this view is not supported by closer observers of the administration. Bush’s partisans, of course, have long maintained that the president is in control (see for example Frum 2003, 29). However, several scholars have echoed this assessment, with Brookings Institution analysts Ivo Daalder and James Lindsay arguing at length that Bush has functioned as “the unquestioned master of his own administration” (Daalder and Lindsay 2003, 2, see also Mann 2004, xviii, Pfiffner 2005, 87, Rockman 2004, 352, Thies 2004, 129). Although Ron Suskind reiterates the charge that Bush’s inexperience has put advisers in the driver’s seat (Suskind 2004, 97), this is belied by Bob Woodward’s account, which shows Bush making sweeping decisions without advisers’ input, overruling them, and dictating actions to be taken (Woodward 2002, 30, 97). Even Vice President Cheney, despite being described as “the most influential vice president in American history,” the administration’s “prime minister,” “Chief Executive Officer” and “Chief Operating Officer,” and Bush’s “consigliere” and “coach” (Bumiller 2001, Page 2001, Lechelt 2004, 211), has not been immune. Bush immediately shot down Cheney’s September 12, 2001 proposal that another official, perhaps Cheney himself, chair a war
cabinet in Bush’s stead (Renshon 2004, 128, Woodward 2002, 37-38). Woodward cites Bush’s decision to pursue weapons inspection resolutions at the United Nations over Cheney’s vociferous opposition and possible malfeasance (as the speech’s line calling for new resolutions mysteriously disappeared from the TelePrompTer version of Bush’s UN speech, only to be ad libbed by the president) as the clearest evidence of Cheney’s subordinate position (Woodward 2004, 163-168, 174-176, 180-184, 430). The view of Cheney as subordinate and Bush in control is also echoed by the sharply critical Richard Clarke (Clarke 2004, 19, 21). Thus, it appears that, notwithstanding certain criticisms that have dogged Bush from the first, he remains to a considerable extent in control of his administration, rendering an effort to assess his cognitive style under stressful conditions of considerable practical value.

Actor Dispensability

Establishing the importance of particular actions to outcomes of interest does not solve the related but distinct problem of actor dispensability, the question of whether or not an explanation of actions in terms of the actor’s personal characteristics is justified. Indeed, a common objection to analysis of particular political leaders is that, in the words of Miles’ Law, “Where you stand depends upon where you sit” (Lewis 2003, 162). Thus, even when a particular action has been deemed significant, “…it may sometimes be argued that the action is one that would have been performed by any actor in the same situation or role” (Greenstein 1975, 46, Hargrove 1993, 71). While this is quite likely true in some cases, it is equally clearly false in others. Significant examples of the latter include President Eisenhower’s decision not to intervene militarily in Indochina and President Johnson’s decision to do the opposite, with both acting against the advice of
their respective Vice Presidents, as well as Woodrow Wilson's self-defeating behavior regarding the League of Nations Treaty (Burke and Greenstein 1989, George and George 1964, Glad 2002, Greenstein 1975, 1-2). Another, with enormous consequences, is Eisenhower's refusal to employ nuclear weapons against China during the Korean War, resisting intense pressure from advisers in the State Department, National Security Council, and Joint Chiefs of Staff to do so on no less than five occasions in 1954 alone (Holsti 1990, 132). Thus, as several scholars (e.g. Dilulio 2003, 247) have noted, the individual personalities of presidents can be an important causal factor.

As noted in the introduction above, focusing on a few particularly significant personality variables offers the potential to maximize the inferential leverage afforded by the analysis of individual leaders' personalities and avoid some of the criticisms that have led to the fall from favor of this mode of analysis. Thus, as Hargrove notes, “We need a model of political personality that specifies the aspects of individuality that may make a difference in political behavior” (Hargrove 1993, 73). More specifically, Rockman seeks to draw scholars' attention to the role of leaders' cognitions, stating that, “Two leaders with the same motivation may cognize the same situation dissimilarly and so arrive at different courses of action (Rockman 2004, 320).

Integrative Complexity represents just such a variable; one shown not only to vary across individuals, but also to be associated with particular behaviors and outcomes in both laboratory and real-world settings. In terms of differences across individuals, IC developed from a construct known as cognitive complexity, a stable trait measure employed to assess differences in the complexity of data analysis and decision making across individuals. This initial research program found “systematic individual
differences" (Tetlock and Suedfeld 1988, 44) in cognitive style, and led to the development of several theories to explain this variation, among them, the “rigidity-of-the-right” hypothesis derived from work on the Authoritarian Personality, the “ideologue” hypothesis designed as a corrective blind to the content of ideology, and the value pluralism model which associates complexity with the number and strength of the values tapped by a given issue.

More importantly in terms of establishing the value of the present study, cognitive, and later, integrative, complexity was also found to be predictive of decisional behavior and outcomes. Laboratory studies of crisis decisionmaking, attitude change, and negotiation and bargaining behavior all found the measure to hold predictive power, as “Subjects classified as integratively complex utilized a broader range of information in forming impressions of others and in making decisions, were more tolerant of dissonant or incongruent information, and were more likely to achieve mutually beneficial compromise agreements in mixed-motive bargaining games” (for a review, see Tetlock 1988, 105). Inter-Nation Simulation studies also found that decisionmakers low in complexity were approximately three times more likely to engage in “highly competitive tactics” such as “war and unprovoked arms build-ups” than their highly complex counterparts, and were also significantly more likely to respond to frustration with violence (Tetlock and McGuire 1984, 116, Tetlock 1985, 1567). In addition, complexity was found to be correlated with other influential elements of cognitive style, such as rigidity and dogmatism, such that individuals high in complexity “collect and monitor information and can change their plans, beliefs, and attitudes in response to feedback. They are relatively tolerant of ambiguity and lack of closure; that is, they are not unduly
upset when situations, problems, or solutions are unclear, there is a high degree of uncertainty, a decision cannot be made immediately, or one must wait a while to learn how events turn out” (Suedfeld 2000, 20).

Similar results have been found in archival studies, which have often assessed state levels of Integrative Complexity at particular points in time, rather than dispositional levels of conceptual complexity. Satterfield’s study of Churchill, Hitler, Roosevelt, and Stalin, for example, found that IC inversely predicted aggression and risk taking (Satterfield 1998, 675-676), even when controlling for the identity of the subject. Shifts in level of IC have been shown to robustly predict, inter alia, diplomatic crises (Raphael 1982), the outbreak of war (Suedfeld, Tetlock and Ramirez 1977), and surprise attacks (Suedfeld and Bluck 1988, cf. Levi and Tetlock 1980), as well as the peaceful resolution of conflicts (Raphael 1982, Suedfeld and Tetlock 1977) and the conclusion of major diplomatic agreements (Tetlock and McGuire 1984). In the domestic sphere, Ballard’s study of Canadian prime ministers showed that “A complexity decrease may also precede decisions that provide uncompromising, unidimensional crisis solutions other than war” (Guttieri, Wallace and Suedfeld 1995, 599, Ballard 1983).

Given these strong associations with outcomes it is important to bear in mind that IC is, as Guttieri, Wallace, and Suedfeld put it, “a descriptive and in no sense a normative or evaluative dimension” (Guttieri, Wallace and Suedfeld 1995, 600). Unlike many other psychological constructs, IC “is a definition by process, not content” such that “...any particular point of view or political position can be arrived at through any level of complexity” (Wallace and Suedfeld 1988, 441). Indeed, the normative value of both high and low complexity are, to some extent, in the eyes of the beholder, for “To some,
integrative simplicity may connote shallowness and superficiality, to others, an ability to penetrate to the essence of key issues. To some, integrative complexity may connote muddled, confused, and vacillating thought, to others, a sophisticated appreciation for the difficult trade-offs with which the world confronts us” (Tetlock, Bernzweig and Gallant 1985, 1238). Even in terms of perceptions modal in contemporary Western society, neither high nor low complexity is necessarily associated with positions or decisions viewed either positively or negatively. For example, both the series of decisions leading to the outbreak of the First World War (Suedfeld and Tetlock 1977) and the principled objection to slavery of American abolitionists (Tetlock, Armor and Peterson 1994) reflect low complexity. Similarly, both the successfully resolved Cuban Missile Crisis (Guttieri, Wallace and Suedfeld 1995, 600) and the now-infamous Munich agreement (Walker and Watson 1994) reflect relatively high complexity. In addition, “Although the preponderance of the evidence favors a flattering normative portrait of integrative complexity,” complexity has also been found to carry characteristic costs, such as increased propensity to buck-pass and procrastinate, susceptibility to the dilution of important cues, and vulnerability to exploitation by adversaries focused on relative gains (Tetlock, Armor and Peterson 1994, 116, see also, for example, Suedfeld 1988). Conflicts with implacable adversaries, crisis situations in which quick response is vital, and those calling for decisive action may well demand relatively low complexity (Suedfeld 1992, 444, Wallace and Suedfeld 1988, 441, Suedfeld 1988, 26).

The need to bear in mind that the appropriateness of any given level of IC, even to the extent that such a discussion can be entertained, will vary with the issue at hand and with other features of the situation, does not attenuate the value of IC as a variable of
interest. It remains the case that IC offers a valid assessment of cognitive style at a
distance, and one in which, as noted above, shifts, if not static levels, are robust
predictors of highly significant outcomes (Raphael 1982, 445). It is this phenomenon, that
of shifts in state levels of IC across time, that is the central concern of Studies I and II.

Subjects, Cases, and Observations: n = 1 Issues

Having established the theoretical value of investigation into the cognition of a
major political leader, through the criteria of action and actor indispensability, it remains
to address a related methodological objection, the so-called n = 1 problem. For several
reasons, single observations are not considered valuable tests of a theory (King, Keohane
and Verba 1994, 209-213). However, there are several reasons why this objection need
not trouble the present study. First, at its heart the objection deals with the number of
observations, defined as “one measure of one dependent variable [and all available
explanatory variables] on one unit” (King, Keohane and Verba 1994, 217) included in a
study, not the number of subjects being observed (King, Keohane and Verba 1994, 52).
While confined to the study of a single political figure, the present study includes some
200 observations. Second, while the lack of variation in a study of only a single subject
can reduce inferential leverage, Study I arises in connection with this particular subject
and deals with a potential rare exception to an already amply demonstrated rule. Thus,
generalizability does not arise as a concern for Study I. Indeed, focusing all observations
on Mr. Bush increases the efficiency with which any effects of stress on his IC are
estimated. In addition, the inclusion of only one subject in the study holds constant
myriad variables, both known and unknown, which lie outside the scope of the study.
Finally, while generalizability is a concern for Studies II and III, which deal with more
broadly applicable hypotheses than Study I, these studies are only possible within the scope of the present project because of the availability of data collected for Study I. Indeed, given the limited resources available for this project, the inclusion of additional subjects would have forced the redistribution of observations and cases among them, with subject replacing other variables of interest, such as high and low stress during the presidential campaign (Study II) and varied issue domains (Study III), as well as reducing the available n for each subject. Finally, the generalizability of any results for Study III and particularly Study II is considered to be subject to testing against a broader range of subjects.

It is also worth reiterating that the present study deals with a subject, George W. Bush, of particular practical and theoretical significance. In the former sphere, there can be few decisionmakers of greater practical import than a sitting U.S. president, and President Bush’s cognitive complexity is of even greater interest than usual given the popular view, discussed above, that he is unintelligent and intellectually disengaged. Mr. Bush is also a subject of great theoretical value. Study I is conducted in response to the literature concerning Mr. Bush, some of which claims that he is unusually resistant to stress. As will become clear in discussion of the hypotheses below, investigation of this alleged trait holds the potential to identify an additional case of resistance to stress, with salutary implications for the eventual unlocking of its causes and mechanisms. While the selection of Mr. Bush as the subject of Studies II and III follows from his selection for Study I and the consequent availability of data, he represents a particularly valuable subject for the latter, and possibly the former study. In the former case, if Bush’s advisers (for example Hughes 2004, 170) are to be believed, he showed less of a need to win the
presidential election than is typical of major party candidates. Thus, he could be less likely to show cognitive simplification under stress during the campaign than the average major party candidate. Should Mr. Bush show evidence of cognitive simplification under stress while in office, this could make Study II a somewhat tougher test of the hypothesis that presidents' cognitive responses to stress can be predicted by those shown as presidential candidates than would be presented by analysis of a more typical candidate. In the latter, it is Bush's conservatism that renders inter-domain differences in IC of theoretical interest as it allows competition among theoretical models of the relationship between ideology and IC.
Chapter 3
Hypotheses

Study I

The Cognitive Manager Model

Before venturing to discuss the nature of stress and its operationalization in the present study, it is important to outline the model of cognition underlying the present study: the cognitive manager model. Proposed by Suedfeld (Suedfeld 1992), this model proposes that good decision makers allocate limited cognitive resources among decisions according to their perceived importance relative to one another, with more important decisions being allocated greater cognitive resources. It should be noted that the sum of available cognitive resources is not a static individual trait, but rather varies for any given individual across situations, such that, for example, "...leaders under severe prolonged stress will have fewer cognitive resources to allocate to the solution of even important problems" (Suedfeld 1994, 339). A further point to note is that Integrative Complexity is viewed as an indicator of "how much cognitive effort the individual has decided to invest (or is capable of investing) in the particular problem or situation being confronted" (Suedfeld, Fell and Krell 1998, 326).

Stress and Threat

Hans Selye's canonical definition identifies stress as "the nonspecific response of the body to any demand" (Selye 1976, 55). While this definition has the salutary effect of drawing attention to the physiological reality of stress, the present study is essentially concerned with stress arising from psychological demands, particularly the demand to cope with threats to important values. Such threat has been widely considered a major
stressor; indeed, while other features of crises have the potential to evoke stress, threat to important values is often considered the key ingredient of crisis-induced stress (Raphael 1982, 425, Holsti 1972, 53 note 17).

**Disruptive Stress**

Selye suggests that the human response to stress is characterized by what he terms the “General Adaptation Syndrome,” which progresses from an initial “alarm reaction,” through a “stage of resistance,” and finally, in some cases, reaches “the stage of exhaustion” (Selye 1976, 38-40). In terms of the cognitive manager model (Guttieri, Wallace and Suedfeld 1995, 599-600, 602-603, Suedfeld and Leighton 2002, 587), the initial onset of a stressor will induce an alarm reaction, in which “The organism is to some extent immobilized while it musters resources and prepares to cope with the situation.” This is followed by the stage of resistance, in which “…available resources are applied to solve the problem.” Finally, “If the problem cannot be solved, or if too many problems occur simultaneously, or if the danger of failure is too great, or if the individual becomes tired or sick—in other words, when the stressor overwhelms the resources that the individual has for coping with it—the stage of exhaustion is reached.” It is at the stage of exhaustion that “disruptive stress” is encountered; as Suedfeld and Granatstein (Suedfeld and Granatstein 1995, 512) note, “Disruptive stress is considered to have occurred when the discrepancy between available coping resources and environmental demands becomes so great that it results in a downturn in complexity.” Thus, the “disruptive stress hypothesis” posits that “…when a situation becomes severely stressful (e.g., after repeated efforts no solution appears, or too many stressors coexist), or
continues for too long, cognitive resources for complex strategies become depleted and complexity decreases” (Suedfeld, Fell and Krell 1998, 327).

This hypothesis finds considerable support, not only from Burke, but also from a wide range of experimental and archival studies. As the literature on this point is voluminous, only a brief summary, focusing on effects of particular salience to this hypothesis, is presented here. Consistent with the disruptive stress hypothesis, moderate stress has been found to improve performance on certain, particularly psychomotor, tasks (Hermann 1979, 28, Post 2004, 121, Holsti 1990, 124). However, higher levels of stress, often crisis-induced, have been associated with increased cognitive rigidity, including the rejection of new information; narrowed attention, including focus on single responses to the problem or on a narrow range of options, focus on a limited number of cues or dimensions of the situation; increased focus on short- versus long-term consequences; reduced tolerance for ambiguity and ability to make subtle distinctions; impaired ability to anticipate unintended consequences; reliance on increasingly crude familiar decision rules; increased tendency to view a preferred option as satisfying all relevant criteria, or to bolster more generally; increased susceptibility to the Fundamental Attribution Error, increased tendency to view one’s own behavior in terms of situational variables, ignoring internal psychological motivations; and, finally, as a result of increased corticosteroid levels, “magnified feelings of mastery and optimism” (Post 2004, 118, Holsti 1990, Holsti 1972, see also McDermott 2004). Each of these effects can be expected to have considerable impact on both decisionmaking ability (see for example Holsti 1990) and IC specifically (Raphael 1982, 426).
The disruptive stress hypothesis is also borne out, for the most part, by studies of Integrative Complexity specifically. Laboratory simulations of international relations by Driver and others have found increased military threat, beyond an optimal point, to decrease the components of IC (Porter and Suedfeld 1981, 322, Suedfeld and Tetlock 1977, 174). In archival work, Suedfeld and his collaborators have found decreases in Integrative Complexity to accompany war and increased international tensions in both private and public communications, not only among the governments and decisionmakers involved (see for example Guttieri, Wallace and Suedfeld 1995, Raphael, 1982, Suedfeld and Tetlock 1977, Wallace and Suedfeld 1988, cf. Levi and Tetlock 1980, Suedfeld, Wallace and Thachuk 1993, Walker and Watson 1994)\(^2\), but also among a variety of eminent members of the societies involved who had no direct connection to political decisionmaking (Porter and Suedfeld 1981, Suedfeld and Bluck 1993, Suedfeld 1985, Suedfeld 1980). This is particularly true of stressors involving national security, as the robust finding with regard to wars has not been found in cases of national economic

\(^2\) While Walker and Watson found a decline in IC as the situation became more stressful, they caution against interpreting the relationship between stress and IC as a direct one (Walker and Watson 1994). Certain of the leaders included in Suedfeld, Wallace, and Thachuk’s study of the 1990-1991 Persian Gulf War did not show cognitive responses to stress as the conflict unfolded (Suedfeld, Wallace and Thachuk 1993). In the case of one of these leaders, and another whose case showed mixed results, this is attributed to a resignation to the fact that these leaders’ countries had little influence over the conflict’s course, while in the other two the very small number of scored statements is suggested as a cause of apparent cognitive stability (Suedfeld, Wallace and Thachuk 1993). Finally, Levi and Tetlock’s study of Japanese government decisionmaking leading to the 1941 attack on Pearl Harbor presented mixed results, as, while Navy Chief of Staff Nagano exhibited the typical disruptive stress pattern, neither the Prime Minister nor the Army Chief of Staff did so (Levi and Tetlock 1980). Further, the Japanese government’s public statements did not exhibit the pattern either. However, there are several reasons to limit the evidentiary weight of these findings. First, the official with greatest responsibility for the operation, Admiral Nagano, did show signs of disruptive stress. Second, Suedfeld and Bluck found that the Japanese government’s public statements showed the same pattern of declines in IC as was found in seven of the eight other surprise attacks included in their study (Suedfeld and Bluck 1988). Finally, Levi and Tetlock themselves point out that their “findings can be reconciled with the disruptive stress hypothesis” as the situation faced by the Japanese officials was not marked by surprise, allowed considerable time in which to make decisions, and involved “unilateral planning” on their part (Levi and Tetlock 1980, 207-208). In contrast, the high-stress periods in the present study have been selected to represent either unexpected crises or continuing periods of high threat.
hardship, among them the Great Depression (Suedfeld 1985), or civil unrest (Porter and Suedfeld 1981). In addition, the effect is largely associated with stressors on the societal level, as negative personal life events, with the exception of illness, have not shown cognitive simplification (Porter and Suedfeld 1981, Suedfeld and Bluck 1993). That said, none of these exceptions vitiates the disruptive stress hypothesis for the purposes of the present study as it focuses on national security-related stressors.

Thus, Study I tests the applicability of the disruptive stress hypothesis to President Bush:

\[ H_1 \text{ In the case of President George W. Bush, IC in low-stress conditions} \geq \text{ IC in high-stress conditions.} \]

The Gromyko Effect

Given this robust literature supporting the disruptive stress hypothesis, one may well ask what value there can be in testing it yet again, with regard to a new actor. The answer is that while the disruptive stress effect appears common, it is not universal. Wallace and Suedfeld (Wallace and Suedfeld 1988) found that, unlike his Soviet colleagues (with the exception of Brezhnev in the Afghan crisis) and American counterparts, prominent Soviet diplomat Andrei Gromyko exhibited increased IC under crisis conditions. While other subjects in this study exhibited average declines of from 11.4 to 58.3 percent from pre-crisis to crisis conditions, Gromyko’s average IC rose by 22.3 percent (a difference significant at the \( p < .001 \) level). This feature of Gromyko’s cognitive style, combined with his unusually lengthy tenure in senior diplomatic posts, spurred a test of the crisis cognition patterns of other figures with similar career paths. This second study identified four additional cases of either increased, or at least

George W. Bush: Another Gromyko?

There is reason to believe that the same pattern may hold with regard to President Bush. The assertion that Mr. Bush is particularly resistant to the effects of stress is a common feature of the journalistic and biographical literatures devoted to his study, one raised by Bush campaign and administration officials, for example Stuart Stevens, Ari Fleischer, and David Frum (Fleischer 2005, 11, Stevens 2001, 117, 127, and, on Frum, Kengor 2004, 249); journalists, for example Bill Keller and Frank Bruni (Keller 2003, Bruni 2002, 233); and scholars, among them Paul Kengor and Fred Greenstein (Greenstein 2004, 210, Kengor 2004, 29). Further, several plausible potential causes of this claimed resilience have also been raised in the literature, either explicitly or implicitly. These include:

• An intense regimen of physical exercise, as a runner of sufficient commitment to have a treadmill installed on Air Force One (Bush 2003a, Renshon 2004, 39, Bruni 2002, 224, 262).

3 Keller’s claim regarding stress is somewhat indirect. He states (Keller 2003) that “Perhaps the most important effect of Mr. Bush’s religion is that, for better or for worse, it imparts a profound self-confidence once he has decided on a course of action.” The implications for decisionmaking under stress seem fairly clear.

4 It should be noted that while Bush appears to lack Clinton’s Vesuvian temperament, even his close friend and advisor Karen Hughes paints an unflattering portrait of his emotional intelligence at times, explaining that she was often sent “into the propeller” to deliver news likely to provoke a reaction from Bush, though she suggests that it would blow over (Hughes 2004, 183), and also recounting two bitingly sarcastic comments Bush made to her on occasions when she had inadvertently made him wait (Hughes 2004, 193).
• The emotional support provided by Bush’s wife, Laura (Brant 2001, 34, Renshon 2004, 40-41).

• Trust in instinctive beliefs and judgments (Woodward 2002, 342).

• Repression of doubts about the efficacy or rectitude of policies, in keeping with Bush’s view, that: “…a president has to be the calcium in the backbone” (Bush, quoted in Woodward 2002, see also Woodward 2004, 420.

• Factors associated with Bush’s religious faith, particularly faith in the power of intercessory prayer, which may offer a sense of control, and in the unfolding of providence, which may offer a sense of comfort in the face of apparent danger or uncertainty (Bush 2000, 2003b, Fineman et al. 2003, Hitchens 2003, Keller 2003, Bush 1999, 6, Renshon 2004, 144, Frum 2003, 30, Kengor 2004, 244, Bruni 2002, 255-256, Goodstein 2000)\(^5\).

In sum, these features of the literature suggest a competing hypothesis to \(H_1\):

\[H_2 \text{ In the case of President George W. Bush, IC in low-stress conditions} \leq \text{IC in high-stress conditions.}\]

This hypothesis represents an open question as evidence exists to suggest that Bush does, in fact, feel the effects of stress, with Renshon, Bruni, and Moens each noting this with regard to the period following the September 11 attacks and ensuing military campaign in Afghanistan (Moens 2004, 131-132, Renshon 2004, 79, Bruni 2002, 2). As Bruni points out, even the relatively less intense rigors of the campaign trail served to deplete Bush and at times make him “peevish or sullen” (Bruni 2002, 182, see also the telling episode recounted at 63).

\(^5\) While Mr. Bush’s apparent religious commitment has yielded political dividends, the preponderant view among both supporters and critics, including religious critics, appears to be that this commitment is genuine. Further information is available from the author.
It is also a question of some importance to both the literature concerning George W. Bush and to that dealing with the relationship between stressful conditions and IC. Its significance to the former literature has already been discussed: the existence of an open question, and one of manifest practical significance, in the literature. Its importance to the latter lies in the possibility of identifying an additional (sixth) case of the Gromyko phenomenon for future research into its genesis and dynamics, which are currently unknown as the identified cases of this phenomenon vary widely in ideology, demeanor, time period, and regime type (Wallace and Suedfeld 1988, 449), as well as several potential causal factors to add to the list already tested against the identified cases. Such research is significant not only in terms of the general value of inquiry into why certain individuals behave in ways counter to the predictions of psychological theories (Jervis 1989), but also in terms of the practical importance of the phenomenon, which, as Wallace and Suedfeld point out, represents, "a possible link between the basic personality traits of decision-makers and the outcomes of crises, since the maintenance of high complexity, apparently a stable individual attribute, is associated with peaceful resolutions of crises" (Wallace and Suedfeld 1988, 449-450). Thus, research into the phenomenon's causes, with a view to better recognizing and perhaps fostering it, would seem to be of value. In addition, a clearer understanding of these causes would also improve normative evaluation of the phenomenon, which, while apparently positive, could be the result of cognitive dynamics, such as hypervigilance, typically associated with flawed decisions and negative outcomes.

It should be noted that this is not the first study to investigate President Bush's pattern of Integrative Complexity under high-stress conditions. An earlier study
investigated this relationship in the IC of President Bush, British Prime Minister Tony Blair, Osama bin Laden, and Taliban leaders, in the days and weeks following the September 11 attacks. This study showed little variation in Bush’s complexity, with an almost imperceptible rise in IC immediately following the attacks, then a slight decline during the organization of the campaign in Afghanistan, and a slight rise as the campaign unfolded, counter to the study’s predictions (Suedfeld and Leighton 2002, 593 Figure 1). Suedfeld and Leighton suggested three hypotheses to account for this pattern: a trait explanation involving limited responsiveness to situational effects on IC; the possibility of a disruptive stress effect initially caused by the disputed nature of the 2000 presidential election but continuing until at least September 11, 2001, when it was joined by additional stressors; and an explanation based on the value pluralism model discussed below in connection with Study III (Suedfeld and Leighton 2002, 595-596). Should Mr. Bush show a similar pattern of stable complexity in the present study, the inclusion of what appears to be a relatively low-stress period early in the administration will provide a test of Suedfeld and Leighton’s second possible explanation, while Study III will perform an initial test of the third.

Study II

Wallace and Suedfeld’s results suggested that resistance to cognitive simplification under high-stress conditions is a stable personality trait as each individual exhibiting resistance did so at the same level across the twenty- to thirty-year period studied. This suggests that it may be possible to unobtrusively test individuals for such resistance prior to their assuming high office (Wallace and Suedfeld 1988, 450). Given the dramatic impact of stress on most people’s cognition, such a test would be of
considerable value in assessing candidates for high political or administrative office (Post 2004, 122). However, it may not be possible to generalize to the U.S. presidency from any other position, as the responsibilities, particularly the national security responsibilities so closely tied to the disruptive stress effect, fall upon no other U.S. policymaker to the same extent that they do the president. Thus, while state governors occupy perhaps the role most similar to the presidency in American politics in terms of ultimate responsibility, these roles are different enough in terms of likely disruptive stress that relatively little is lost by testing $H_3$ against the slightly more dissimilar role of presidential candidate, while much is gained from the latter’s added virtue of being a role occupied by most eventual presidents. Study II tests this possibility against the case of George W. Bush, through the competing hypotheses:

$H_3$ The relationship between stress and President Bush’s IC during the 2000 presidential election campaign will be similar to that observed in Study I.

$H_4$ The relationship between stress and President Bush’s IC during the 2000 presidential election campaign will not be similar to that observed in Study I.

While the presidential campaign represents a dramatically different context than the presidency itself, one which has been found to influence IC specifically (Tetlock 1981b), there is also reason to believe that those individuals vulnerable to disruptive stress will show these effects during their campaigns. It is not difficult to believe that most if not all major party U.S. presidential candidates view victory in the election as an important personal value, and one with the potential to be threatened by downturns in popular

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$^6$ It also bears pointing out that U.S. governorships vary widely in the power and, arguably, the responsibility held by governors.
support or other campaign difficulties. In addition, it is also quite possible that many such candidates may consider their election to be an important national value potentially imperiled by such difficulties. Should Mr. Bush show evidence of cognitive simplification under stress while in office, it is possible that he may provide a tougher test of $H_3$ than the average major party presidential candidate if his aides’ accounts of his lack of a need to win (Hughes 2004, 170) are to be believed.

Study III

Controlling for the topic domain in which statements are made (further discussed in chapter 4), is a necessary feature of Study I. However, such control also allows comparison of the IC of George W. Bush’s statements as president across three issue domains: those of the U.S. economy, U.S. national security, and U.S. relations with the People’s Republic of China. Given the effects of campaign versus governing status on the IC of utterances (Tetlock 1981b, Suedfeld and Rank 1976), Mr. Bush’s statements as a presidential candidate are expected to differ systematically from those made as president. For this reason the domain of the presidential campaign is excluded from this analysis.

As has been briefly mentioned above, three theoretical models have been developed to address the relationship of ideology to IC. The first two predict that highly conservative individuals will show consistently low IC across issues. The rigidity-of-the-right hypothesis, derived from work on the Authoritarian Personality, posits that conservatives will, for reasons rooted in inner psychological conflicts, tend to evince lower IC than moderates and those with liberal views (Tetlock 1989, 131, for examples of at least qualified support, see Tetlock 1981a, 1983, 1985, Tetlock, Bernzweig and Gallant 1985, cf. Tetlock 1984). The ideologue hypothesis, designed as a response to rigidity-of-
the-right, focused on the intensity rather than the content of a subject’s ideological commitment, claims that those holding relatively moderate views will show higher IC than those with more extreme views (Tetlock 1989, 131-132, for examples of at least qualified support see Tetlock, Armor and Peterson 1994, Dillon 1993, cf. Tetlock 1984). Tested against the case of George W. Bush, these models yield hypothesis five:

\[ H_5: \text{President Bush will show consistently low IC (i.e. no significant differences) across issue domains.} \]

A competing hypothesis is suggested by the value pluralism model, designed by Tetlock to recognize, among other issues, the multidimensional nature of political belief systems (Tetlock 1989, 138-140). The value pluralism model posits that, consistent with the cognitive manager model’s insights regarding the allocation of cognitive resources, relatively complex reasoning results from conflict between values which are simultaneously held to be incompatible and of high importance (Tetlock 1986). Drawing on the work of Rokeach, Tetlock argues that political moderates and liberals are, in most salient issue domains, more likely to experience such value conflict, between, for example, the values of freedom and equality, than are conservatives (Tetlock 1986, 826, for examples of at least qualified archival support, see Tetlock 1984, Tetlock, Armor and Peterson 1994, for a strongly supportive experimental study, see Tetlock 1986). In light of the common finding that political conservatives do not appear prone to such value conflict regarding economic matters, value conflict is not expected to increase the IC of Mr. Bush’s statements regarding the U.S. economy. Further, Tetlock’s suggestion that conservatives (at least in the 1980s) might experience value conflict over matters of national security, for example in terms of tensions between the demands of national
security and fiscal prudence (Tetlock 1989, 142) does not appear to apply to Bush. Thus, value conflict is not expected to increase the IC of statements in the domain of national security. However, Mr. Bush is expected to experience value conflict with regard to the United States' relationship with China, which appears to bring into conflict values of democracy and freedom (especially religious freedom) and those of trade and harmonious relations. In sum, these expectations, based on the application of the value pluralism model to George W. Bush, yield hypothesis six:

\[ H_6: \text{Mr. Bush will show significantly higher IC in utterances regarding U.S. relations with China than those regarding the U.S. economy or national security.} \]

Finally, it should be noted that the cognitive manager model suggests that subjects may show higher IC in issues in which they invest greater cognitive resources. Suedfeld, Conway, and Eichhorn (Suedfeld, Conway, and Eichhorn 2001), for example, found that statements by some but not all of the Canadian politicians studied were higher in IC when regarding issues of particular importance to their parties (see also Suedfeld 2000). However, each of the three issues studied will have been particularly salient to Mr. Bush. Major reform of the military and tax policy were among his top priorities upon entering office and both continued to rank highly throughout the period under study. Indeed, the tragic events of September 11, 2001, not only raised the salience of national security but arguably also of the economy. Finally, while relations with China were not generally among Bush's top priorities, his statements on the matter have, for reasons of availability, been drawn from specific periods in which this relationship would have been particularly salient (a crisis involving the two nations in the high-stress condition, and a diplomatic
trip to the region in the low-stress condition). Thus, no predictions of significant cross-domain variation in IC are drawn from the cognitive manager model in the present study.
Chapter 4
Methodology

Research Design and Case Selection

Given the constraints of limited resources, the present study employs what King, Keohane, and Verba (King, Keohane and Verba 1994, 140) have identified as “the best ‘intentional’ design,” one in which observations have been selected in order to ensure variation on the explanatory and control variables, but without reference to the values of the dependent variable. In addition, observations have been selected to ensure an equal distribution of values of the explanatory variable across the variables of campaign vs. governing status and issue domain, thus ensuring that these variables are not correlated with the explanatory variable. This reduces the analytic load placed on the data by obviating the need to control for these variables statistically, and permits the testing of hypotheses through the comparison of mean IC levels, rather than through multiple regression, ordered probit, or other relatively complex and impenetrable statistical techniques.

Variables

Primary Explanatory Variable

Nature of Variable

The present study does not seek to measure the effects of stress on cognition, for stress itself is an abstraction and not amenable to direct measurement (Selye 1976, 49, Guttieri, Wallace and Suedfeld 1995, 603). Rather, Studies I and II test the impact of a significant stressor, specifically threat to important values, on cognitive complexity.
Thus, the key explanatory variable for these studies is the presence or absence of major threats to important values.

Validity

The question of what constitutes significant threat to important values is an open one, and its answer may vary from actor to actor. As Pennell explains,

An event's meaning is not inherent in the event itself. ... The crucial determinant of which meaning is constructed lies in the subject's definition of the situation. Therefore, when an event's meaning is central to the research question (as it is in this study), it is incumbent on the researchers to try to bracket their own assumptions. It is only through this more interpretive stance that the content-analytic schemes used and the resultant findings remain grounded in the lived experiences of the individuals studied (Pennell 1996, 799).

Post echoes this view with respect to stress, and threat to important values specifically, arguing that even perceived threat to major national values may not pose a threat to an actor's personal values, and thus may not evoke stress (Post 2004, 102-103). While this critique is valid to a point, it is unlikely to present a significant problem for the present study. While human cognitive and emotional responses to life events are complex and often ambivalent (Suedfeld and Bluck 1996, 783), it seems a reasonable assumption in most cases that a favored presidential candidate will subjectively interpret serious campaign difficulties as a threat to important values. Similarly, it seems unproblematic to assume that national security and the lives of one's citizens will generally be interpreted as important values (cf. Post 2004, 102). Indeed, Hermann argues that senior policymakers are, for a variety of reasons, "quite vulnerable to perceiving threats to their nation's goals as personal threats..." (Hermann 1979, 27). Further, as Suedfeld and Bluck point out, making such assumptions is vital to the enterprise of scientific research, with its search for "generalization and prediction" (Suedfeld and Bluck 1996, 782-783). This
is true of the present study. It is conceivable, if unlikely, that, for a range of reasons (belief in providence, the apprehension of political gains), a given decisionmaker may not experience threats to national security as threats to an important value and thus a stressor. For this reason, should this analysis yield for \( H_2 \), a logical next step will be to investigate the possibility of measurement error in terms of the perception of threat, and the dynamics through which cognitive simplification is resisted.

That said, the present study compares very different values: that of national security and the protection of U.S. lives and the potentially more ambiguous value of a successful presidential campaign (for assertions of this ambiguity regarding Bush see Stevens 2001, 127, and especially Hughes 2004, 170). Given the perfect collinearity between domain (threat) and condition (campaigning v. governing) in the present study, future research may seek to distinguish among the roles of these factors.

While this study seeks, to some extent, to take heed of Pennell’s advice and interpret events in light of the subject’s subjective experience, questions of validity arise with respect to the available accounts. This problem is particularly acute when conducting research on a sitting official, and represents one aspect of the trade-off between the practical significance of such research and the possibility that more candid accounts may be available for officials long retired.

Both “insider” and arm’s-length accounts present distinct validity problems. In the latter case, the most prominent and complete accounts are those provided by news media. Such accounts present a problem of media bias, not in terms of oft-claimed bias in favor of or against a particular ideology, but rather in favor of a compelling story. Former Bush administration press secretary Ari Fleischer (Fleischer 2005, 43-46, 76-122) explains this
bias as one in favor of “conflict,” while the *New York Times*’ Frank Bruni (Bruni 2002, 163-164), writing specifically of presidential campaign reporting, describes the filtering of facts through the lens of shifting campaign fortunes. These tendencies may well exaggerate the salience of threats to important values in many journalistic accounts. In dealing with inside accounts, the problem of impression management comes to the fore. However, this problem is likely to be less acute, as insiders may be more likely to explicitly paint a picture of their principal as composed under difficult conditions than they are to bolster this by exaggerating the adversity of the conditions themselves. Indeed, in some cases this would seem to run counter to their own impression management goals (e.g. admitting to mistakes in the campaign which made conditions more arduous). Given that their portrayals of the candidate’s performance under stress are treated as assertions to be tested rather than sources of data, explicit management of impressions in this vein should not pose a problem for case selection. Nonetheless, a variety of overlapping sources, including both media and inside accounts, have been employed in an effort to maximize the validity of assessments of perceived threat.

*Biasing Events/Recovery Periods*

An important factor in identifying these periods, particularly those selected for the low-stress condition, is the need to avoid including biasing (counter-valence) events in the time periods selected. Specifically this means carefully combing the record regarding low-stress periods to ensure that they are free of atypical significant threats to important values. In so doing, a temporal standard must be adopted in terms of the minimum time without such threats which must pass between the end of a high- and the beginning of a low-stress period for the purposes of this research. While Suedfeld and Bluck adopted a
one- to two-year period before and after a major life change event, this proved extremely
difficult (Suedfeld and Bluck 1993) and, in the view of one critic (Pennell 1996), met
with only limited success. Wallace and Suedfeld employed a thirty-day period before
crisis onset and after crisis termination, but did not seek to avoid the confounding effect
of other stressors which may have been present in the pre- and post-crisis periods
(Wallace and Suedfeld 1988, 443). Any random error in the measurement of the presence
of threat will have the effect of attenuating the relationship between this independent
variable and Integrative Complexity. Thus, this does not pose a problem for studies which
seek to demonstrate cognitive simplification, as any such error only increases confidence
in results showing this phenomenon (Suedfeld and Bluck 1996, 783). In contrast, such
error in the present study could inflate support for $H_I$ as an attenuated link between threat
and complexity would make Mr. Bush appear more resistant to cognitive simplification
than is actually the case. Thus, the attempt to explicitly identify relatively low-stress
periods for comparison represents an attempt to subject the hypothesis of Bush’s
resistance to stress to the more robust test provided by reduction of random error. To this
end the present study adopts Wallace and Suedfeld’s thirty-day minimum between the
termination of a high-stress period and the beginning of a low-stress period, though this
waiting period is not maintained in cases of abrupt shift from low- to high-stress, when
acute precursors with the potential to initiate stress ahead of threat onset appear absent.

Reliability

A reliability check of sorts was undertaken through the presentation of the threats
and periods (both high- and low-stress) employed in the present study to a research
seminar for critiques and/or suggestions. The threats and periods ultimately employed
were informed by this process. In addition, the threats and periods selected are outlined below, allowing for reanalysis and critique by subsequent researchers.

Explanation of Scores

As the present study is informed by Selye's General Adaptation Syndrome (GAS) and the disruptive stress hypothesis, not only acute crises but also longer-term situations of stress are of interest, as the latter may be even more likely to engender eventual exhaustion. One such period has been identified for each of the governing and campaign phases.

Study I – Governing

Condition: Low-Stress

- February 8, 2001 – March 2, 2001

This busy but low-threat period begins with Bush’s submission of a ten year tax-cut plan to Congress, thirty days after Linda Chavez’s withdrawal from nomination as Labor Secretary in the Bush transition’s main hiccup (Anonymous 2003, Burke 2004). It ends the day prior to the onset of chest pains which led to Vice President Richard Cheney’s hospitalization for heart trouble on March 5 (Schmitt 2001, 1).

- January 8, 2002 – January 22, 2002

The thirty-day buffer period begins just after coalition forces took Kandahar (December 6, 2001), and also includes Bush’s withdrawal from the Antiballistic Missile Treaty (Anonymous 2003). It ends with a vacation at Bush’s Texas ranch (Allen 2001, A02, Reuters 2001, A18). The period itself begins with the signing of an education bill, one of the Bush administration’s key legislative priorities. While tensions between India and
Pakistan flared during this period, threatening Pakistan’s commitment of troops in Afghanistan and drawing administration attention, this remained a threat peripheral to U.S. security. Similarly, while Osama bin Laden remained at large, he was believed, if still alive, to be on the run and considerably less effective as a threat than he had been prior to the invasion of Afghanistan (McFadden 2001, 1). Politically, some suggested that, far from hurting the administration, failure to capture bin Laden may have improved its fortunes by retaining relatively high public perceptions of threat (Kohut 2002, 17). The period ends prior to the abduction of *Wall Street Journal* reporter Daniel Pearl in Pakistan (CNN.com 2002). While both the buffer and sampling periods include fallout from the collapse of Enron, the period is included nonetheless as, while this collapse did affect the administration, the administration was consistently vindicated in the press, and political conflict was muted as Bush’s approval ratings remained stratospheric throughout this period (see poll results available through Polling Report Inc. 2006).

• February 16, 2002 – February 21, 2002

The paucity of utterances concerning relations with China during the January 2002 period outlined above necessitated sampling from a later period, during which the salience of this issue was increased by Mr. Bush’s diplomatic trip to several East Asian states, including the PRC. This presented a tradeoff, balancing the desire to sample sufficient low-stress utterances from this domain against the period’s more questionable low-stress status relative to the other periods. Measurement error in the stress status of the period could attenuate a relationship between stress and IC. Thus, if the results suggest support for $H_2$, they will be re-run excluding utterances from this period in order to provide a more robust test of this hypothesis.
Condition: High-Stress

- April 1, 2001 – April 10, 2001

This period marked Bush’s first national security crisis, indeed his “first serious foreign policy crisis” (Fleischer 2005, 56). A Chinese fighter jet collided with a U.S. spy plane, resulting in the loss of the former and forcing the latter to land in Chinese territory. The aircraft and its crew were taken into custody, endangering the security of both the crew and the aircraft’s technology, as well as presenting less tangible threats such as those to U.S. credibility and resolve on the world stage. As it has been suggested that stress-induced cognitive simplification may end upon the psychological, rather than material, resolution of the crisis (Guttieri, Wallace and Suedfeld 1995, 615), and it is difficult to predict the state of Bush’s perceptions regarding threat during the April 11-12 period between the announcement of an agreement to return the crew and their transfer to U.S. custody, this sampling period ends on the last day before the agreement was announced in order to avoid artificially attenuating the stress-IC relationship and inflating estimates of Bush’s resistance to cognitive simplification.

- September 11, 2001 – September 14, 2001

This represents a slight forward shift of the alarm period tested by Suedfeld and Leighton (September 12-15), which includes statements made on September 11 itself, and a period of continuing threats (for example against the White House September 13, see Hughes 2004, 250). The period ends the day before Bush began a Camp David strategy session on how to conduct the War on Terror. This may have represented Bush’s first real opportunity to recover from the shock of the 9/11 attacks and enter the resistance phase of
the GAS; as Woodward reported, footage of the president’s arrival showed a man “dead
tired, drained, almost staggering” (Woodward 2002, 72).

- October 4, 2001 – October 31, 2001

This period represents a substantial extension of the exhaustion phase tested by Suedfeld
and Leighton (October 7-14). This period begins on the day when the threat of continuing
terror attacks was heightened by the first in a series of anthrax mailings. Of this day, Ari
Fleischer declared, “I had never before and never since seen the President look as tired
and troubled as he did that morning” (Fleischer 2005, 189). The period includes both
direct and indirect threats to U.S. security, through the anthrax attacks and difficulties
attending the Afghan campaign of the War on Terror. It also included political threats in
terms of strident criticism of how both were being pursued (see, for example, Fleischer
2005, 206), which could well be perceived as a security threat in terms of undermining
perceptions of U.S. resolve and the actual undermining of such resolve among the
populace, rendering prosecution of the war more difficult. Woodward’s account suggests
that Bush was forced to confront the possibly weakening resolve of his inner circle on
October 26, while a major terror threat was noted on October 29. Further William Kristol
and Charles Krauthammer launched a blistering critique from Bush’s right flank on
October 30, as part of a continuing onslaught of negative media coverage that continued
into early November (Moens 2004, 143). Given these events, this sampling period has
been ended only two weeks before the coalition capture of Kabul marked a major turning
point, on the argument that it does not appear that there were objective reasons for
President Bush to expect, as of late November, that such a reversal of fortunes would be
so forthcoming.
Study II – Campaign

Condition: Low-Stress

- April 7, 2000 – July 19, 2000

While Bush campaign aides suggest that the campaign viewed the Republican nomination as won through the “real Super Tuesday” of the Washington and Virginia primaries in late February (Dowd, in Dowd and Steeper 2001), this sampling period errs on the side of caution by beginning its thirty-day waiting period after Super Tuesday (March 7) essentially confirmed Bush’s victory. The value of this period, in which Bush faced essentially no pressure from any political opponent, in terms of recovery from the battles of the primary season has been cited by both Bush (Stevens 2001, 150) and Gore (Knapp 2001, Eskew, in Eskew and Shrum 2001) campaign operatives, as well as by journalists (Milbank 2001, 259) and scholars (Kenski 2002). The sampling period ends thirty days before the beginning of the long and difficult period known to the Bush campaign as “Black September.”

- October 17, 2000 – November 1, 2000

This period begins on the day of the final presidential debate, one month after Bush’s “Black September” began to shift with the resolution of the debate issue, and continues through the day before Bush’s DUI was revealed. The date of the final presidential debate is also significant in that, for several reasons, the presidential debates proved a more significant turning point in the 2000 election than they had been in several election cycles (Denton, 2002, 10). Indeed, while Gore committed several missteps in the second half of September, both Gore (Greenberg 2001, Eskew and Shrum 2001) and Bush (Dowd and Steeper 2001, Stevens 2001) operatives, as well as other observers (Babington 2002,
Denton 2002, Friedenberg 2002, Milbank 2001, Bruni 2002, Smith and Mansharamani 2002), attest to the role of the debates in returning the momentum to Bush. During this period, he is described as “puffed up and pumped up by his disaster-free navigation of the Straits of Debates” while “His advisers were positively ecstatic…” (Bruni 2002, 193). Stevens suggests that “The governor was in a fabulous mood” (Stevens 2001, 270), while Burger states that “Bush...had been coming in from rallies pumped up and reporting that he felt like he was connecting with his audiences as never before” (Burger 2002, 73). No thirty-day period is observed between the latter two phases as research suggested no reason to believe that Bush or his campaign believed that this information would surface before it erupted onto the front page on November 2, 2000. On the contrary, Burger suggests that, even on November 2, before the story broke, “…the whole Bush team seemed to feel victory was theirs” (Burger 2002, 73).

Condition: High-Stress

- February 1, 2000 – February 29, 2000

negative campaign (Milbank 2001, 191, Sabato and Scott 2002, 19-21), including a stop
at Bob Jones University that would later haunt his campaign (Milbank 2001, 190, 245,
248, Hughes 2004, 131-132). Further, this victory was quickly followed by a
discouraging loss in the Michigan primary (Dowd in Dowd and Steeper 2001, 19, Hughes
2004, 132-133). The period ends after Bush’s victories in the Washington and Virginia
primaries shifted this momentum, quickly leading to his ultimate victory in the primaries
(Milbank 2001, 191).

- August 18, 2000 – September 16, 2000

This period, termed “Black September” by Bush campaign adviser Mark McKinnon
(McKinnon 2001, 151), begins the day after Al Gore’s acceptance speech on the final
night of the Democratic National Convention, a point at which the lead shifted to Gore
for the first time (Babington 2002, 52, Frankovic 2001, 123, Dowd in Dowd and Steeper
2001, 22). It was a time, as McKinnon put it, of “rats, moles, and bad polls” in which the
campaign was plagued not only by lower levels of support than it had enjoyed in the past
but also bizarre incidents like allegations of subliminal messaging in a Republican
television ad (rats), the arrival of a Bush debate preparation video at the Gore campaign
(moles), and Bush’s rather unfortunate comment about a New York Times reporter in
front of a live microphone. It was a deeply frustrating time, described by Stuart Stevens
as “a black hole” (Stevens 2001, 219), and by Bush’s closest confidante in the campaign,
Karen Hughes, as “slogging through a swamp of bubblegum in hiking boots” (Hughes
both attest, news coverage of Bush exacerbated this situation, accentuating the shift in

7 While Gore’s selection of Sen. Joseph Lieberman as his running mate had already begun to shift the
campaign’s momentum somewhat (Denton, 2002, 6, 8), the present study errs on the side of caution so as to
avoid artificially attenuating any results, which would have the effect of inflating support for H2.
momentum (Milbank 2001, 312, Bruni 2002, 163-165). This period ends on the day on which the Bush campaign announced that it had reached an agreement with the Gore campaign regarding the presidential debates, resolving an issue which had been dogging Bush, but with a result widely viewed as a victory for Gore (Friedenberg 2002, 138-140, Rove 2001, 201-202, 224, Hughes 2004, 156-157, Bruni 2002, 166).

Dependent Variable

Nature of Variable

Several features of Integrative Complexity have already been discussed above. Before moving to a more detailed discussion of how IC is scored, it is necessary only to offer a brief recapitulation of the difference between high and low complexity, as encapsulated by Suedfeld and Tetlock:

At the simple end of the continuum, decisions are characterized by anchoring around a few salient reference points; the perception of only one side of an argument or problem; the ignoring of subtle differences or similarities among other points of view; the perceiving of other participants, courses of action, and possible outcomes as being either totally good or totally bad; and a search for rapid and absolute solutions in order to achieve minimization of uncertainty and ambiguity. At the complex end, we find flexible and open information processing; the use of many dimensions in an integrated, combinatorial fashion; continued search for novelty and for further information; and the ability to consider multiple points of view simultaneously, to integrate them, and then to respond flexibly to them (Suedfeld and Tetlock 1977, 172).

Measurement of Integrative Complexity

Integrative Complexity is scored on a seven-point ordinal scale reflecting first the presence of differentiation among dimensions of, or points of view on, the matter at issue, and then the level of integration among these differentiated components, through the recognition of trade-offs, explanations as to why “reasonable people” may disagree, and
the like. Thus, differentiation is a necessary but insufficient condition for integration.

While the scoring of Integrative Complexity is itself a complex and a subtle art (Tetlock 1992, 47, Baker-Brown et al. n.d. 3-4), brief guidelines, drawn from the current IC coding manual (Baker-Brown et al. n.d.) and other sources (Tetlock 1989, Tetlock 1992, Tetlock and Suedfeld 1988), for the assignment of each score are as follows. Following the practice of several previous studies (for example, Suedfeld and Granatstein 1995, Tetlock, Bernzweig and Gallant 1985, Tetlock, Armor and Peterson 1994, Gruenfeld 1995), each level is illustrated with a paragraph assigned that score in the present study. Following standard practice, both the primary and the secondary scorer were blind to the hypotheses under investigation and, as much as possible, to the source of the materials being scored.

- **Level 1 – Low Differentiation, No Integration**

A score of 1 indicates that the scorer found “no evidence of either differentiation or integration” and that “The author relies on unidimensional, value-laden, and evaluatively consistent rules for processing information” (Baker-Brown et al. n.d., 1). Thus, no opinions other than that espoused by the author are considered legitimate, nor are general categories broken down into smaller units (Suedfeld, Fell and Krell 1998, 325). It is important to note that, as Tetlock and Suedfeld point out, “...more than one perspective can be voiced; the crucial criterion then is that only one is accepted as legitimate” (Tetlock and Suedfeld 1988, 48).

*Example*

But to make sure that the economy gets the boost it needs, Congress ought to come together quickly and accept the ideas that I've just laid out. We believe that will be the best way to make sure that America recovers from the terrorist attack of September the 11th (Bush 2001b, 1422).
• **Level 2 – Implicit Differentiation, No Integration (Transition Point)**

A score of 2 indicates the presence of emergent, but undeveloped, differentiation among dimensions or perspectives. Thus the "critical indicator" for this score is "the potential or conditional acceptance of different perspectives or dimensions" (Baker-Brown et al. n.d., 20). These dimensions or perspectives need not be made explicit. Thus, the qualification of a point of view, without the elaboration of alternatives, "is sufficient evidence for a score of 2" (Baker-Brown et al. n.d., 20).

**Example**

First of all, we're taking measures here at home to get our economy started. There is some optimism, as some numbers recently have shown that consumer confidence is getting stronger, that people are beginning to get on the airways more, that people are traveling. So there are some positive signs (Bush 2001c, 1478-1479).

• **Level 3 – High Differentiation, No Integration**

A score of 3 indicates clear differentiation among two or more dimensions or perspectives, which are presented as operating in isolation from one another. This typically takes the form of recognition of: multiple but unrelated causes, the need to make choices among options none of which is superior to the others on all relevant criteria, or that "reasonable people view the same problem in different ways" (Tetlock and Suedfeld 1988, 48). Thus, its "critical indicator" is "the recognition of alternative perspectives or different dimensions" and their acceptance as "relevant, legitimate, justifiable, valid, etc." (Baker-Brown et al. n.d., 23). These differentiated components must, however, be sufficiently elaborated to justify a score of 3, rather than a 2 for undeveloped differentiation, or a 1 for an unelaborated list of components (Baker-Brown et al. n.d., 24). It should also be noted that differentiation among more than two dimensions or perspectives does not increase a score beyond 3.
Example

But there are two other aspects to a good, strong economic stimulus package, one of which is trade promotion authority. And the other is an energy bill. Now, there was a good energy bill passed out of the House of Representatives. And the reason it passed is because members of both parties understand an energy bill is not only good for jobs, it's important for our national security to have a good energy policy (Bush 2001a, 1453).

• Level 4 – High Differentiation, Implicit Moderate Integration (Transition Point)

A score of 4 indicates not only the presence of clear differentiation among legitimate dimensions or perspectives, but also “an implicit recognition of a dynamic relationship between or among them” (Baker-Brown et al. n.d., 28). Thus, while interaction among these components is suggested “...there is no overt statement specifying the nature of this interaction” (Baker-Brown et al. n.d., 29).

Example

And this energy bill that we're working on is a jobs bill. And when we explore for power-U.S. power—U.S. energy in ANWR, we're not only helping us become less dependent on foreign sources of crude oil and foreign sources of energy, we're creating jobs for American workers—jobs so that men and women can put food on the table (Bush 2002a, 83).

• Level 5 – High Differentiation, Explicit Moderate Integration

A score of 5 indicates not only that “alternative perspectives or dimensions are...held in focus simultaneously” but that they are also “viewed interactively” (Baker-Brown et al. n.d., 32). This integration can take the form of interdependence and mutual influence among components, the recognition of trade-offs among alternative goals, synthesis among components, or causal explanation for the ability of reasonable people to hold different views on the issue (Tetlock and Suedfeld 1988, 49, Baker-Brown et al. n.d., 32-34).
Example
In order to grow our economy—in order to grow our economy, we've got to have an energy plan. Believe it or not, we're the first administration in a long time that's developed a comprehensive energy plan. On the one hand, it says, we've got to do a good job of conservation. We've got to promote technologies that will enable people to have the same lifestyle without burning as much energy. We've got to figure out ways for our cars to burn less fuel, but be able to be comfortable and be able to let families drive all throughout West Virginia. We've got to conserve energy (Bush 2002b, 99).

- **Level 6 – High Differentiation, Implicit High Integration (Transition Point)**

A score of 6 indicates an intermediate level between the moderate integration of level 5 and the high integration of level 7. The author deals with multiple levels of concepts, and the passage must include either “an explicitly presented global overview with only an implicit indication of the specific dynamics of the alternatives” or “explicitly stated details about the dynamic interaction between alternatives and only an implicit communication of the global overview” (Baker-Brown et al. n.d., 36).

*Example*

No scores of six were assigned in the present study.

- **Level 7 – High Differentiation, Explicit High Integration**

A score of 7 indicates “an overarching thesis or conclusion pertaining not only to the existence but also to the nature of the relationship or connectedness between alternatives” (Tetlock and Suedfeld 1988, 50). This thesis or conclusion “contains an explanation of the organizing principles (e.g. temporal, causal, theoretical) of the problem or concept” and discusses “the ways in which levels of the problem or concept interact...thus demonstrating the validity of the overarching perspective” (Baker-Brown et al. n.d., 39). Discussion of the interaction between levels of the system must be specific and illustrate the dynamic effect of each level on the other (Baker-Brown et al. n.d., 39).
Example

No scores of seven were assigned in the present study.

- X – Unscoreable

It should be noted that some texts are considered unscoreable for Integrative Complexity. Such texts, which average approximately 5% (Liht, Suedfeld and Krawczyk 2005, 548), but have ranged from <1% (see Baker-Brown et al. n.d., 5) to as high as 20% (Tetlock, Bernzweig and Gallant 1985) depending on the nature of the material, are removed from the study. Texts are considered unscoreable whenever it is impossible to confidently assess “the author’s rule structure for drawing inferences or making decisions” (Baker-Brown et al. n.d., 10). This is often the case when dealing with satire or sarcasm, clichés, definitions or descriptions, and quotations. Texts are also considered unscoreable if they cannot be understood or if a scorer cannot decide which of two scores, which differ by at least two points, to assign. In the present study none of the selected texts were deemed unscoreable.

Data Sources and Collection

One of the practical benefits of research on a recent U.S. president is the ready availability of source material, in terms of utterances from both the campaign and governing periods. The present study scores a range of texts including both prepared speeches and apparently spontaneous (more on this below) responses to questions posed in interviews and press availabilities. Materials covering the 2000 Bush presidential campaign have been drawn from remarks transcribed by the Federal News Service and FDCH Political Transcripts, available through the Political Transcripts coverage provided
by Lexis-Nexis Academic, as well as transcripts of interviews with news media, also available through Lexis-Nexis Academic. Materials covering the Bush presidency have been drawn from the online database of the *Weekly Compilation of Presidential Documents*. The *Weekly Comp.* represents “the official publication of presidential statements, messages, remarks, and other materials released by the White House Press Secretary” (National Archives and Records Administration 2006). It includes a range of materials including “presidential proclamations, executive orders, addresses, remarks, letters, messages and telegrams, memorandums to federal agencies, communications to Congress, bill-signing statements, presidential press conferences, communiqués to foreign heads of state, appointments, and nominations” (DeToro 1983). The database, which is maintained by the National Archives and Records Administration and located at http://www.gpoaccess.gov/wcomp/index.html can be browsed by date from 2001 onward, facilitating the identification of utterances from the appropriate periods. This high availability, indeed near comprehensiveness, of public utterances provides significant benefit to the study by reducing the potential for selection bias in terms of the available data. It also has salutary implications for the availability and independence of observations and thus the efficiency of estimates of mean IC. Finally, the ready accessibility of these materials enhances the replicability of this study in comparison with studies of individuals for whom materials are less readily available.

The present study includes documents from the *Weekly Comp.* categories: “Addresses and Remarks,” “Interviews With the News Media,” “Meetings with Foreign Leaders,” and “Statements by the President.” These documents were selected into pools defined by date in order to sample from both high- and low-stress periods. Documents
were read and all paragraphs not associated with any of the issue domains included in this study were discarded. The remaining paragraphs were placed in issue-by-period sampling pools. The requisite number of paragraphs was then selected from each pool with the aid of a random numbers table (Jones 1971, 209-213 Table A2.1), with the numbers selected by research assistants blind to the paragraphs. A similar procedure was followed for the selection of paragraphs for analysis in Study II, with the exceptions that only one issue domain was included and that the source of the documents was the Lexis-Nexis Academic database rather than the *Weekly Comp.*

**Validity**

One issue which immediately arises when content analytical methods are applied to materials designed for public consumption is the question of validity; whether or not scoring such materials can offer an accurate assessment of “private psychological states or traits” (McDermott 2004, 33-34). Indeed, should public utterances fail to validly reflect cognitive states to the same extent as private ones, this focus on a fairly comprehensive set of public utterances nonetheless introduces an egregious form of selection bias into the study. Three distinct validity questions arise with regard to the assessment of IC in the present study, questions of whether or not these materials accurately capture cognition as opposed to strategic rhetoric, whose cognition they capture, and when they capture it. While each of these is a concern worthy of attention,

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8 The first criterion was the selection of equal numbers of paragraphs from low- and high-stress periods; second was the selection of equal numbers of paragraphs from each domain (in Studies I and III), and, within each domain, from high- and low-stress periods. Finally, effort was made to sample identical numbers of paragraphs from each domain in the low-stress periods and from the domains of security and the economy in the second and third high-stress periods, but this was not always possible, and was unnecessary for the analyses reported here.
none presents a crippling impediment to the present study. Each concern, and the reasons for its limited expected impact, will be briefly discussed below.

Impression management

The first of these questions, and one which has consistently arisen in IC work on public documents, is that of whether or not such documents truly present anyone's actual thinking on the matter at issue. Tetlock has advanced an “impression management” hypothesis, which suggests that the integrative complexity evinced in public speeches and documents may better illustrate actors' rhetorical strategies for influencing others than the manner in which they think about issues (Tetlock 1992, Tetlock and McGuire 1984, Tetlock, Hannum and Micheletti 1984, Tetlock 1985). Thus, for example, integratively simple statements might be employed to signal resolve, while integratively complex statements would signal willingness to compromise (Tetlock and McGuire 1984, 117, Tetlock 1985, 1568). This hypothesis has been employed to explain the increase in complexity observed by Suedfeld and Rank (Suedfeld and Rank 1976), on the part of revolutionary leaders who succeeded in post-revolution government roles. It has also been tested against the rival cognitive hypothesis by Tetlock (Tetlock 1981b) who found similar increases as U.S. presidents moved from campaigning to governing, and decreases as they returned to campaigning. Impression management explanations have also been advanced for findings in the international arena (e.g. Tetlock 1985, 1580).

However, other studies have yielded less support for the impression management hypothesis, some contradicting its predictions entirely. A study of U.S. senators by

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9 While not a study of Integrative Complexity, Holsti’s content analysis of communications in the 1914 crisis found that private communications presented the same pattern of results as did public communications (see Holsti 1972, 67 note 25).
Tetlock, Hannum, and Micheletti (Tetlock, Hannum and Micheletti 1984) yielded findings consistent with impression management for liberal and, to a lesser degree, moderate senators, but not for conservatives, the latter finding consistent with the cognitively oriented rigidity-of-the-right hypothesis. Suedfeld and Rank (Suedfeld and Rank 1976) found no difference between the complexity of revolutionaries’ private and public utterances. Suedfeld, Tetlock, and Ramirez’s (Suedfeld, Tetlock and Ramirez 1977) study of UN speeches on the Middle East found that “…complexity levels do not necessarily correlate very highly with manifest content” as countries who professed desire for peace but would soon wage war exhibited declines in IC. A particularly telling example of this disjunction can be found in Suedfeld and Bluck’s (Suedfeld and Bluck 1988) study of twentieth-century surprise attacks which found that statistically significant declines in the IC of the attacking side telegraphed its intentions prior to the attack, a finding later replicated with regard to the Iraqi invasion of Kuwait (Wallace, Suedfeld and Thachuk 1993, 101-102). In the same conflict, Wallace, Suedfeld and Thachuk found that both U.S. President George H. W. Bush and Iraqi President Saddam Hussein showed shifts in IC opposite to those suggested by impression management considerations (Wallace, Suedfeld and Thachuk 1993, 105). A study of President Clinton, conducted in light of Tetlock’s findings regarding increases in presidents’ IC levels as they shifted between campaigning and governing, found that not only did Clinton manage to project an image of high complexity without being integratively complex, but that the picture of complexity he presented was an unflattering one (Suedfeld 1994, 346). Impression management is also unable to explain the disruptive stress declines in IC observed in American Psychological Association presidential addresses, editorials in the Bulletin of
the Atomic Scientists, and the personal correspondence of eminent persons (Suedfeld and Bluck 1993, Suedfeld 1985, Suedfeld 1980), which strikingly resemble those of political leaders for whom impression management is claimed to be operative. Nor can it entirely explain shifts in leaders' IC outside of the relevant issue domain (Satterfield 1998, 683).

Scholars skeptical of the impression management view have also criticized the hypothesis on theoretical grounds. While readily admitting that political leaders frequently manipulate the content of their public utterances in order to realize impression management goals, these critics point out the long-accepted view that Integrative Complexity is not concerned with content but rather structure (Tetlock 1992, 382). As Suedfeld and Leighton explain, “Structure, which refers to how [sic] people think rather than what [sic] they think, is implicit in messages and is therefore not as easily manipulated by the source as is content” (Suedfeld and Leighton 2002, 586, Suedfeld 1994, 342-343, Guttieri, Wallace and Suedfeld 1995, 598, 606-607, Winter and Stewart 1977, 49-50).¹⁰ These waters are muddied somewhat by Tetlock’s assertion that empirical support for the value pluralism model, which holds that complexity increases when an issue activates multiple values, each of which is held to be important, equally important, and incompatible with the other(s), renders sharp distinctions between the content and structure of thought processes no longer tenable (Tetlock 1986). Thus, for example, complexity could be increased by the need to simultaneously appeal to two opposed constituencies, each held to be (equally) important.

Reviewing the evidence to date, Tetlock and Manstead (Tetlock and Manstead 1985) have made a compelling case that, since “No neat, nonarbitrary line divides the

¹⁰ The nature of IC coding also renders the method more robust to impression management as differentiation is scored in a binary manner. Thus, leaving baser motivations out of official policy justifications will not bias the IC unless these reduce the number of factors involved to one.
intrapsychic from the social” (Tetlock and Manstead 1985, 67) and, ultimately, “Each perspective has a seemingly unlimited capacity to mimic the predictions of the other” (Tetlock and Manstead 1985, 72), even experimental investigations will never be able to distinguish between the effects of cognitive and impression management processes.

Indeed, such manipulations as exclusive use of private documents cannot confidently escape the effects of impression management motives (Tetlock and Manstead 1985, 64). Further, there seems to be general acceptance to at least some extent that both cognitive and impression management factors shape the structure of utterances, to varying degrees in varying situations (Suedfeld 1992, 449, Suedfeld and Bluck 1993, 125, Tetlock 1981b, 211, Tetlock, Hannum and Micheletti 1984, 989, Tetlock 1985, 1567-1568, Gruenfeld 1995, 9, Satterfield 1998, 684). That said, this has not been held to invalidate the search for inferences regarding cognitive states. As a recent review put it, “…the hypothesis that political leaders’ IC levels are deliberately adjusted in order to project some desired image has had very little support” (Liht, Suedfeld and Krawczyk 2005, 550). The present author agrees with Suedfeld that, on balance, “…the complexity of the utterance is a relatively (although not absolutely) faithful index of the complexity of thought” (Suedfeld 1994, 342-343).

Source attribution

All content analytical work based on archival material also faces a validity problem in terms of connecting the subject to the materials under analysis. This problem is particularly acute in the analysis of contemporary senior political leaders, such as U.S. presidents, many of whose public utterances are generated by staff aides. One approach to this problem is to avoid the assessment of prepared speeches and select for analysis only
verbal materials apparently generated by the subject him- or herself, such as responses to questions posed in interviews and press conferences.

Three problems attend the use of interview and other questions as a means of increasing validity. First, this dramatically restricts the universe of available data. This can render the selection of verbal materials on particular topics difficult, and may engender a tradeoff between the validity of assessing particular materials and the need to control for the effects of domain on IC and/or a tradeoff between the practical significance offered by a study of contemporary leaders and the greater availability of private materials associated with leaders long departed from the political scene. Second, materials generated under time constraints and with relatively little thought or planning tend to show lower complexity than planned materials generated without time constraints (Baker-Brown et al. n.d., 6). Further, verbal materials, such as interview responses, tend to be lower in complexity than written materials (Baker-Brown et al. n.d., 6), such as speeches which, while delivered orally, are in a sense written communications. Thus, confining the present study to such sources could bias the IC of the samples downward, rendering shifts more difficult to identify with confidence. Finally, notwithstanding Raphael’s claim that, through the use of interview or press conference question responses “...the problem of source attribution is eliminated” (Raphael 1982, 434), these may provide only an illusory increase in validity given the “fuzzy boundary” between spontaneous and prepared remarks (Suedfeld and Leighton 2002, 589). Even if questions are not shared in advance, political leaders and their aides often have a fairly clear idea of what they will be asked, and every effort is made to prepare a president for press
questions ahead of time (e.g. Fleischer 2005, 39). For all of these reasons, the approach of including only apparently extemporaneous utterances is rejected in the present study.

Fortunately, given these difficulties, validly connecting a leader to their utterances does not present as grave a problem as might at first appear. There are three reasons for this. First, political leaders do not select speechwriters at random, but instead are likely to select speechwriters whose styles are compatible with their own (Tetlock 1983, 121 note 4, Winter and Stewart 1977, 49-50, Suedfeld 1994, 342, Guttieri, Wallace and Suedfeld 1995, 608). As Tetlock points out, a reciprocal relationship between speechwriter and principal is likely to increase this tendency even further over time (Tetlock 1983, 121 note 4). Second, political principals do not simply present anything and everything that their aides hand them, but rather demand speeches that they are comfortable delivering. Indeed, they often provide speechwriters with considerable direction and editing (Tetlock 1983, 121 note 4, Winter and Stewart 1977, 49-50, Suedfeld 1994, 342, Guttieri, Wallace and Suedfeld 1995, 608, Suedfeld and Leighton 2002, 589-590), a point which Bush staffers Ari Fleischer, David Frum, and Karen Hughes have each made with regard to their principal (Frum 2003, 48, Hughes 2004, 81, 146-147, Fleischer 2005, 33), and an assessment which Bob Woodward has supported in his largely critical Plan of Attack (Woodward 2004, 10 [caption]). Finally, as has already been mentioned, IC focuses on the structure of utterances rather than on their content. This may render it more robust to stylistic differences between the manner in which a principal and their aide might express ideas than other content analytic techniques. While principals are likely to demand speeches which capture their “voice” in terms of both structure and word choice, they can
more easily give direction on, and will likely attach greater importance to, the dimensions and perspectives that their speech treats as legitimate than specific wording.

Evidence from archival studies also supports the view that ghostwriting does not pose a validity problem. With a few exceptions (e.g. Guttieri, Wallace and Suedfeld 1995), the complexity levels of private materials have been found to be strikingly similar to those of public ones (Suedfeld and Tetlock 1977, Satterfield 1998). Thus, in a recent article, Suedfeld and Leighton echo this assessment, stating that “Our evidence shows no difference between materials unquestionably written by the source...and those whose author is less certain” (Suedfeld and Leighton 2002, 589-590).  

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Temporal validity

A final question of validity, and one unique to investigations of shifts in IC in response to environmental stimuli, is that of validly connecting the materials scored to the environmental conditions hypothesized to influence them. It is entirely possible for speeches, particularly those major addresses in which principals are likely to be most closely involved, to have been developed well in advance of the onset of environmental conditions present during their delivery. It must be noted that the same materials that present the principal as highly involved in the speechwriting process, also tend to emphasize the lengthy nature of the process. Woodward, for example, refers to Bush reviewing “two dozen or more drafts” (Woodward 2004, 10 [caption]). This problem may be particularly acute in the setting of a political campaign, in which candidates often recite what is essentially the same “stump speech” over and over again. Indeed, the legendary “message discipline” of the Bush campaign, in which both the candidate, and

11 Wallace and Suedfeld point out that Winter has established a similar pattern for other content analytical measures (Wallace and Suedfeld 1988, 442).
the campaign more broadly, generally refused to stray from a set of established positions,\textsuperscript{12} may prove particularly problematic in this respect, not only in terms of prepared speeches but also what are essentially equally prepared responses to questions (Bruni 2002, 40-41).

The benefits and liabilities associated with a strategy of reliance on apparently extemporaneous statements have been canvassed above, and the approach rejected, particularly in view of its inability to solve the problem. Instead, this concern plays a role in the decision to focus on materials concerning the issue domain of the stressor. Such a focus may serve to increase the likelihood of the utterances’ generation after the onset of the stressor. Even if a baseline position on the issue, with a characteristic level of complexity, existed before this onset, the principal and staff will still have been confronted with the stressor between onset and delivery, likely influencing the complexity of the remarks delivered.

\textit{Reliability}

Satisfied that the measurement of IC is indeed a valid indicator of cognitive style, the next question to arise is that of reliability: the degree to which these measurements are consistent. While IC coding is a subtle enterprise, its coding rules are relatively simple, avoiding the reliability problems faced by many content analytic methods (Wallace and Suedfeld 1988, 442). Further, IC coding yields a quantitative assessment of reliability, as a portion of the paragraphs scored are also scored by a second qualified scorer and the correlation among the scores assigned is calculated. An inter-rater correlation of at least

\textsuperscript{12} On Bush’s message discipline specifically, see Fleischer 2005.
0.85 is considered indicative of sufficiently reliable measurement (Tetlock and Suedfeld 1988, 44), though in practice, correlations of at least 0.80 have been considered acceptable (Suedfeld and Bluck 1993, Suedfeld and Bluck 1988). In the present study, a random sample of 40 paragraphs, representing 20% of the total, was scored by both the primary scorer and a secondary scorer.

The inter-scorer correlation attained in this study was very low, a mere 0.48. Qualitative analysis of those paragraphs for which the scores assigned differed by more than one point on the scale and discussion of these paragraphs with the primary scorer suggested that these differences were, for the most part, due to the difficulty of distinguishing real from illusory differentiation in campaign rhetoric. Five out of the six paragraphs discussed were from the campaign utterances scored for Study II, and four of these five received scores of 3 (explicit differentiation) and 1 (no differentiation) from the primary and secondary scorers respectively. This suggests that in future, particular care must be taken to sensitize coders to the importance of and techniques for distinguishing between true from false differentiation when assigning them materials drawn from political campaign rhetoric. The possible implications of these differences for the results of the present study are discussed in the results section.

Statistical Implications

A final issue arising from the use of Integrative Complexity as a dependent variable is its implications for the use of statistical tests to generate results and estimates of their certainty. IC presents two problems to the use of conventional techniques such as linear regression. First, it is an ordinal variable: while it represents levels of increasing complexity, IC lacks the precision of equal intervals among levels characteristic of
interval and ratio measurement, rendering even as simple a manipulation as the
calculation of mean values inappropriate (Moore, Carroll and Church 1994, 272). Second,
IC tends not to be normally distributed. Rather, scores are typically heavily skewed
toward the low end of the scale. Tetlock, for example, points out that it is not uncommon
for 40-60% of assigned scores to fall at level 1 (Tetlock 1985, 1572 note 4). However,
neither of these issues has prevented scholars from freely employing mean values and
related statistical tests into their analyses, as recommended by the Integrative Complexity
manual (Baker-Brown et al. n.d., see, for example, Satterfield 1998, Walker and Watson
same method is employed in the present study.

Control Variables

Integrative Complexity has been found to vary with several factors, including
features of the individual under study, of the issue being discussed, and of the external
environment. Failure to control for any such features which are also likely to vary with
the presence of stressors courts omitted variable bias.

Internal Correlates

Factors internal to the subject which have been associated with IC include
ideology and age. As discussed above, both the nature (rigidity-of-the-right hypothesis)
and intensity (ideologue hypothesis) of subjects’ ideological commitments has been
associated with IC. However, the use of a case study design focused on a single subject
controls for this variable. Age has also been observed to have a statistically significant
effect on IC (Porter and Suedfeld 1981, 326). However, the period covered by the present
study is relatively brief, and, in any case, age is not expected to vary systematically with stress. Thus, age need not be controlled. Aging in office represents an alternative view of age, in which a subject's IC may be affected by exposure to substantial stress over a long period, such as a presidential campaign or term in office (see, for example, Suedfeld and Wallace 1995). While this factor is not explicitly controlled, the apparent presence or absence of an "aging in office" trend will be discussed in the results section.

**Environmental Correlates**

IC has also been found to vary with several environmental factors, including those associated with the act of policymaking (groupthink and information) and role requirements (accountability, majority vs. minority status, campaigning vs. governing).

Concurrence-seeking pressures

The presence of concurrence-seeking pressures associated with "groupthink" has been linked to decreases in IC (Walker and Watson 1994, 8), and may well increase under stressful conditions. Nonetheless, given the paucity of available information regarding the deliberations of Bush and his advisers at various times, this factor must remain uncontrolled in the present study, potentially introducing bias. If one accepts that concurrence-seeking pressures are increased under stressful conditions, then part of any observed decline in IC under such conditions may be mediated by an increase in concurrence-seeking. This should, however, introduce little if any bias, because the stressful conditions themselves remain the key explanatory variable. Further, its effects may be reduced by an alleged tendency on the part of the Bush administration to a relatively closed decision-making process as the rule rather than the exception (see, for
example, Suskind 2004, 293) and for Bush to make significant decisions without consulting key advisers (Woodward 2002, 30).

Information input

A more serious problem is posed by information input, which experimental results have shown has a curvilinear relationship with complexity (see Suedfeld and Tetlock 1977, 174), and, as Vertzberger notes, is apt to climb dramatically in times of crisis (Vertzberger 1990, 88, 212-213). The measurement of this variable presents major challenges and eludes the present study, potentially introducing omitted variable bias, the effect of which will be to overstate somewhat the strength of the relationship between stressful conditions and IC, thus strengthening the test of the null hypothesis (also the primary hypothesis of interest in Study I) that Bush is unusually resistant to the typical effects of stress on IC.

Political role: campaigning vs. governing

IC has also been associated with decisionmakers’ roles, conceived of in various ways. The role requirements of campaigning versus governing have been associated with shifts in IC, with political campaigns demanding relatively low, and governing, higher, IC (Tetlock 1981b, Tetlock 1985, 1581, Suedfeld and Rank 1976, cf. Suedfeld 1994). It is also quite possible that governing may prove more stressful than campaigning, or the reverse. Thus, political role must be controlled. This is not problematic as the very nature

13 Vertzberger also discusses several factors endemic to the international system which reduce the availability of information, including secrecy, deception, and the nonexistence of information (such as information regarding an adversary’s plans when they have not yet been determined). These factors, particularly the nonexistence of certain information, may well be particularly likely to influence information load during the unfolding of crises. In addition, the availability of information in such cases, particularly where surprise is involved, may be slowed by the need to re-focus information-gathering systems on the relevant situation, actors, etc.
of the present study demands that data for Studies I and III be drawn solely from Mr. Bush's utterances as president and those for Study II be drawn from those he made during the presidential campaign.

Political role: majority vs. minority status

Similarly, policymakers' majority (i.e. governing) versus minority status has also been associated with IC, with those in the minority tending to show lower IC than those in the majority. This tendency has been observed among both legislators (Tetlock, Hannum and Micheletti 1984, Tetlock 1984, see Gruenfeld 1995, 7) and Supreme Court justices (Tetlock, Bernzweig and Gallant 1985, Gruenfeld 1995). While, given the nature of shifting coalitions in American politics it is possible to argue that significant differences in majority-minority status can be felt across issues, it seems safe to assume for the purposes of the present study that Mr. Bush, as a sitting president with a consistent partisan majority in the House of Representatives and, for a portion of the period covered by the present study, a slim majority in the Senate, will have felt the effects of majority rather than minority status. Alternatively, it is possible that after eight years of Democratic control of the White House, Bush and many of his Republican colleagues may have been on the offensive and thus continued to exhibit minority effects. In either case, this effect is expected to remain relatively constant throughout the period studied. The one potential for significant change in this variable is the shift from Republican to Democratic control of the Senate. The possibility of differences between these periods will be tested and discussed in chapter 5.
Accountability

The role of accountability is somewhat less clear. Laboratory studies have suggested that accountability is associated with higher IC when audience views are unknown by the subject than when they are known (Gruenfeld 1995, 8). Similarly, archival work has suggested that "...the goal of explaining and justifying a decision to a respected and skeptical audience will tend to increase the complexity of decision-makers' statements" (Levi and Tetlock 1980, 209). Nonetheless, laboratory work has found accountability to be associated with low complexity when the subject was already publicly committed to a particular position on the issue (Gruenfeld 1995, 8). In addition, Gruenfeld's archival study of U.S. Supreme Court opinions found that unanimous opinions were strikingly lower in IC than nonunanimous majority opinions, though both were equally "accountable" (Gruenfeld 1995, 17). Accountability effects are expected to remain fairly constant across conditions in the present study.

Issue-Specific Correlates

The control variable crucial to the present study is the issue domain with which utterances are associated. Research shows variations in leaders' IC across issue domains (Tetlock, Bernzweig and Gallant 1985, Suedfeld, Conway, and Eichhorn 2001), and both the cognitive manager and value pluralism models advance compelling theoretical reasons to expect such variation. Further, it seems clear that some issue domains will be associated with greater stress than others (Frank 1977). As domain is thus expected to vary with both the independent and dependent variable, its effects must be controlled.

14 Of course, it can certainly be argued that the gravitas of a united Court reduces accountability by bolstering the tendency of a decision to find popular acceptance.
The fact that issue domain must be held constant does not in itself answer the question of whether to score utterances associated with the domain of the stressor or some other domain. Indeed, stress-related declines in IC can be expected to manifest across issue domains (Suedfeld and Bluck 1993, Suedfeld and Bluck 1996, Suedfeld 1985, Suedfeld 1980). Perfect control of this variable may be elusive regardless of which approach is chosen. If the domain of the stressors is scored, utterances in the domain but predating the onset of the stressor may be unavailable, while if some other domain is employed, concern with the issue most associated with the stressor may drown out other issues after its onset, rendering non-stress utterances unavailable in the stress period. It should be noted that impression management motives may well be more salient in domain-relevant utterances. However, this concern has not prevented previous investigators from focusing their studies on crisis-relevant statements (see, for example, Raphael 1982, Suedfeld and Bluck 1988, Guttieri, Wallace and Suedfeld 1995, Suedfeld, Tetlock and Ramirez 1977). Further, two key considerations tip the scales in favor of the domain most associated with stress. First, as briefly mentioned above, it is expected that this will reduce the temporal validity problem as utterances related to a dynamic situation may be expected to vary more in relation to environmental conditions than canned policy statements, particularly when dealing with a campaign which evinces particularly strong message discipline (Bruni 2002, 40-41, 53). Second, under the cognitive manager model, declines in complexity in non-stress domains may well be considered adaptive, reflecting the channeling of cognitive resources away from such issues to focus on the threat at hand. The domains selected are:

- **Campaign period:** the presidential campaign, including tactics, prospects, etc.
• **Governing period:** U.S. relations with the People's Republic of China (PRC),
  U.S. national security, and the U.S. economy

As the use of more precise measures of domain, such as focusing specifically on the
stressor at issue, make it impossible to find references to a situation that did not exist
prior to the onset of the stressor, an effort has been made to define domain as narrowly as
possible while still generating the necessary data. This follows the practice of previous
investigators (e.g. Suedfeld and Bluck 1988, Guttieri, Wallace and Suedfeld 1995).

It should be noted that validly controlling for domain carries certain analytic
costs. First, the perfect collinearity between domain and status (campaigning v.
governing) renders it impossible to replicate Tetlock's finding regarding increases in
presidential IC with the shift from campaigning to governing. As the phenomenon is well
established and consistent with other results (for example Suedfeld and Rank 1976), this
analytic cost is negligible. More broadly, comparison of these results with those of
several previous studies is compromised.

However, controlling for the effects of issue domain also bears analytic benefits.
While chosen in order to maximize the validity with which issue domain is controlled in
Study I, this design also permits the investigation of possible inter-domain differences in
Bush's cognitive structure (Study III). Such differences would lend support to the value
pluralism model of IC, against the predictions of the rigidity-of-the-right and ideologue
hypotheses. Given the tendency toward invariance in IC across conditions among
conservatives (Tetlock 1992, 403), this investigation may be of considerable theoretical
value, as well as providing a more nuanced account of Mr. Bush's cognitive structure.

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15 Utterances concerning national security and the economy are sampled during the second and third
governing high stress periods, while the domain of relations with China is sampled during the first
governing high stress period. All are sampled during the governing low stress periods.
While cross-domain differences in IC do not appear to have been investigated with regard to Bush (Conway and Thoemmes 2005, Suedfeld and Leighton 2002), analysis of the related concept of conceptual complexity revealed inter-domain differences (Keller 2005), giving reason to believe that differences may also exist in his IC.

Subject-Specific Methodological Challenges

Possible IC Floor Effect

Another methodological issue arising in the assessment of President Bush’s shifts in IC is the likelihood of his consistently displaying relatively low IC, which could produce a floor effect rendering shifts relatively small in magnitude and thus difficult to detect with confidence. While assertions of both critics (of oversimplification) and supporters (of moral clarity) are hardly conclusive, both the rigidity-of-the-right and ideologue hypotheses discussed above would predict such a pattern, while the value pluralism model, while more nuanced in its predictions, could also be consistent with it (on the latter point, see Suedfeld and Leighton 2002, 595). In addition, there is evidence to suggest that conservatives have a greater tendency than liberals or moderates to exhibit not only low but stable complexity across changes in conditions such as role/accountability (Tetlock 1992, 403).

However, past research shows that this is unlikely to prove problematic. The distribution of IC scores is generally heavily skewed toward the low end of the scale. Tetlock points out that it is not uncommon for 40-60% of assigned scores to fall at level 1 (Tetlock 1985, 1572 note 4), while Suedfeld and Bluck reported that their means of between 1.6 and 2.4 were “consistent with previous group data” (Suedfeld and Bluck 1993, 127). Satterfield’s study of Churchill, Hitler, Roosevelt, and Stalin yielded an
average IC of only 1.78 (Satterfield 1998, 675). Further, the two studies to have assessed Bush’s IC to date have found scores of approximately 2 (Conway and Thoemmes 2005, Suedfeld and Leighton 2002). While somewhat low, this not unusually so. Further, the original case of resistance to cognitive simplification under stress, Andrei Gromyko, while typically increasing in IC under crisis conditions, exhibited mean levels of only 1.5 before and after crises, and 1.8 during them (Wallace and Suedfeld 1988, 446). Thus, the low distribution of IC scores generally is not expected to be problematic for the detection of cross-condition or cross-domain shifts in IC with confidence.

George W. Bush’s Verbal Intelligibility

A final concern arising with respect to content analysis of George W. Bush’s utterances: his rather distinctive relationship with the English language, which has provoked discussion of dyslexia and other potential causes (Miller 2001, Sheehy 2000). So-called “Bushisms” have been one of the hallmarks of Mr. Bush’s candidacy and presidency. While this could prove problematic if, as some have suggested, the prevalence of Bushisms is correlated with stress (see, for example, Allen 2000, A08), this would only cause problems if Bushisms cause scorers to systematically over- or underestimate IC. There is no reason to believe that this would be the case, particularly as past studies have shown IC to be validly scoreable across “style[s] of expression…from Elizabethan England to mid-1990s Iraq…,” while even “the sometimes idiosyncratic use of the language” by guerrillas in a recent study did not invalidate IC scoring (Suedfeld and Bluck 1996, 782, Liht, Suedfeld and Krawczyk 2005, 550-551, see also Suedfeld and Leighton 2002, Suedfeld 1985).
Another possibility is that, while many Bushisms are perfectly intelligible, if bizarre, some will prove unintelligible and thus unscoreable. However, this is unlikely to represent a large portion of the sample. Further, standard practice in dealing with unscoreable paragraphs is their replacement with another randomly selected paragraph from the same case. Thus, even if unscoreability is correlated with stress, this should not bias the results, nor decrease the efficiency of estimates in the present study.
Chapter 5

Results and Discussion

General Results

Features of the data in general were as follows. The present analysis yielded a distribution of scores heavily concentrated at the lower end of the scale (reported in Table 1), consistent with similar work (see chapter 4).

Table 1. Distribution of Integrative Complexity Scores

<table>
<thead>
<tr>
<th>Score Assigned</th>
<th>Frequency</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>66</td>
<td>33</td>
</tr>
<tr>
<td>2</td>
<td>74</td>
<td>37</td>
</tr>
<tr>
<td>3</td>
<td>46</td>
<td>23</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

In addition, the mean IC of President Bush’s utterances as president (reported in Table 2) is slightly higher than that reported by Suedfeld and Leighton, who found that Mr. Bush showed a consistent mean of approximately 2 in utterances, across stress conditions, made while in office (Suedfeld and Leighton 2002).

Table 2. Mean Integrative Complexity Scores

(George W. Bush)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Mean</th>
<th>St. Dev.</th>
<th>Obs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total IC</td>
<td>2.06</td>
<td>.97</td>
<td>200</td>
</tr>
<tr>
<td>IC (Campaigning)</td>
<td>1.86</td>
<td>.84</td>
<td>80</td>
</tr>
<tr>
<td>IC (Governing)</td>
<td>2.19</td>
<td>1.03</td>
<td>120</td>
</tr>
</tbody>
</table>
In comparison to other 20\textsuperscript{th} century U.S. presidents, Mr. Bush’s IC appears to be unusually low, both as a presidential candidate and after attaining office (see Table 3).

<table>
<thead>
<tr>
<th>President</th>
<th>IC Campaigning</th>
<th>IC Governing</th>
</tr>
</thead>
<tbody>
<tr>
<td>W. McKinley</td>
<td>2.1</td>
<td>3.1</td>
</tr>
<tr>
<td>W. H. Taft</td>
<td>2.4</td>
<td>3.5</td>
</tr>
<tr>
<td>T. W. Wilson</td>
<td>3.2</td>
<td>3.75</td>
</tr>
<tr>
<td>W. G. Harding</td>
<td>2.2</td>
<td>2.25</td>
</tr>
<tr>
<td>H. C. Hoover</td>
<td>3.8</td>
<td>2.75</td>
</tr>
<tr>
<td>F. D. Roosevelt</td>
<td>2.2</td>
<td>3.65</td>
</tr>
<tr>
<td>D. D. Eisenhower</td>
<td>1.9</td>
<td>3.4</td>
</tr>
<tr>
<td>J. F. Kennedy</td>
<td>2.1</td>
<td>3.55</td>
</tr>
<tr>
<td>R. M. Nixon</td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td>J. E. Carter</td>
<td>2.7</td>
<td>3.1</td>
</tr>
<tr>
<td>W. J. Clinton</td>
<td>2.3</td>
<td>2.2\textsuperscript{17}</td>
</tr>
<tr>
<td>Avg. (not including Bush)</td>
<td>2.5</td>
<td>3.1</td>
</tr>
<tr>
<td>G. W. Bush</td>
<td>1.9</td>
<td>2.2</td>
</tr>
</tbody>
</table>

However, it must be borne in mind that the figures in Table 3 are not directly comparable to those of previous studies, as the present study’s figures for Mr. Bush are based on random samples from pools of utterances defined by domain, rather than from random samples of the full universe of utterances made in each period. Thus, for example, the relatively low IC shown by Mr. Bush during the campaign could be a function of the fact that the sample focused on the campaign itself, rather than policy (which may have been evocative of higher IC), and not reflective of particularly low IC on Mr. Bush’s part more generally. Further, it is worth noting that Bush’s mean IC while in office, while relatively

\textsuperscript{16} Adapted from Tetlock 1981b and Suedfeld 1994. Tetlock’s figures for the first month and second year in office have been averaged in order to generate a measure more comparable to ours, in which the governing period spanned from the first few weeks in office through the end of the thirteenth month.

\textsuperscript{17} Suedfeld’s figures for President Clinton during the governing period include only the first month in office.
low for a U.S. president, remains higher than the mean scores of a large majority of the Canadian prime ministers included in Ballard’s 1982 study (Ballard 1982), more than two-thirds of whom failed to reach an average level of 2, though again these scores are not directly comparable. Similarly, while Tetlock’s (Tetlock 1981b, see also Suedfeld and Rank 1976) finding of an increase in IC among U.S. presidents upon taking office (see Tables 2 and 3) is replicated in the present study, this finding may be confounded by the effects of domain on IC.

Study I

Study I tested the relationship between stress, operationalized in terms of threat to important values, and IC in Mr. Bush’s utterances as president. Specifically, this study tested the competing hypotheses that, in George W. Bush’s utterances as president:

\[ H_1 \text{ IC in low-stress conditions} > \text{ IC in high-stress conditions} \]

\[ H_2 \text{ IC in low-stress conditions} \leq \text{ IC in high-stress conditions} \]

The differences between observed IC in the low- and high-stress conditions are illustrated in Figure 1 and reported in Table 4.

<table>
<thead>
<tr>
<th>Table 4. Study I Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td>Low Stress</td>
</tr>
<tr>
<td>High Stress</td>
</tr>
</tbody>
</table>
President Bush’s utterances show a pattern of cognitive simplification under stress \( (p = .008) \), consistent with previous research. These results lend strong support to \( H_1 \), as the null hypothesis \( H_2 \) is rejected \( (p < .02) \).\(^{18}\)

**Study II**

Study II represents an initial test of whether or not a U.S. president will show similar patterns of cognitive response to stress both as a presidential candidate and as a sitting president, potentially offering a means to forecast cognitive resilience prior to a president’s election, against the case of George W. Bush. The original hypotheses:

\(^{18}\) All reports of significance based on two-tailed t-tests under the assumption of unequal variance, except where otherwise specified.
$H_3$ The relationship between stress and Mr. Bush's IC during the 2000 presidential election campaign will be similar to that observed in Study I.

$H_4$ The relationship between stress and Mr. Bush's IC during the 2000 presidential election campaign will not be similar to that observed in Study I.

have been restated in terms of the results of Study I, yielding the hypotheses that, in the case of Mr. Bush:

$H_3'$ IC in low-stress conditions $> IC$ in high-stress conditions

$H_4'$ IC in low-stress conditions $\leq IC$ in high-stress conditions

As Figure 2 and Table 5 demonstrate, the same pattern of reduced IC under high-stress conditions found in Study I was also observed during the campaign, consistent with $H_3'$. However, the observed effect is weaker in the campaign than in the governing condition, to the point that $H_4'$ cannot be rejected at conventional levels of statistical significance ($p = 0.14$).

<table>
<thead>
<tr>
<th>Condition</th>
<th>Observations</th>
<th>Mean</th>
<th>St. Error</th>
<th>St. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Stress</td>
<td>40</td>
<td>2.00</td>
<td>.14</td>
<td>.91</td>
</tr>
<tr>
<td>High Stress</td>
<td>40</td>
<td>1.73</td>
<td>.12</td>
<td>.75</td>
</tr>
</tbody>
</table>
This attenuation may be a joint effect of the lower levels of IC observed in the campaign condition and of the smaller sample size obtained for Study II than Study I. Such an interpretation is bolstered by the significant difference ($p = .047$) observed when, following Tetlock's method of compensation for the low skew of IC scores (Tetlock 1985, 1572 note 4), the analysis is rerun using a subset of the highest scores from each sampling period (in this case the top 50 percent). In addition, disaggregation of the results into the original sampling periods presents a mixed picture which, on balance, lends support to this contention (see Figure 3).
As Figure 3 shows, Mr. Bush’s lowest mean IC is observed in the wake of the disastrous New Hampshire primary (period 1), while his highest levels are observed during the long period in spring and summer 2000 in which he consolidated his support within the Republican Party and enjoyed a steady lead over his opponent, incumbent Vice President Al Gore. His IC then drops during the period termed “Black September” by campaign official Mark McKinnon (period 3), and enjoys a slight increase as the campaign regained a slim lead in October (period 4). While Bush’s drop in period 3 is not as substantial as that observed in period 1 it is possible that the loss in New Hampshire was more threatening to Mr. Bush than the long period of Black September. It must be noted, however, that the reverse is also possible. Similarly, Bush’s increase in period 4 is not as
substantial as that observed in period 2, nor does it reach the same level of IC. This is consistent with hypotheses positing an enduring increase of stress and depletion over the course of the campaign underlying more acute increases and decreases. It should also be noted that, with regard to the potential generalizability of these results, Mr. Bush provides a particularly tough test of $H_3'$ (and thus $H_3$) given his low level of IC relative to other presidents, which serves to exacerbate the floor effect inherent in testing for cognitive simplification during political campaigns.

**Study III**

Study III investigated inter-domain differences in IC among conservatives, pitting the predictions of the rigidity-of-the-right and ideologue hypotheses against expectations derived from the value pluralism model, in the case of George W. Bush. Specifically, it set out to test the hypotheses:

$H_5$: President Bush will show consistently low IC (i.e. no significant differences) across issue domains.

$H_6$: Mr. Bush will show significantly higher IC in utterances regarding U.S. relations with China than those regarding the U.S. economy or national security.

The mean IC of Mr. Bush’s utterances in each issue domain is reported in Table 6 and illustrated in Figure 4.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Observations</th>
<th>Mean</th>
<th>St. Error</th>
<th>St. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>40</td>
<td>2.15</td>
<td>.13</td>
<td>.80</td>
</tr>
<tr>
<td>Economy</td>
<td>40</td>
<td>2.68</td>
<td>.19</td>
<td>1.19</td>
</tr>
<tr>
<td>Security</td>
<td>40</td>
<td>1.75</td>
<td>.14</td>
<td>.87</td>
</tr>
</tbody>
</table>
The presence of significant differences in IC across issue domains disconfirms $H_5$ (ANOVA, $p < .001$). As predicted by $H_6$, Bush’s utterances regarding U.S. relations with the PRC are significantly (bonferroni, $p < .04$) higher in Integrative Complexity than those regarding U.S. national security. However, this effect appears to be driven by particularly low IC in the latter domain rather than particularly high IC in the former. This interpretation is supported by the significant (bonferroni, $p < .03$) difference between utterances concerning relations with China and those regarding the U.S. economy in the opposite direction to that predicted. Utterances concerning the economy and those concerning security both differed significantly from the pool of all other utterances in the governing condition (bonferroni, $p < .001$ in both cases). These results
suggest that neither the rigidity-of-the-right nor the ideologue hypothesis accurately predicts Mr. Bush's IC patterns. They also suggest that he may experience greater value conflict in the realm of the economy, and less regarding U.S. relations with China, than was expected. This could be the result of political opposition imposing a form of value conflict as values held by opponents concerning had to be acknowledged as legitimate. Such a hypothesis could explain why this effect was found for the economy and not for security. However, these results may also reflect the Cognitive Manager Model, as, notwithstanding the present study's crude control for issue salience, Mr. Bush may have placed significantly greater importance on the economy than on relations with China. The relatively low IC of his statements regarding U.S. national security could reflect the other dimension of this model: Mr. Bush's ontological assessment that, despite its importance, the simplicity of the issue did not necessitate the investment of greater cognitive resources.

Other Relationships

The present study also investigated other relationships, including the effects of majority vs. minority status, cumulative stress, and whether utterances represented statements or responses.

Majority vs. minority status, measured in terms of Republican vs. Democratic control of the Senate (as control of the House of Representatives did not vary over the period studied), was tested through a t test performed on the subset of utterances dealing with the U.S. economy, as these utterances were expected to show the greatest status effect. It found this variable to be resoundingly insignificant ($p = .92$). Though the $n$ involved in this t test was very small ($n = 40$), a test of the stress variable for this subset
of utterances found a highly significant difference \( (p = .004) \), suggesting that the insignificance of majority vs. minority status is not merely due to the small \( n \). This insignificance may, however, be due to the fact that formal control of the houses of Congress may simply fail to capture the more complex nature of this variable in terms of issue-specific and often shifting coalitions.

The hypothesized “aging in office” effect of cumulative stress and cognitive wear over the course of the presidential campaign and term was disconfirmed. Regression of IC on a variable measuring which sampling period utterances came from found a small but highly significant \( (p = .003) \) effect for the passage of time. To eliminate any effect of the arrangement of high- versus low-stress periods in this timeline, the regression was rerun adding the stress variable. Again, a small but significant \( (p = .007) \) increase was found. However, the passage of time proved insignificant \( (p = .221) \) once campaign vs. governing status was added as a control.

Finally, as a possible test of validity, the IC of statements was compared to that of responses to questions or the statements of others. This variable was skewed, as statements were much more prevalent during the governing period (75 vs. 44 responses) than during the campaign (38 vs. 41 responses). Statements were also more prevalent in low- (67 vs. 33 responses) as opposed to high-stress periods (46 vs. 52 responses). However, as Table 7 illustrates, the mean levels of IC for statements and responses were similar. No significant difference \( (p = .398) \) was found between the IC of statements and that of responses.
Table 7. Mean Integrative Complexity of Statements vs. Responses

<table>
<thead>
<tr>
<th>Condition</th>
<th>Observations</th>
<th>Mean</th>
<th>St. Error</th>
<th>St. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statements</td>
<td>113</td>
<td>2.11</td>
<td>.10</td>
<td>1.05</td>
</tr>
<tr>
<td>Responses</td>
<td>85</td>
<td>2.00</td>
<td>.09</td>
<td>.86</td>
</tr>
</tbody>
</table>

Impression Management

It should be noted that the specter of impression management does haunt the present study to some extent. The findings of Study III seem vulnerable to the argument that Mr. Bush's rhetoric concerning the national economy in particular is influenced by political considerations, which require the recognition of differentiated dimensions of the issue and perhaps their integration. It has been suggested that the relatively complex portrait that has emerged from IC analysis of President Bush's utterances on the issue is belied both by the content of many of his policy decisions and by what is known about the decisionmaking process within his administration.\(^{19}\) Future research coding private materials could help to clarify this issue. It is also possible that impression management has shaped the pattern of results found in Study II, as downturns in one's campaign fortunes may call for unqualified claims of confidence, while being ahead in the polls may call for a more nuanced approach in order to avoid appearing overconfident. Future research testing the effects of campaign stress across other domains, such as various policy issues, may help to avoid this problem, but potentially at the cost of losing temporal validity as such utterances may prove essentially identical across the campaign.

However, impression management is somewhat harder pressed to explain the results of Study I when these are disaggregated by issue domain (see Figure 5 and Table 8). While utterances concerning the U.S. economy and relations with the PRC declined in

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\(^{19}\) I am indebted to Alan Jacobs for raising this point.
complexity during stressful periods, those concerning U.S. national security did not, instead showing a small increase.

Figure 5. Stress-Induced Shifts in Integrative Complexity by Issue Domain

Table 8. Stress-Induced Shifts in Integrative Complexity by Issue Domain

<table>
<thead>
<tr>
<th>Domain and Condition</th>
<th>Observations</th>
<th>Mean</th>
<th>St. Error</th>
<th>St. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>20</td>
<td>2.35</td>
<td>.18</td>
<td>.81</td>
</tr>
<tr>
<td>High</td>
<td>20</td>
<td>1.95</td>
<td>.17</td>
<td>.76</td>
</tr>
<tr>
<td>Economy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>20</td>
<td>3.20</td>
<td>.25</td>
<td>1.11</td>
</tr>
<tr>
<td>High</td>
<td>20</td>
<td>2.15</td>
<td>.23</td>
<td>1.04</td>
</tr>
<tr>
<td>Security</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>20</td>
<td>1.70</td>
<td>.19</td>
<td>.86</td>
</tr>
<tr>
<td>High</td>
<td>20</td>
<td>1.80</td>
<td>.20</td>
<td>.89</td>
</tr>
</tbody>
</table>
This finding appears more compatible with a cognitive manager/disruptive stress view of IC, as high stress, which for the most part involved national security issues, led to an increase in the cognitive resources devoted to security and a decline in cognitive investment in other areas, possibly accompanied by a reduction in the cognitive resources available overall. These results also support Suedfeld’s expectation (Suedfeld 2000, 32) that inter-domain differences in IC disappear in the presence of disruptive stress, as analysis of variance found such differences to be non-significant ($p = .48$) in the high-stress condition (they remain non-significant, at $p = .26$, when utterances regarding relations with China are excluded). That said, it remains possible that utterances regarding relations with China during the high stress period, which involved the holding of U.S. military personnel and an aircraft by Chinese authorities, were designed to taking a strong and relatively unqualified approach, as Tetlock has suggested may often be the case in the international arena. In addition, the impression management constraints imposed on Mr. Bush in the sphere of the economy by political allies and opponents may have been less salient during the high stress periods as the country united behind its leader. Thus, impression management remains capable of advancing alternate explanations for all of these results.

Implications of Inter-Coder Differences

Potential implications for the above results of the different scores assigned by the primary and secondary coder were also considered. Though not a consistent difference across all paragraphs, the scores assigned by the secondary scorer were lower in the aggregate than those assigned by the primary scorer ($p < .001$). This could imply that the
differences found among conditions and issue domains are in fact smaller than they appear in the present study.

More specifically, tentative re-estimations of these effects, based on the scores assigned by the secondary scorer, have been conducted. Statistical significance was not assessed due to the very low ns available for these re-estimations and the resulting lack of statistical power.

Re-estimation of Study I (see Figure 6) found a small increase in IC under threat from a mean of 1.71 to 1.80.

Figure 6. Re-estimation of Study I
This runs counter to the reported results for Study I. Re-coding and analysis of the data for Study I are indicated.

The results of Study II are particularly questionable as all five of the paragraphs for which scores differed by more than one point on the IC scale drawn from the campaign (out of six such paragraphs total) received scores two points higher from the primary than the secondary coder. Thus, Mr. Bush’s IC during low-stress periods of the presidential campaign may have been lower than they appeared on the basis of the scores reported above. If this is the case, then the cognitive simplification shown during the campaign, which failed to reach statistical significance, is even smaller than the results reported above suggest. Re-estimation of the results for Study II (see Figure 7) found only a marginal decrease in IC under threat during the presidential campaign, from a mean of 1.40 to 1.38.
Further, given that Study II is designed to test whether or not presidents' patterns of cognitive response to stress can be predicted from their cognitive performance as presidential candidates, drawing conclusions about the validity of $H_3$ and $H_4$ requires not only a larger $n$ so as to yield greater certainty, but also robust results for Study I.

Finally, re-estimation of Study III (see Figure 8) yielded the same pattern of inter-domain differences in IC as is reported above.
Utterances concerning the U.S. economy continued to show the highest IC with a mean of 2.43, while those concerning U.S. national security showed the lowest levels with a mean of 1.33, and those concerning U.S. relations with the People's Republic of China fell between these with a mean of 1.67.

In sum, the results reported above must be considered highly preliminary and subject to revision upon recoding of the data, though the results of Study III appear somewhat more robust.
Chapter 6
Conclusions and Implications

The present study investigated the relationship between stress and Integrative Complexity in the utterances of U.S. President George W. Bush, as well as that between topic and IC.

• It provisionally rejected the claim that George W. Bush is unusually resistant to the effects of stress.
• It found qualified support for the possibility that presidential candidates’ cognitive responses to stress during the campaign may forecast their responses in office.
• It found that contrary to the predictions of the ideologue and rigidity-of-the-right hypotheses, and in line with a cognitive manager/value pluralism view, Mr. Bush’s statements regarding the U.S. economy showed significantly higher IC than those regarding U.S. national security or U.S. relations with the People’s Republic of China.
• It found that the results of Study I, and especially Study II, are strongly qualified by the presence of significant differences in the IC scores assigned by the two scorers consulted.

These results contribute both narrowly to scholarship regarding President Bush and more broadly to the literature concerning IC. They contribute to the literature regarding President Bush both by determining that claims of his unusual resistance to stress appear, according to these initial results, to be unfounded (though this remains to be re-tested based on a new coding of IC scores), and that his views concerning the U.S. economy are more complex than they may have appeared under more impressionistic analysis. In
terms of their contribution to the literature regarding the relationship between stress and IC, these results, should they persist under re-analysis, will underline the rarity of the Gromyko phenomenon of resistance to cognitive simplification under stress, as President Bush was found not to exhibit this pattern despite the assertion of his resistance to stress by several observers and the presence of several plausible causes of such resistance in his case.

Perhaps most importantly, these results also indicate the value of further research into the validity of inferring presidents’ patterns of cognitive response to stress in office from their patterns during the presidential campaign. Such research should be conducted on a broader range of presidents and with a higher number of observations than was possible in the present study. An alternate study could test the IC of Canadian prime ministers under campaign and governing stresses, drawing upon the previous identification of a prime minister previously found to resist cognitive simplification (Pearson) and several found to be susceptible to this pattern of cognition under stress (Macdonald, King, Trudeau) (Wallace and Suedfeld 1988, Ballard, 1983). As Post has noted, given what is known about the potential effects of crisis-induced stress on decision making, “a demonstrated capacity for effective and judicious decision making under stress” should be “a major criterion” in the selection of senior policymakers (Post 2004, 122). Such research will not only bear the potential to offer an invaluable insight into the capacities of candidates for high office, but may also present opportunities to better understand the phenomenon of resistance to cognitive simplification under stress. While it appears that such resistance is adaptive, such an assessment remains incomplete without a clearer understanding of the phenomenon’s basis (or bases). Finally, it is hoped
that these results, suitably re-analyzed, will draw political scientists’ attention to the value of IC as an important and tractable variable for the political analysis of personality.
References


