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CIVIL-MILITARY RELATIONS AND STRATEGY:

THEORY AND EVIDENCE

DISSERTATION

Presented in Partial Fulfillment of the Requirements for

The Degree Doctor of Philosophy in the Graduate

School of the Ohio State University

By

Jon A. Kimminau, Lt Col, USAF

*****

The Ohio State University
2001

The views expressed are those of the author
And do not reflect the official policy or position of the United States Air Force,
Department of Defense, or the US Government

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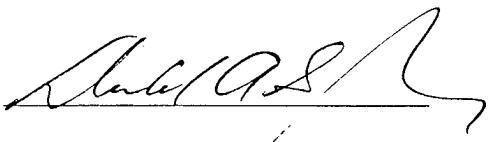

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ABSTRACT

Do civilians deliberate national strategy differently than military officers? This dissertation begins with that question because the cross-disciplinary efforts of civil-military relations have to date shown relatively little empirical evidence on the differences between civilian and military strategy. There are a number of propositions about such differences that lie at the heart of theories of state and group behavior at international and domestic levels. In addition to thinking about civilians and the military as homogeneous groups, this research focused on civilian and military subgroups in order to better understand the divergent influences such groups exert on strategy as it is being developed. The design used content analysis to systematically measure differences between specified groups in their communicated strategies, which were gathered from four domains: analysis, organization, operations, and planning of US actors from 1995-2000.

The results are both significant and interesting for those interested in strategy and civil-military relations. Eight hypotheses concerning differences between civilians, the military, and their subgroups were tested on each of the dependent variables of offensiveness, uncertainty outlooks, and use of history in strategy. An enduring theoretical notion about civil-military relations is supported by evidence that the military is indeed significantly more offensive than comparable civilians. However, this offensiveness differential only seemed substantively large in

the arena of doctrine, and was reversed in national missile defense. More importantly, offensiveness is critically related to context: "whether-to" deliberations of strategy reveal a more offensive civilian group, while only "how-to" discussions support the "offensive military" paradigm.

Civilians are also greater users of history than is the military. The difference existed across all domains of strategy, but was most significant in doctrine and national missile defense. Civilians invoke the current case and the most recent war more often than the military—a strong indication that civilians are predisposed towards case-based reasoning. Civilians and military are characterized as approximately equal in including uncertainty in analytic and operational strategy; but civilians are significantly less uncertain in doctrine than the military, and more uncertain in NMD. An important proposition offered is that groups may be more likely to include more uncertainty when they feel competence in or responsibility for strategy.

Among key findings here were the clustering effect of military services into Air Force/Navy and Army/Marine groups, and the intermediary role of defense civilians. One domain of strategy also proved to be vital in understanding strategy: evidence showed that doctrine is an exemplar of strategy, an area within which groups clarify their roles and reinforce uniqueness of function. Lastly, cultural explanations for civil-military relations and strategy were critically reviewed, and on each of the characteristics of strategy studied—offensiveness, use of history, and uncertainty—reasonable explanations can be cited as to the causal roles of both material resources and social structure, rather than

organizational culture. Civil-military scholars will be well advised in future studies to consider that subgroups may consistently vary in values, beliefs and behavior in their approaches to the formulation of strategy.

ACKNOWLEDGMENTS

I owe every good thing in my life to God, my parents and family, my wife and best friend Trish, and my kids Bekah, Erin, Riley and JJ. I want to especially thank Trish for her full and loving support throughout the experience of graduate school and this research.

A number of people and organizations were also critical to my success. My adviser and mentor Don Sylvan not only shares a number of interests and perspectives in political science, he also is an excellent taskmaster, teacher, writer, and friend. The United States Air Force is my life profession, and it is also the source of outstanding jobs and the full-time support it took to engage in and complete this phase of my life. The Ohio State University aided me immensely by giving me a University Dean's Fellowship that supported my book binges, supplies, and research. Last but not least, my other committee members—Rick Herrmann, Ted Hopf, and John Mueller—provided the encouragement and support necessary to complete this task in the time that military requirements allowed.

I would be remiss if I did not finally mention the remaining faculty and graduate students of Ohio State as a continuous source of knowledge, friendship, and one of the best environments for learning I have ever seen. You truly do learn something every day.

This task was immensely challenging and rewarding for an Air Force officer trained to be a military strategist supporting this nation's security requirements. I was exceptionally lucky in that

neither the subject nor the research effort ever seemed tedious or boring, despite its intellectual and physical demands. I pray its results prove interesting and helpful to others.

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CHAPTER 1

INTRODUCTION

For critics of American policy...civil-military relations in the decision-making process often figure prominently in explanations of who was at fault in critical mistakes in policy...[Many] views reflect the prevalent assumption that military professionals are more aggressive than diplomats and politicians. But ... despite a wealth of literature on military participation in decisions on defense budgets and weapons procurement, there has been no comprehensive survey of the postwar role of American military men in decisions on their most essential function: the use of force in combat.

Richard K. Betts, Soldiers, Statesmen, and Cold War Crises

...Presidents (and scholars) must confront the inescapable reality that the overwhelming proportion of modern foreign policy—both grand and mundane—is the product of formal organizations...Students of international relations must analyze these efforts and understand their consequences.

Arnold Kanter, Defense Politics

A ... problem has been the failure of theorists of organizational culture to state and rigorously test hypotheses about culture; as a result, many critics argue that culture is little more than a mushy word used to dignify the hunches and intuitions of softheaded writers who produce journalism in the guise of scholarship.

James Q. Wilson, Bureaucracy

How does the military affect national strategy and its formulation? Do civilians—whether leaders in government or experts outside it—approach tasks involved in the formulation of strategy differently than military officers? At the roots of these questions lie two assumptions: first, that policy and strategy are often the products of a complex bureaucratic process, and second, that militaries and other groups have distinct preferences, capabilities and even cultures that directly affect decision-making.[1] More than a decade after the most recent of the quotes above, an understanding of the interaction between civil-military relations and strategy in terms of organizational preferences and culture remains largely theoretical, rather than empirical. The little evidence that exists on the differences between military and civilian behaviors in the realm of strategy is either not systematic, focuses on only one of the two groups, or relies on old data.[2] The result, as Richard Betts wrote in 1977, is that "notions of military influence [on national strategy] have been premises of political debate more than conclusions of analysis."[3]

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[1] Both assumptions are fundamental to a number of foreign policy approaches. Graham Allison's Models II and III (organizational and bureaucratic perspectives), Snyder, Bruck and Sapin's foreign policy decision-making framework, and more recently Lake and Powell's strategic interaction perspective each incorporate these assumptions. See Graham Allison, Essence of Decision (Little, Brown and Co., 1971); Richard Snyder, H.W. Bruck, and Burton Sapin, Foreign Policy Decision Making (MacMillan Co., 1962); and David Lake and Robert Powell, Strategic Choice and International Relations (Princeton University Press, 1999).

[2] This statement exactly mirrors that of Bruce Russett in 1974, where he was concerned with the differences in civilian and military *values* rather than strategy processes. See "Political Perspectives of US Military and Business Elites," Armed Forces and Society 1:1 (Nov 1974), pp. 79-80. His observation followed an identical opinion in Handbook of Organizations that, except on the theoretical level, there are few systematic comparisons of military organizations with civilian bureaucracy; see Kurt Lang, "Military Organizations," in Handbook of Organizations by James March, Rand McNally (1965), pp. 838-839. The 1990's finally produced a handful of civilian-military values studies. See Ole Holsti, "A Widening Gap between Military and Civil Society? Some evidence, 1976-1996," John M. Olin Institute for Strategic Studies, Harvard University, October 1997; Peter Feaver and Chris Gelpi, "The Civil-Military Gap and Casualty Aversion," Paper for the TISS Project on the Gap between Military and Civil Society, 1999; and American Military Culture in the 21st Century by the Center for Strategic and International Studies, Feb 2000.

[3] Richard K Betts, Soldiers, Statesmen, and Cold War Crises, Harvard University Press (1977), p. 2.

There are some fundamental notions about civilian and military strategy behaviors that remain thinly investigated. In the study of foreign policy and national strategy, the consensus approach is to treat the military as a monolith with a particular set of offense-minded, autonomy-seeking preferences and an atavistic, warrior-promoting culture. Propositions about military behavior often are derived from folk knowledge—one writer has pointed out the "natural association of militancy and aggression"—or from organizational theory and models. The monolithic approach is common to both international relations theory and civil-military relations study,[4] and proposes that contemporary military thought disregards uncertainty, discounts history, and is primarily offense-minded.[5] Unfortunately, few studies ground these propositions empirically, and even fewer answer the question, "compared to what or whom?"

There are also competing propositions that arise from the idea that the "military" is better treated as "armed services": institutions with organizational heterogeneity and distinctive sets of

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[4] When accused of oversimplification with a monolithic military as actor in one study, Peter Feaver replied, "....I stand guilty as charged...I am joined in the docket by every other civil-military analyst (historian, political scientist, and sociologist) I know." See "Modeling Civil-military relations: a reply," Armed Forces and Society 24:4 (Summer 1998), p. 597.

[5] Contemporary scholarship on the military's consideration of uncertainty and use of history includes work by Williamson Murray, Don Snider and Marc Trachtenberg. See Murray, "Does Military Culture Matter," pp. 27-43, and Snider, "An Uninformed debate on Military Culture," pp. 11-27 in Orbis 43:1 (Winter 1999); and Trachtenberg, History and Strategy (Princeton University Press, 1991), esp. Chap. 1. Classic examples of theoretical explanations that rely on military offense-mindedness include a series of studies about the "cult of the offensive" and World War I; see Military Strategy and the Origins of the First World War ed. by Steven Miller, Sean Lynn-Jones, and Stephen Van Evera (Princeton University Press, 1991). A number of scholars in political science and civil-military affairs have been drawn to explanations using military symbolism and culture; see Carl Builder, The Masks of War (RAND, 1989); Arnold Kanter, Defense Politics: A Budgetary Perspective (University of Chicago Press, 1975); Jeffrey Legro, Cooperation Under Fire (Cornell University Press, 1995), and Alastair Johnston, Cultural Realism (Princeton University Press, 1995).

preferences.[6] The heterogeneous approach to the military role in foreign policy proposes that in the US, for example, each service (Army, Air Force, Navy and Marines) possesses a coherent culture, which produces competition on questions of strategy and variation in behavioral tendencies.[7] This approach is less developed, however: few scholars have compared the military subgroups of services with any civilian subgroups such as government leaders or non-governmental experts.[8] In addition, the propositions for service behaviors are often less explicit—for example, the author has not discovered any notions about variation *between* services' offense-mindedness. But, theories of some differences between services can be logically deduced that parallels the monolithic propositions and center on strategy characteristics of uncertainty, use of history, and offense-mindedness.

Taken together, these observations produce three broad questions worthy of empirical study:

A. Does US civilian and military *strategy* differ in characteristics or traits involving uncertainty, use of history, and preference for offense?
B. Do subgroups of civilians and each of the US military services (Army, Air Force, Navy, and Marine Corps) possess *distinctive* strategy behavior on these trait dimensions of uncertainty, use of history, and offense-mindedness?

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[6] A particularly cogent argument about the concept of "armed services" is presented by Martin Edmonds in Armed Services and Society (Leicester University Press, 1988), Chap. 2, esp. pp. 26-28.

[7] The cultural approaches of Williamson Murray, Don Snider, and Carl Builder, cited above, each contain propositions about service cultures and even sub-cultures (cleavages within services.) See also Stephen P. Rosen, Winning the Next War: Innovation and the Modern Military (Cornell University Press, 1991), esp. Chap. 1; Barry Posen, The Sources of Military Doctrine (Cornell University Press, 1984), esp. conclusions about the organizational approach found in Chap. 7; Kanter, Chapter 2, "The Organizational Structure of the 'Military';" and Bureaucracy by James Q. Wilson, Basic Books (1989), pp. 91-93.

[8] Two examples that do focus on specific civilian subgroups compared to military officers are the previously cited Feaver and Gelpi paper, "The Civil-Military Gap and Casualty Aversion," and Bruce Russett's "Political perspectives of US military and business elites," Armed Forces and Society 1:1 (Nov 1974): 79-108.

C. Are the civilian, military and subgroup strategy behaviors on these trait dimensions coherent and stable across different *domains*, such that they may be considered cultural characteristics?

The study presented here investigates these questions by explicating specific hypotheses, establishing the appropriate groups and subgroups for comparative analysis, gathering a large amount of data that captures the concept of strategy, and applying both content analysis and statistical analysis. The object is to first, *characterize* some dimensions of strategy-making about which scholars have only philosophized, and second, to *test* some fundamental notions—such as military offensiveness—that have largely been taken for granted. While the former effort can stand on its own merits, the latter raises questions about potential impact to existing scholarship.

The Roles of Offensiveness, History, and Uncertainty

There are demonstrable cases where assumptions about civil-military relations and strategy may be critical to successful research and explanation of international and domestic behavior. It is in the nature of theory building to state premises or make fundamental assumptions in order to logically demonstrate how one expects something to happen. Philosophers of science also often debate over the extent to which such premises must be "true" or observable in the real world in order for the theory to be valid, or taken seriously. Without recounting such debates (which remain unresolved), a natural question for the current study is whether differences in military and civilian offensiveness, use of history, and outlook of uncertainty make all that much difference in current and past research. In several cases of past research, across both the monolithic and

heterogeneous approaches to civil-military relations, a real-world difference from the assumptions could greatly undermine the theories or change the conclusions.

Two examples indicate that incorrect assumptions about offensiveness of a monolithic military may have serious implications. Jack Snyder's "Civil-Military Relations and the Cult of the Offensive, 1914 and 1984" proposes that the military (in any state) has a penchant for offensive strategy, a tendency that in cases like World War I can be exacerbated by the state of civil-military relations.[9] It is key to his argument and findings that the military behavior is both incommensurate with structural incentives (i.e., preferring offense even if defensive strategy has a military advantage) and discontinuous with civilian preferences. If the military in reality does not prefer offense more than civilians, then it ("military planners" in Snyder's parlance) is not the source of his theorized behavior, and cannot act in the civil-military dynamic as hypothesized.[10] Without military offensiveness—a military that favors offense more than civilian leadership—his theory of a cult loses effective meaning and explanation. And since Snyder was attempting to draw conclusions from 1914 to say something about nuclear strategy in the 1980's, such a change could be crucial.

Similarly, Stephen Van Evera and Barry Posen also argue that the military naturally prefers offensive strategy and may exaggerate its usefulness through an organizational logic. Van Evera,

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[9] Jack Snyder, "Civil-Military Relations and the Cult of the Offensive, 1914 and 1984," pp. 20-58 in Military Strategy and the Origins of the First World War, ed. by Steven Miller, Sean Lynn-Jones, and Stephen Van Evera (International Security Reader, Princeton University Press, 1991).

[10] See Snyder, pp. 22-27. In these pages he both describes the import of the discontinuity between military and civilian leaders, and concludes that military planners helped cause World War I by creating vulnerabilities and increasing time pressures for preemption in crisis.

as Snyder, looks at 1914 and the cult of the offensive, but in contrast proposes that militaries glorified and adopted offensive strategy (pushed it) while civilian elites and publics assumed its advantage (accepted it or followed.)[11] This more nuanced theory seems to allow that the military and civilian counterparts might both favor offense; but, his hypotheses rest on offense-oriented military planning as the source of five dangers, and his conclusion is that the military is the ultimate source for the cult of the offensive.[12] In his organizational theory of military doctrine in the interwar years for France, Great Britain and Germany, Barry Posen also predicts that the military is naturally offensive in orientation, but he adds that civilian intervention and control will moderate its effects.[13] He considers his case study findings to be weakly supportive of the hypothesis, but his research does not directly consider whether military and civilian preferences for offense always differ in the direction predicted. Instead, he assumes that less offensive strategy by a military is an indication of civilian intervention.[14] For either scholar, if the military is not more offensive in strategy than civilian leaders or the public, then their mechanisms for the production of strategy and doctrine will not work as advertised.[15] Van Evera's five dangers

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[11] See "The Cult of the Offensive and Origins of the First World War" in the Military Strategy and Origins of First World War volume, pp. 59-108.

[12] See Van Evera, "The Cult of the Offensive," p. 107 for the conclusion about military planning's role.

[13] Barry Posen, The Sources of Military Doctrine (Ithaca: Cornell University Press, 1984), esp. pp. 222-224.

[14] I should note that by "assumes" I mean Posen interprets and looks for evidence that the civilians preferred defensive strategy and infers intervention. Whereas, in cases where the military has offensive strategy, Posen does not look for evidence that the civilians may also have preferred offense, sharing the impulse or even imposing it.

[15] The Military Strategy and Origins of the First World War volume includes two essays addressing what the alternative explanations could be, without directly raising my point on the monolithic military. Scott Sagan and Jonathan Shimshoni offer structural and political reasons for the offensive strategies of major

may still be a threat to international stability, but his explanation for them becomes invalid, and likewise Posen's confidence in organizational explanations for doctrine is further undermined. In short, their theories fail a crucial test: they are not providing valid insights or explanations for the origin of strategy and doctrine.

Assumptions about the use of history in strategy by civilians and military officers can also be critical to certain explanations. For instance, in several studies Carl Builder suggested that the US Air Force discounted or ignored history, both because there were few historical air war events to turn to, and the high-technology nature of air weapons attracted scientific explanations.[16] This leads him to describe Navy and Army decision-making as having a greater reliance on history and experience, en route to an explanation for each service's Cold War European security strategy. If, however, the Air Force actually uses more history in strategic decision-making than the other services, Builder's proposed ties between technology, service weapons and traditions, and military analysis becomes muddied and less useful. In another perspective, Marc Trachtenberg proposes that Cold War deterrence strategy originated with technocrats possessing little diplomatic experience or historical knowledge, and spread to military analysts of all stripes as the dominant method of strategic discourse.[17] This explanation is threatened if civilian strategists are shown using more history than their military counterparts; if

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powers that do not depend on beliefs and assumptions of organizations or individuals involved; see "1914 Revisited", pp. 109-133, and "Technology, Military Advantage, and World War," pp. 134-162.

[16] Builder, The Masks of War, Chapters 2 and 10, and "On the Army Style in Analysis," RAND P-7267 (Santa Monica, CA, Oct 1986), p. 9.

[17] Trachtenberg, History and Strategy, Chapter 1.

true, then where did systems analysis come from, and did it really dominate the strategic discourse? Finally, Williamson Murray more recently proposes that military organizations—and the AF in particular—have abandoned classic military theory and the study of history and adopted a "techno culture that holds even recent military experience is of limited use."[18] In this case, demonstrating any significant use of history by military officers—let alone a greater use than civilians—disconfirms Murray's speculations about the current state of US military strategy and the role of technology.

Decision-making approaches to foreign policy and strategy have also made assumptions about civilian and military behaviors with respect to uncertainty. Vertzberger suggests in Risk Taking and Decision Making that organizations such as the military may be even more constrained in their willingness to accept or recognize uncertainty than individuals. Civilian leaders may therefore be better equipped to formulate intervention strategies (the focus of his case studies) than the military, since foreign policy situations are naturally vague, ambiguous, and ill-structured.[19] Richard Betts develops a similar proposition, and states that "For politicians, policy and strategy are tentative and malleable; for soldiers, they are more often definitive and determining."[20] The implication, as Murray draws out in one argument, is that downplaying uncertainty in strategy may discount the role of friction and chance which is always present, and

[18] Williamson Murray, "Does Military Culture Matter," Orbis 48:1 (Win 99), p 41.

[19] Yaacov Vertzberger, Risk Taking and Decision Making, 1998.

[20] Betts, p. 88.

therefore lead to flawed strategy.[21] If it can be shown that in fact civilians are less uncertain in strategy than the military, not only does the civil-military difference employed by some scholars fail, but also foreign policy decision-making theory may need to reconsider whether less uncertain strategy is flawed strategy.

The point of these brief arguments is that it is important to know whether the military really is more offensive than civilians, or whether civilians see a more uncertain world when making strategy than military officers. The following chapters lay out a study for the questions outlined in this introduction, and present some interesting findings. Chapter 2 specifies the hypotheses and develops the dependent variables for the analysis, while Chapter 3 describes the data and methodology. Chapter 4 develops and presents some cultural factors that cut across subject categories of "civilians" and "military." Chapters 5-7 present the analysis and results for Offensiveness, Use of History, and Uncertainty in strategy. Chapters 8 and 9 draw out implications and present some new theories of civil-military relations and strategy, followed by a concluding Chapter 10.

[21] Murray, pp. 42-43.

CHAPTER 2

CIVIL-MILITARY RELATIONS AND STRATEGY

For the whole foreign affairs-national security bureaucracy, I forecast, in other words, relatively little change—a 'hawkish' military establishment, possibly lacking unanimity, as in the second half of the 1950's, because of noticeable dissent among army officers; a mission-oriented State Department exerting influence in general for maintenance of the status quo; and a somewhat schizophrenic intelligence establishment. If change occurs, it will come slowly.

Ernest R. May, Lessons of the Past

Although civil-military relations are central to democratic governance, American interest in the issue has waxed and waned. Until 1945, the country's favorable geographic position permitted it to demobilize rapidly after each war. The onset of the Cold War almost before the guns of World War II had cooled ensured that the United States would maintain a large military establishment. It also triggered a flurry of important studies on civil-military relations, as well as a warning from retiring President Dwight Eisenhower on the potential dangers to democratic society of a permanent 'military-industrial complex.'

Ole R. Holsti, "A Widening Gap Between the Military and Civilian Society?"

Martin Edmonds noted that militaries are ubiquitous variables for scholars in political science, history, sociology, and other disciplines: nearly all nations have militaries, most spend from a quarter to half of their public resources on them, some nations are ruled by their

militaries, and wars and conflicts use military forces.[1] From a theoretical perspective, a nation's military or armed services influence its strategy and foreign policy as a capability that affects interstate perceptions and actions (power), or as a self-interested institution producing policy and strategy (organizational actor), or finally as a domestic force in internal and external policy-making (cultural agent.)[2] These theoretical choices often lead to independent fields of study—for instance, treating the military as state capability and power is often associated with international relations theory and realism,[3] while examining the military as a domestic force in policy-making is associated with civil-military relations scholarship.[4] Occasionally works are produced which examine competing explanations; Barry Posen investigated whether external security requirements or organizational dynamics better explained interwar doctrines of France,

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[1] Edmonds, p. vii.

[2] These categories come from Edmonds, p.2. However, they also closely parallel Alastair Johnston's review of strategic culture literature as having three generations: *broad-descriptive*, where military culture affects preferences and options; *mythical*, where military actors have distinct assumptions and symbols; and *analytic*, in which culture moderates outcomes and behavior. See "Thinking about Strategic Culture" by Alastair Johnston, International Security 19:4 (Spring 1995), pp. 32-64. Johnston cites a similar framework by David Jones of the military role in national strategy, where there *macro*, *societal*, and *micro* levels of involvement. See Carl Jacobsen, ed., Strategic Power: USA/USSR (London: St. Martins Press, 1990), pp. 35-49 [a valuable collection of essays on strategic culture with a strikingly unfortunate title and date of publication which relegated the work to obscurity.]

[3] As Theo Farrell writes in examining organizational approaches to international relations, "The dominant debate in IR has been between realists and liberal institutionalists over whether calculation of power or international norms guide state action..." See "Figuring Out Fighting Organizations," Journal of Security Studies 19:1 (March 1996), pp. 122-135, esp. p. 123.

[4] For a recent example, see the "Symposium on Civil-Military Relations" in Armed Forces and Society 24:3, Spring 1998.

Britain and Germany, while Jeffrey Legro used all three perspectives in explaining inadvertent escalation during World War II.[5]

It is worth asking, however, exactly what "the military" is in all this scholarship. The consensus across a broad range of disciplinary fields—regardless of the theoretical choice outlined above—is to treat the military as a monolithic set of capabilities and preferences attributed to a unitary actor. Legro describes the traditional view of the military as an organization that seeks to maximize autonomy, reduce uncertainty,[6] and promote its own tools and solutions in the context of national security and strategy.[7] This view has led a number of international relations theorists to argue that the "military" is a functionally equivalent concept or unit, both across nations and within them. Military organizations select doctrines that: promote their own interests and the self-image of the officer corps, strengthen the nation's position in alliances, and best utilize skills of troops and equipment.[8]

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[5] Interestingly, Posen finds the 'power' explanation preferable, while Legro favors the 'cultural agent.' See Barry Posen, The Sources of Military Doctrine (Cornell University Press, 1984), and Jeffrey Legro, "Military Culture and Inadvertent Escalation in World War II," International Security 18:4 (Spring 1994), pp. 108-142.

[6] It must be noted that organizational theory proposes any organization will work to reduce uncertainty in its environment, and this is entirely different from a proposition that the military or armed services disregards uncertainty in strategy. The former is a widespread assumption about organizational behavior, while the latter is a narrow proposition about particular military strategic communications and particular time periods.

[7] See Legro, "Military Culture and Inadvertent Escalation", p. 114. Not all authors point out that these characteristics—attributed to Graham Allison's organizational model of politics—in themselves do not make militaries much different than other organizations. It is their highly specialized nature, responsibility for violence on behalf of the state, and potential threat to internal security that sets them apart; see Edmonds, Chap. 2; Stephen Rosen, Winning the Next War (Cornell University Press, 1991), p. 19; and Kurt Lang, "Military Organizations," p. 838.

[8] See "Military Culture and the Fall of France in 1940" by Douglas Porch, International Security 24:4 (Spring 2000), pp. 157-181 for one description of this argument.

An alternative to viewing the military artificially as a single organization is to carry organizational analysis down a level to the actual armed services. Despite the fact that a number of scholars treat the military as a single stereotype, some like Don Snider propose that service diversity is "obvious to any observer"—at least, in some dimensions, if one observes the divergence in ideals, concepts and symbols, not to mention function.[9] Martin Edmonds is just as firm in writing, "Evidence would confirm that most armed services throughout the world are not the monoliths popular opinion would suggest."[10] Unfortunately, the evidence referred to is either anecdotal or very thin, and only a few investigators have tackled the issue, usually from the perspective of budgetary politics. Arnold Kanter took this perspective in Defense Politics (1975), and Carl Builder in The Masks of War (1989), both claiming that the budget process revealed more important realities of organizational influence in strategy and foreign policy. Using the 'heterogeneous' approach, scholars would suggest that individual armed services are the units of study, and strategy and foreign policy are a complex interaction of the services and civil leadership.

The utility of these theories depends upon the varying simplifications of the "military" and "civilians." Simplification is not in itself a negative aspect of theorizing, rather it is necessary. As Peter Feaver replies to one critic of his article on an agency theory of American civil-military

[9] Don Snider, "An uninformed debate on Military Culture," Orbis 43:1 (Winter 1999), pp. 11-27. Williamson Murray echoes this in "Does Military Culture Matter" in the same issue of Orbis, pp. 28-29.

[10] Edmonds, Armed Services and Society, p. 28.

relations, it is easy to demonstrate that "civilian leadership" and the "military" are both composed of a great many political actors, bureaucracies, and institutions. Yet,

> The acid test of a simplification is not whether a knowledgeable observer can detect where the model's assumptions deviate in detail from the real world. Rather, the test is whether the model provides useful insights and empirically verifiable hypotheses.[11]

Feaver's comment suggests two tests of a simplification in theory: do the insights remain useful, or the hypotheses logically consistent, if the simplification is not empirically verifiable? Put another way, if the simplification is not accurate, how does it change or influence the research's findings?[12] These kinds of questions call attention to the need for rigorous identification of hypotheses, derived from the theories and speculations under study, that can then be tested.

The Military or the Armed Services: Hypotheses about Strategy

Either conceptualization of the "military" produces a number of propositions about the military role in strategy and military behavior in the context of national security. The foremost stereotypical proposition is that militaries favor offensive strategies because such a stance

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[11] Peter Feaver, "Modeling Civil-Military Relations: A Reply," Armed Forces and Society 24:4 (Summer 1998), p. 597. This statement reveals a position in a long-recurring debate about positive science and description, where Feaver appears to favor Milton Friedman ("The methodology of Positive Economics," Essays in Positive Economics (Chicago: University of Chicago Press, 1953), pp. 3-43) rather than Herbert Simon ("Human Nature in Politics: The dialogue of psychology with political science," American Political Science Review 79, 1985, pp. 293-304.) Despite having philosophical reservations with Feaver's position, my discussion takes the argument on its own terms.

[12] Feaver's model does not include uncertainty, use of history, or offensiveness, so it is not included here. However, it could fail his own acid test if one simply demonstrates that organizations that make up the military have different incentives for 'working or shirking' in his game-theoretic analysis. If the preferences do vary, then the identification of relevant decision branches is ambiguous, and his theory is no longer empirically verifiable—the essence of James Burk's critique that Feaver adroitly sidestepped. See Feaver, "Crisis as Shirking: An agency theory explanation of the souring of American Civil-Military relations," Armed Forces and Society 24:3 (Spring 1998), pp. 407-434, and James Burk, "The Logic of Crisis and Civil-Military Theory: A comment," in the same volume, pp. 455-462.

advances their interests, increases the necessity of a nation to rely on military expertise and provide it resources, reduces uncertainty in planning, and more recently, capitalizes on technological strengths.[13] "Militaries are likely to foster escalation in any usable means of warfare...gradualism and restraint can cost lives and are inconsistent with such hallowed principles as concentration of force and the goal of total victory."[14] Interestingly, only a few writers specify a comparison group for this offensive behavior, but generally the idea that civilian elites or the civilian public are less offensive is implied. Put simply,

A1. Militaries will prefer and advance more offensive strategies and foreign policy solutions than their civilian counterparts.

Two other propositions are generated in the modern context of high technology and the history of nuclear weapons: that militaries have come to a) disregard uncertainty, and b) discount the role of history. Marc Trachtenberg argues that American strategic analysis by the late 1960's was "apolitical in substance...in large part because it was ahistorical in method. History, for the strategists, when they used it at all, was more a source of illustration than of

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[13] For examples, see Posen, The Sources of Military Docrine, pp. 41-59; Jack Snyder, The Ideology of the Offensive: Military Decision-Making and the Disasters of 1914 (Ithaca: Cornell University Press, 1984), pp. 24-25; Stephen Van Evera, "Why Cooperation Failed in 1914," in Kenneth Oye, ed., Cooperation Under Anarchy (Princeton: Princeton University Press, 1986), p. 97; Van Evera, "Causes of War," Ph.D. diss. (University of California, Berkeley, 1984), Ch. 7; Richard Betts, Soldiers, Statesman and Cold War Crises (Cambridge: Harvard University Press, 1977); and John Carter, Airpower and the Cult of the Offensive (Maxwell AFB: Air University Press, 1998).

[14] Legro, "Culture and Preferences in the International Cooperation Two-Step," American Political Science Review 90:1 (March 1996), p. 121. David Nowlin and Ronald Stupak are even clearer: "The direct approach to offensive action naturally follows this tendency [of the American psyche] and is the way the US military conducts military operations." See War as an Instrument of Policy (New York: University Press of America, 1998), p. 84.

insight."[15] He believes that the technocrats who fostered strategic nuclear planning (which continued an offense-oriented stance) also imbued the military with an abstract, systems-analytic approach to conventional warfare that focused on manipulation of risks and promoted reactive responses.[16] Two other authors, who specifically focused on Air Force processes in World War II and Vietnam, suggested that ahistoricism was less associated with strategic nuclear planning than with technological change which made past experience irrelevant.[17] Williamson Murray follows this line to argue that contemporary military officers are attracted to technological, mechanistic solutions to the problems raised by war. "Fog, friction, ambiguities, and uncertainties will ostensibly disappear under the searching eye and superior capabilities of technology that provides US forces with an ever greater flow of data and information."[18] The mechanistic approach that subdues uncertainty in strategy also brings a more devastating effect: "there are few military organizations that possess a culture that encourages the study of even the recent past."[19]

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[15] Marc Trachtenberg, "Strategic Thought In America," chapter 1 in History and Strategy (Princeton: Princeton University Press, 1991).

[16] Trachtenberg, Ch. 1; Samuel Huntington makes a similar point, though it is intended to be much more critical; see Samuel Huntington, "The Elements of American Strategy," in Policy Papers in International Affairs Number 28 (Berkeley: Institute of International Studies, 1986), p. 14.

[17] See Perry McCoy Smith, The Air Force Plans for Peace, 1943-45 (Johns Hopkins University Press, 1970), pp. 39-40; and Don Mrozek, Air Power and the Ground War in Vietnam (Air University Press, 1988), pp. 5-6.

[18] Williamson Murray, "Does Military Culture Matter," in Orbis 48:1 (Winter 1999), pp. 33-34. See also Murray's "Clausewitz Out, Computer In: Military Culture and Technological Hubris," The National Interest (Summer 1997), pp. 57-64. For an analysis of Clausewitz' emphasis on non-linearity, unpredictability, and the import of history, see Alan Beyerchen, "Clausewitz, Non-linearity, and the Unpredictability of War," International Security 17:3 (Winter 92/93), pp. 59-90.

[19] Murray, pp. 31-32.

This is not to say that no history whatsoever enters into military analysis. One view might be that history is synthesized into general approaches and explanations that are then used by military officers, rather than historical cases themselves. Those favoring this view often focus on military doctrine as a source of military perspectives. Others, such as Trachtenberg, Murray, and Snider recognize a military tendency to plan or strategize with reference to the most recent war or conflict. This proposition is most often attributed to the military historian Michael Howard, who argues in a classic essay that militaries are often forced to rely on their most recent experience due to the pressures of politics (both the international environment and domestic situations), economic realities (resources) and structural dynamics (organizational rigidity.)[20] The 'history' problem from this perspective is twofold: militaries are unable to effectively cope with technological and political change, and tend to focus on the most recent experience to the exclusion of other historical evidence. This position stands in contrast to others, who propose that history is used in strategy and foreign policy analysis in a variety of ways, to include illustration, justification, advocacy, and exploration of options.[21]

Most of the studies of use of history in policy and analysis focus on either military analysts or civilian analysts and policymakers, rather than comparing use across groups. In contrast,

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[20] See Michael Howard, "Military Science in an Age of Peace," Journal of the Royal United Services Institute (RUSI) 119:1 (March 1974), pp. 3-9.

[21] Yuen Khong's Analogies at War (Princeton University Press, 1992) remains one of the best examinations of the competing roles of historical cases in policy. See also Ernest May, 'Lessons' of the Past: The Use and Misuse of History in American Foreign Policy (Oxford University Press, 1973); May and Richard Neustadt, Thinking in Time: The uses of history for decision makers (Free Press, 1986); and Robert Jervis, Perception and Misperception in International Politics (Princeton University Press, 1976), esp. Chapter Six, "How Decision-Makers Learn from History."

most of the theorizing about military disregard of history is not based on any systematic study, but rather is a relatively modern proposition about military strategic behavior. Perspectives on uncertainty in strategy are even less supported by any empirical research or thought about comparison groups. The natural or default notion in these two areas seems to be that the military is both less uncertain and a smaller user of history in strategy than comparable civilian policymakers—those who also have competence in making strategy analysis and decisions, rather than any civilian public or mass society. Deductively, then, these points may be transformed into the following hypotheses:

A2. Contemporary US military analysis and strategy downplays or disregards the role of uncertainty (in the entire situation, rather than merely choice options) compared to civilian analysis and policy on the same issue.

A3. Contemporary US military analysis and strategy discounts the importance of history (past cases of conflict and war), compared to civilian analysis and policy on the same issue.[22]

In comparison, some of the civil-military relations literature emphasizes the interaction of services and civilian leadership, creating a complex, bureaucratic strategy and decision-making process. But why stop at the level of services in disaggregating the concept of "military"? A central issue in changing the level of analysis is not merely whether differences exist—they probably do—but rather how great the differences are and how they help in understanding the process under study. In thinking about this, several scholars believe that at the level of services

[22] The notion that the military makes strategy based on the most recent war would be a wholly separate hypothesis, and is not directly addressed in this study. However, it is examined in the course of analysis as a side issue.

one finds the most important differences for strategy, and opinion on particular issues. These authors recognize the existence of 'subcultures' or intra-service groupings by function or weapons systems, but find the differences in these groups less significant in important processes like strategy, and less pervasive.[23] Service-level behaviors are the most powerful alternative construct to a monolithic military, and lead to the following problem statement:

> Role requirements of the professional military...may lead to certain commonality of outlook across cultures. The relative strength of such factors must be determined by empirical analysis.[24]

In other words, one expects some commonalities in military services; but the factors of function, structure and culture may vary across them and produce different results in important processes like strategy. While law prescribes military functions,[25] structure can be seen in an organization's history and leadership. One scholar has suggested that the US Army and Navy have a "feudal" (decentralized) structure, while the Air Force and Marine Corps are "monarchic" (centralized) based on the patterns of subgroup control of the service's highest ranking position. These structural distinctions were found to be related to how each service integrated innovative

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[23] For instance, Perry Smith agrees with and quotes Samuel Huntington in saying, "For no service was intra-service competition ever equal in importance to competition among the services"; Air Force Plans for Peace, p. 26. Arnold Kanter asserts that services are the predominate source of symbols and promotion structures, important variables in his theory; see Defense Politics, pp. 16-17. Barry Posen found that technological distinctions within services, or across them (for instance, air power) were less influential than organizational biases and structures; see The Sources of Military Doctrine, pp. 236-237. Finally, Peter Feaver and Chris Gelpi, in scrutinizing the issue of casualty aversion, found that service distinctions were significant, but other sub-cultural distinctions were not, in understanding military officer opinions; see "The Civil-Military Gap and Casualty Aversion," Paper for TISS Project on the Gap between Military and Civilians (1999).

[24] Jack Snyder, "The Soviet Strategic Culture," R-2154-AF (RAND, Sept. 1977), p. 10.

[25] See United States Code, 1994 edition, volume 4 (Washington D.C.: US Government Printing Office, 1995) Title 10, Subtitle D. The Army mission is found in Chapter 307, Section 3062(b), p. 18; Marine Corps in Chapter 507, Section 5063(a), p. 170; Navy in Chapter 507, Section 5062(a), p. 169, and Air Force in Chapter 807, Section 8062(c), p. 367.

weapon systems.[26] Finally, an organization's processes may be constrained or enabled by practices, beliefs, and assumptions common to its members—a framework that is often called organizational culture. As Alastair Johnston notes, "the boundaries of strategic debate will be set by [the military organizations'] language, logic and conceptual categories."[27]

Along this line of thought, some scholars have also argued the importance of recognizing different subgroups of civilians in analysis. Holsti described the concept of civilians as not only "elites versus mass public," but also functionally as media, politics, labor, government, and experts, for example.[28] His study compared military officers responding to a series of surveys to "civilians holding comparable leadership positions" in both private and governmental organizations. Russett, in an earlier study, outlined the need for appropriate control groups in order to develop a "systematic comparison of military beliefs on particular issues with beliefs of particular civilian groups identified by interest or profession."[29] More recently, Feaver and Gelpi noted that civilians and the military can interpenetrate—military retirees, civilians with any amount of military service, civilians who trained in professional military schools with the military, and even civilians serving in the Defense Department—and any study must deal with

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[26] Tom Ehrhard, "Unmanned Aerial Vehicles in the United States Armed Services: A Comparative Study of Weapon System Innovation," (JHU, June 2000), esp. chapter 2, "The US Armed Services."

[27] Johnston, "Thinking about Strategic Culture," p. 58.

[28] Holsti, "A Widening Gap," pp. 1-3.

[29] Russett, "Political Perspectives of US Military and Business Elites," p. 81.

appropriate classification of *both* civilian and military subgroups if it is to be sufficiently systematic to yield useful findings.[30]

The paucity of work focusing on subgroups of civilians, the armed services and different approaches to strategy make it difficult to find shared propositions that consider service structure, function, and culture, or look at traits for uncertainty, use of history, and offense-mindedness. For instance, Arnold Kanter's research focused on the defense budget process and found varying institutional incentives for the services to cooperate on some issues and compete intensely on others, while being less systematic with civilians and focusing mainly on the executive branch policymakers. In particular, each service's function, structure and tradition produced different behaviors, with the Army most likely to favor integrated (team-based) strategies, and the Navy and Air Force respectively less likely.[31] Some authors reduce or transform service's functional responsibilities to cultural symbols, and do not describe comparable civilian symbols at all; Murray proposes Navy and Air Force predilections for "distant firepower", while the Army and Marines turn to "maneuver warfare."[32] These functional and symbolic propositions may still allow an inference about offense-mindedness and strategy, however: the more independently a service's tools can be employed, the more likely the service will recommend their use to solve problems. Using the insights of the above authors, then,

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[30] Feaver and Gelpi, "The Civil-Military Gap and Casualty Aversion," pp. 24-26.

[31] Kanter, Defense Politics, pp. 18-20. See also pp. 99-102 for a review of other scholars on the same topic.

[32] Murray, "Does Military Culture Matter," p. 32-33.

B1. The services will vary on offense-oriented strategy preferences, with the Air Force and Navy significantly more offense-minded than the Army and Marine Corps.

While specific propositions about service behaviors for uncertainty and history are not present in these author's works, they can be deduced. Carl Builder proposed that each service had different styles of analysis that supported their cultural symbols, with the Air Force flexibly systematic (ad hoc use of methods) and Army rigidly systematic (reliance on large scale, persistent models), while the Navy was interpretative and relied on tradition.[33] The implication in his descriptions of analytic styles is that the Air Force was the least inclined to include uncertainty in its analysis of all the services, followed next by the Army. He similarly implied that both services relied less on history and tradition than their counterparts, preferring instead technological and scientific solutions.[34] Williamson Murray is more direct, and seems to focus on the Air Force being most different. He writes,

> ... in some cases, military cultures reject the past as having no relevance to the future of war. Air Forces have been particularly attracted to a technological culture that holds that even the study of recent military experience is of limited use in preparing for a revolutionary technological future.[35]

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[33] Carl Builder, The Masks of War: American Military Styles in Strategy and Analysis (RAND, 1989), pp. 104-107. In a precursor to the book, containing similar arguments, Builder is more direct about the implications of style differences; see "On the Army Style in analysis," RAND P-7267 (Santa Monica: RAND press, October 1986).

[34] It should be noted that Builder's work has a serious flaw, in that he treated the Marine Corps as a subsection of the Navy—i.e., not merely subordinate in the departmental sense (which is a fact) but also conforming to the Navy image and processes he constructed. Almost no other observer would agree with this choice.

[35] Murray, "Does Military Culture Matter," p. 31.

Later in the same work, Murray relates technological dominance to service beliefs about friction in war and uncertainty. His analysis produces a contrast to Builder in proposing that the Air Force and Navy are the most deterministic services:

> The Air Force will remain a technologically driven organization...Similarly, the highly technical nature of surface, submarine, and aviation combat in the navy push that service towards a technological, engineering approach to warfare.[36]

Taken together, then, these authors seem to agree on Air Force differences relative to the other services, and two hypotheses about service heterogeneity, uncertainty, and use of history are:

B2. The services will vary on their consideration of uncertainty in strategy, with the Air Force being most deterministic of all the services in strategic analysis.

B3. The services will vary on their use of history in strategy, with the Air Force being least likely of all the services to include historical cases in strategic analysis.

Strategy and Service cultures

Carl Builder wrote that strategy "can be a minefield for confusion and argument, particularly if the formulation and application of strategy are made the central basis for explaining military actions."[37] He goes on to show how several dictionary and military definitions agree on some basic points, such as planning, directing, and employing resources to accomplish ends related to combat operations or war. But, "the devil lies in the details," for definitions differ on whether the resources include political, economic, and psychological resources in addition to military capabilities, and whether the ends are purely military combat operations or include

[36] Murray, p. 33.

[37] Builder, p. 47.

diplomatic and economic ends. As Caspar Weinberger once said, "Strategy, like policy, is an accordion word."[38]

In a recent review of this broad term, Nowlin and Stupak quote one author's division of strategy into five contexts:[39]

1. Classical, involving theory, principles and axioms from honored philosophers.
2. Spatial, dealing with geographic arrangements and issues.
3. Power potential, describing military force structures, mobilization, and planning.
4. Technological, which considers applications, adaptation, and innovation.
5. Ideological, relating values and norms of a society, in addition to goals.

These varying contexts give rise to a number of problems in the study of strategy. For instance, both Kanter and Builder focused their studies on budgetary strategies of the armed services; yet, it is not clear that characteristics of force planning and domestic political strategies would be at all the same as characteristics of a Gulf War strategy or the nation's National Security Strategy. Another example is an extant debate over the term 'doctrine': to some, doctrine is one context of strategy, containing elements of theory, force planning, organization, and mobilization.[40] It is not a plan for conflict or war, relating political goals to military objectives through a particular use of capabilities, nor in most cases is it intended to be.[41] Yet, existing

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[38] Annual Report to the Congress, Fiscal Year 1987, 5 Feb 1986, p. 33.

[39] Nowlin and Stupak, quoting E.B. Atkeson, p. 34.

[40] See Johnston, "Thinking about Strategic Culture," pp. 42-43; Posen, pp. 41-47; and Perry McCoy Smith, The Air Force Plans For Peace (Johns Hopkins Press, 1970), Chap. 3, "The Role of Doctrine".

[41] See Douglas Porch for a discussion of this in his critique of Elizabeth Kier's Imagining War. Porch, "Military Cultures and the Fall of France in 1940," International Security 24:4 (Spring 2000), pp. 157-181. Each of the military services' basic doctrine also share a common proposition that doctrine relates military means to military objectives, while strategy relates all a nation's means to national policy objectives. To some this distinction may be semantically useful but in practice artificial: modern military doctrine rarely

military doctrine meets all the definitional requirements for strategy, as it relates plans for organizing and employing resources to accomplish military objectives.

To study the role and characteristics of the military in national strategy requires, therefore, it makes sense to define the concept and consider identifying *a number of relevant contexts.* Carl Builder's definition that:

> A strategy is a concept for relating means to ends.[42]

is about as generic a definition as one might find. Yet it has the advantage of encompassing strategy's various roles in analysis, organization and theory, explanation, and force planning. Each of these roles describes a different conceptual domain relating means to ends, and each is also an important aspect of national and military strategy. Instead of focusing on only one context and extending the results as a statement about all strategy, this study proposes to vary strategy contexts and look for patterns of stability and coherence across them.

The four domains described in Table 1 are proposed as types of strategy commonly found in military and civilian reasoning. They are not mutually exclusive, as many military and policy issues will exhibit two or more of these types of strategy in the process or substance of formulating solutions. However, this study assumes that some strategy contexts can be associated primarily or even completely with one of the domains, and that choosing particular contexts that can be so associated provides leverage in systematically examining group

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ignores psychological, economic, and political means, nor US policy ends. See for instance FM 100-23, Peacekeeping Operations, by the US Army (cited in the bibliography.)

[42] Builder, p. 49.

behaviors. For example, military doctrine is almost solely an organizational type of strategy, and this is the basis of some scholars' criticism of research which uses doctrine as a singular representative of a nation's strategy. Chapter 3 will describe particular domain choices that parallel Table 1 domains and form the foundation of this study's database.

Domain	Type of Strategy
Analysis	*Problem solving reasoning, where subjects analyze given problems and produce strategy*
Organization	*Theoretical reasoning where subjects develop and apply concepts to organize, train and equip their resources for the accomplishment of broad or generic objectives*
Operations	*Descriptive reasoning where subjects express plans and intentions to organize and execute resources against specific objectives*
Planning	*Projective reasoning, where subjects develop and describe plans for dealing with future requirements*

Table 1 – Domains of Strategy

This approach—varying the contexts of strategy—is important to understanding the military role in theories of strategy and foreign policy. Many scholars are proposing, regardless of their approach, that military or armed service behavior is related to a nation's, or an organization's culture. Jack Snyder, a leading scholar in the field of strategic culture and foreign policy, proposed that culture is "the body of attitudes and beliefs that guide and circumscribe thought on strategic questions, influences the way strategic issues are formulated, and sets the vocabulary and perceptual parameters of strategic debate."[43] Unfortunately, the definitions of

[43] Jack Snyder, "The Soviet Strategic Culture: Implications for Nuclear Options" (RAND R-2154-AF, 1977).

culture are legion[44], and Snyder's definition omits something specified elsewhere in his writing, and common to many others. The missing element concerns *persistence*: culture is generally considered to be a long-term phenomenon, a concept that is pervasive and which is taught or reinforced by those who possess it.[45] If the military role in strategy is related to either national or particular armed service culture, then one should expect the characteristics or traits displayed in one strategy context to be either related to or the same as characteristics in another, differing context.

The third question guiding this study is derived from this concern. If, in the investigation of characteristics of civilian and military strategy, a consistent pattern is found across different strategy contexts, the implication is that a culture may be at work here. Choosing a positive perspective for hypothesizing,

C1. A pattern of differences between the military and civilian strategy will remain coherent and stable across domains (i.e. there is military culture at work in strategic processes.)

C2. A pattern of differences between civilian subgroups and military service strategies will remain coherent and stable across domains (i.e. there is bureaucratic or service culture at work in strategic processes.)

If on the other hand, certain characteristics are found in military strategy in different contexts, but there is no discernable pattern linking them, something other than culture could be at work—it

[44] I have counted at least five distinct and different definitions by scholars in this tradition (Jack Snyder, Elizabeth Kier, Alastair Johnston, Michael Desch, and Edgar Schein), not to mention the many adaptations and unique creations of others.

[45] Johnston and Schein also emphasize the persistent and reinforcing aspects of culture. See Forrest Morgan, "Compellance and the Strategic Culture of Imperial Japan," Ph.D. dissertation (University of Maryland, 1998), Chap. 2.

might be differing choices due to contemporary circumstances, or personalities in leadership, or structural factors particular to each strategy domain. Either finding would have important implications for the study of strategy, and could serve as the basis for some broad theorizing. But the entering hypothesis for this study is that either military or service cultures (or, possibly, both) are present in American military strategy.

Hypotheses and Contexts for Study

To summarize the above discussion and review, research into the role of the military in national strategy and foreign policy generally follows one dominant path and a second, less-traveled path. The dominant path treats the military as a singular organization, and attributes to it offense-oriented preferences and the tendency to disregard uncertainty and discount the relevance of history. The second path treats the military as a set of distinctive armed services, and attributes varying functions and culture to each, which results in competitive behavior on national strategy and policy. In addition, many scholars have proposed that consistent behaviors or characteristics may be evidence that culture is influencing strategy. Considered jointly, these perspectives on the military and strategy produce three broad questions and associated hypotheses:

A. Does US civilian and military *strategy* differ in characteristics or traits involving uncertainty, use of history, and preference for offense?

A1. Militaries will prefer and advance more offensive strategies and foreign policy solutions than their civilian counterparts.

A2. Contemporary US military analysis and strategy downplays or disregards the role of

uncertainty (in the entire situation, rather than merely choice options) compared to civilian analysis and policy on the same issue.

A3. Contemporary US military analysis and strategy discounts the importance of history (past cases of conflict and war), compared to civilian analysis and policy on the same issue.

B. Do subgroups of civilians and each of the US military services (Army, Air Force, Navy, and Marine Corps) possess *distinctive* strategy behavior on these trait dimensions of uncertainty, use of history, and offense-mindedness?

B1. The services will vary on offense-oriented strategy preferences, with the Air Force and Navy significantly more offense-minded than the Army and Marine Corps.

B2. The services will vary on their consideration of uncertainty in strategy, with the Air Force being most deterministic of all the services in strategic analysis.

B3. The services will vary on their use of history in strategy, with the Air Force being least likely of all the services to include historical cases in strategic analysis.

C. Are the civilian, military and subgroup strategy behaviors on these trait dimensions coherent and stable across different *domains*, such that they may be considered cultural characteristics?

C1. A pattern of differences between the military and civilian strategy will remain coherent and stable across domains (i.e. there is military culture at work in strategic processes.)

C2. A pattern of differences between civilian subgroups and military service strategies will remain coherent and stable across domains (i.e. there is bureaucratic or service culture at work in strategic processes.)

CHAPTER 3

METHODOLOGY AND DESIGN

[A person]...does not live for months or years in a particular position in an organization, exposed to some streams of communication, shielded from others, without the most profound effects upon what he knows, believes, attends to, hopes, wishes, emphasizes, fears, and proposes.

Herbert A. Simon, Administrative Behavior, 3rd ed.

...Students of language may wish to examine how military terminology (often euphemisms) clarify or obscure our reasoning about war.

James Burk, "Military Culture"

Still another service, for which historians have some special qualification, is analysis of words commonly used in governmental discourse. For each word has not only roots and current definitions but also connotations partly traceable to past contexts...the same is true of some other terms employed frequently during the Cold War not only in public rhetoric but even in supposedly reflective reports and memoranda...and it is true even of neutral words such as, to cite but a few, commitment, credibility, coexistence, deterrent, and détente.

Ernest R. May, Lessons of the Past

This study proposes to characterize differences in the strategic reasoning of civilians and military officers, and to use some of the measured characteristics to test past assumptions of scholars and critics of civil-military relations. To characterize and measure concepts—and then perform tests—on strategic reasoning requires some degree of *content analysis*, a method for

analyzing verbal or textual communications. And this methodology in turn requires detailed definitions of the *concepts* under study and extensive data on the *domain*—in this case, offensiveness, use of history, and uncertainty in the domain of strategic reasoning. This chapter addresses these issues of methodology, design, concepts and data.

Methodology

By the definition presented in Chapter 2, a strategy is a concept—it is a verbal or written *communication* relating ends to means. Characterization and measurement of strategy must therefore deal with verbal or written data. An investigation of the military role in strategy, particularly one directed at the hypotheses in this study, has two not necessarily exclusive options: case study, in which appropriate past events and their participants are qualitatively interpreted; or content analysis, in which appropriate communications—that is, communication containing or revealing strategic processes and reasoning—are reduced to categories chosen by the researcher as valid indicators of the concept(s) in question.[1] While either method is feasible, content analysis is more appropriate for this study, because it more directly assesses the concepts in question: strategy is conceptual, and is not necessarily found in events or actions.[2] In addition, by focusing systematically on texts, the breadth and depth of data is expanded.

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[1] Another qualifying adjective could be added, so that this sentence might say "two primary methodological options." Among the wide expanse of methods, there can be roles for experimental studies (offering a sample of civilians and military a prospective, and controlled, problem), field studies (for instance, of civil-military exercises and crisis scenarios), and many others.

[2] In addition, content analysis is often a method of choice for producing "grounded theory": theoretical concepts produced by directly investigating phenomena, often with inductive tools and practices. The hypotheses for this study are, in essence, argument about how well grounded extant theories are, and thus content analysis may be better for the task. See similar discussions by Alastair Johnston, "Thinking about

Content analysis is a research method that uses a set of procedures to make valid inferences from text.[3] There are at least six procedural steps:

1. Selection and preparation of data: Once data appropriate for the subject has been selected, it usually must be put in a format that supports the coding method chosen. Sometimes, preparation involves a step that breaks down normal communications into sentence structures or phrases, or codes verbs and nouns into generic forms. An especially important decision in this step is the unit of analysis, e.g., pages of text, paragraphs, or statements in interviews. Even if the data as a whole includes both essays and interviews (for example), the unit of analysis chosen should be consistent to support analysis.

As will be described below, strategy comes in a huge variety of packages, from a single paragraph to hundreds of pages of texts derived from interviews, articles, speeches and prepared documents. To establish a comparable unit of analysis that retains the essential elements of strategy, this study uses an average of 300-word "chunks" of text.[4] This unit was chosen after sampling a variety of texts to ascertain how many words or paragraphs generally contained a "strategic thought" or argument. "Chunk" units of analysis will also allow the

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Strategic Culture," International Security 19:4 (Spring 1995), pp. 50-52, and Valerie Hudson and Martin Sampson III, "Culture is more than static residual: Introduction to special section on Culture and Foreign Policy," Political Psychology 20:4 (December 1999), pp. 667-675.

[3] Robert Weber, Basic Content Analysis, 2nd ed. (Sage Publications, 1990), p. 9. See also Klaus Krippendorf, Content Analysis: An Introduction to its Methodology (Sage Commtext Series, 1980.)

[4] Using some software tools specifically designed for this study, 'chunks' are files with complete, sequential paragraphs of reasoning. There are no incomplete sentences nor hanging paragraphs; the method created files that vary between 1 and 4-5 paragraphs, depending on each subject's style of communication and the type of communication (for instance, speech or document) and also vary between 100 and 600 words (averaging 300) in order to retain completeness.

possibility that subjects vary on the traits under study even within their own communication: in other words, it puts a finer grain on the measurement by breaking large and small strategy communications into comparable components. Chunks will also reduce the possibility of multiple-category attribution (or confusion) because larger communications have the potential to show, for example, extreme offensiveness and uncertainty in one part of the reasoning, and defensiveness and determinism in another part.

2. Identification of coding scheme or dictionary and operationalization: The conceptual categories of interest require definitions that can be used by the coder to reduce the data, usually written text. Categories can range from simple sets of words to complex phrases and words-in-context. Categories may or may not be the researcher's theoretical variables; often, categorical measures are combined in indices or transformed using distribution assumptions to produce the conceptual variables for final analysis. This study uses content analysis to measure "elements" of concepts, and then discriminant analysis to produce instrumental functions for the conceptual variables. Described further below and in Appendix A, the instrumental functions are based on parallel codings of a subsample of data—three human coders and the automated coding against a representative sample. The functions provide operationalizations that bridge human interpretations of the conceptual variable measures of offensiveness, use of history, and uncertainty to computer analysis of language features.

3. Coding: Human beings (coders) or computers use the coding schemes to reduce the textual data. When human coders are used, the researcher must check reduced (coded) data for reliability (see below.) Computer-aided or automated coding is the primary method for this

study, and is subject to accuracy checks (when appropriate or reasonable) and validity arguments. To examine the correspondence of automated to manual coding, and reinforce the validity of automated coding for this study, a subsample of the research data was manually coded by three coders, and these results compared to automated coding of the same data. The test, its results, and the subsequent discriminant analysis can be found at Appendix A.

4. Analysis: The researcher uses the categorical data to produce the conceptual variables, which are then subjected to statistical or qualitative analysis to generate inferences. For example, *offensiveness* in strategy might be measured as some combination of "defense" and "offense" statements in a text. Content analysis may provide the defense and offense category counts, but the conceptual variable of offensiveness is derived from some transformation of these two category counts. Then, one may choose a statistical tool to examine the differences (if any) in civilian and military subjects and the amount of offensiveness in their strategies. Both the categories and the transformations into conceptual variables follow later in this chapter, and this study primarily relies on statistical analysis to aid in drawing inferences.[5]

5. Reliability and validity checks: Coding can be assessed for reproducibility (can different coders get the same results using the same data and scheme), stability (can the same coder get the same results on the same data at different times), and accuracy (does the coding achieve results comparable to an established standard.) Validity is assessed by means common to all

[5] Statistical Package for the Social Sciences version 9 and 10, or SPSS 9.0 and SPSS 10.0. As is displayed in the results, SPSS is primarily used to derive descriptive statistics, accomplish analysis-of-variance tests, and examine simple linear regression models involving the dependent variables and some cultural factors defined in Chapter 4.

research. As mentioned in step 3 above, this study will include a consistency check (often called "correspondence") on computer-aided coding.

6. Report: The researcher communicates results of the analysis.

Automated coding requires software tools capable of both preparing the textual data (as in step 1) and implementing the coding rules (specified in step 2 and carried out in 3.) Most software packages use text files as inputs (ASCII or DOS text), manipulate the data into word- or language-based structures, and compare data in these structures to dictionaries provided by the researcher. The comparison function results in assignments of codes, and sometimes is followed by simple aggregation functions to produce categorical counts. Thus, a researcher selects software for automated coding based on: the kind of data under study, what kinds of preparation the software can perform, the degree of sophistication that the software's libraries allow, and the kind of coding that will be performed.

The content analysis for this study required the ability to prepare and manipulate a very large number of electronic text files, and most software packages in content analysis are capable. However, the coding schemes described below for operationalizing the dependent variables in strategy require the ability to input specific, original dictionaries (some packages have pre-formed dictionaries and measures), and also require a limited level of context-oriented coding (the ability to identify words in particular phrases or in proximity to occurrences of other words.) At this time, the author is only aware of two programs that meet all these requirements: Profiler+ by Social Science Automation, and Diction 5.0 by Scolari Software. Both programs

are advanced tools for data reduction, which allow the researcher to use a variety of coding schemes. A preponderance of the data analyzed in this study was produced using Diction's software tools.

The coding and operationalization sections below contain merely descriptive versions of what is in the final coding dictionaries, presented in Appendix B. Four steps were necessary to develop and refine them: 1) theoretical explication of the concepts, which follows below in this chapter; 2) an intensive review of similar content analysis variables by other scholars to reveal some additional code possibilities; 3) a consistency test of the automated coding schemes, in which manual coding of a sub-sample was compared to automated results; and 4) some amount of manual analysis of the data, in particular for the 'use of history' variable and case-based reasoning, to inductively gather other relevant terms and language.

Design

One way to conceptualize the challenge of this study is to array the dependent variables (strategic reasoning characteristics) against the different domains of strategy. Each cell of Table 2 (below) is an opportunity to characterize civilian and military subjects, and test those hypotheses that apply. There are three conceptual categories of measurement: offensiveness, uncertainty, and use of history. There are also four domains of strategy: analysis, organization, operations, and planning. Two steps of analysis will take place within each cell of Table 2, one to assess whether the military subjects (as a whole) differ from civilian subjects in the directions hypothesized, and the second to assess whether subgroups of civilian and military subjects differ

in the directions hypothesized. A third step of analysis, after each of the concepts is individually analyzed, is an assessment of patterns across the table, which will be facilitated by measuring cultural factors (see Chapter 4).

Military Strategy	Analysis *Officer Essays*	Organization *Published doctrine*	Operations *Kosovo testimony*	Planning *Missile Defense*
Offensiveness				
Uncertainty				
Role of History				

Table 2 – One perspective of the study

As described earlier, the design of the study therefore requires identification of the data that will represent the strategy domains, specification of the dependent variables, and selection of various subjects—the authors of the study—that will appropriately represent civilians, the military, and the subgroups of each. The first two tasks follow below, while the description of strategy subjects and cultural factors that will be included in the study are the focus of Chapter 4.

Domains of Strategy

> Businessmen do not now, and doubtless never did, see the world with a single eye…They begin with varying assumptions and thus, even in good logic, reach varying conclusions. Corporate executives cannot all be characterized as possessing "the business mind" any more than factory workers, military officers, blacks, or other groups can be treated as being mentally homogeneous. At the same time, this fact should not prevent us from trying to see if broad agreement exists among most businessmen on certain important topics, or at least if the

range of disagreement among businessmen occupies a different point on a broader spectrum than it does for other groups.[6]

A primary argument driving this study is that scholars in the field of civil-military relations rarely perform an empirical examination of their behavioral propositions for civilian and military individuals or groups. A secondary and distinct argument is that scholars also may be too permissive in extending their study of one type of strategy to generalizations about all strategy. One study that did keep both factors foremost in their analysis was Russett and Hanson's research on foreign policy beliefs, which isolated particular groups and particular issues. In contrast, Carl Builder's Masks of War theorizes about military culture and its links to *analysis*, then applies the theory to Cold War force *organization* (grand strategy and doctrine) and *planning* (force structure planning and the budget process.)[7] Builder's argument assumes a culture to analysis link with no comparison groups present, and extends generalizations across strategy domains of organization and planning.

A more focused, but also flawed, example is Arnold Kanter's Defense Politics, in which he studies budgetary or planning processes of the Kennedy and Eisenhower administrations in order to develop generalizations about the dynamics of civil-military relations and national

[6] Bruce Russett and Elizabeth Hanson, Interest and Ideology: The Foreign Policy Beliefs of American Businessmen (Yale University Press, 1975), p. 59. Russett and Hanson used survey techniques rather than content analysis.

[7] Builder, The Masks of War, 1989. Analysis styles for the US military services are mostly presented as a theoretic argument in Part III, while organization and force structure planning are a synthetic argument about implications in Part IV.

security—using *planning* strategy as a bridge to understanding all strategy.[8] A third example is Richard Bett's Soldiers, Statesman and Cold War Crises, which (as the title suggests) looks at Cold War situations or operational strategy to understand the process of military advice to civilian leaders. Betts is more careful to focus on operational strategy situations, but in his case studies it is less clear when his subjects were making analytical, organizational (doctrinal), or operational judgments.[9]

This study incorporates into its design the premise that different types of strategy may give rise to different characteristics in strategic reasoning. By selecting the four domains of strategy outlined in the previous chapter and discussed here, this research shows that, while there are some patterns in civil-military reasoning across all strategy, there are also some dynamics which are unique to certain domains. Additionally, one might anticipate that strategy may also vary by period or generation. To get at these important differences, and support investigation of military stereotypes and subgroup differences, four representative contexts for US military strategy were selected. To maintain temporal consistency, all data was restricted to the 1995-2000 timeframe.

1. Analytic Strategy: This type of strategy exhibits problem-solving reasoning. Ideal examples of analytic strategy would be the estimates and proposed courses of action produced by military

[8] Kanter, Defense Politics: A Budgetary Perspective, 1975. Kanter is certainly more cautious about his generalizing from one domain to the others than is Builder, however. See Chapter 8, the conclusion.

[9] Betts, Soldiers, Statesmen and Cold War Crises, 1977. Betts does make an admirable distinction between "whether-to" and "how-to" types of strategy that I also adopt in this study, but his generalizations about the civil-military advice dynamic seem to gloss over any differences between a soldier's analysis of a situation versus justification or explanation of potential strategy. See the conclusion in particular.

officers and civilians for real-world crises and situations. However, these types of estimates are usually classified (making them unavailable for public research) in addition to varying in structure and content across different situations.[10] The type of reasoning in these estimates may be simulated, fortunately, by problems presented to experienced officers and civilians at military colleges. Mid-career military officer essays on strategy were obtained from a recent class at the Air Command and Staff College, Maxwell Air Force Base, Alabama. Officers were tasked with completing essays on a contemporary strategic question, in which they presented their own analysis of events and recommendations for action. (Approximately 200 essays from academic year 1998-99.) Classes included members of all four services and Department of Defense civilian participants. In addition, a small sample of Ohio State University history and political science graduate students produced similar essays (given the same tasking) for comparison. Details of this sample are in Appendix E.

2. Organizational Strategy: This type of strategy focuses on how resources will be organized in general terms for the accomplishment of broad or generic objectives. For civilians, this is similar to the most general examples of grand strategy, and governmental documents such as the National Security Strategy (for 1995, 1997 and 1999), chartered commissions and private think-tank reports, and some individual speeches and congressional testimonies (including President Clinton's and Secretary of State Albright's 1999 national security statements) were gathered. For the military there were two types of organizational strategy available—doctrine

[10] In other words, in order to make a systematic study, a large amount of data is needed, yet only a few estimates may exist for any particular crisis, and they may vary by region and command responsibility.

publications and vision statements. The sample includes each service's basic, operations, and warfighting documents, and most recent vision statement. See the bibliography for detailed citations.

1. Civilian leaders: 1996, 1997, and 1999 National Security Strategy; Secretary of State Albright's May 99 Congressional testimony
2. Defense civilians: Secretary of Defense statement in 1997 Quadrennial Defense Review; Secretary of Air Force Widnall 1996 speech; National Military Strategy of 1995 and 1997
3. Civilian experts: Hart-Rudman Commission Phase 2 report on national security; National Defense Panel report of 1997; RAND 1997 report
4. Air Force: Air Force Doctrine Document (AFDD)1 (Basic Doctrine); AFDD 2 (Organization and Employment of Aerospace Power); AFDD 2-1 (Air Warfare); 2000 Vision statement
5. Army: Field Manual (FM) 100-1 (The Army); FM 100-5 (Operations); FM 100-23 (Peacekeeping Operations); 2000 Vision Statement
6. Navy: Naval Doctrine Publication (NDP) 1 (Naval Warfare); NDP 6 (Command and Control); NDP 5-1 (Naval Planning); Vision Statement
7. Marine Corps: Marine Corp Doctrine Publication (MCDP) 1 (Warfighting); MCDP 1-1 (Strategy); Marine Corp Warfighting Pamphlet (MCWP) 0-1 (Operations); Vision Statement
8. Joint: Joint Vision 2020

3. Operational Strategy: This type of strategy involves how particular objectives in specific situations will be attained. If some scholars are correct that military doctrine does not reflect what the military may recommend for real crises, then a sample of operational strategy is needed for comparison to organizational strategy. The most recent crisis which involved US military operations and exhibited significant statements by all types of civilian and military individuals was Operation Allied Force, the 1999 US-led and NATO executed intervention in Kosovo.[11]

[11] It has been suggested by reviewers that Desert Storm (1990-91) is also a significant crisis for which extensive data may exist. However, there are at least two problems with the Gulf War: it is outside the 1995-2000 timeframe (introducing potential generational problems) and pre-war to mid-war statements may be much more difficult to gather (a resource problem for the study, as this predates many digital archives.)

Military and civilian testimony (particularly congressional hearings) and published statements by military service officers and civilians (both 'expert' and governmental) on Kosovo operations planning and execution was collected. In order to collect service-specific examples of operational strategy, statements by retired general officers were often included and treated as service-oriented. Limited military experience, or even recognized service bias, by civilians was present but was not treated as military or service-oriented. See the bibliography for comprehensive citations.

1. Civilian Leaders: President Clinton; Secretary Albright; House Armed Services Committee (April 1999); Senate Armed Services Committee (April 1999); Ambassadors Slocombe, Talbott, Pickering; Senators McCain and Dole
2. Defense Civilians: Secretary of Defense Cohen; Public Affairs representative Bacon; various Department of Defense statements
3. Civilian experts: Allard; Brzezinski; Collins; Cordesman; Daalder; Grant; Haass; Hill; Hillen; Luttwak; O'Hanlon; CATO Institute; former Secretaries of Defense Carlucci, Brown, and Schlesinger
4. Air Force: Generals McInerny, Link, McPeak, Jumper; Col Tretler
5. Army: Generals Clark, Gard, Joulwan, Reimer, Odom, Nash; Colonels Killebrew, Summers
6. Navy: Navy Times editorial; VADM Fry; Rear Admirals Carroll, Wilson
7. Marine Corps: Gen. Neal, Lt. Gen. Van Riper
8. Joint: Gen. Shelton, Chairman JCS

4. Planning strategy: This type of strategy forecasts future requirements and force structures. While there are a number of good examples for which public statements in the chosen timeframe might be found (including the Joint Strike Fighter and Unmanned Aerial Vehicle programs), a recent and high-profile example of US planning strategy is National Missile Defense (NMD). NMD has involved both military and civilian projections and different strategic approaches, but

more importantly has also garnered more senior-level (including the President) attention with public statements and advocacy. Civilian and military testimony (including congressional hearings) and published statements by military service officers and civilians on Strategic Missile Defense were gathered. While this issue has a recurring history in the US, the focus of analysis is post-1995.[12] Of the four domains of strategy, this one was the most difficult to find sufficient specific military service examples. In this case, the Ballistic Missile Defense Office chiefs were treated as representing their individual services when they spoke about NMD. This allowed significant data for three services (Air Force, Army and Navy) to exist. Unfortunately, though understandably perhaps, Marine Corps officers rarely devote any statements to this particular area. Again, detailed citations are in the bibliography.

1. Civilian Leaders: President Clinton; Ambassador Slocombe; House Armed Services Committee (Oct 1999)
2. Defense Civilians: Secretaries Perry, Cohen; USD/AT Gansler, Kaminski; DoD statements
3. Civilian Experts: Rumsfeld Commission (July 1998); Bulletin of Atomic Scientists report; Council for Livable World report; independent analyst Hawkins report; Woolsey editorial
4. Air Force: Generals Kadish, Lyles, Estes, Fogleman
5. Army: General O'Neill
6. Navy: Rear Admiral West
7. Joint: General Shelton

Offensiveness or Offense-mindedness

> *Offense*, assertive action to defeat a foe by winning in battle or scoring points to win an athletic contest, usually based on a unified strategy and tactics.

[12] The year 1995 is chosen arbitrarily, and does not correspond to any particular event. The intent is to keep the body of statements used for data temporally contingent, and likewise relevant to the other strategy contexts.

> *Offensive actions* involve operations that will force the defeat of armed forces and destroy an enemy's will to fight. Offensive action permits initiative—the choice of immediate objectives and direction of attack, and the organization and timing of attack.
>
> *Defense* entails the employment of all means and methods to prevent, resist, or destroy an enemy attack.[13]

Definitions of offense and offensive actions reveal a number of congruencies with theories about military strategy and offense-mindedness, but an important conceptual distinction is not present in dictionaries: the role of capabilities and the idea of an offense-defense balance. In a seminal security studies article, Robert Jervis proposed that security dilemmas are directly affected by two factors—whether offense or defense has the advantage in contemporary circumstances, and whether offensive weapons are distinguishable from defensive weapons.[14] His notions of offense and defense are very similar to the above definitions—they include elements of destroying the adversary, having the initiative, and taking its territory versus protecting and holding one's own in a reactive stance. However, the concepts that offense or defense may have an advantage, and that weapons and capabilities may somehow be classified or identified with one or the other, are now technical details with theoretical applications. Even more, these technical details introduce different possibilities for measurement.[15]

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[13] "Offense" and "Warfare," Microsoft® Encarta® Encyclopedia 99. © 1993-1998 Microsoft Corporation. All rights reserved.

[14] Robert Jervis, "Cooperation Under the Security Dilemma," World Politics 30:2 (Jan 1978), pp. 186-214.

[15] The best critical analysis of the offense-defense balance and other elements of the term "offense" remains Jack Levy's "The Offensive-Defensive balance of military technology: A theoretical and historical analysis," International Studies Quarterly 28 (1984), pp. 219-238.

Thus, an essential question about our hypotheses concerning "offensiveness" in military strategy (hypotheses A1 and B1) is its definition. The scholarship from which they were derived (including Snyder, Van Evera, Posen, and Jervis) includes both the typical and more technical notions of offense. For example, Snyder's theory about pre-World War I behavior of nations is that a) the *offense-defense balance* of the time clearly favored defense, b) militaries had a "*penchant for offense*" due to institutional and organizational requirements, and c) a pathological pattern of civil-military relations skewed strategic policymaking by allowing or encouraging military use of *offensive operational strategy*.[16] Conceptually, these uses of "offense" include an objective quantification of capability (the 'balance'), a behavioral trait or motivation (preferential leaning towards offense), and an interpretative classification of purpose (distinguishing an offensive from a defensive strategy.)

This study makes a distinct choice in measuring *motivation* expressed in strategic rhetoric as the most *appropriate* understanding of "offense" for the research hypotheses. The choice of definition (and operationalization) of "offense" is critical, and must discern between the various uses of the concept in previous scholarship, in addition to relating directly to this study's hypotheses. The key is identifying both the role of offense in these scholars' theories, and the impact it has on their findings. In fact, Van Evera, Posen and Snyder are all similar in expressing theories that rely on military organization's behavioral motivation for offense, revealed by their offensive strategy choices, which produces destabilizing consequences.

[16] Jack Snyder, "Civil-Military Relations and the Cult of the Offensive," esp. pp. 20-22.

> First, military organizations tend to exhibit a bias in favor of offensive strategies...second, this bias will be particularly extreme in mature organizations which have developed institutional ideologies and operational doctrines with little civilian oversight. Finally, the destabilizing consequences of an inflexible, offensive military strategy are compounded when it is mismatched with a diplomatic strategy based on the assumption that risks can be calculated and controlled through the skillful fine-tuning of threats.[17]

> ...Many of the proximate causes of the war of 1914 represent various guises of [the theoretical] consequences of offense-dominance: either they were generated or exacerbated by the *assumption* that the offense was strong, or their effects were rendered more dangerous by this *assumption*...Without the cult of the offensive these problems probably would have been less acute, and their effects would have posed smaller risks. Thus the cult of the offensive was a mainspring driving many of the mechanisms which brought about the First World War.[18] (italics added)

> Predictions about the behavior of civilians and soldiers derived from the organization theory and civil-military relations literature broadly suggest a tendency toward offensive, stagnant military doctrine—doctrine poorly integrated with the political objectives of a state's grand strategy. The cases will illustrate that these tendencies do exist; organization theory does successfully predict a fair amount of military behavior and does explain much about civil-military relations.[19]

In none of these studies is the "objective" offensive-defensive balance or *capability* a linchpin to theoretical explanations. In addition, few of these authors specify offensive *purpose* in particular strategies or doctrines as their focus for theorizing about behavior. Instead, both the

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[17] Snyder, p. 41.

[18] Van Evera, "Cult of the Offensive," pp. 66-67. Note that the "cult of the offensive" lies in preferences and beliefs, not in any objective measurement of an "offense-defense balance."

[19] Posen, The Sources of Military Doctrine, p. 40.

offense-defense balance and classifications of operational strategies as offensive or defensive play supplemental roles to the more critical notion of a military motivation for the "offensive."[20]

How does one also take the next step of measuring the offensiveness "motivation" of strategy in order to determine whether one subject prefers more offense than another subject does? Few of the scholars in this area specify measurement of offensiveness; instead, the common approach is to classify operational strategies as either offensive or defensive and infer offensiveness.[21] In other words, these authors focus on *purpose* to assess the *motivation* of strategy, but provide only general or loose definitions to measure purpose. For instance, Barry Posen writes that:

> *Offensive* doctrines aim to *disarm* an adversary—to destroy his armed forces. *Defensive* doctrines aim to *deny* an adversary the objective that he seeks.[22]

He later adds to this description by saying that nearly all offensive doctrines call for early and intense attack, and include pre-emptive strains, while defensive doctrines usually have a protective component. Others agree on the offensive elements of *early*, *intense* or *decisive attacks to destroy* adversary forces.

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[20] For instance, both Snyder and Van Evera believe that the 'real' status of the offense-defense balance can exacerbate the theoretical mechanisms they describe in their studies. Both compare the pre-World War I situation to 1984 and nuclear strategy, and argue that the combination of actual defense dominance and offensive military planning creates dangerous conditions. Offense-defense balances thus moderate, but are not proximate causes. This contrasts with other theories such as Stephen Walt's "balance of threats," in which state behavior and alignment is explained by a function of aggregate power, perceptions of intent, and the offense-defense balance. See Revolution and War (Cornell University Press, 1996), pp. 18-19; and "Alliance Formation and the Balance of World Power," International Security 9:4 (Spring 1985).

[21] While this can be a logical approach, a common problem is that several of the writers also seem to subjectively infer the degree of offensiveness of some strategies, without a specification of how one strategy is "more" offensive than another.

[22] Posen, p. 14. Italics in original.

When we say that the offense has the advantage, we simply mean that it is easier to destroy the other's army and take its territory than it is to defend one's own. When the defense has the advantage, it is easier to protect and to hold than it is to move forward, destroy, and take.[23]

The Schlieffen Plan embodied all of the desiderata commonly found in field manuals and treatises on strategy written by military officers: it was an *offensive* campaign, designed to seize the initiative, to exploit fleeting opportunities, and to achieve a decisive victory by the rapid annihilation of the opponents' military forces...The German's pursuit of a strategy for a short, offensive, decisive war despite its operational infeasibility is simply an extreme case of an endemic bias of military organizations.[24]

In Marshall Foch's words, the French army adopted 'a singular formula for success, a single combat doctrine, namely, the decisive power of offensive action undertaken with the resolute determination to march on the enemy, reach and destroy him.'[25]

This discussion leads to a related pair of concepts: the offense and defense. The offense contributes striking power. We normally associate the offense with initiative: The most obvious way to seize and maintain the initiative is to strike first and keep striking. The defense, on the other hand, contributes resisting power, the ability to preserve and protect ourselves. The defense generally has a negative aim, that of resisting the enemy's will.[26]

Air *defensive* operations are those operations conducted to deny another force's air operations in a defined airspace. Defensive operations include any efforts to ensure that the enemy cannot use the air to successfully attack targets existing either in the air, on the ground, or on or under the sea...Defensive operations can be further categorized into two types: active and passive...Active defenses attempt to deny attacks by destroying or interfering with the attacker or the attacker's munitions...Passive defenses attempt to deny weapons employment by the attacker without assaulting the attacker or the munitions.

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[23] Robert Jervis, "Offense, Defense and the Security Dilemma," in International Politics by Robert Art and Robert Jervis (4th ed., Harper-Collins, 1996), pp. 183-203.

[24] Jack Snyder, "Civil-Military Relations and the Cult of the Offensive," pp. 27-28, 30. Emphasis added.

[25] Stephen Van Evera, "Cult of the Offensive," p. 61, quoting another author's work (Richard D. Challener.)

[26] MCDP 1, Warfighting, Chapter 2, Washington, D.C.: United States Marine Corps, June 1997.

> Air *offensive* operations include both those operations conducted inside of the airspace defended by another, and those operations conducted outside of one's actively defended airspace. No matter who controls the airspace, the offense must always employ measures required to defeat passive defenses.[27]

These excerpts reveal that offensiveness is often inferred by classifying strategic purpose in ways similar to dictionary definitions of offense and defense: offense is quick, takes the initiative, decisively defeats or destroys opponents, while defense is protective and reactive to opponent actions. But two problems are evident, also—destroying the adversary may be common to both offense and defense, and one's mobility may obscure whether one is taking the initiative in attack or making an active defense. One answer to these problems lies in defining the offense by characteristics of both *capability* and *intent* that can be distinguished from the defense. Jack Levy came to a similar conclusion in a critical analysis of the offense-defense balance,[28] and interpretations of historical cases by scholars inevitably include these two aspects.

However, another answer is to focus on motivation in strategy by assuming that descriptions of capability and purpose in strategy communications will reflect both the presence and degree of offensiveness. Adapting descriptions of offense presented above to this perspective, actions that *describe* attacking the adversary first, destroying their forces, and rapid and decisive defeats, particularly within territory under the adversary's control, are considered offensive. Using capability-oriented terms, this offensive motivation is revealed by

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[27] John Carter, Jr., "Airpower and the Cult of the Offensive," pp. 12-13.

[28] Jack Levy, "The Offense-defense balance of military technology: A theoretical and historical analysis," International Studies Quarterly 28 (1984), pp. 219-238. Specifically, he wrote "It must be concluded that offensive or defensive characteristics of a weapons system must be defined by both its intrinsic characteristics and the tactical doctrine which determine its use," p. 226.

preferences for *initiative*, *mobility* and *destruction*. Theoretically, *mobility* may also be a critical element. In each of the cited examples, offensive actions were focused on denying the adversary its capability to act militarily, rather than preventing its immediate actions on one's own forces, territory or populace. If one can capture the preference for mobility in a strategy or communication, then one may be able to infer an *external location of the action* essential to ideas of offense-mindedness.

The contrast of defense with offense becomes more direct under this conception. Defense motivations are protective and reactive; they seek to prevent degradation to one's own populace, territory, or forces. Similar to insights of Clausewitz and Quincy Wright, defense includes *relative passivity*, *immobility*, and a *state of expectancy*.[29] Defensive intentions also might be inferred from immobility that implies an *internal location of action*. While defense may involve or even prefer destroying enemy forces, it typically is more focused on reducing effects on friendly forces and resources.

The motivational concept of Offensiveness can be constructed from these six elements of offense and defense: initiative (+), mobility (+), destruction (+), relative passivity (-), immobility (-), and expectancy (-). The assumption in a content-analytic approach to offensiveness is that people expressing their conceptions of strategy must use language which can be associated with these six elements. **Persons who prefer offense will use the offensive elements relatively more often than the defensive elements**. That is, measuring a subject's relative use of

[29] Levy cites these aspects and the two theorists in "The Offense-Defense balance...", p. 224.

different categories of language tells us something about a larger concept.[30] This assumption is key to the validity of the automated analysis, and requires addressing three threats:

1. "What if individuals are subtle or sophisticated communicators who might, for example, use a lot of defensive language but in fact recommend and support strong offense?" Most automated content analysis methods cannot distinguish this kind of subtle communication, and the general assumption is that communication such as this occurs much less than instances where people use words to "mean what they say." To strengthen this assumption, however, two things can be done. First, the volume of data analyzed must be large so that measurement overcomes those "rare" instances of subtle communication which would be misclassified. This study accomplishes that step in the design. Second, a comparison can be made between a manually coded and automatically coded sub-sample of the data. Positive and reasonably strong correlation between the two different methods will imply that the concept under study is susceptible to automated measurement. Appendix A reports this analysis and its results.
2. "How can or how should measures of the 'elements' of a concept be combined into a conceptual variable?" It is one thing to examine definitions and uses of concepts by scholars, and another thing to transform those definitions into a quantifiable measure.

[30] This larger concept may be psychological or cognitive (pertaining to a person's thinking processes and personality characteristics) or rhetorical (pertaining to a person's particular choice of communication style and substance.) In some cases the distinction may be important; however, in this study I do not classify offensiveness, use of history, and uncertainty as being one or the other: I think, in fact, that elements of both are involved. For a comparable discussion and conclusion, see Phil Tetlock, Kristin Hamman, and Patrick Micheletti, "Stability and Change in Complexity of Senatorial Debate: Testing Cognitive versus Rhetorical Style Hypotheses," Journal of Personality and Social Psychology 46:5, 1984, pp. 979-990.

The theoretical explication of offensiveness, for example, tells us that it may be positively related to three elements of offense, and negatively to three elements of defense. The choice of mechanism or transformation in content analytic studies is often based on the scholar's theoretical construction and particular choices that may be regarded as creative in origin. Appendix D describes some of this process by discussing the methodological background of automated content analysis. In this study, this threat is dealt with by creating an instrument for measuring the conceptual variables—an instrument based on both manual coding (and understanding) of the concepts and automated coding (of language features) of the elemental categories. Appendix A also describes this effort.

3. "How do we know that the codings are in fact capturing the concepts in the texts?" While it is obviously impossible to show all the coded text files—4100 300-word text files composing the current effort—it is reasonable to wonder about what kind of texts are captured in the study's coding scheme, and whether those codes then seem reasonable. In this study, examples will be shown in each of the results chapters to both illustrate the particular findings and also demonstrate the capabilities of the automated coding. These examples begin in Chapter 5.

Offensiveness in this study is a concept measured by the relative presence of six more basic elements related to offense and defense. Figure 1 below shows the concept and theorized relations to elements. In addition, some examples from the element dictionaries are provided;

the complete content analysis dictionaries for each element can be found in Appendix C. The actual instrument or mechanism for connecting the elements to the concept of offensiveness is described in both Appendix A and Chapter 5.

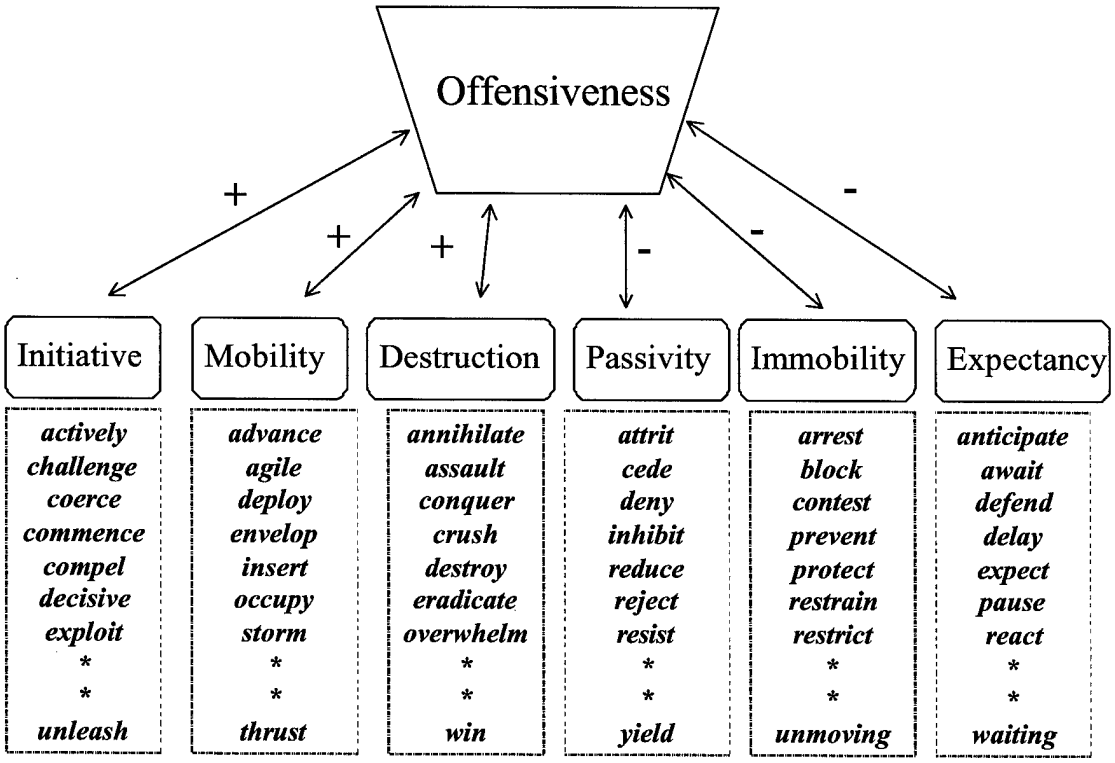

Figure 1 -- Offensiveness

Uncertainty

> ...But in war everything is uncertain, and calculations have to be made with variable quantities...If one has never personally experienced war, one cannot understand in what the difficulties constantly mentioned really consist, nor why a commander should need any brilliance and exceptional ability. Everything looks

> simple; the knowledge required does not look remarkable, the strategic options are so obvious that by comparison the simplest problem of higher mathematics has an impressive scientific dignity.[31]

Clausewitz' concept of friction in war has inspired many theorists and scholars, and one of friction's essential components is the notion of uncertainty and chance: not everything can be determined beforehand in strategy.[32] Hypotheses A2 and B2 spring from a modern concern of the effects of technology on warfare, a concern that increasing reliance on computer and information systems restricts a leader's consideration of unknown outcomes and unfavorable possibilities. Williamson Murray quotes a number of senior military leaders on the subject of technology and "information superiority," and finds contemporary thought "so dangerous [because] it flies in the face of 2500 years of history, not to mention modern science."[33] Murray believes that the military's fascination with high technology may concomitantly bound its awareness of the complexities of warfare. Clausewitz' concept of friction may be giving way to more mechanistic perspectives.

The contrast of friction and mechanism in perspectives is not, however, easily translated into a difference between uncertainty and certainty in outlooks. Some writers define different levels or types of uncertainty, and these varying types also can lead to the conclusion that

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[31] Carl Von Clausewitz, On War, ed. and translated by Peter Paret and Michael Howard (Princeton, 1976), "On the Theory of War," p. 136, and "Friction in War," p. 119.

[32] Clausewitz does not provide a full description of friction and its components, rather he illustrates it and describes its consequences. Some of the illustrative aspects of friction include complexity, human error, weather, and chance. (The "fog of war" so often ascribed to him is, in fact, literally fog in war.) See Clausewitz, pp. 119-121.

[33] Murray, "Does Military Culture Matter," p. 35.

certainty may be a different characteristic rather than a polar opposite. For example, James Thompson defines three levels of *uncertainty* that he applies to organizational reasoning:[34]

1. Generalized uncertainty: a lack of causal understanding of the situation or the environment
2. Contingency: outcomes that are dependent on situational events which may not be anticipated
3. Interdependence: outcomes that are dependent on the complex interaction of components

Though he does not detail *certainty* in the same manner, his logic and descriptions may allow the following parallel levels:

1. General determinism: assertion of causal understanding of situation or environment
2. Forecasting and estimation: knowledge of potential events and their likelihoods
3. Control: confidence in the relationship between the task environment and one's own participation in the situation

From this perspective, uncertainty and certainty are distinct conceptions and are not polar opposites or ends of a spectrum. Uncertainty involves vagueness or the role of chance in one's view of the environment around them, while certainty may mean not only some firmness or determinism in outlook but also confidence and some degree of efficacy in participating in the environment. Between the two concepts may be some shared notions of probabilism—estimates of chances or probabilities of event occurrence—but they differ critically on the axes described above.[35]

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[34] James D. Thompson, Organizations in Action (New York: McGraw Hill, 1967), pp. 159-60.

[35] Because of this, the study attempts to be consistent in describing the opposite of uncertainty as determinism, rather than certainty. For too many observers, certainty carries an air of confidence and control, whose opposites are not necessarily part of uncertainty. One can be uncertain about the environment, yet also very confident.

The military concept of information superiority that Murray alludes to provides a contemporary example of this problem. One writer cites that information superiority "is a capability (not a proven condition) that the US armed forces are trying to develop. Once the concept becomes robust it will help to reduce uncertainty, provide a more complete intelligence picture of the battlefield, and assist precision-guided missiles in obtaining and destroying targets." But he goes on to argue that information superiority is a myth:

> ...Information superiority is not enough. One danger in information superiority, then, is in assuming knowledge. Another danger...is in overestimating our abilities.[36]

In other words, the reduction of generalized uncertainty or even contingency through better information should not be mistaken as increasing certainty through control or actual knowledge of future events.

These differences between uncertainty and certainty are in fact the foundation of the study's hypotheses about uncertainty (A2 and B2, Chapter 2.) When various writers have expressed concern about alleged military "discounting" of uncertainty, the common theme is that such discounting leads to unhealthy confidence in one's control over outcomes. Yaacov Vertzberger is more specific about the problem, and writes that

> Controllability is thus a mental construct concerning the perceived relation between the task environment and a decisionmaker's attributes and skills...The implications for risk taking are obvious: when uncertainty is perceived to be embedded in the external environment, low confidence in success will cause risk-averse behavior; but when uncertainty is construed as internal, the

[36] Timothy Thomas, "Kosovo and the current myth of Information Superiority," Parameters 30:1 (Spring 2000), pp. 14, 27.

> perceived probability of success increases, and so does the propensity to accept risks. [37]

The focus of interest, then, lies in first determining how much uncertainty one finds in modern strategy and analysis, and whether the quantity or quality of that uncertainty varies between civilians and military or their subgroups. Whether differences (if they exist) lead to different degrees of certainty or risk-taking behavior is key to some critic's concerns, but this is a separate question not addressed in this study. For now, the interest is whether different groups truly possess different realizations of uncertainty in strategy.

A starting point for measuring uncertainty across the levels of generalized uncertainty, contingency, probabilism and interdependence may be found in decision and game theory. A generally common definition of uncertainty in decision theory is that it describes conditions under which the probability of an event occurring is either unknown or so ambiguous as to be of little use in forecasting or prediction.[38] The critics of military strategy, however, are concerned with the role of uncertainty *throughout* the decision process. In measuring the extent that uncertainty is incorporated into analysis, one must capture *attention to* or *ambiguity in*: the range of alternatives, options, or events (number of decision nodes); the perceived conditionality between and within these events (chance nodes); the estimated probability of any individual

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[37] Yaacov Vertzberger, Risk Taking and Decisionmaking (Stanford University Press, 1998), p. 68. In addition, he writes that, "When uncertainty is ignored, decisionmakers make 'something out of nothing' by misinterpreting random data and make 'too much from too little' by misinterpreting incomplete and unrepresentative data." See fn. 23 p. 419.

[38] For example, see Vertzberger, pp. 20-21; and James Morrow, Game Theory for Political Scientists (Princeton University Press, 1994), pp. 28-29.

event occurring (probability); and the estimated consequences of options (payoffs.)[39] For a content analysis approach, one needs to capture in dictionaries or codebooks both the breadth of the decision cycle and the recognition of different elements of uncertainty.

A beginning point for capturing uncertainty in decision processes—one that measures most of these elements—has been used in previous research, and is called Bayesian problem representation. Bayesian representation is a concept where decisionmakers structure and communicate problems as a product of prior judgements and diagnostics of facts or evidence.[40] Probability updating of a range of options, estimation of the likelihood of outcomes, and conditional linking of options or outcomes are the primary functions of this kind of problem representation. Content analysis has been used to capture Bayesian representation in strategy by focusing on words and language structures that are common to this form of reasoning.

Borrowing from the concept of Bayesian representation and previous research, a coding scheme for uncertainty in strategy will assess textual use of terms associated with four elements described previously: causal uncertainty, contingency, interdependence, and probabilism. Each of these elements possess a positive association with uncertainty; that is, an increase in any element is expected to increase overall uncertainty. Figure 2 below shows the concept to

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[39] Edith Stokey and Richard Zeckhauser, A Primer for Policy Analysis (W.W. Norton and Company, 1978), p. 203.

[40] See Donald Sylvan and James Voss, Problem Representation in Foreign Policy Decision Making (Cambridge University Press, 1998): Chapter 8; Donald Sylvan, Matthew Diascro and Deborah Haddad. "Stories, Ledgers, and Bayesian Calculations: Studying Problem Representation in Foreign Policy," International Society for Political Psychology presentation, July 1996; and Donald Sylvan, Thomas Ostrum and Katherine Gannon, "Case-based, Model-based and Explanation-based Styles of Reasoning in Foreign Policy," in International Studies Quarterly 38 (1994): 61-90.

element relationship, and some examples from the element dictionaries. Again, specific operationalization for uncertainty is described in Appendix A and Chapter 6, while the complete dictionaries for uncertainty elements are in Appendix C.

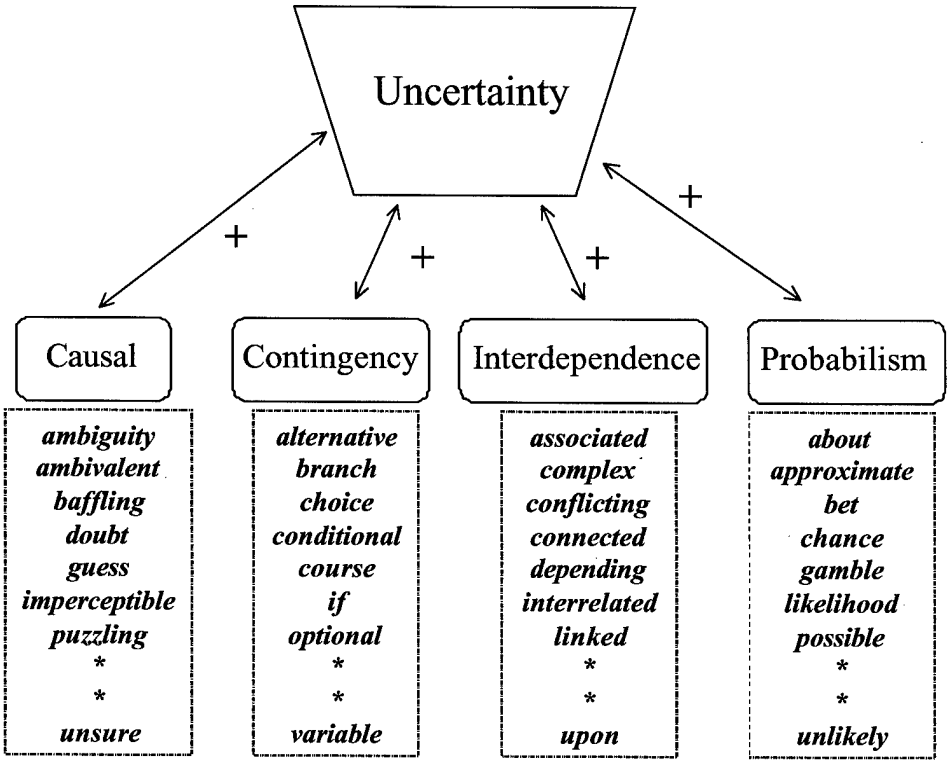

Figure 2 -- Uncertainty

Use of History

> Historical examples clarify everything and also provide the best kind of proof in the empirical sciences. This is particularly true of the art of war...Historical examples are, however, seldom used to such good effect. On the contrary, the

> use made of them by theorists normally not only leaves the reader dissatisfied but even irritates his intelligence.[41]

The underlying assumption for those who write about, or study, strategy and history, is that historical facts and examples are useful or even critically important in the formation of strategy and policy. A number of important studies in political science, for instance, examine *how* and *how well* statesman and leaders use history in making foreign policy. These studies have, broadly, concluded that history is: a) often used by leaders to justify, advocate, analyze, and specify possible options when confronted with a problem; and b) often used poorly, from incomplete consideration of applicable cases to imperfect reasoning about historical lessons.[42]

The question for this study, however, is not how or how well history is used in strategy—instead, it is whether history is used at all, or *how much*. When Trachtenberg, Snider and Murray address the role of history in strategy, their proposition is that contemporary US strategy is ahistorical—that it relies on other forms of reasoning than those involving historical cases. This shift in focus from how/how well to how much greatly reduces some problems of measurement: one does not have to trace a process of reasoning within strategy, or establish any standard for qualitative evaluation. The challenge in measuring how much history is used at first blush appears to be primarily based on locating historical references.

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[41] Clausewitz, "On Historical Examples," p. 170.

[42] On looking at "how" and "how well" history is used, see May, Lessons of the Past, and May and Neustadt, Thinking in Time. In chapter 7 of Perception and Misperception, Jervis primarily addresses how history is used. Khong asserts early in Analogies at War that others have paid limited attention to the "how" of analogy and history use, and his research focuses more on that question than on how well history is used. As an interesting side note, Clausewitz discusses all four uses of history in On War; see p. 171, "On Historical Examples."

The use of historical events or facts in reasoning has a scholastic history as case-based reasoning (CBR), and may provide a framework for measuring how much history is used in strategy.

> Case-based reasoning is an analogical reasoning method. It means reasoning from old cases or experiences in an effort to solve problems, critique solutions, explain anomalous situations, or interpret situations.[43]
>
> The assumption is, broadly, that because new problems or new situations remind us of problems or situations we have encountered in the past, or with which we are familiar due to education or professional training, we intuitively entertain the possibility that what we know of prior cases may apply to the current one. The stock of cases that the professional utilizes in this effort to reason by analogy, or reason by example, need not be present in his or her personal memory, but may be collected and indexed in some database or library.[44]

CBR provides a powerful fit with this study's hypotheses concerning history because it also deals with the parallel propositions concerning uncertainty. In contrasting CBR with other forms of reasoning, Janet Kolodner writes that the "primary power...is that [CBR] allows the decision maker to deal with unknown and uncertain information."[45] If the military or any other subject group discounts the role of uncertainty in strategy, the presence of CBR can be argued to be a compensating or mitigating behavior. If, on the other hand, any subject group is relatively low in both considering uncertainty and using history through CBR, then there may be strong cause for concern.

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[43] Janet Kolodner, "Improving Human Decision Making through Case-based Decision Aiding," AI Magazine (Summer 1991), p. 53.

[44] Dwain Mefford, "Case Based Reasoning, Legal Reasoning, and the Study of Politics," Political Behavior 12:2 (1990), p. 127.

[45] Kolodner, p. 56.

CBR can be measured in strategic communications by focusing on two elements: the language structure underlying CBR, and historical case references or labels. Research into CBR has identified three processual steps that may be reflected in examples of CBR:[46]

1. Recognition and retrieval: the identification, recall or assertion of a salient case, and its relevant details
2. Inspection of likeness/differences: comparison and contrast of the case to the problem at hand, or to other cases
3. Evaluation of utility: assessing what parts or lessons of a case apply to the problem at hand by some secondary reasoning or calculation of its value

When a reasoning subject uses cases, the language associated with recognition, comparison, and evaluation follows some common structures and patterns. Thus, a CBR category coding structure could include:

> CBR language: applicable; due to; because, if...then; if [we] consider, considering; recalling, recall, remember, remembering, lessons of, the lesson; in order to understand; need to understand; of course; keep in mind; is apparent; it seems clear; obviously; case of, this case/instance, previous case/instance, past case/cases/instances, classic case, previously; in comparison, comparable, comparing; in contrast, contrasting; the difference/differences; like, similar, similarity, similarities, same; precedent, precedents; in the past; recent events, recent history, most recent example; example of, examples of; shows/has shown

Reliance on language structure alone for identifying CBR would be insufficient, so a second element of identifying the use of history involves case references or labels. At least one group of

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[46] The first two steps are identified by Mefford in "Case Based Reasoning," p. 131, while the third is identified by Kolodner in "Improving Human Decision Making," p. 62. Sylvan, Ostrom and Gannon also point out these steps and further discuss how Kolodner's approach may blur distinctions between case-based reasoning and explanation-based reasoning. See "Case-Based, Model-Based, and Explanation-Based Styles of Reasoning in Foreign Policy," International Studies Quarterly 38 (1994), pp. 61-90 (esp. 66-67.)

researchers has pointed out that case-based reasoning shares many structural similarities with explanation-based reasoning, which may not have any specific history cases embedded.

> ...Groups charged with the responsibility of making foreign policy decisions frequently contain statements, often strategic in nature, that argue logically for the superiority of one option over another. The form of the argument might be, 'if we choose option A, here is the chain of events that would follow, while if we choose option B, the following chain of events would follow.' Such a statement, when it does not make explicit reference to either cases or general, prepackaged principles, is an example of explanation-based reasoning.[47]

The implication, then, is that without a case reference, CBR language may well be explanation or model based reasoning. This leads the authors to the position that "explicit reference to a specific case as the basis for a decision distinguishes case-based reasoning from the other two varieties."[48]

Thus, the concept of Use of History depends on two or more elements: case-based reasoning (CBR); and case references or labels which may be in more than one group. Because of the data selected for this study (more on this in Chapter 4) the Use of History variable is conceptualized as shown in Figure 3 below, using CBR and three categories of case references.

[47] Sylvan, Ostrom and Gannon, p. 63.

[48] Sylvan, Ostrom and Gannon, p. 65.

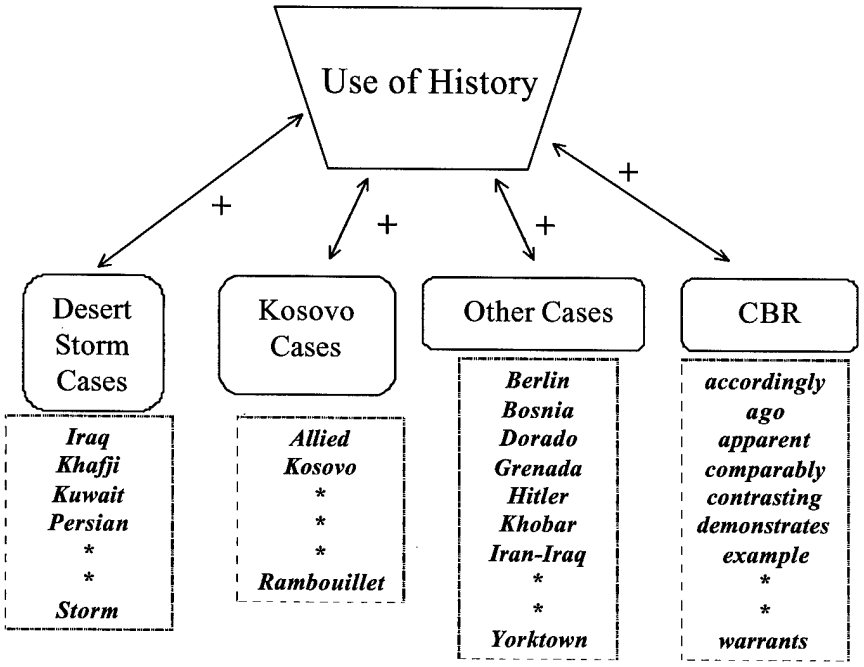

Figure 3 – Use of History

* * *

This chapter has outlined the primary portion of the study's methodology and design by developing the independent and dependent variables in accordance with the methodological choice of content analysis. The next chapter completes the design description by presenting the study's perspective and choices regarding the actors in civil-military relations, associated "factors" of ideas and symbolic language, and some relevant controls for analysis.

CHAPTER 4

CIVIL-MILITARY ACTORS AND FACTORS

Armed services do not exist independently of the nation-state; they are, by definition, an integral part of the society that falls within national territorial-state-boundaries.

Martin Edmonds, Armed Services and Society

The Great Divorce is the less-than-amicable separation of the military from the financial, business, political and intellectual elites of this country, particularly from the last two. Important sections of America regard those who serve in today's armed forces as at best unwanted stepchildren, at worst stepchildren not only unwanted but inclined to be vicious.

Arthur T. Hadley, The Straw Giant (1987)

The end of the Cold War has coincided with a deterioration in the relationship between civilian authority and the military institution in the United States. While there is no 'crisis' in US post-Cold War civil-military relations, it seems clear that the United States is now experiencing a weakening in civilian control of the military, at least compared with the Cold War period.

Michael C. Desch, "Soldiers, States and Structures"

A central point in any civil-military relations study involves determining who the actors are. Are military individuals simply part of a group-within-a-larger group? Or is the civil-military divide simply a matter of occupation? Most scholars believe the differences are greater than bureaucratic or organizational position, and that the military is an intrinsically different, or at least

highly specialized, form of cultural grouping within the larger society.[1] While theoretical studies may simply distinguish between those wearing uniforms and those who do not, an empirical study requires more definition, some attention to potential subgroups of both classes, and consideration of the role of civilian and military ideas. This chapter explores these issues and defines the actors for this study, while also presenting additional factors of symbolic language and normative versus practical strategy. It concludes by describing how these actors and factors will be folded into three primary methods of statistical analysis.

Civilian and Military subgroups

Most civil-military relations study treats the military as a subset of civil society. This means that while one may identify a military person by formal and institutional characteristics, a civilian simply is anyone who is not military. This minimalist approach can be found in a number of studies. For example, in Soldiers, Statesmen and Cold War Crises (1977), Richard Betts focuses case study and interviews on a number of military leaders, and compares their advice and preferences to those of civilian leaders in government. Yet he never actually defines who qualifies as a civilian subject—letting it be 'self-evident'—and also treats leading figures such as George Marshall and Maxwell Taylor as military advisors, even when serving later in their

[1] As mentioned in a previous chapter, some authors take the difference as inherently obvious. Others note the highly specialized nature of military organizations, responsibility for violence on behalf of the state, and potential threat to internal security as setting them apart. See Edmonds, Chap. 2; Stephen Rosen, Winning the Next War (Cornell University Press, 1991), p. 19; and Kurt Lang, "Military Organizations," p. 838. For a more philosophical view that the military creates different people through training and experience, see Thomas Ricks, "The Widening Gap Between the Military and Society," The Atlantic Monthly 280:1 (July 1997), pp. 66-78.

careers in non-military positions after retirement.[2] In a recent work examining the question of a gap in values between the military and civil society, Ole Holsti is more systematic. He chooses to compare surveys of military officers with civilians "holding comparable leadership positions", yet also fails to specify whether there is more to being a civilian than simply not wearing a uniform.[3]

There are some works, however, which identify two central issues in any systematic comparison of the military with civil society. The first issue might be called *group salience*: on whatever dimension one investigates, are the military subjects comparable to civilian subjects selected? Bruce Russett explicitly recognized this issue in a 1975 article, writing that:

> There are many 'civilian minds,' and the difference between any two civilian ethics may be greater than the difference between any one of them and the military ethic. What we need, therefore, is a systematic comparison of military beliefs on particular issues with the beliefs of particular civilian groups identifiable by interest or profession.[4]

Russett proceeds to examine differences in policy preferences by comparing military officers at senior professional education schools to senior executives and vice presidents of Fortune 500 companies in banking, savings and loan, and investment and insurance. These executives were felt to represent both a comparable leadership and experience level to the military, and also

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[2] Richard Betts, Soldiers, Statesmen and Cold War Crises (Harvard University Press, 1977), 292 pp. While many of his case references involve the Kennedy/Johnson administrations and civilian 'whiz kids' with no military experience, it is curious that the issue is not addressed when Betts also examines the Truman and Eisenhower administrations, where it was more difficult to find a civilian leader without some World War II military service.

[3] Ole Holsti, "A Widening Gap Between the Military and Civilian Society?," Olin Institute for Strategic Studies (October 1997), p. 10.

[4] Bruce Russett, "Political Perspectives of US Military and Business Elites," Armed Forces and Society 1:1 (November 1974), p. 81.

were arguably competent on the particular policy issues (such as defense spending) measured by Russett. One can see that while civilians may merely be non-military people, it may be necessary to select a particular group of civilians that act in comparable roles and possess competence for the issues under study.

Russett did not address a second key issue, however, that might be called *military affiliation*: are there civilian subsets which may be directly related to, or even conflated with, military personnel?[5] When Richard Betts, for instance, treated Marshall and Taylor as "military" even when holding Secretary of State and ambassadorial positions, a question about military experience and civilian occupations was ignored. How should a systematic study of civil-military relations classify retired military persons in civilian positions or civilian persons with careers in military staffs or departments? In an unpublished article, Peter Feaver and Chris Gelpi chose to classify their civilian elite sample into a variety of subgroups associated with the military, including prior military service, military-related government jobs, and education at professional military schools.[6] For their particular study, they found civilian elites to be significantly different from military officers on key questions, while most of the civilian subgroups are not significantly different from each other. One subgroup, however, is generally different

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[5] The opposite possibility—military who may be more 'civilian'—is mostly disregarded by scholars. It is not treated in this study, but it should not be ignored, either. In some situations, National Guard or reservists who spend a predominate portion of their lives in civilian professions may be better treated as civilian. There are also those who believe a significant amount of civilian education may make military officers more civilian-like; see Sam Sarkesian et.al. and Soldiers, Society, and National Security, Lynne Rienner Publishers, 1995.

[6] Peter Feaver and Christopher Gelpi, "The Civil-Military Gap and Casualty Aversion," paper prepared for the TISS Project on the Gap Between the Military and Civilian Society (1999), pp. 24-28.

from the others—civilians with the experience of attending professional military education schools.[7]

Group salience and military affiliation will be integrated into how this study defines "civilians" in a number of ways. Each strategy domain involves different types of subjects, and therefore reveals the different subgroup classifications necessary for systematic comparison. By reviewing the data gathered for each strategy domain under the rubric of comparing military and civilian reasoning, one can see three important civilian subgroups: defense civilians, civilian leadership, and civilian experts.

1. Analytic Strategy: The strategy analysis domain compares mid-career military officers with civilians who are predominately from the US Department of Defense. This is due to the nature of this sample—essays from the Air Command and Staff College—but the issue of military affiliation of these civilians is prominent. On the one hand, they are in the same program, at the same level in their careers, and share occupational interests with the military officers, so the samples are arguably the most salient for comparison. On the other hand, Feaver and Gelpi's finding that civilians from military education programs are different from other civilians is critical of any assumption that civilians in this sample can represent civil society at large. Two separate efforts deal with this.

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[7] The civilians with professional military education are found to be closer to the military in some particular dimensions of casualty aversion than to other civilians. In my own study, using the ACSC student essays, if this trend is replicated the hypotheses tests will be made more difficult.

First, the essays were examined with a complementary sample of political science and history graduate students. While the graduate students do not share the occupational responsibilities, they were familiar with the issues raised in the particular analysis and possessed at least a minimal competence due to their education. The graduate students were found to be significantly different than the defense civilians in the sample; even more, the graduate students were different both from other civilians in other domains and from the military in the essay sample. (Details on this test are in Appendix E.) This test bolstered the idea that civilian subgroups ought to be treated separately, but did not provide additional information that might have allowed inferences about where civilian leaders and experts might trend, if they also had completed analytic essays.

Second, relative to the larger study a clear subgroup of civilians will be established as *defense civilians*—those government employed civilians who by organization or training are clearly more affiliated with the military organization(s) than any other civilians, whether in government or out. This classification has equivalents in the other strategy domains, and also allows examination of Feaver and Gelpi's finding that defense civilians may be intrinsically different.

2. Organizational Strategy: The doctrine domain compares service basic doctrines and vision statements with three types of extra-military doctrinal statements: the National Security Strategy (NSS, produced by the White House or National Security Council staff), National Military Strategy (NMS, produced by the Defense Department and Joint Chiefs of Staff), and reports from non-governmental or independent organizations on the Quadrennial Defense Review and

national security. While the NSS may have military personnel involved in its development, it is the best example available of a *civilian leadership* document that addresses broad marshalling of resources in pursuit of general national objectives without extensive participation by the military—in other words, it offers the most parallel and salient examples opposite basic military doctrine and vision statements. Civilian leadership, those civilians either in the Administration or Congress but not the Defense Department, is thus a second subgroup of civilians.

The National Military Strategy (NMS) is a Defense Department document that has direct and significant military involvement through the Joint Chiefs of Staff. It is analyzed and treated as a *defense civilian* example of military doctrine, however, because it is produced under the authority, supervision, and participation of the Secretary of Defense and many other defense civilians. In addition, NMS documents tend to be more focused on broad political objectives than military doctrine is, and are often rewritten with changes in civilian leadership and the NSS. These factors argue for treating NMS as some form of extra-military strategy.

Non-governmental national security reports, the results of US commissions on national security, and semi-independent expert reviews of national security (such as the 1997 National Defense Panel review of the QDR) and statements comprise a third type of extra-military organizational strategy. Each of these groups or organizations are treated as *civilian experts*—individuals who by training, expertise and/or appointment are non-governmental civilians with some degree of competence in strategy. The data set purposely avoids using products by military service advocates (e.g., the Air Force Association or Naval Institute) in order to keep the civilian categories of leadership, defense, and outside experts as separable as possible.

3. Operational and Planning Strategy: Both the operations and planning domains compare military officer statements on Kosovo and national missile defense with a mixed sample of civilians producing speeches, analyses or reports, or called to testify in congressional hearings—primarily recognized civilian 'experts', administration appointees and staffers, and career government personnel. All of the data available in these areas thus conforms well to three subgroupings of civilians—leadership, defense, and expert. (Note that congressmen and senators in hearings are treated as civilian leaders.)

An affiliation issue that does arise in these two domains concerns retired military officers. Public debates about operational Kosovo strategy (particularly prior to and during Allied Force) rarely receive open participation by active-duty military officers.[8] Comparing military and civilian operational or planning strategy requires openly published statements, however. Fortunately, the tendency in operational situations in both the media and Congress is to invite retired general officers to voice service views, concerns, and perspectives. These retired general officers both possess significant and authoritative competence to represent their services, and are simultaneously unbeholden to civilian authority when making such statements. Thus, several instances of service-oriented strategy declarations in these domains come from retired officers, and are not classified as a separate category. Additionally, it must be noted that

[8] In fact, Air Force Chief of Staff General Michael Dugan was asked to retire during the run-up to Desert Storm because of some relatively parochial comments made in public.

in contrast to the Cold War period, in 1995-2000 there were no problematic situations of senior government officials who also were retired military officers.[9]

A final issue that primarily arises in these two domains concerns the "joint military." Following the 1986 JCS reorganization, the idea of a joint military profession (or, colloquially, "purple suits"[10]) received significant attention. JCS staff and portions of regional commands (in particular, their Commander in Chiefs or CINCs) are considered, once in position, to no longer represent their services but rather the US military at large. The extent to which this objective is realized is debated both within and without the military; however, it is clear that the JCS Chairman and occasionally regional CINCs take efforts to be service-neutral parties in public statements.[11] Within the data set collected, joint military positions fortunately present only a few problems. Statements by CJCS concerning organizational strategy and Kosovo are treated as military, but non-service oriented (a joint classification.) In contrast, statements by Gen. Wesley Clark, NATO commander during Allied Force, were treated as military and Army oriented. This choice rests upon this author's argument that Gen. Clark's subsequent replacement by an (unprecedented) US Air Force general reflects some service-oriented issues present during

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[9] One might consider this almost providential, as it appears the 2001 change in US administrations could present more than one such problem for similar studies.

[10] This term is used mostly within military circles, and refers to a "fifth color" for uniforms that represents a metaphorical blending of the current services.

[11] Betts, for example, considered the JCS as being in the 'gray area' between professionalized politicos and politicized professionals. While the service Chiefs arguably still represent their service interests, and are salient to the issues in my study, the Chairman and his Vice, regardless of their uniforms, are clearly military but debatable as service representatives. All military officer statements are analyzed, but I control for these positional differences, including whether the officer is in a "joint" position established by the Goldwater-Nichols Defense Reorganization Act (1986). This may become most important in the cross-service comparisons.

Kosovo. In any event, that portion of the data does not affect the research's results, if others object to this assumption.

By using Russett's idea of comparable subgroups, and focusing on this study's data or domains of strategy, group salience and military affiliation factors lead to eight classifications of civilians and military. Civilians comprise three groups: civilian leadership, defense civilians, and (non-governmental) civilian experts. The military comprises five categories: Air Force, Army, Navy, Marines, and joint. Table 3 below shows a pre-analysis classification of data by strategy domain and actor. Each unit of data is a "chunk" (average 300-word text), so the cell counts show a per-unit count of data in these categories for each of the strategy domains.[12]

Looking at column 2, Analysis, for example, one sees that the data set has no essay texts representing either civilian leaders or civilian experts (due to the nature of the military college class). Column 5, Planning, also shows there were no Marine Corps attributable statements on National Missile Defense. A final observation concerns stratification: one can see that each domain is weak in different types of actors; but across all domains (the frequency column) the data sample provides fairly balanced representation for all the actors under study. (Air Force over-representation is mostly due to the Analysis domain, which uses strategy essays from the Air Command and Staff College.)

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[12] By "per-unit" I mean each 'chunk' or data point has an author who is classified to a particular category. Thus, the total numbers shown in the table are not separate individuals but textual units with civilian or military authors.

	Analysis *Strategy Essays*	Organization *Doctrine*	Operations *Kosovo*	Planning *NMD*	Totals	Frequency
Civilian Leaders	0	314	354	70	738	0.18
Defense Civilian	91	95	117	154	457	0.11
Civilian Expert	0	156	115	125	396	0.10
Air Force	493	235	51	99	878	0.21
Army	244	411	50	62	767	0.19
Navy	182	232	16	19	449	0.11
Marine	47	319	18	0	384	0.09
Joint	0	29	31	1	61	0.01
Totals	1057	1791	752	530	4130	

Table 3 – Textual Units per Actor and Domain

Cultural Factors and Symbolic Language in Strategy

> We can now see that the assertion that a major military development, or the plan for one, should be a matter for purely military opinion is unacceptable and can be damaging. Nor indeed is it sensible to summon soldiers, as many governments do when they are planning a war, and ask them for purely military advice. But it makes even less sense for theoreticians to assert that all available military resources should be put at the disposal of the commander so that on their basis he can draw up purely military plans for a war or a campaign.[13]

The issue that Clausewitz is addressing in discussing the interplay of politics and war is over control and development of strategy. Organizational theory proposes that the military or the services, as organizational units themselves, will advance their own tools and solutions to problems. While this behavior is much like Kaplan's law of the instrument[14]—the boy who has

[13] Clausewitz, "War is an Instrument of Policy," p. 607.

[14] Abraham Kaplan, The Conduct of Inquiry (Transaction Publishers, 2nd ed. 1998), p. 28.

a hammer will find that everything needs pounding—it also is supposed to reinforce group autonomy, legitimacy, and position in larger organizations or governments.[15] In terms of this study's purpose, one problem of interest is whether strategic discourse reveals civilians or the military vying for control of strategy by advancing their own tools and symbols.

This proposition that groups may reason using some fundamental ideas or assumptions has its roots in both culture studies and organizational theory. The organizational explanation stems from Graham Allison's original proposition that organizations advance their own tools and solutions to problems, often to the exclusion of other alternatives.[16] International relations theorists, for example, propose that military responsibility for national security and fighting capabilities dictate military recommendations for active violence that will use current capabilities, and national policy to fund development of these capabilities.

> For the military services, the size of their budgets—both absolutely and relative to those of the other services—is a measure of organizational success...Defense budgets reflect the military capabilities that define the Pentagon's national security mission, the organizational objectives of the services, and the outcomes of the interactions among participants with different program priorities.[17]
>
> Academics who have argued that military organizations tend to stagnate except when goaded by some outside force, have tended to make some implicit assumptions about the nature of military organizations, typically portraying them as monolithic units pursuing or protecting their self-interests, which are defined

[15] For the application of organizational theory to military organizations, see Posen, The Sources of Military Doctrine, pp. 41-46; Jack Snyder, "Civil-Military Relations and the Cult of the Offensive," p. 21-22, and Snyder, The Ideology of the Offensive (Cornell University Press, 1984), p. 211; and Alastair Johnston, "Thinking about Strategic Culture," pp. 56-60.

[16] Graham Allison, Essence of Decision (Boston: Little, Brown and Co., 1971), Chap. 3. To be fair, Allison's organizational model has a much richer description than my simplification, and includes the concepts of SOP's (standard operating procedures), programs and repertoires, and problem-directed search.

[17] Kanter, Defense Politics, p. 5.

> in fairly narrow terms—bureaucratic "turf," autonomy, protection of positions of power within a hierarchy, or marshalling of material resources.[18]

The organizational approach tends to focus on parochialism and self-measurement needs driving a conscious effort to reason about strategy with one's own symbols or to advance one's own tools. Competition between services is often de-emphasized in this approach, and senior military decision-makers are characterized as advancing all service priorities.[19]

Culture studies or organizational culture theory advances a different perspective. If the military is composed of distinctly different organizations in terms of structure, function and culture, then individuals of these groups may innately or subconsciously possess differing conceptions of proper tools for conflict and the symbols expressed in strategic analysis. Don Snider and Carl Builder suggest the existence of service culture *orientations*, where the Air Force focuses on technology, the Army soldiers and the human dimension, and the Navy independent control and insularity.[20] Each of these orientations reflects propositions about what each service values, and their beliefs and assumptions about the nature of conflict. James Burk puts it like this:

> Consider also organizational differences and the still intense rivalry among army, navy and air forces. The bases for these differences can be explained in part by

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[18] Rosen, Winning the Next War, p. 18.

[19] For instance, Posen relegates interservice differences over forces to tactics rather than military doctrine; Sources of Military Doctrine, p. 13-14 and footnote 3. In a similar vein, Rosen says that, "If the military organization is healthy, there is some general agreement among the various branches about how they should work together in wartime;" Winning the Next War, p. 19. Kanter presents a more detailed theory, writing that the intensity of interservice rivalry depends on the level of civil-military conflict, the strength of civilian leadership, and the size of the defense budget; Defense Politics, Chap. 3. For him, there are structural incentives in each decision context that may or may not promote interservice competition.

[20] Snider, "An Uninformed Debate on Military Culture," pp. 18-20.

> the self-interested competition for scarce resources...yet more is at work than competitive self-interest. Each service fights in a unique environment to gain effective control over the land, sea, or air. The unique features of these environments affect weapons technology, the way force is organized and controlled, and, as a result, fundamental beliefs about the nature of war and the qualities of effective leaders.[21]

Jack Snyder summarizes the cultural approach in stating, "Culture, if one may call it that, enters the story when a distinctive approach to strategy becomes ingrained in training, institutions, and force posture."[22]

The interesting question that arises here is whether, apart from studying differences in civilian and military *actors* in their strategic reasoning, one can also assess differences in civilian and military *ideas*. On the one hand, if this or other studies can show that civilian and military actors possess significantly different characteristics in their reasoning, these differences could be attributed in part to either organizational or cultural differences, as James Burk suggests. On the other hand, the cultural approach suggests that certain ideas and symbols arise in each institution, and that these ideas are then used in reasoning and discourse. Is it possible in this same study to track or assess group tools and symbols in strategic reasoning, independent of the actor using them?

Research on organizational culture and symbolic strategy provide a framework for thinking about the influence of tools and symbols. Organizational culture scholars propose that culture may impact strategy by:

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[21] Burk, "Military Culture," p. 455.

[22] Snyder, "The Concept of Strategic Culture: Caveat Emptor," p. 7.

1. Shaping a 'toolkit' of habits, skills and styles from which people construct 'strategies of action'[23]
2. Setting the boundaries of strategic debate by language, logic and conceptual categories[24]
3. Guiding and circumscribing thought, influencing the way strategic issues are formalized, and setting the vocabulary and conceptual parameters of strategic debate[25]

What is common to these ideas is the influence of language, conceptual categories and vocabulary on strategic debate, and this closely parallels ideas about symbolic strategy. Alastair Johnston writes that, "according to a substantial body of literature on the role of symbols in human behavior...symbols can be used for three major related purposes, with differing effects on operational strategic choice."[26] These three purposes are:

1. Autocommunication—linguistic devices designed to reinforce the sense of competence and legitimacy held by decision-makers
2. Official language—concepts and language that constrains alternative strategies, undermines challenges to authority, mobilizes support and upholds control of the decision process
3. In-group solidarity—language that creates distance between the values of the in-group and those of 'others' and helps to legitimize externally directed behavior

The concept of an "official language" and its role in strategy discourse does enable a direct measurement of military tools and symbols, because within the timeframe of this study each of the US military organizations has provided a roadmap to their own symbols. Within the last

[23] Ann Swidler, American Sociological Review 51:2 (April 1986), p. 273-277.

[24] Johnston, "Thinking about Strategic Culture," p. 58.

[25] Snyder, "The Soviet Strategic Culture: Implications for Limited Nuclear Options," RAND R-2154-AF (RAND Press, Sept. 1977), p. 9.

[26] Johnston, "Thinking about Strategic Culture," pp. 56-59.

decade, a large number of corporations and governmental agencies have published "vision statements":

> They grew out of the Total Quality management movement of the 1980's and have become an inextricable part of corporate culture. Every large organization has one. So do the Joint Chiefs of Staff and each of the armed services...Vision statements express a sense of identity, purpose and direction. And since top management tends to take a personal interest in them, they are often a good indication of an organization's innermost beliefs and intentions.[27]

Vision statements provide organizational-level perspectives on forces, strategy and conflict. In the course of expressing purposes and direction, these statements invoke symbolic phrases that are intended to be ingrained in training, institutions, and force posture. In addition, in the dynamics of strategic discourse such symbols can be invoked independently of actors involved: organizational ideas may be voiced by non-organizational actors in order to communicate and advocate various courses of action.

A codebook for analyzing the advancement of military tools and symbols in different strategy domains has been constructed using service vision statements as a primary source. Service vision statements were manually analyzed for repeated phrases and words, and distinctive phraseology, to create four coding categories: Sym-AirForce, Sym-Army, Sym-Navy, and Sym-Marines. In addition, a Sym-Civil category was constructed by analyzing the most recent National Security Strategy in a similar manner. These symbolic dictionaries are purposely short and focused; they contain only frequently repeated and relatively unique phrases for each of the actor groups, and their selection was admittedly inductive. Since the intent is to

[27] John Correll, "Visions," Air Force Magazine 83:9 (Sept. 2000), p. 35.

measure how often such symbols are invoked in strategy, and in what ways, the five categories were directly transformed to five variables using term counts—in other words, these symbol variables are simply counts within the textual units of organizationally unique terms and phrases.

Sym-USA	Sym-USAF	Sym-Navy	Sym-USMC	Sym-Civ
deployable	aerospace	expeditionary	air-ground	democracy
forward-deployed	airmen	forward-deployed	amphibious	democratic
institution	airpower	littoral	battles	economic
invincible	effects	littorals	forcible	engagement
land	expeditionary	maritime	marine	humanitarian
safeguard	global	naval	marines	leadership
safeguarding	responsiveness	presence	scalable	prosperity
soldier	targeting	projection	self-contained	security
soldiers	versatility vigilance	sea	warfighting	

Table 4 – Symbolic Categories

These symbol variables facilitate some cross-cutting analysis of both reasoning characteristics and the hypotheses in the study. Rather than only examining the differences between actors, one can also assess the relevance of cultural symbols in strategy. For instance, one could find that offensiveness in strategy is reduced (all else being equal) when civilian symbols are invoked, and conversely offensiveness increased when military symbols—or symbols of particular services—are invoked. In addition, the symbol variables afford at least a partial test of an attribution question: if actors are found to be significantly different in strategy, and their cultural symbols are also significant in these differences, one may conclude that cultural

theory has some merit. As we will find in the following chapters, some limited evidence along these lines exists and carries some interesting implications.

Strategic reasoning factors

While this study treats strategy as a conceptual communication relating means and ends, and focuses on national strategy with military implications or aspects, there is at least one additional distinction to be made concerning strategic reasoning. In his investigation of the role of military advice in cold war decision-making, Betts separated cases into two categories: the decision to intervene (*whether* to do something) and the options for intervention (*how* to do something.)[28] He argued that these were two different domains of policy-making, and that the significance of the military role and its behavioral tendencies varied in these domains. His findings corroborated his intuition; unfortunately, Betts did not have explicit evidentiary rules for classifying cases, and admitted his own data categories were subjective and interpretative. The whether/how to distinction is also significant for the study of strategic reasoning, but raises a similar challenge in study design—how does one classify particular strategies as being one or the other type?

Strategic reasoning and analysis can be made in the course of deciding whether to act in situations, and—once the decision has been made—how to act. The stereotypical view of military strategy is that "whether to" decisions are left to policy makers and elected officials, while "how to" is well within the military's authority, competence, and responsibility. As Betts

[28] Betts, p. 210 and Appendix 1 (Summary of case findings.)

puts it, "In theory, foreign policy determines military strategy...Reality is rarely so simple."[29] Many strategy arguments may appear to be "how to" conceptions, yet are intended as more political "whether to" justifications; likewise, some "whether to" arguments may significantly constrain or direct "how" a strategy is put together. Graham Allison argued that contained within the Air Force's reticence for the success of a surgical strike on Soviet missiles in Cuba was an Air Force preference for a massive air strike. Thus, the Air Force answered a clear "how to" question in a manner designed to influence "whether" to act.[30] Not only are the two types of strategic reasoning different, they also overlap and may form a feedback loop.

The challenge, then, is to somehow capture the distinction in strategic reasoning in order to assess whether there are differences in behavior, yet also make valid comparisons between subjects and their communications. Because of the existence of feedback, and the intent by some communicators to present arguments in one form to influence another part of a decision process, a systematic classification may be unobtainable. It may not be possible to assess individual instances of strategy as whether/how to. However, it may be reasonable to treat or classify some strategy *domains* as being primarily one or the other type of reasoning. For instance, the strategy analyses of the first domain in this study are all re-examinations of Gulf War strategy: that is, they take for granted the decision to intervene, and discuss and recommend "how to" better execute that intervention. The organizational domain, given its more generic approach to objectives and means, is also more arguably "how to" strategy than

[29] Betts, p. 13 and p. 96.

[30] Allison, Essence of Decision, p. xx.

"whether." National missile defense statements and reports, on the other hand, are—as NMD is a planning strategy or open security issue—a "whether to" type of strategic reasoning. Finally, Kosovo strategy testimony presents the possibility of both types of reasoning, in that pre-strike discussions (up through March 1999) can be considered mostly "whether to" reasoning, while post-initiation statements (April and May) could be treated as "how-to" reasoning. Table 4 below shows the pre-analysis classification of text units per domain using this logic.

	Analysis *Strategy Essays*	**Organization** *Doctrine*	**Operations** *Kosovo*	**Planning** *NMD*	**Totals**	**Frequency**
How-To	1057	1791	103	0	2951	0.71
Whether-To	0	0	649	530	1179	0.29

Table 5 – A Priori Strategy Contexts of Data

These classifications are by no means perfect, but they allow the opportunity to assess differences in strategy without requiring a systematic rule or extensive, and coder-subjective, interpretation. Simultaneously, they include all data for analysis, rather than arbitrarily excluding some communications because they are of a stereotypical, "non-military" type, such as "whether to" instances of strategic reasoning.[31] Theoretically, one can examine whether Betts'

[31] Without this kind of approach, a study could face a serious internal validity threat: if, for instance, civilians more often address "whether", and military "how-to" (at least from appearances), how could one even begin to compare their strategies? It is taken as a central assumption of this study that such categorization of civilians and military into predominately different "types" of strategy is false and unsupportable. Civilian and military persons do both engage in comparable forms of strategic reasoning.

conclusions extend across the data and subjects of this study. His primary dependent variable was aggressiveness of military and civilian actors, and he found that the military was much more aggressive in the "how-to" context of crisis strategy than the "whether-to." Thus, we can hypothesize that military offensiveness will not only be greater than civilian offensiveness, but that controlling for strategy context will reveal most of any offensiveness 'gap' in how-to contexts.

Analysis of Civil-Military Relations and Strategy

Content analysis is used in this study as a measurement tool. Given the subject area of US national strategy as expressed in a variety of texts, content analysis assesses the existence and magnitude of certain terms which have been pre-selected and designated as representing certain conceptual categories. These categorical results are largely intermediate measures on the road to analyzing civil-military relations and strategy; they are all either directly used or transformed into the variables used in statistical analysis. In addition, several factors or other variables are derived from the nature of the data itself to aid in exploring the variety of questions and hypotheses.

Table 6 below outlines this study's design in a tabular form. It shows the primary relationships between the concepts and variables described in this and previous chapters, and the study's questions and hypotheses raised in Chapters 1 and 2.

The most feasible way to account for these distinctions in strategy is by domain classification, rather than interpretation of motives and intent.

Analytic Variables	Key Measurements	Study Focus
Dependent	***Offensiveness*** (Offense-Defense categories) ***Use of History*** (Case counts* CBR language) ***Uncertainty*** (Uncertainty category)	Primary questions and Propositions A, B, C
Independent	***Civilians*** (Leadership, Defense, Expert) ***Military*** (Air Force, Army, Navy, Marine, Joint) ***Symbols*** (Air Force, Army, Navy, Marine, Civilian)	Hypotheses A1-A3 and B1-B3 Hypotheses C1-C2
Control	***Strategy Context*** (How To /Whether)	-Check Bett's findings of Context impacts

Table 6 – Study Design

In order to both characterize the nature of civil-military relations and strategy, and test the presented hypotheses and tangential issues, this study engages in three types of statistical analysis. Each type of analysis either provides essential answers or reveals important aspects of the study questions. Though there are a variety of statistical techniques available in social science research, the techniques for this study are relatively simple: analysis of variance (ANOVA) tests and simple linear regression models.

1. ANOVA: ANOVA is a statistical technique for analyzing whether data or responses from two or more groups are significantly different from each other. It is commonly used when the independent variables are ordinal or nominal in nature. The primary purpose of this study—to ascertain the differences between civilians, the military, and their subgroups—is achieved by

using ANOVA of these group's behavior (or 'responses') in strategy characteristics. "Responses" are dependent variables, and groups are defined by actors. Various ANOVA tests will show whether the strategy of each group is significantly different on the dependent variable dimensions. The substantive impacts of differences (if found) will be assessed through more qualitative interpretation. These tests therefore will primarily address Hypotheses A1-A3 and B1-B3.

2. Regression models: Regression models are techniques for analyzing whether one or more factors (independent variables) can be used to predict outcomes (dependent variables.) Such models can be used in different ways; some researchers try to establish the best prediction relationships possible (models which can be used with more accuracy in predicting outcomes), while others try to establish what factors have significant relationships with the outcomes (the accuracy of the overall model is less important than determining which factors are closely related to outcomes.) In this study, some simple linear regression models are used to assess the significance of cultural symbol variables to the dependent variable outcomes. In other words, regression models in this study will help to identify which symbolic variables have significant relationships with the concepts of offensiveness, use of history, and uncertainty. While these tests will complement assessment of Hypotheses A1-A3 and B1-B3, they will primarily support the C1 and C2 hypotheses dealing with culture.

3. Exploratory analysis: ANOVA, regression and a number of descriptive statistical techniques are used to assess the relationships of strategy contexts with the dependent variables. The tests and results of the control variables and hypotheses will be presented at various points in the

following chapters. For the most part, this is tangential to the main study and involves issues raised in this chapter.

* * *

The next three chapters report the results of both content and statistical analysis in pursuit of the understanding of civil-military relations and strategy. Chapter 5 looks at Offensiveness; Chapter 6 Uncertainty; and Chapter 7 Use of History. While these chapters possess some interesting findings in themselves, Chapter 8 examines patterns across all three variables and assesses the implications for civil-military relations and strategy, and the cultural hypotheses. Chapter 9 evaluates a number of issues that this research suggests for future studies.

CHAPTER 5

OFFENSIVENESS

In democratic armies all the soldiers may become officers, and that fact makes desire for promotion general...promotion in times of peace must be slower in democratic armies than in any other armies... therefore all the ambitious minds in a democratic army ardently long for war, because war makes vacancies available and allows violation of the rule of seniority...We thus arrive at the strange conclusion that of all armies those which long for war most ardently are the democratic ones, but that of all peoples those most deeply attached to peace are the democratic nations.

Alexis de Tocqueville, Democracy in America

The army is the impersonation of force. It does not deliberate, it acts; it does not decide, it executes; it does not reason, it shoots. Militarism is the very antithesis of Democracy; they do not grow in the same soil; they do not draw their nourishment from the same source.

William Jennings Bryan, "The Army"

For most states, it is their military that fights wars and conflicts, and the state's military officers possess the responsibility for that fighting and (generally) careers centered on the responsibility. It might therefore seem reasonable for military officers to be more offensive than others in their state merely due to their respective functions; but it is not necessarily true. In contrast one can logically argue that the greater risk to life might make military officers more cautious than those who decide to fight but risk other's lives; and one might also believe there is

more to war-fighting decisions than base motivations of career advancement suggested by Tocqueville. There are other explanations offered by scholars for offense motivations of military officers and military organizations, and these explanations have been integrated into a number of studies of domestic and international behavior. Yet few studies have substantiated by systematic comparison any difference in offensive preferences in strategy between civilian and military individuals.

How is *offensiveness* expressed in strategy? What are the real differences between civilian and military strategy in offensiveness? And does symbolic language, the context of the strategy decision, or the domain of strategy matter?

Offensiveness in Strategy Language

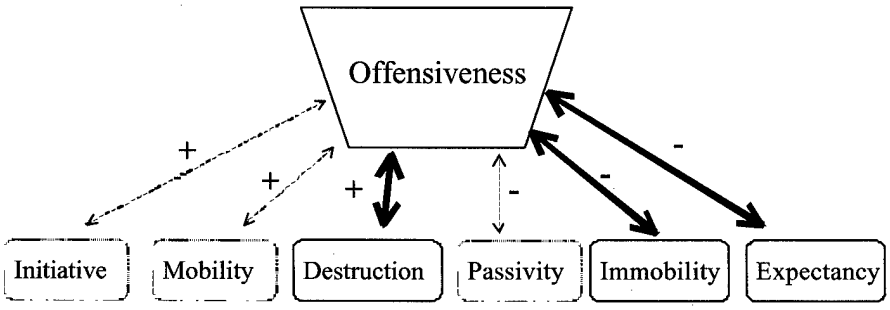
The first step in systematically appraising offensiveness in strategy is to determine how and what one is measuring. Chapter 3 discussed the various definitions of offense used by scholars, and noted the lack of any specific definition of "offensiveness" as a motivation or behavior preference. Instead, a conceptual definition of offensiveness was inferred from a variety of propositions and theories. The conceptual definition proposed that offensiveness is composed of three positive and three negative characteristics or elements of strategy: mobility (+), initiative (+), destruction (+), passivity (-), immobility (-), and expectancy (-). These characteristics are measured in strategic language through dictionaries of associated words and terms. (See Appendix C for specific dictionaries.)

Discovering the particular combination of these elements that best represents offensiveness in strategy is a matter of analysis. By performing a dual or parallel analysis that compared human interpretation of offensiveness and machine counting of the offensiveness elements, it was possible to construct a formula for measuring the degree of offensiveness in strategic language.[1] Figure 4 below shows that the best correspondence between human interpretations of offensiveness and machine classification of strategic language is achieved when offensiveness is a weighted combination of the categories of destructive, expectant and immobile language.[2]

This operationalization is interesting for *how* it implements the behavioral meaning of offensiveness. Although theoretically we expected initiative, mobility and destruction terms, moderated by passivity, immobility and expectancy, to indicate offensiveness, the best indication of presence and direction is provided by destructive terms for positive offense, and immobility and expectancy for 'negative offense,' or defense. Literally, then, offensiveness is destruction-oriented action words *less* words indicating that one is staying in position or waiting for another's action. Put another way, in this study, offensiveness in strategy is defined as the amount of language indicating destructive intentions, unless that language is combined with words that show one is not moving, or is waiting for someone else to act first.

[1] See Appendix A for a full description of the parallel analysis.

[2] The formula reflects both the weights (multiplier) and the normalization (dividing by the mean score) of the category counts.



Offensiveness = .628* Destr /1.21 - .706* Immob/1.29 - .485*Expect/.651

First discriminant function only; explains 77.8% of variance

Chi-square = 89.8 , df = 12, sign. P<.000

Figure 4 – Measuring Offensiveness

While this formulation provides a systematic and quantifiable measure of offensiveness, the reader may be curious about an "offensive" text's content and the categorical coding performed by the computer. Below are some examples of texts coded in both directions, along with their scores. Note, however, that they are only excerpts of passages that average 300 words in length, and therefore they only provide the "flavor" of the text. To provide a "feel" for the automatic coding function, **Destruction** terms are bold, Immobility is underlined, and *Expectancy* is in italics. The score reported is calculated from the entire 300-word passage, not the excerpts shown here.

Positive Offensiveness

> The **attack** erupts in a powerful and violent **assault** upon the objective. Its purpose is to **destroy** an enemy force or to seize the ground it occupies…Synchronized fires, maneuver, and combat support are imperative to achieve superior combat power at the point of the **assault**. Firing artillery

preparations and suppressive fires, isolating the enemy force, concentrating combat power, and overrunning the enemy all combine to **destroy** the *defending* force. [Army Field Manual 100-5, section 194] ***Score: +9.1***

A hasty **attack** is an **attack** in which the commander decides to trade preparation time for speed to exploit an opportunity. A hasty **attack** takes advantage of audacity, surprise, and speed to achieve the commander's objectives before the enemy can effectively *respond*...A deliberate **attack** is a type of offensive action characterized by pre-planned and coordinated employment of firepower and maneuver to close with and **destroy** the enemy. Deliberate **attacks** usually include the coordinated use of all available resources. [Marine Corps Warfighting Pamphlet 0-1, section 103] ***Score: +7.1***

A key part of counterinformation is "information **attack**." Information **attack** refers to those activities taken to manipulate or **destroy** an adversary's information or information system without necessarily changing visibly the physical entity within which it resides. Although different from the conventional concepts of physical and electronic **attack** (EA), information **attack** can be an equally important part of air warfare...Strategic **attack** is defined as military action carried out against an enemy's COGs or other vital target sets, including command elements, war-production assets, and key supporting infrastructure. It affects a level of **destruction** and disintegration of the enemy's military capacity to the point where the enemy no longer retains the ability or will to wage war or carry out aggressive activity. [Air Force Doctrine Document 2-1, section 15] ***Score: +5.5***

With respect to the language that is used, we could use other types of words which would then be an overstatement. For example, **destroy**, and that would connote you had to **destroy** each and every element in Milosevic's force in order to achieve your military objective. We think that the words that we have used about degrading and diminishing and **damaging** his military to the point where we achieve the political objectives is the correct one. I notice the Chairman, I didn't realize this before, but he added the word "**decimate**"... And so that is the reason why we didn't want to overstate it, and you say **destroy** and the criticism would be you haven't **destroyed** everything yet, so we think the calibration is right as far as the language and goals. [Secretary of Defense Cohen statement to House Armed Services Committee, section 16] ***Score: +3.1***

Unfortunately, the military instrument of power could have done a better job achieving these objectives...The military objective to eject forces from Kuwait

was achieved without enough **damage** to the vaunted Republican Guards, while almost totally **destroying** the Iraqi regulars. Given that General Schwarzkopf's military objective was to **destroy** the Republican Guards, the military action during the war must be called a military failure...Essentially the USMC forces **attack** into Kuwait was too soon, and the XVIII Airborne Corps and VII Corps actions began too late. Had the timing of these **attacks** been different...the result would have been a **destroyed** Republican Guard and ejection of forces from Kuwait. [Naval officer analysis] ***Score: +4.2***

When we are referring to planning for the end state following hostilities, there are many items and thoughts to be discussed. But, first and foremost is the fact that we must **win** militarily... We see that we still need to kick Iraq out of Kuwait, restore the legitimate Kuwaiti government, and ensure that Iraq is not a threat to it's neighbors... Rather than risk the loss of many US service men and women, we used our technological superiority and our targeting science to hit what meant most to Saddam. [Marine officer analysis] ***Score: +3.6***

The rationale for the cease-fire at the time was that the strategic objective (those of the UN resolution) had been met - Kuwait was liberated, and there was no longer the need to risk more American lives. The US forces, however, had not achieved all their supporting objectives. Most notably, the Republican Guard had not been **destroyed** (and we did not know if all the WMD were effectively **destroyed** either). This is where I feel the US forces failed in their ability to attain a better state of peace...The US forces objective was not just to **defeat** the Republican Guard or render it "combat ineffective," but to **DESTROY** the force. That goal was not fulfilled and half the Republican Guard got away. [Air Force officer analysis] ***Score: +3.6***

Negative Offensiveness

The U.S. government is responsible for protecting the lives and personal safety of Americans, maintaining our political freedom and independence as a nation and promoting the well being and prosperity of our nation. No matter how powerful we are as a nation, we cannot always secure these basic goals unilaterally. Whether the problem is nuclear proliferation, regional instability, the reversal of reform in the former Soviet empire, international crime and terrorism, or unfair trade practices, the threats and challenges we face frequently demand cooperative, multinational solutions. Therefore, the only responsible U.S.

strategy is one that seeks to ensure U.S. influence over and participation in collective decisionmaking in a wide and growing range of circumstances. [National Security Strategy of 1996, section 29] ***Score: -6.0***

Security forces position themselves between the main force and the enemy. Security elements are dependent on the movement of the main force. As a result, the operations of the security force must be closely coordinated with the concept of operations...The security force reduces the chance of surprise to friendly forces...[and] gives the commander the time and space necessary to counteract an enemy threat. [Marine Corps Warfighting Pamphlet O-1, section 67] ***Score: -9.2***

The current approach to addressing national security engages the Department of *Defense* and services too often and too quickly in situations that should have been resolved by non-military means. Failure to devote adequate attention and resources to promoting regional stability and security increasingly results in the use of military forces to restore social normalcy in areas not central to U.S. strategic interests, such as Somalia, Haiti, and Rwanda. Put in a more positive way, by strengthening our diplomatic, political, economic, and other assistance efforts, we may be able to prevent the breakdown of order, which requires the use of military force. [National Defense Panel 1997 report, section 43] ***Score: -9.6***

Finally, we must continue to develop a robust technology base to underlie these two programs--both the TMD program and the NMD program--which will allow us to develop and deploy more advanced missile *defense* systems over time as the threat systems they must counter become more advanced...the Department's immediate missile *defense* priority is to develop, procure, and deploy Theater *Defense* systems to protect forward-deployed elements of the U.S. armed forces, as well as allies and friends, against cruise and ballistic missiles (as well as aircraft). [Statement of Honorable Jacques S. Gansler, USD/AT, section 3] ***Score: -13.2***

In conducting a delay, commanders deploy their maneuver forces forward and disperse their CS and CSS units farther to the rear to reduce their vulnerability. Artillery fire control, generally centralized in the *defense*, should be in position to support all delaying units. When feasible, commanders designate maneuver reserves and use them to disengage committed units and retard the enemy's advance by blocking or counterattacking his vulnerable forces. [Field Manual 100-5, section 224] ***Score: -13.9***

Hypothesis A1: Militaries will prefer and advance more offensive strategies and foreign policy solutions than their civilian counterparts.

Sometimes a proposition or hypothesis generates additional interpretations once someone attempts to investigate it. The first civil-military hypothesis in this study is one example: there are several ways to interpret militaries being more offensive in strategy. For instance, is this simply overall offensiveness—an average for civilian and military groups across examples and domains available? Or is it offensiveness by count—taking X examples each of civilian and military strategy, are there more military strategies that are offensive than civilian? Or could one mean offensiveness by degree—of all strategies examined and found positively offensive, are the most offensive strategies consistently military?

In examining civil-military offensiveness in strategy across the domains of analysis, doctrine, operations and planning, the general conclusion to all of these possible interpretations is that

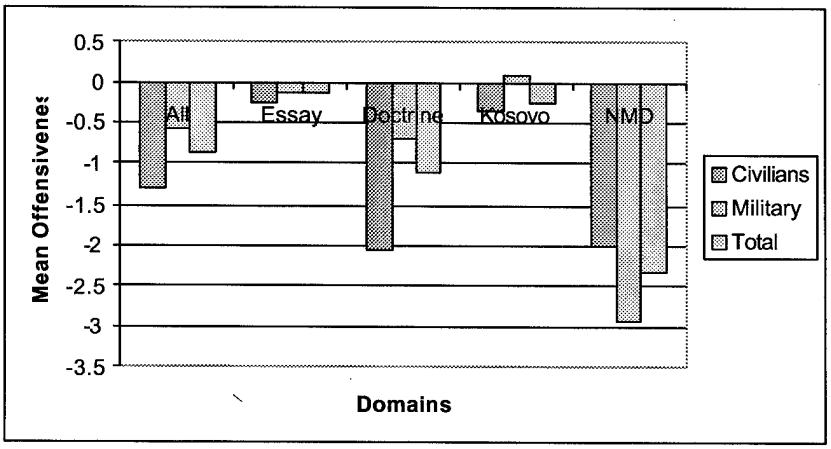


Figure 5 – Offensiveness Averages

militaries are in fact more offensive than civilians—hypothesis A1 is found to be true. Figure 5 shows offensiveness from a perspective of averaging across examples and within domains.

The average offensiveness is higher for the military examples, but an important point to note is that from a qualitative perspective the general stance of strategy appears to be defensive. The data is telling us that, on average, there tends to be more use of words indicating immobility and waiting on another to act, than of decisive action-oriented words. A score of –1 in the manual coding handbooks is equivalent to: "Slightly Defensive: Statements and intentions lean towards defense, but are not clear or unambiguous." Substantively, civilian strategy appears to be always slightly more defensive than military strategy—except for National Missile Defense. In that case there is one true anomaly to examine later—the military is significantly more defensive in NMD questions than are civilians.

Table 7 shows that all differences are statistically significant with the exception of the essays domain; there, the differences still track with other areas, but are not significant.

ANOVA	N	F	Sign.
Overall	4131	143.50	0.00
Essays	1058	1.15	0.28
Doctrine	1791	176.90	0.00
Kosovo	752	17.20	0.00
NMD	530	18.20	0.00

Table 7 – Offensiveness ANOVA

The differences between civilians and military continue to be significant even if one uses different perspectives to examine offensiveness. If, for example, one only selects those data units that were scored as positively offensive—which is 1643 units, or about 40% of the data set—the military remains more offensive in quantity and degree. Table 8 presents this perspective below. The military makes positively offensive arguments about twice as often in the data set, and civilians are only about 60% as offensive as the military in the arguments they do make.

	N	Mean	s.d.	F	Sign.
Civilians	484	0.441	0.746	30.34	.000
Military	1159	0.721	1.008		

Table 8 – Positive Offensiveness Only comparison

All of this would seem to support the arguments of Jack Snyder, Stephen Van Evera, Barry Posen and others who argue that the military may have a penchant for offense, relative at least to civilian elites in their nation.[3] While the implications for theory and research will be developed more later (Chapter 8), there are yet some underlying issues to examine. For instance, Figure 5 shows the most substantive difference between civilians and military is in the

[3] See "Civil-Military Relations and the Cult of the Offensive, 1914 & 1984" by Jack Snyder, and "The Cult of the Offensive and Origins of the First World War" by Stephen Van Evera in Military Strategy and the Origins of the First World War ed. by S. Miller, S. Lynn-Jones and Stephen Van Evera (International Security Reader, Princeton University Press, 1991); and The Sources of Military Doctrine by Barry Posen (Ithaca: Cornell University Press, 1984).

domain of doctrine. Civilians are more than twice as defensive as military in doctrine; and if one focuses only on positively offensive arguments, the military makes more than six times as many offensive arguments in doctrine, and is consistently more offensive in those arguments. Since doctrine describes how one will organize and train to accomplish a function, and the military's function is generally the use of force while civilians possess a broader function, this makes logical sense. However, this finding still highlights this domain of strategy as different from the others.

The first issue, then, is that Doctrine may be a separable domain of strategy. A t-test for differences between domains on the dimension of offensiveness confirms this—between the Doctrine and Kosovo domains, $t = -10.651$ and $p<.000$. This raises a serious question for scholars who examine doctrine in order to generalize to national strategy in crises and war—doctrinal preferences may not translate to 'real-world' strategy. While this will also be examined more later, the indication is that scholars such as Jack Snyder, Doug Porch and Ian Johnston are correct to point out that doctrine may be problematic if taken as evidence of the true intentions of leaders and the military.[4] In both cases, general offensiveness may change—and in different directions for military and civilian leaders—when one looks instead at analytic, operational, or planning strategies.

[4] See "Thinking about Strategic Culture" by Alastair I. Johnston, International Security 19:4, Spring 1995, p. 42; Jack Snyder, "The Soviet Strategic Culture," R-2154, The RAND Corporation, Sept. 1977, p. 5; and Douglas Porch, "Military Culture and the Fall of France in 1940," International Security 24:4, Spring 2000, p. 163-165.

A second issue arises when one poses the question Richard Betts asked in his study: is advice significantly different if the question is "should we do it" versus "how do we do it?" This question is treated as the *context* of strategy in this study, where "whether-to" strategy is any argument that a priori was pondering "should we do this", and "how-to" strategy was considering the practical aspects or particular execution of strategy.[5] For the data in this study, speeches about Kosovo prior to Allied Force deliberated aspects of whether-to get involved, while testimony and texts after Allied Force commenced were more generally how-to accomplish the given objectives. As Figure 6 shows, the context of strategy is very significant in

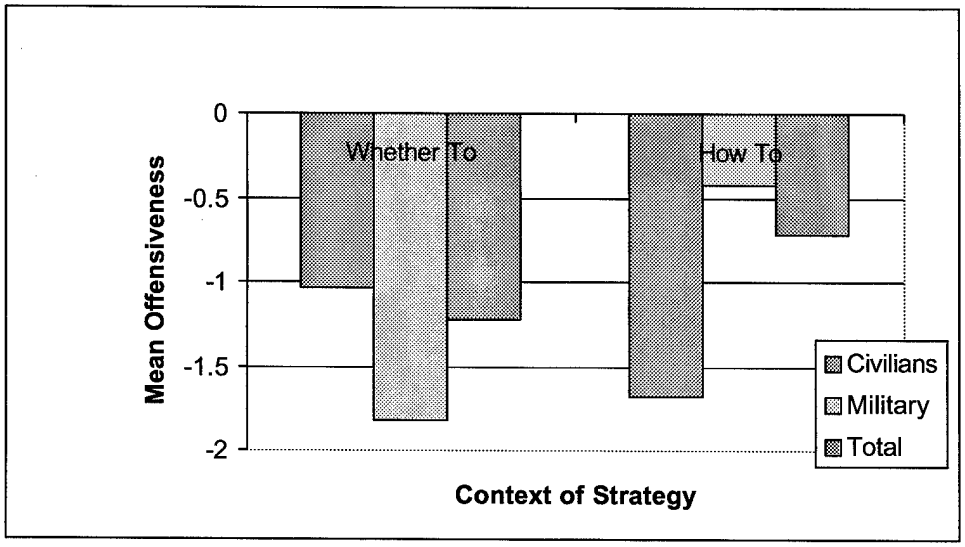


Figure 6 – Offensiveness in Context

[5] Chapter 4 described this division; basically, the Essay and Doctrine domains were mostly "how-to" strategy arguments, while Kosovo had some of each (determined by date of text, where pre-April 99 text was "whether-to" and post "how-to"), and NMD was "whether-to" strategy.

considering civil-military offensiveness: civilians are surprisingly more offensive in whether-to decisions of strategy than are military officers, while the reverse is true in how-to.[6]

Overall, an assessment of hypothesis A1 is that militaries are more offensive than civilians in strategy, with four important caveats:

1. The average offensiveness across all military and civilian strategy arguments—i.e., treating every strategic chunk of text as having equal importance—is negative, meaning military and civilian strategy on average is slightly defensive. This means that in strategic rhetoric, US actors generally communicated defensive motivations for strategy in the 1995-2000 timeframe.
2. National Missile Defense presents an anomalous situation, where civilians continue to be defensive but militaries become sharply more defensive. Something about this domain of strategy—possibly dealing with aspects of homeland defense rather than extraterritorial interventions—invokes more defensive motivations for military actors.
3. The most substantial difference between military and civilian offensiveness in strategy is in doctrine. Doctrine is significantly different from other strategy; and perhaps more importantly, differences between civilians and military are much smaller in analytic, operational, and planning strategy. Doctrine appears to clarify organizational functions, when compared to more "pragmatic" domains of strategy.

[6] F-test on differences in Whether-To strategy was F=33.065, df (1,1177), sign p<.000. F-Test for How-To strategy differences was F=261.294, df(1,2950), sign. p<.000.

4. Context is critical. Civilians actually are more offensive than militaries in considering entry or commitment decisions for conflict; but once the decision is made, civilians become more defensive and militaries sharply more offensive. It is possible that organizational roles play an important part in offensive motivations: an actor exerts relatively more offensive language when it possesses more responsibility for the strategy deliberations.

To this point the focus of discussion and evaluation has been on the civilian-military distinction. Hypothesis B1 changes our focus to subgroup differentiation, and in fact offers some possible explanations for the National Missile Defense anomaly, in addition to uncovering some underlying patterns in military strategy.

B1. The services will vary on offense-oriented strategy preferences, with the Air Force and Navy significantly more offense-minded than the Army and Marine Corps.

There are at least two different perspectives at the root of examining the military services and offensiveness. One could be called technological: a number of military theorists have long held that air power is inherently offensive, and this would imply Air Force strategy should be more offensive than other military strategies.[7] A second perspective could be parochial: both theorists and military experts have suggested that the Air Force and Navy strategists or leaders may have narrow conceptualizations of military power because their services rely predominately on one environment for military force, while the Army and Marine Corps are both team-

[7] See, for instance, 10 Propositions Regarding Air Power by Col. Philip Meilinger, Air Force History and Museums Program,1995. Proposition 3 is "Air Power is primarily an offensive weapon."

centered and multi-environment.[8] A 'bridging' argument between these perspectives suggests that the Air Force and Navy rely on 'distant firepower', while the Army and Marine Corps are team-reliant maneuver forces.[9] Because of their relative distance from the human impacts of their weapons, Air Force and Navy officers purportedly are less hesitant to recommend and use them.

The analysis of military offensiveness—in a surprise to this author—supports the argument that there is a significant difference between the services, and that focusing on the Air Force and Navy is appropriate. Figure 7 shows the subgroups in an ascending progression of average offensiveness. Statistical tests of significance identify three "clusters": all civilians as least

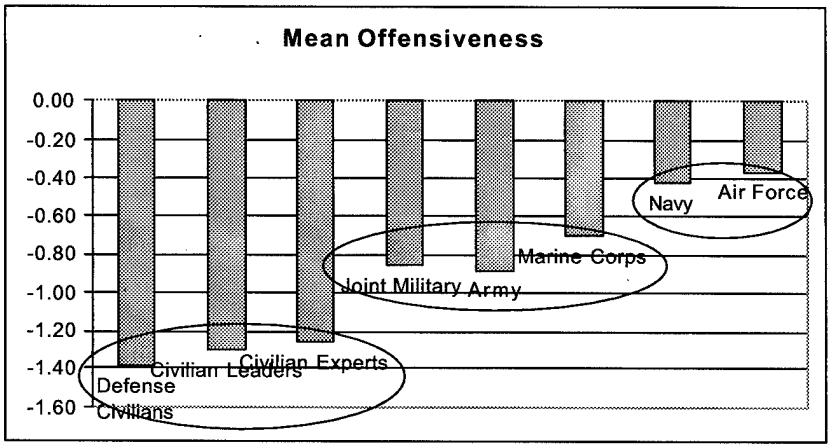


Figure 7 – Subgroups and Offensiveness

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[8] This reasoning has been informally offered in the past as an explanation for why regional Commander's in Chief are more often Army and Marine Corps generals, with the exception of major sea areas such as the Pacific and Atlantic, where the Navy clearly held sway.

[9] Williamson Murray favors this argument; see "Does Military Culture Matter," Orbis 48:1, Winter 1999, p. 32.

offensive, Army and Marine Corps officers as mid-offensive, and Air Force and Navy officers as the most offensive. Clusters are defined by ANOVA tests between subgroups which possess the following properties: a) all members of a 'cluster' have statistically significant differences from members of other clusters; and b) all members of a cluster can not be statistically separated from each other.[10] Consistent with the previous evidence, the differences between these three clusters are not symmetric—both military groups are closer to each other than they are to civilians.

This clustering effect in military services versus civilians also illuminates some of the action in National Missile Defense and provides some additional information regarding contexts and strategy. By arraying the average offensiveness in each domain against these three clusters of actors, two points are highlighted. In Figure 8, the ordered arrangement of Air Force & Navy

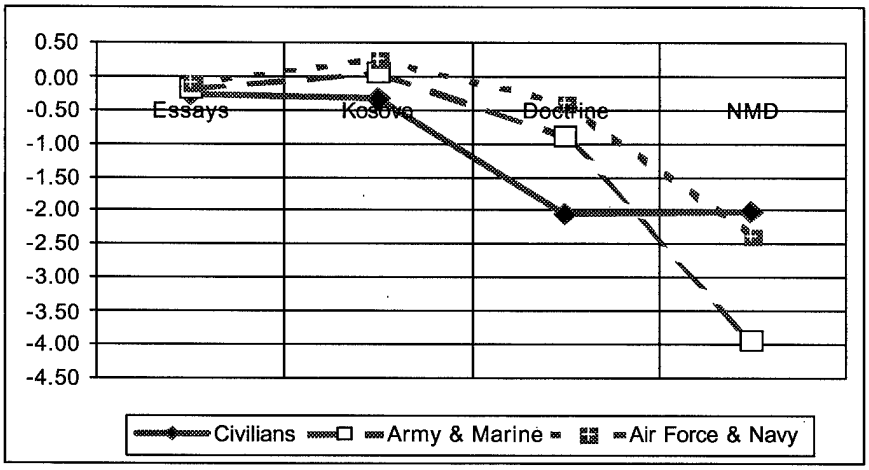

Figure 8 – Offensiveness by Cluster and Domain

[10] Even if civilian data is excluded, the differences between the Air Force/Navy and the Army remain statistically significant. The Marine Corps lies between these groups, and is closer to the Army, and is thus grouped with it.

> Army and Marine Corps> All Civilians is consistent through strategy domains of analysis (essays), operations (Kosovo), and organization (Doctrine.) Thus there seems to be a meaningful pattern in these three cluster groups, and it is a pattern that resonates with Bett's findings in his study.[11] The Air Force and Navy have more offensive leanings than the Army and Marine Corps, and it particularly shows in NMD strategy. These intra-military offensive differences may be directly related to service capabilities and functions; in the NMD arena in particular, the Army may have greater concerns about homeland defense as opposed to "strategic attack" capabilities.

One can also see another abrupt change in the planning domain, represented by relative civilian offensiveness in National Missile Defense arguments. In NMD, civilians cease being more defensive than the military, and it also appears that the Army/Marine Corps group is *disproportionately* more defensive than their Air Force/Navy counterparts. While functional responsibilities may explain the intra-military differences, as described above, civilian offensiveness relative to the military may be more role-related. NMD is classified as whether-to strategy, meaning that one expects these deliberations to be over whether to commit to courses of action, rather than how to execute commitments. Both Betts and Petraeus believe that in this

[11] Richard Betts found that, in looking at aggressiveness vice offensiveness, Air Force and Navy officers were more aggressive than Army officers (Marines not accounted for in his data). See Soldiers, Statesmen and Cold War Crises, Harvard University Press, 1977, p. 209.

arena, civilians in the Cold War era were either closer to the military, or more offensive overall.[12] The evidence here supports those contentions.

It is also worthwhile to take a closer look at subgroup variation within their major groupings. For instance, Figure 9 shows the relative changes in offensiveness between civilian leaders, defense civilians, and civilian experts as one looks at doctrine, NMD and Kosovo data sets.[13] In each domain, leaders and defense civilians remain relatively close, while civilian experts seem to vary widely. In NMD especially, civilian experts are almost half as defensive as other civilians, leading to an overall effect of making civilians more offensive than both military

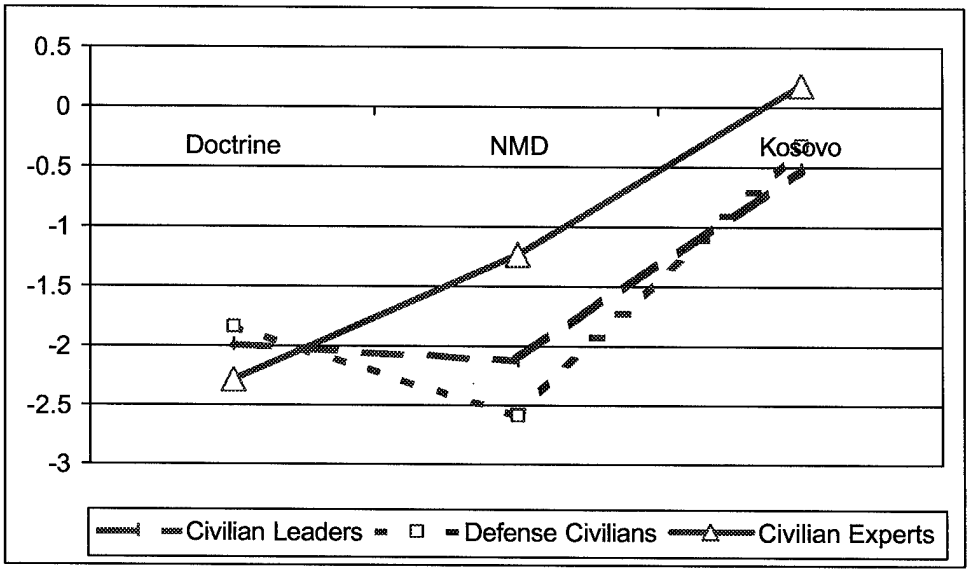

Figure 9 – Offensiveness in Civilian Subgroups

[12] Betts, Soldiers, Statesmen and Cold War Crises, especially Appendix 1. David Petraeus, "Military Influence and the Post-Vietnam Use of Force," Armed Forces & Society 15:4, Summer 1989, p. 492. For his strong finding that civilians can be much more aggressive in whether-to instances, see pp. 490 and 497.

[13] Essays data is excluded here because only defense civilians are included in that data set.

groups. Thus a supporting explanation for civilian offensiveness in NMD is that civilian experts approach that domain of strategy differently than other domains.

Examining the subgroup behavior of the military services also supports the "homeland defense" explanation for military offensiveness.[14] Across the four domains of strategy and focused on the characteristic of offensiveness, the Air Force, Navy and Marine Corps each 'jockey' for different relative positions. However, the one service that is consistent in all areas on offensiveness behavior is the Army—it is always the least offensive military

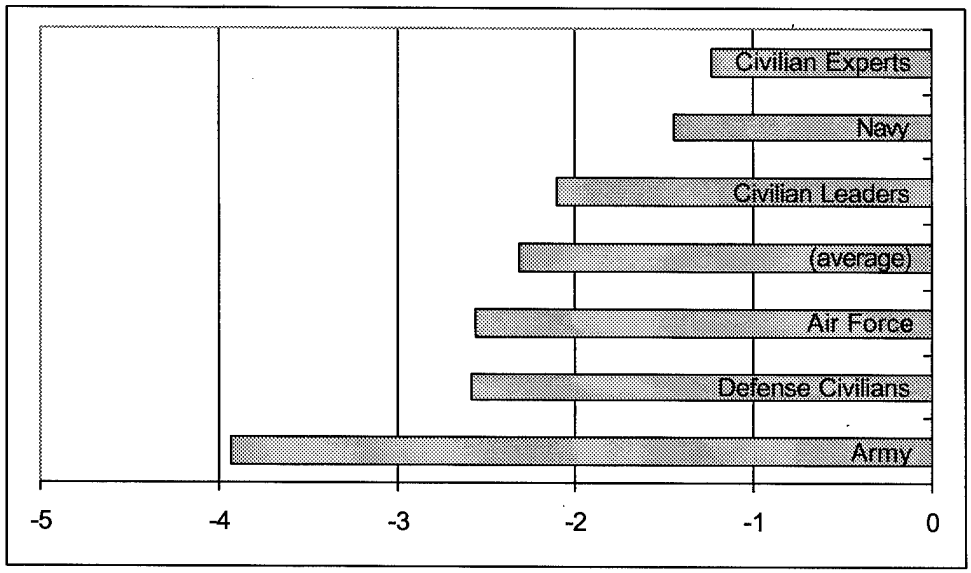

Figure 10 – Offensiveness in National Missile Defense

service, regardless of strategy domain. In NMD in particular, the Army stakes out a completely independent position of relatively extreme defensiveness—it is nearly twice as defensive as the

[14] A recent study that outlines the Army's preeminence in homeland security is Eric Larson and John Peters, Preparing the US Army for Homeland Security, RAND MR-1251/A, Santa Monica, 2001.

average of all other military services. Figure 10 shows the Army's position relative to both the other services and the civilian subgroups. Together with the evidence of civilian divergence across domains, it appears *that civilian experts and Army officers both have uniquely different approaches to NMD* as compared to other strategy domains. This will be discussed further in Chapter 8.

Another interesting pattern uncovered by looking at subgroups instead of civilian and military monoliths is that of service variation in contexts. Hypothesis B1 proposed that the Air Force and Navy were more offensive than their sister services, and the evidence favors clustering these services together in their offensiveness behavior. However, one of the cautionary conclusions in civil-military offensiveness was that context mattered: civilians were

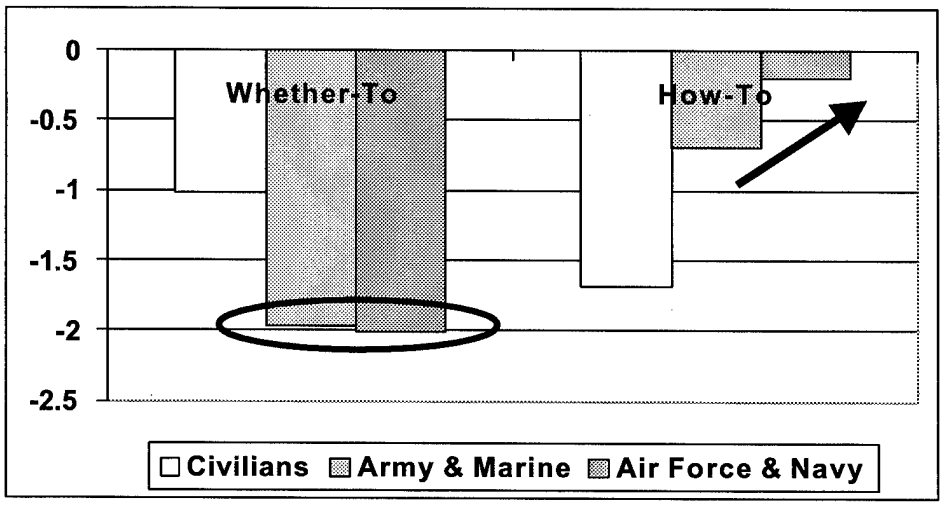

Figure 11 – Offensiveness by Subgroup and Strategy Context

more offensive in "whether-to" enter conflicts questions than the military, and the opposite in "how-to" proceed questions. Does any similar caution arise if one looks at subgroup clusters and strategy contexts for offensiveness?

Figure 11 below illustrates a dual conclusion to this question: context does still matter, and yet the Air Force/Navy and Army/Marine split still persists. The evidence shows that in strategic arguments concerning entry or commitment into conflicts, the four services are remarkably homogenous and (as concluded before) more defensive than their civilian counterparts. However, once a commitment decision is made, and the strategy questions become practical or "how-to" challenges, the services diverge both from civilian groups and from each other. Consistent with hypothesis B1's general direction, the Air Force and Navy remain significantly more offensive than their Army and Marine counterparts. This finding seems quite analogous to Bett's conclusion that, "the greatest pressure from professional soldiers will come not on whether to use force, but on how to use it."[15]

Overall, then, an assessment of hypothesis B1 is that the Air Force and Navy are more offensive than the Army and Marine Corps, with three supporting propositions:

1. Within offensiveness, a 'clustering' effect seems to hold, such that most patterns repeat an ordering of Air Force & Navy > Army & Marine Corps > All Civilians. These clusters align remarkably with intuitions by scholars that suggest the Air Force and Navy are technologically or functionally similar partners, when compared to the Army and Marine Corps.

2. At least two subgroups exhibit divergent behaviors that may partially explain unique patterns in National Missile Defense. Civilian experts become relatively offensive in NMD apart from other domains, while Army officers are consistently less offensive than military peers and extremely defensive in the case of NMD. There may be both functional and role-oriented dynamics at work; in particular, Army homeland defense interests may explain its defensive motivations.
3. Strategy context continues to matter, even when looking at civil-military subgroups. The military services are relatively homogenous in approaching "whether-to" questions of strategy, but heterogeneous in "how-to" questions, where the Air Force and Navy are significantly more offensive. This effect only enhances the 'cluster' perspective on the military services: if functional questions dominate how-to strategy, one may expect the Air Force and Navy to express more offensive motivations if their capabilities and resources are relatively more offensive in the first place. In contrast, on questions of whether to commit to a course of action, the military services may share equal restraint in expressing their motivations or capabilities.

Symbolic language and Organizational offensiveness

In Chapter 4 the idea was raised that symbolic language associated with different organizations may also affect offensiveness. It is possible that particular words and phrases carry 'official' meanings associated both with a particular organization or group and that group's

[15] Betts, p. 210.

general position on different issues. In the case of offensiveness, the idea might be that Group A invokes particular words like X and Y to reinforce the credibility of its position on an issue; therefore, an analysis of all mentions of X and Y might be associated with a particular position...one which is expected a priori to be group A's position.

	Model A: Overall Offensiveness	***Model B: Kosovo Offensiveness***	***Model C: Doctrinal Offensiveness***
Intercept	[+.465**]	[-1.18*]	[-1.06**]
Civ-Mil (0=Civilian/ 1=Military)	.038*	.103**	.115**
Civilian Symbols	-.338**	-.301**	-.342**
Army Symbols	.003	.048	.024
Air Force Symbols	.046**	.063	.100**
Navy Symbols	-.078**	.008	-.068**
Marine Symbols	-.034*	-.065	-.024
Model R^2	.13	.12	.18

Note: Cell values are standardized coefficients; * indicates p<.05, ** indicates p<.01

Table 9 – Symbolic Language and Offensiveness Models (OLS)

In order to assess the role of symbolic language with offensiveness in strategy, all the texts were classified according to the civilian and military service dictionaries (found in Chapter 4 and

Appendix C), and the category counts regressed against the offensiveness dependent variable. Regressions were also calculated for the Kosovo and Doctrine domains for comparison. Table 9 shows the standardized coefficients and significance for each symbolic category, and also the model R^2 for each regression. There are several significant coefficients associated with the symbolic variables; however, the model R^2 is uniformly low, and scatterplots (not shown) show extremely weak substantive associations between these variables and the offensiveness measure.[16] Overall, symbolic language variables do not provide a sufficient explanatory model, but the significant coefficients do aid in understanding the dynamics of offensiveness in strategy.

These models indicate that the strongest relationship between symbols and offensiveness lies in civilian language. The dictionary of civilian terms—only eight words, including democracy, prosperity, engagement and humanitarian—is consistently associated with less offensive strategy. This is to say that regardless of who expresses the language—military or civilian, of any subgroup—civilian symbols seem to reduce the offensive preference of any strategic argument. In addition, this effect is substantively greater than that of distinguishing which subgroup the speaker/author is a member (the civ-mil variable in Table 9 above.)

Only two other categories of symbolic language have effects worth noting: the Air Force and Navy symbols. Both of these symbol sets are significant in overall offensiveness and doctrinal offensiveness; they also have opposing effects. Navy symbols, like civilian, contribute to less offensive strategy, while Air Force symbols provide the largest positive contribution to

[16] Quite simply, the significance of the coefficients is due to large sample size rather than any substantive association between the dependent and independent variables.

offensiveness of any category. These opposing sets of symbols are interesting for their contrast with subgroup offensiveness—generally the Air Force and Navy cluster together as the most offensive groups in the study. Yet, in terms of language associated with their groups, they have contrary effects. Only Air Force symbols seems to parallel organizational/subject behavior in offensiveness—the Navy is generally more offensive but its symbols are associated with less offense.

Summary

Offensiveness is destruction-oriented action words *less* words indicating that one is staying in position or waiting for another's action. Put another way, offensiveness in strategy is the amount of language indicating destructive intentions, unless that language is combined with words that show one is not moving, or is waiting for someone else to act first. For practical measurement in this study, the best indication of presence and direction of offensiveness was provided by content analysis of destructive terms for positive offense, and immobility and expectancy for 'negative offense,' or defense.

An analysis of hypothesis A1 revealed that militaries are more offensive than civilians in strategy, with four important caveats:

1. The average offensiveness across all military and civilian strategy arguments—i.e., treating every strategic chunk of text as having equal importance—is negative, meaning military and civilian strategy on average is slightly defensive. This means that in strategic

rhetoric, US actors generally communicated defensive motivations for strategy in the 1995-2000 timeframe.

2. National Missile Defense presents an anomalous situation, where civilians continue to be defensive but militaries become sharply more defensive. Something about this domain of strategy—possibly dealing with aspects of homeland defense rather than extraterritorial interventions—invokes more defensive motivations for military actors.
3. The most substantial difference between military and civilian offensiveness in strategy is in doctrine. Doctrine is significantly different from other strategy; and perhaps more importantly, differences between civilians and military are much smaller in analytic, operational, and planning strategy. Doctrine appears to clarify organizational functions, when compared to more "pragmatic" domains of strategy.
4. Context is critical. Civilians actually are more offensive than militaries in considering entry or commitment decisions for conflict; but once the decision is made, civilians become more defensive and militaries sharply more offensive. It is possible that organizational roles play an important part in offensive motivations: an actor exerts relatively more offensive language when it possesses more responsibility for the strategy deliberations.

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2. At least two subgroups exhibit divergent behaviors that may partially explain unique patterns in National Missile Defense. Civilian experts become relatively offensive in NMD apart from other domains, while Army officers are consistently less offensive than military peers and extremely defensive in the case of NMD. There may be both functional and role-oriented dynamics at work; in particular, Army homeland defense interests may explain its defensive motivations.
3. Strategy context continues to matter, even when looking at civil-military subgroups. The military services are relatively homogenous in approaching "whether-to" questions of strategy, but heterogeneous in "how-to" questions, where the Air Force and Navy are significantly more offensive. This effect only enhances the 'cluster' perspective on the military services: if functional questions dominate how-to strategy, one may expect the Air Force and Navy to express more offensive motivations if their capabilities and resources are relatively more offensive in the first place. In contrast, on questions of whether to commit to a course of action, the military services may share equal restraint in expressing their motivations or capabilities.

Symbolic language associated with the actors in the study highlights some additional dynamics of offensiveness in strategy. Although symbolic language variables do not provide a sufficient explanatory model in OLS regressions, the significant coefficients do aid in

understanding these dynamics. First, increasing civilian symbolic language is associated with less offensive strategy, and also has the largest substantive impact of any symbolic language category. Secondly, civilian symbol effects on offensiveness are substantively greater than the already significant effect of identifying whether the actor is civilian or military. Lastly, the Navy and Air Force symbols are the only other language categories with any significant relationship to offensiveness. Interestingly, while Air Force symbols are associated with more offensive strategy—consistent with actor behavior in other analysis—Navy symbols contribute in an opposite direction from Navy officers, where naval symbols decrease offensiveness and naval officers are associated with higher offensiveness.

CHAPTER 6

UNCERTAINTY

Beginning with efforts at the RAND Corporation during the late 1980's, the focus of defense planners has shifted from 'the clear and present danger' of Soviet power to the intractable problem of 'uncertainty.' Along with this shift has come a new type of Pentagon partisan—the 'uncertainty hawk.' The uncertainty hawks forsake 'threat-based' planning for new methods variously called 'adaptive,' 'capability-based,' or 'scenario-based' planning...any hypothetical danger that seems remotely possible is deemed worthy of attention...A fixation on uncertainty colors all of the major post-Cold War policy blueprints...

Carl Connetta and Charles Knight
"Dueling with Uncertainty: The New Logic of American Military Planning"

Uncertainty...is to organizations what original sin is to individuals—they are born into it. Government organizations are steeped in uncertainty because it is so hard to know what might produce success or even what constitutes success. Executives and higher-level managers have an understandable urge to reduce that uncertainty. They also have a less understandable belief that more information means less uncertainty...

James Q. Wilson, Bureaucracy

Without trying to force a play on words, one can never be entirely sure what scholars and theorists mean by the term "uncertainty" unless a fair amount of explanation accompanies it. Decision and game theorists often use uncertainty to describe situations in which specific outcomes *could* occur from known probabilities and circumstances, while others may use

uncertainty as a term encompassing ambiguity and unknowable details of the future. Literally, of course, one may only intend to describe things which are "not certain" or not fixed. But the intersection of "uncertainty" and "strategy" produces a plethora of propositions about how much or how little uncertainty "should" be included in strategy, or whether some strategic actors possess more realistic or proper conceptions of uncertainty than others.

How can uncertainty be captured or assessed in strategy arguments? Do civilians and military officers consider or incorporate uncertainty in strategy differently? This chapter examines these questions, and evaluates the role of strategy context and symbolic language in the inclusion of uncertainty in strategy.

Uncertainty in Strategy Language

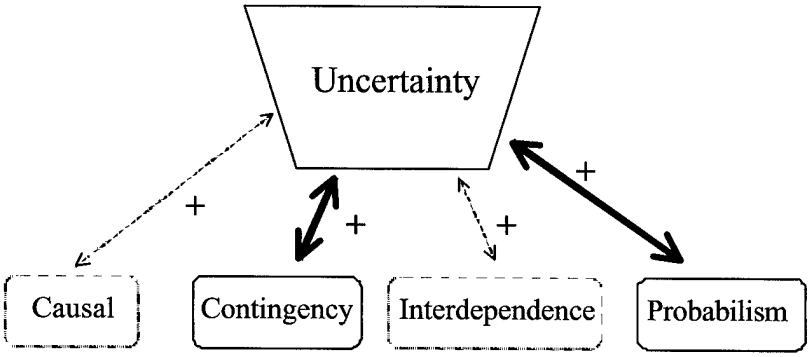
In Chapter 3, definitions of *uncertainty* were contrasted with those of *certainty*, and it was found that though both share some elements, they are fundamentally different on others. For instance, both concepts involve opposing quantities or directions of causal understanding, contingent events, interdependence (complexity) and probabilism (chance estimates.) But *certainty* often includes some degree of confidence in assessment and an increasing perception of efficacy or control over situations. Thus, the first step in defining how uncertainty could be measured in strategy was to separate the elements focusing on that concept, and leave aside questions and elements that dealt only with certainty.[1]

[1] As also described in Chapter 3, for this study the opposite of uncertainty is generally labeled "determinism."

The resulting definition was then applied as the theoretical "mechanism" in a parallel analysis of a strategy subsample. Human coding of the concept of uncertainty was analyzed side-by-side with machine coding of four elements of uncertainty: causal, contingent, interdependent, and probabilistic terms.[2] The parallel analysis (utilizing a technique called discriminant analysis) uncovered a mechanism for measuring uncertainty in strategy texts that uses only two of the theoretical elements—contingency and probabilism. Shown in figure 1 below, this formula indicates that most of the time, what humans read as *uncertainty* in strategy texts corresponds to focusing about 1/3 on use of contingent terms (like alternative, branch, choice, if) and 2/3 on use of probabilistic estimates (like approximately, bet, chance, probable.)[3]

[2]Appendix C provides the dictionaries for the four uncertainty elements. Appendix A recounts the parallel analysis and more results than reported here.

[3] Thus, the Uncertainty formula weights counts of Contingency and Probabilism (the multipliers) and also normalizes them by dividing by their mean (the divisors.)



Uncertainty = .434*Contg/1.21 + .905*Probab/1.72

First discriminant function only; explains 92.6% of variance

Chi-square = 56.02; df = 6; p<.000

Figure 12 – Measuring Uncertainty

The entire strategy data set was coded for inclusion of uncertainty using the formula or mechanism shown in Figure 12. The results provide empirical evidence that supports analysis of the hypotheses dealing with uncertainty (A2 and B2 at the end of Chapter 2), and also reveals some other interesting patterns in civil-military relations and strategy. Before presenting these findings, however, it may be useful to review some examples of text coded for "high" and "low" uncertainty. As in Chapter 5, note that the following are excerpts of approximately 300-word strategy arguments, rather than complete files; the below only provides examples of what the files contain, and how they were classified. **Contingency** terms are in bold, while Probabilism terms are underlined. The score shown is for the entire text, not the excerpts displayed.

High Uncertainty

War is intrinsically unpredictable. At best, we can hope to determine **possibilities** and probabilities. This implies a certain standard of military judgment: What is possible and what is not? What is probable and what is not? By judging probability, we make an estimate of our enemy's designs and act accordingly. Having said this, we realize that it is precisely those actions that seem improbable that often have the greatest impact on the outcome of war. Because we can never eliminate uncertainty, we must learn to fight effectively despite it. [Marine Corps Doctrine Pamphlet 1, section 6) ***Score: 10.8***

The commission's view was that the eminence (sic) of the threat posed by rogue states' ballistic missile programs in particular was far greater than the 1995 estimate suggested. It stated that North Korea and Iran could have an ICBM within 5 years of beginning a program and Iraq within 10, and further, the commission stressed that we might well not know when a rogue state's programs began leaving us with considerably less than 5 years or in Iraq's case 10 years of warning. As **if** to punctuate the commission's work, a few weeks after the report was filed a year ago July, North Korea tested a Taepo-Dong missile with a third stage, demonstrating substantial unexpected progress to an ICBM program that was unexpected by the U.S. intelligence community. [House Armed Services Committee hearing 106-33, section 1) ***Score: 8.8***

Such a policy would entail continued aerial attacks on Serbian military assets, prolonged economic sanctions, covert action designed to weaken the regime of Slobodan Milosevic, and the arming and training of the Kosovo Liberation Army, the force of the Kosovo opposition. By definition this **option** would do nothing to halt the humanitarian nightmare now unfolding. It might also be difficult to sustain over time given the opposition in parts of Europe and Russia to continued bombing. Insurgencies can take years to succeed, **if** ever...Meanwhile, Serbia might sue for peace, making the West appear to be the party unwilling to compromise. A third **option** would be to send in ground forces... **If** successful, this **option** would be the best by humanitarian and strategic yardsticks. But this **choice**, too, is fraught with costs and **risks**. [Richard Haass article, section 1] ***Score: 8.5***

Depending on the time reference that you use, the trigger event that leads us into the CPM can change, but for our discussion, let us be very general and say that it is the invasion of Kuwait by Iraq... the desired end-state should have been more decisive and included the removal of Saddam as leader of the Iraqi people and the destruction of Iraq's capability to wage war on its neighbors. It is perhaps easy to say that in the intellectual vacuum of hindsight, but this course may have held its own dangers. With Iraq defenseless, Iran may have decided that the time was right to annex Iraq. We may have become embroiled in a war

defending Iraq from Iran. The point is this: little or no thought was given to the post-hostility desired end-state at the international level. Did we want Saddam in power or not, the Iraqi army intact or not, what humanitarian considerations are there, how are vital security concerns affected, and so on were virtually left to chance. [Naval officer analysis, section 2] ***Score: 7.8***

Low Uncertainty

...Second, we have invested a great deal in Bosnia, and we believe that it is important to make sure that that very positive process goes on. We obviously also have humanitarian interests in the Balkans, and as we look at people out in the mountains, or being slaughtered, that is something that has always troubled Americans... Now what I think is of utmost importance here is that we have calibrated this, I believe, very, very well. The brunt of the force will be Europeans. Out of a force of around 28,000, the U.S. will contribute less than 4000... I believe that obviously it is very hard and always will be to answer a mother or father who has lost somebody in a battle, and I would always have a hard time with that, but I would explain what our vital interests are because I fully believe them. [Secretary of State Albright, section 35] ***Score: 0***

We operate aircraft and spacecraft optimized for their environments, but the art of commanding aerospace power lies in integrating systems to produce the exact effects the nation needs... Operation ALLIED FORCE demonstrated the power of aerospace integration. During combat operations over Serbia, space sensors identified time- critical targets, allowing airborne surveillance platforms to pinpoint exact target locations. The Aerospace Operations Center then rapidly directed strike aircraft to engage and destroy those targets. Tomorrow's fully- integrated aerospace force will realize even greater potential...Our airmen will think in terms of controlling and exploiting the full aerospace continuum on a regional and global scale to achieve effects both on earth and in flight regimes beyond the horizon. [Air Force Vision statement, section 2] ***Score: 0***

We also are committed to maintaining information superiority - the capability to collect, process, and disseminate an uninterrupted flow of information while exploiting and/or denying an adversary's ability to do the same. Operational readiness, as well as the command and control of forces, relies increasingly on information systems and technology. We must keep pace with rapidly evolving information technology so that we can cultivate and harvest the promise of information superiority among U.S. forces and coalition partners while exploiting the shortfalls in our adversaries' information capabilities. [1999 National Security Strategy, section 29] ***Score: 0***

> Overall...the Persian Gulf War was a success, however as I stated earlier, the one thing that would come back to bite us was not having the political where-with-all to target the destruction of Saddam. Our failure to do so has resulted in being caught in a continuous conflict resolution framework loop in which we float back and forth between Post hostilities and pre-hostilities, with limited hostilities thrown in for good measure. [Army officer analysis, section 5]
> ***Score: 0***

Hypothesis A2: Contemporary US military analysis and strategy downplays or disregards the role of uncertainty (in the entire situation, rather than merely choice options) compared to civilian analysis and policy on the same issue.

How uncertain a world does a military officer see? A remark by Jack Snyder in his classic "Cult of the Offensive" article states that, "The military professional tends to hold a simplified, zero-sum view of international politics and the nature of war..."[4] As the results that follow indicate, though, it may be more correct to say that military professionals express less uncertainty about those things they are not responsible for deciding. Indeed, behind the writing of classic theorists like Clausewitz and more recent scholars such as Williamson Murray lies an implication that military officers are constantly challenged with imperfect reality, or the "friction" that includes chance, probabilities, and complexity.[5] Any inability to deal with this imperfect reality introduces opportunities for overconfidence and failure.

If one compares the uncertainty that civilians and military officers include in their strategy arguments, the evidence is largely inconclusive. Figure 13 below shows that across all domains

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[4] See the version of "Cult of the Offensive" in The Use of Force, ed. by Robert Art and Kenneth Waltz, 5th ed., Rowman and Littlefield Pulishers, 1999, p. 117.

[5] Williamson Murray, "Does Military Culture Matter," Orbis 48:1 (Winter 99), pp. 33-34.

of strategy, and within the domains represented by analytic essays and Kosovo arguments, civilians and military are statistically inseparable. Only the domains of doctrine and NMD show significance in analysis-of-variance tests—and there, civilians and military officers differ in *opposite* directions. It seems that in doctrine, the military is about 1/3 more uncertain in their language than civilians, while in National Missile Defense discussion, civilians are 1/3 more uncertain than the military.[6]

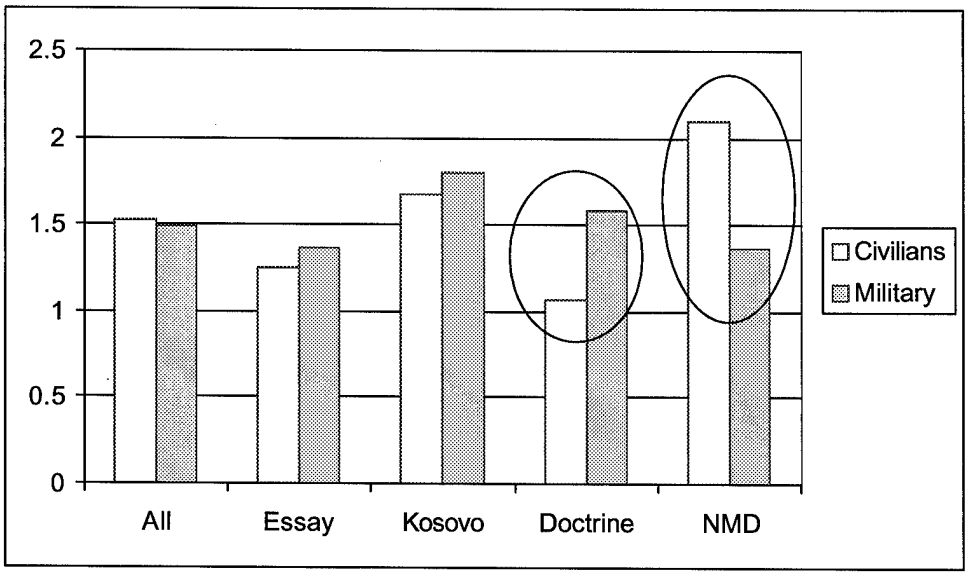

Figure 13 – Uncertainty Averages

One way to understand these differences in uncertainty is by comparing the definitions of "low" and "medium" uncertainty used by human coders in the parallel analysis. In that analysis, low uncertainty scored "1", while medium uncertainty scored "2".

[6] F-tests for overall, essays and Kosovo were not significant. F (1,1789) = 55.16 for the Doctrine domain, significance p<.000, and F (1,528) = 32.99 for NMD, with p<.000.

Low uncertainty: The subject acknowledges that not all causes-effects can be known, or that actions are contingent, or some degree of complexity in the situation, but generally seems to feel most things can be anticipated or easily integrated to the strategy.

Medium uncertainty: The subject consistently qualifies their outlook for the role of chance, or believes outcomes or adversary choices are difficult to predict. This kind of outlook may mention efforts at forecasting and estimation to identify all the possibilities, consider probabilities of occurrence, and recommend gathering more information.

Comparison to the Doctrine and NMD domains tells us that the military, in general, maintains a "low" uncertainty perspective in both, while civilians seem to go from low uncertainty in Doctrine to a "medium" uncertainty in NMD. There appears to be something about the NMD domain which would lead civilian strategists to more "consistently qualify their outlook" or mention more forecasting and estimation.

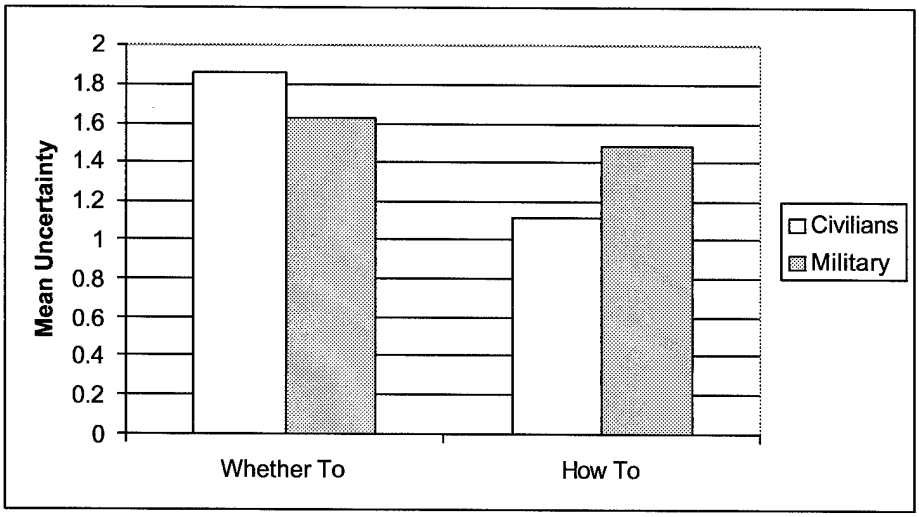

Figure 14 – Uncertainty in Context

Another explanation may lie in a classification difference between the doctrine and NMD domains: doctrine is considered to be "how-to" strategy, while NMD is "whether-to" strategy. Whether-to strategy deliberates the necessity of a course of action, or choices between courses, and NMD in the 1995-2000 timeframe is marked with debates over missile defense options. An analysis of the effects of context on uncertainty across all domains reveals that it is again a significant factor in a strategy characteristic. Figure 14 below shows that "whether-to" arguments of strategy present civilians as being significantly more uncertain, while "how-to" arguments demonstrate military assumptions of uncertainty over civilians. These differences are statistically significant, and importantly, they parallel the differences in the doctrine and NMD domains.[7] It seems likely that one explanation for the divergence of civilians and military in these two domains is that the context is different: civilians are more uncertain in "whether-to" decisions of strategy, while the military is more uncertain in "how-to" decisions.

In examining hypothesis A2 then, a couple of interesting conclusions arise from the evidence. First, it does not appear that the military is either more or less uncertain than civilians across types of strategy; therefore, hypothesis A2 is unsupported. But, there are two observations to add to this conclusion:

1. Civilians and the military approach doctrine and National Missile Defense with differing perspectives. In these areas, the two groups are significantly different, and the military is more uncertain in doctrine, while civilians are more uncertain about NMD. Doctrine's focus on how to organize and train resources to accomplish national objectives seems to

[7] F (1,1177) = 7.21 with p<.007 for Whether-To differences, while F (1,2950) = 42.07 with p<.000 for How-To.

draw more discussion of options and estimates from the military, while NMD's focus on planning for a US missile defense draws more alternatives and probabilities from civilians.

2. Context matters in considering uncertainty. Linked very closely with the first observation, strategy that weighs decisions of whether to enter conflicts or commitments to courses of action involving force generally shows the military less uncertain than civilians. In comparison, strategy arguments about how to execute a commitment of force or how to design courses of action typically have civilians less uncertain than the military. This dynamic may reflect role responsibilities, and the implication is that increasing responsibility for the decisions under discussion is associated with increasing expression of uncertainty about the situation. One can argue that civilians and military should be more uncertain in the areas they are more competent in: militaries should design courses of action, and consider uncertainty a lot there, while civilians should decide entry or commitment to actions, and they consider more uncertainty there.

B2. The services will vary on their consideration of uncertainty in strategy, with the Air Force being most deterministic of all the services in strategic analysis.

In the view of two defense analysts at the beginning of this chapter, robust defense budgets and force structures are advocated by "uncertainty hawks" who purportedly exploit uncertainty in threat assessments. What is not clear—either from their perspective or the article it is a part

of—is who the uncertainty hawks are supposed to be.[8] Although these analysts point to "Pentagon partisans", their examples of uncertainty hawks span the civil-military continuum: civilian experts like RAND and the National Defense Panel, defense civilians for the Quadrennial Review, and military in the Joint Staff Vision 2010. In fact, the only hypothesis this author was able to develop from scholar's writings about uncertainty centers on military service differences.

It is helpful, however, to begin an analysis of hypothesis B2 by looking at all subgroups rather than just the military services. As Figure 15 shows, there are some significant subgroup differences, particularly within types of civilians. Civilian experts, to borrow a term mentioned previously, appear to be uncertainty hawks—they are significantly more uncertain than all other subgroups. A second 'cluster' is formed by Army and Marine Corps officers, who are only less uncertain than civilian experts. Either one or two clusters are formed by civilian leaders, defense civilians, Air Force officers, and Navy officers, who comprise those with the least amount of uncertainty.[9]

[8] Carl Conetta and Charles Knight, "Dueling with Uncertainty: the New Logic Of American Military Planning," Project on Defense Alternatives, Commonwealth Institute, February 1998.

[9] Differences between subgroups were analyzed using Tukey's HSD test. Differences between civilian experts and all seven other groups had a significance of $p<.000$. Differences between Army and Marine officers and other groups were $p<.002$, except for defense civilians, who were $p<.152$.

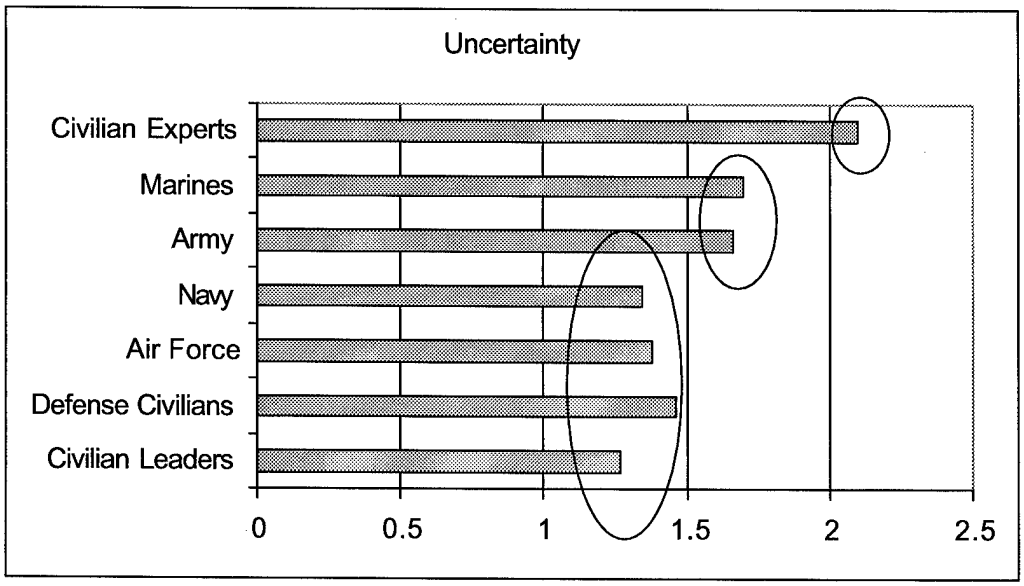

Figure 15 – Subgroups and Uncertainty

The first question that arises in looking at the position and order of subgroups for uncertainty in strategy is whether this pattern is consistent within domains. Aggregating the subgroups into four clusters—experts; Marines & Army; Air Force & Navy; civilian leaders & defense—and performing a series of analysis of variance tests reveals more information.[10] Figure 16 shows this evidence in a 'trend-line' format for ease of understanding. While analytic strategy (essays) shows no significant differences, the remaining domains of doctrine, Kosovo, and NMD are significant. In particular, organizational and operational strategy (doctrine and Kosovo) share similar patterns, where Experts & Army/Marines > Air Force & Navy >

[10] Clusters are revealed by ANOVA tests: members of a cluster are a) statistically different from any subgroup in other clusters, and b) not statistically different from other members of the cluster. ($P < .05$.)

Leaders and Defense civilians. In planning strategy or NMD arguments, Experts > Leaders and Defense civilians > Air Force & Navy > Army.

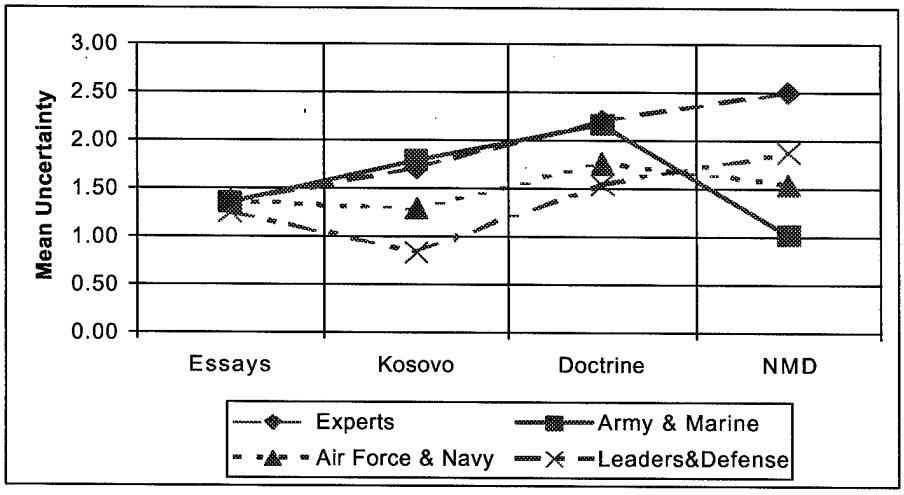

Figure 16 – Uncertainty by Cluster and Domain

Once again, the divergence of the NMD domain from patterns found in other domains calls into question whether we are observing context effects. An analysis of uncertainty from the perspective of the four 'clusters' of subgroups and the context of strategy produces the data shown in Figure 17. Context matters yet again: in whether-to strategy discussions, civilian experts are different from everyone else, and include significantly more uncertainty. In how-to, or practical strategy discussions, the primary uncertainty pattern reasserts itself: Experts & Army/Marines > Air Force & Navy > Leaders and defense civilians. Although this can be speculated on in more depth in Chapter 8, it initially seems that if "uncertainty hawks" exist in strategy, then they are primarily civilian experts who are distinctive in considering entry into

conflicts, or commitments to long-term courses of action such as national missile defense. As uncertainty hawks, these actors include significantly more alternatives and probabilities when discussing whether-to strategy; whether that is leveraged into distinctive recommendations awaits further study.

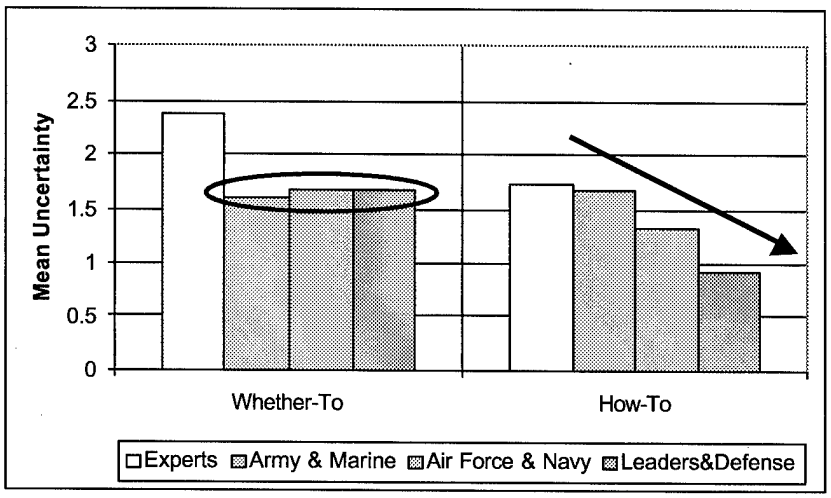

Figure 17 – Uncertainty Clusters and Context

The evidence thus far seems to demonstrate that the Air Force and Navy track with each other in terms of uncertainty, and that this cluster can be considered different from other subgroups of civilians and military. However, the original hypothesis is that the Air Force is least uncertain of *all the services*. Analysis of variance tests for the Air Force versus all other services are shown in Table 1 below. Two conclusions should be drawn from these results. First, it is fair to say that the Air Force, in general, is the least uncertain of the services. However, this conclusion must be qualified by stating that most of this difference appears to be

derived from a difference in doctrine, or organizational strategy. That domain shows the starkest difference between the Air Force and other services; in other domains, the Air Force is approximately equal to the average of her counterparts. Doctrine may present the clearest opportunity, and the one most separable from political controversies, for a military service to express its motivations in the use of force—and the Air Force often touts the links between technology and air power.[11] Perhaps, as some worry, a technological focus is associated with increasing determinism. (Murray 1994)

	Air Force average	Other Military average	F Test	Significance
Essays	1.37	1.34	.157	.692
Doctrine	1.28	1.65	12.65	.000
Kosovo	1.87	1.78	.222	.638
NMD	1.37	1.37	.000	.983
All Domains	1.38	1.56	10.99	.001

Table 10 – Air Force vs. Other Services on Uncertainty

In summary, then, an analysis of uncertainty in strategy taken from the perspective of civilian and military subgroups reveals a different picture than one taken purely at the civil-

[11] "Technology and air power are integrally and synergistically related." Proposition 9 of Col. Phillip Meilinger, USAF, in 10 Propositions Regarding Airpower, Air Force History and Museums Program, 1995, p. 56.

military level. With regards to hypothesis B2, the Air Force is less uncertain than other services in strategy, but with some important caveats:

1. At the level of military services, most differences in uncertainty are found in doctrine, or organizational strategy. Here the Air Force is definitely least uncertain.
2. In other domains, and across all participants in strategy, it is better to consider clusters of subgroups to distinguish different behaviors. The prominent pattern in uncertainty among clusters is: ***civilian experts, Army and Marine officers > Air Force and Navy > leaders and defense civilians.***
3. National Missile Defense (NMD) is again an exceptional area for uncertainty, apparently driven by it's different strategy context. Whether-to strategy such as NMD produces an uncertainty pattern in which civilian experts are most uncertain, and other subgroups are generally similar to each other and less uncertain.

Symbolic language and Organizational uncertainty

If organizations imbue their members or representatives with certain concepts, perspectives and vocabularies, then we might expect that any individual's perspective on uncertainty may include or be influenced by their organization's official language. Finding evidence of a relationship between symbolic language and uncertainty is difficult, however. Table 11 shows the results of three OLS regression models, using uncertainty as the dependent variable and civil-military classification and symbolic language category counts as the predictors. None of

the models are strong at all—the highest R^2 is .08—and the only relationship that seems to span all the different models is between Marine symbolic language and uncertainty.

	Model A: Overall Uncertainty	*Model B: Doctrinal Uncertainty*	*Model C: NMD Uncertainty*
Intercept	[+.1.72**]	[1.33**]	[2.15**]
Civ-Mil (0=Civilian/1=Military)	-.022	.173**	.217**
Civilian Symbols	-.141**	-.091**	-.048
Army Symbols	-.021	-.055*	-.044
Air Force Symbols	-.044**	-.077**	-.047
Navy Symbols	-.066**	-.121**	.078
Marine Symbols	-.033*	-.055*	-.086*
Model R^2	.03	.07	.08

Note: Cell values are standardized coefficients; * indicates p<.05, ** indicates p<.01

Table 11 – Symbolic language and Uncertainty Models

Perhaps these results are not surprising at all, if one considers the situation. When an individual invokes symbolic language, it is generally their own symbols. When one speaks of their own organization, they are within their sphere of competence…and confidence. Thus, we might logically expect that the more any subject invokes their own symbols, the less uncertain their communications appear to be. In this way, symbols might *mask* uncertainty. For the most part, all of the coefficients associated with symbolic language indicate mitigating effects on uncertainty—that is, use of any symbolic language set generally is associated with decreased

uncertainty in strategy. Although we cannot use categorical counts of symbolic language to predict anything about uncertainty in strategy, we can generally note that all else being equal, an individual using more symbols is likely to be less uncertain.

Summary

A look at uncertainty in strategy shows that, while there is little remarkable at the civil-military level of analysis, there are some interesting patterns at finer grains, if one focuses on subgroup behaviors. At the civil-military level, it does not appear that the military is either more or less uncertain than civilians across types of strategy; therefore, hypothesis A1 is unsupported. There are two things worth noting:

1. Civilians and the military approach doctrine and National Missile Defense with differing perspectives. In these areas, the two groups are significantly different, and the military is more uncertain in doctrine, while civilians are more uncertain about NMD. Doctrine's focus on how to organize and train resources to accomplish national objectives seems to draw more discussion of options and estimates from the military, while NMD's focus on planning for a US missile defense draws more alternatives and probabilities from civilians.
2. Context matters in considering uncertainty. Linked very closely with the first observation, strategy that weighs decisions of whether to enter conflicts or commitments to courses of action involving force generally shows the military less uncertain than civilians. In comparison, strategy arguments about how to execute a commitment of force or how to design courses of action typically have civilians less uncertain than the

military. This dynamic may reflect role responsibilities, and the implication is that increasing responsibility for the decisions under discussion is associated with increasing expression of uncertainty about the situation. One can argue that civilians and military should be more uncertain in the areas they are more competent in: militaries should design courses of action, and consider uncertainty a lot there, while civilians should decide entry or commitment to actions, and they consider more uncertainty there.

At the subgroup level of analysis, the Air Force is less uncertain than other services in strategy, which generally supports hypothesis B2. But there are important caveats:

1. At the level of military services, most differences in uncertainty are found in doctrine, where the Air Force is definitely *least* uncertain.
2. In other domains, and across all participants in strategy, it is better to consider clusters of subgroups to distinguish different behaviors. The prominent pattern in uncertainty among clusters is: ***civilian experts, Army and Marine officers > Air Force and Navy > leaders and defense civilians***.
3. National Missile Defense (NMD) is again an exceptional area for uncertainty, apparently driven by it's different strategy context. Whether-to strategy such as NMD produces an uncertainty pattern in which civilian experts are most uncertain, and other subgroups are generally similar to each other and less uncertain.

Finally, symbolic language appears to have little relationship with uncertainty in strategy. In general, the increased use of symbolic language by any subject may indicate less uncertainty.

But this relationship is fairly weak, and may only be reflecting any communicator's confidence and knowledge of particular subjects in discussion.

* * * * *

After looking at Offensiveness and Uncertainty, it is apparent that there are at least three patterns that may be present in civil-military relations and strategy. The first is the importance of context: distinguishing whether the strategy deals with "whether-to" commit questions or "how-to" execute arguments is critical to identifying civil and military strategy patterns. Secondly, there may be a clustering pattern among subgroups of civilians and military: the Air Force and Navy, Army and Marines, and leaders and defense civilians may each form significant cohorts in understanding strategy. Thirdly, National Missile Defense may be a significantly different domain of strategy, producing unique or special behaviors, particularly in civilian experts and Army officers. The next chapter will examine Use of History, and will attempt to reflect findings there on these three preliminary patterns in the evidence.

CHAPTER 7

USE OF HISTORY

History, for the strategists, when they used it at all, was more a source of illustration than of insight... 'One of the distinctive weaknesses,' [Bernard Brodie] said, 'of the otherwise spectacular kind of strategic analysis that has developed especially in the United States is that it often seems to be conspicuously lacking in something that I can only call historic sense or sensitivity.'

Marc Trachtenberg, History & Strategy

Several persistent themes have appeared amid the accumulation of ideas about air power in America, and these eventually influenced the use of air forces in Vietnam...First, air power's proponents, especially the most ardent, have typically stressed the essential novelty of the air age and the consequent irrelevance of historical experience. The new principles and practices of air power supposedly superseded old military lessons and dogmas, which had arisen in reflection on the character of surface warfare.

Donald Mrozek, Air Power and the Ground War in Vietnam

How important is history in the development and expression of strategy? To military theorists, the classical approach to the study of war and strategy lies in the appreciation of the lessons of history.[1] History provides the evidence and data necessary not only to understanding future conflicts, but also to prescribing potential courses of action. Some theorists even suppose

[1] For one discussion on this, see Azar Gat, The Origins of Military Thought, Oxford: Clarendon Press, 1989, esp. chapter 1.

that history is the only relevant data for analyzing strategic problems and proposing solutions.[2] In this light, a modern concern for a number of observers and scholars of strategy and foreign policy is reflected in statements such as the quotes presented above. Is contemporary strategy marked by a lack of historical sense? Can we assess the relative use of history by civilians and the military services?

Use of History in Strategy Language

The primary decision to be made in assessing the use of history in any communication is "what kind of use?" As discussed in Chapter 3, the "use" of history which is focused upon by many of the scholars observing contemporary strategy seems to be the amount or frequency of historical references. There are also concerns with the quality of reasoning about historical events, and whether history is invoked merely to justify or market particular courses of action or decisions. However, an initial assessment of accusations that any party—civilian or military—is not using history, or is ahistorical in the making of strategy, must start with some measure of "how much" history is cited or used in strategy communications.

The primary elements of a Use of History measure are 1) case reference counts and 2) case-based reasoning language counts. In regards to case references, two facets of the strategy data were important: the strategy essays were written about Desert Storm before Kosovo (1999); and the Kosovo strategy texts, for obvious reasons, could not see Kosovo as history.

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[2] See for instance Col. T. N. Dupuy, a distinguished military historian, in his "Military History and Case-Based Reasoning," in Proceedings of a Workshop on Case-Based Reasoning ed. by Janet Kolodner, DARPA, May 1988, pp. 125-135.

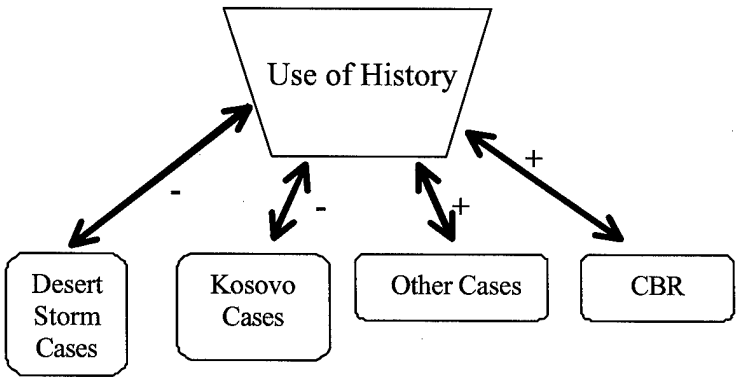
In order to assess questions such as "does military strategy fight the most recent war," and enable controlling for particular sets of event references, three case reference categories were created: Desert Storm Cases, Kosovo Cases, and Other Cases. Analysis of every strategy text in the data base resulted in counts of each time a case was mentioned (in one of these categories) plus counts of words used in reasoning about history (case-based reasoning.) The dictionaries associated with these four categories can be found in Appendix C.

The use of history formula was created based on parallel analysis of a subsample of the data. Human coders assessed how much history was being used in a subsample of the data on a 4 point scale (0-3), while the computer counted for each of the four categories shown in figure 1 below. A discriminant analysis produced the adjusted Use of History formula shown in the figure. This formula presents the notion that a measure of history use, as interpreted by human beings, is similar to adding specified amounts of "other case counts" and "case based reasoning" while subtracting fractions of "kosovo references" and "Desert Storm" references.

This formula may initially seem a bit strange: why would one *subtract* counts of Kosovo and Desert Storm references in creating a use of history measure? Primarily, this is due to the nature of two of the strategy domains—the analytic essays and the Kosovo communications. In each case, human coders would not assess citations of the Gulf War or Kosovar Albanian 'massacres' (for example) as 'using history', since they were—within those domains—current events. The computer, in creating category counts, does not know or care whether Desert Storm or Kosovo would be a contemporary event in particular texts. Thus, the computer-

created formula found the best fit was to subtract citations of these two events from the overall measure. If one used this formula, it could provide a *statistically comparable* measure across all the domains of the amount of history used by any subject, but at the same time it would seem illogical.

For this research a second approach is to create three *logically comparable* formula for measuring use of history that are based on the mathematical mechanism. Instead of a single measure across the timeframes and situations of the strategy domains, formulas that are *modified for each domain's history perspective* make eminent sense. The three formula shown in the figure are those used in this chapter's report of findings. It should be noted, however, that the singular measure of the discriminant formula was also implemented, and its results supported the same hypothesis findings while also highlighting some peculiarities in civilian and Marine Corps use of history. (See below and Appendix A for descriptions of these peculiarities.)



Use of History =

.975*Ocases/2.33 + .617*CBR/2.7 - .790*DSCases/2.38 - .424*KoCases/.85

First discriminant function only; explains 96.6% of variance

Chi-square = 65.7; df = 8; p<.000

$History_{Essay}$: .975 * (Other Cases/2.33) + .617 * (CBR/2.7)

$History_{Kosovo}$: .975 * (DesertStorm/1.34 + Other Cases/2.33) + .617 * (CBR/2.7)

$History_{Doctrine,NMD}$: .975 * (Kosovo/.5 + DesertStorm/1.34 + Other Cases/2.33) + .617 * (CBR/2.7)

Figure 18 – Measuring Use of History

Use of History Examples

The following examples illustrate the results of the automated coding for use of history. Each is only an excerpt of a strategy text that averages 300 words in length, and the score shown here is the score of the entire text, not the portion provided. Underlining indicates a case reference (for that domain's formula) and italics indicates a *case-based reasoning* (CBR) term. They are highlighted merely as a depiction of how automated coding assesses strategy texts.

> Offensive campaigns and major operations are designed to achieve operational and strategic objectives quickly and decisively at least cost. Operations Just Cause and Desert Storm are good *examples*. Army forces must also be adept and have the will to fight in more protracted conflicts if necessary. Several

dynamic characteristics apply to offensive operations: initiative on the part of subordinate commanders, rapid shifts in the main effort to take advantage of opportunities, momentum and tempo, and the deepest, most rapid and simultaneous destruction of enemy defenses possible...The Desert Storm phase of the 1990-1991 Persian Gulf War reflects the dynamic joint and combined nature of the operational offensive and simultaneous operations in depth. [Field Manual 100-5, section 149] ***Score: 10.8***

President Clinton has dispatched troops to Bosnia, Haiti, Rwanda and elsewhere in "do something" missions. Sometimes the troops had a clear mission -- feed the hungry in Rwanda, *for example* -- but sometimes, as in Somalia, they did not. If the United States persists in "doing something" in Kosovo, it must first define the mission -- in this case: Stop the killing. But before committing troops to Kosovo's internecine bloodbath, the United States should look to its successes so far in the Balkans...In 1995, the United States used conventional air strikes and Tomahawk cruise missiles to bomb Serb targets in Bosnia to break the Serbian siege of Sarajevo and force Serbian President Slobodan Milosevic to the negotiating table. It worked, and later that year the Dayton peace agreement was signed. [Navy Times editorial, section 0] ***Score: 6.4***

This was the case in Joint Task Force Andrew when 21,000 tons of material and food were airlifted in by 1,014 air sorties to southern Florida after Hurricane Andrew struck in 1992. *Another example* is Operation PROVIDE COMFORT, which furnished Kurdish refugees food, water, relief centers, and medical assistance after they fled Iraqi forces in northern Iraq...Arms control operations limit and reduce the number and types of weapons threatening stability within a region...The Open Skies Treaty, signed by 27 nations in 1992, allows overflight verification of each country's conventional military posture and confirms that signatory nations are in compliance with the Conventional Forces in Europe Treaty... Counterterrorism operations are programs designed to detect, prevent, or neutralize terrorist activities by identifying, targeting, and repressing individuals, groups, or organizations conducting or suspected of conducting terrorist activities. In 1986, Operation EL DORADO CANYON included air strikes against terrorist sites and encampments within Libya to dissuade Muammar Qaddafi from supporting international terrorism. [Air Force Doctrine Document 2, section 18] ***Score: 6.1***

Operation Provide Comfort exhibited unity of effort in the joint, multinational and interagency arenas. Security is *demonstrated* by the establishment and enforcement of the no-fly zones in both the North and South while restraint is *demonstrated* by the fact that we do not fire upon the Iraqis unless they come

into the no-fly zones or fire upon us and adhere to the ROE. Perseverance continues to be *demonstrated* by the fact that we are still in Iraq enforcing UN sanctions through operations *like* Provide Comfort, Southern Watch, and the most recent Desert Fox. The operation was deemed legitimate in the passage of UN Security Council Resolution 688. [Defense civilian analysis] ***Score: 5.4***

Let me say a word about the ABM Treaty. The ABM Treaty is the major problem impeding U.S. efforts to build ballistic missile defenses ... 23 years ago the U.S. and the Soviet Union negotiated an armed control treaty, the SALT treaty *in this case*, in which the U.S. intended to limit the build-up of the Soviet ICBM force. In conjunction with that treaty, the two adversaries also negotiated the ABM Treaty which was specifically intended to ensure the continuing vulnerability of both the U.S. and the Soviet Union to ballistic missile attack. The SALT I agreement was a failure in limiting the Soviet ICBM force which was massively expanded in capability after the SALT I agreement went into effect... [House Armed Services Committee hearing 106-33, Congressman Graham, section 7] ***Score: 4.9***

Washington and other leading European governments are normally willing to tolerate genocide and mass murder around the globe--witness Cambodia *decades ago*, Sudan continuously for years, and Burundi and Rwanda *more recently*. The West is also ever-ready to ignore brutal civil wars and anti-secessionist campaigns conducted by allies. NATO members are offended only when other nations play by the same rules...In 1991 the West encouraged the break-up of Yugoslavia... NATO eventually lent its air force to Muslims in Bosnia and helped impose the bizarre Dayton accord, under which three antagonistic groups are supposed to live together in an artificial state ruled by international bureaucrats. The *same* hypocrisy is being played out in Kosovo... [Doug Bandow, CATO Institute, section 11] ***Score: 4.1***

The Russians have never deliberately adopted a strategy of retreating...The point is that they have demonstrated an ability to retreat deeply into their own country if they must do so in order to survive and ultimately prevail. This *demonstrated* ability was a matter of *historical* record to be considered by Charles XII of Sweden in 1708, Napoleon in 1812, Kaiser Wilhelm III in 1914, and Hitler in 1941. It is no coincidence that of these invaders, the only one to succeed (Germany in World War I) was the one that adopted a strategy containing a viable political component, *in this case* the support of internal revolution, used in conjunction with the military component. [Marine Core Doctrine Pamphlet 1-1, section 15] ***Score: 3.4***

Hypothesis A3. Contemporary US military analysis and strategy discounts the importance of history (past cases of conflict and war), compared to civilian analysis and policy on the same issue.

Hypothesis A3 seems contrary to the classical conception of how the military approaches strategy and warfighting—one might expect the military to be thinking of nothing but history and tradition—and in fact it is derived from more recent concerns that information and technology is changing the military approach to war. Instead of basing strategy in historical cases and possibilities, the military is (supposedly) focusing on technological analysis and problem solving, which requires "modeling" the enemy, applying targeting formulas, and gathering "real-time" information on forces and disposition. In comparison, civilian leaders are (supposedly) using a

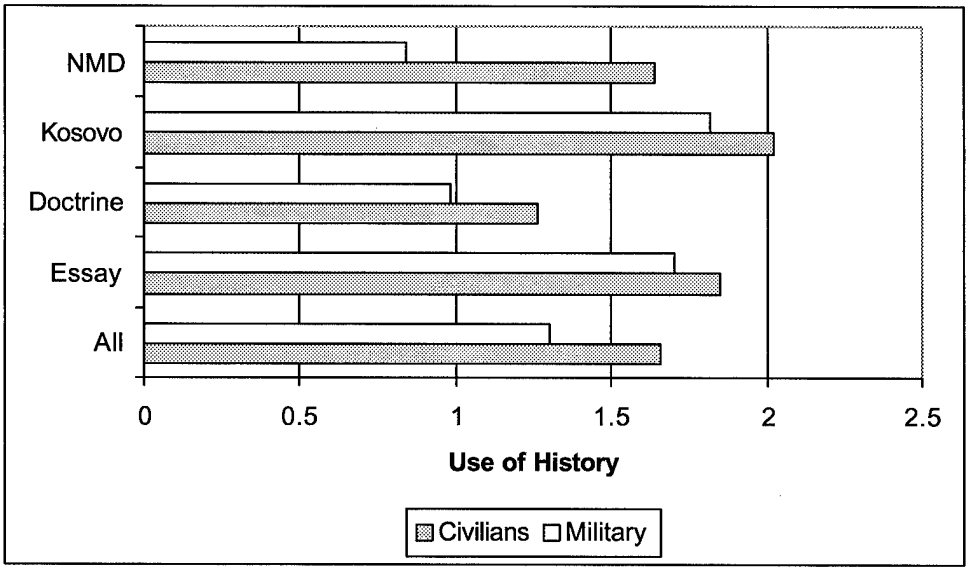


Figure 19 – Use of History Averages

greater amount of history in political analysis of the situation, examining diplomatic options within past cases and relationships.

The evidence seems to indicate that this hypothesis is supported: civilians are using more history in strategy on average than the military. Figure 19 shows significant differences overall, and in each domain except analytic strategy (essays) and Kosovo. Although significant, this difference in use of history is a difference in degree rather than magnitude. One way of describing the overall difference involved in measures of 1.65 for civilians and 1.30 for military is to say that "civilians cite history in strategy about a quarter as much more than military officers." Another rough description can be found in comparing the difference in verbal descriptions of "medium" and "high" use of history that were used in manual content analysis:

> **Medium**: At least one reference to a historical case in a 300-word 'chunk' of strategy. Reasoning about that/those cases is minimal; i.e. the cases do not extensively inform the author's reasoning. Most of the text unit does not relate to this/these case(s).
>
> **High**: One or more references to history that include case based language, and a discernible degree of influence on the author's reasoning is present. As compared to 'medium', this level reflects a concentration in the text unit of case-based reasoning.

Although civilians are significantly more likely to use history than is the military, the essay and Kosovo domains display relatively weak differences and were not statistically significant. What can explain the smaller margins of difference in these types of strategy? It is unlikely to be related to context, as both student strategy essays and doctrine are classified as how-to, while NMD and Kosovo texts include arguments about whether-to commit to courses of action. As Table 12 shows, the context of strategy is significant in understanding use of history—but it does *not* explain why the military has a higher average use in Kosovo strategy.

		N	Mean Use of History	F	Sign.
Whether-To	Civilians	886	1.84	54.04	.000
	Military	293	1.24		
How-To	Civilians	700	1.42	3.58	.058
	Military	2252	1.31		

Table 12 – Use of History in Context

Essentially, the analysis of variance shown in Table 1 tells us that, in discussions about how to achieve given objectives and use military force, civilians and the military are statistically inseparable on the amount of history they use. The trend is still for civilians to use more history, but only at a very small margin. The real difference is in making the decision to commit force or intervene: in these prior deliberations the military is sharply *less* likely to use history in its strategy argumentation.

Exploratory analysis reveals that a possible explanation for civil-military similarity in essay and Kosovo use of history lies in civilian predispositions. The study's separate categories for Desert Storm and Kosovo case references allowed analysis for the role of the "current" situation and "the last [major] war" in strategy deliberations. Because the computer counted these categories regardless of the eventual formulas used, the data base includes counts of Desert Storm references in strategy essays and Kosovo references in Kosovo texts. Comparison both within and across domains shows that civilians use the most recent, or even current, war in widely different ways from the military.

One example of civilian variance is that civilians, prior to or during a major conflict, invoke the *current* case at a much higher rate than any military subjects would. In Kosovo strategy, civilians are much more likely to reference Kosovo (mean of 2.7 references per text unit) than are military subjects (mean of 1.8 references per text unit.)[3] While these case "references" are not directly present in figure 2 and Kosovo use of history measures, it is possible that when given a specific context to reason about—as in the analytic strategy of the essays and the operational strategy of Kosovo—civilians use comparably less actual history references because they are occupied with the given situation. If this were true, one would expect overall use of history by military and civilians to be that much closer in those domains, as the data shows.

If a leadership role puts civilians in a position of talking about the 'current' political situation and actors much more than the military would, then one might expect the converse to also be true: perhaps the military talks much more about the most recent war in specific situations, which would again narrow any gap. If one treats Desert Storm or the Persian Gulf War as the last major war for the US, then counts of Desert Storm references could serve as a proxy to evaluating how much the "last war" figures in civil-military strategy. Between military and civilians, who mentions the last war more in strategy?

[3] This difference is significant at $p<.000$; $F(1,750) = 15.86$.

Excluding the essays domain (which was focused on Desert Storm), references to the last major war in other strategy domains indicate a *civilian* rather than a military preference for "fighting" the last war. Figure 20 shows the mean Desert Storm references in the Doctrine, Kosovo, and NMD domains for civilians and military. The differences uniformly favor civilians,

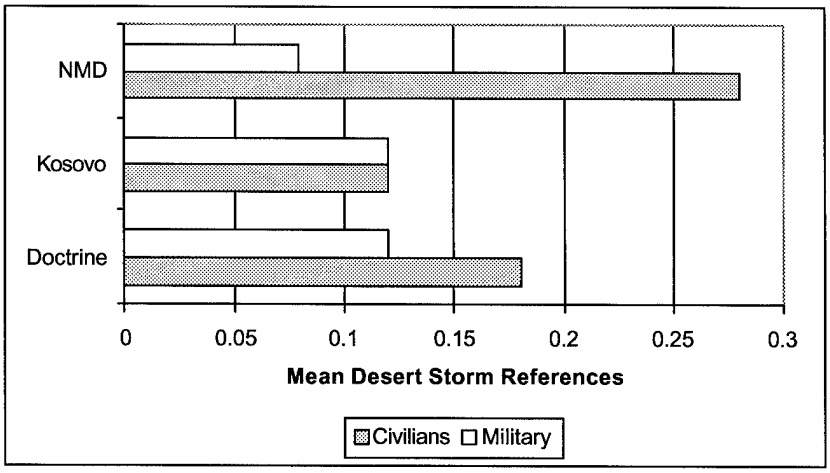


Figure 20 – Fighting the Last War

and are statistically significant in the doctrine and NMD domains.[4] Overall, this is quite surprising: especially in the doctrine domain, one might expect a predominance of military references to operations almost universally regarded as highly successful. Instead, the data seems to indicate that in types of strategy where organizing or planning are playing central roles, civilians invoke the most recent war at significantly greater rates.

[4] In Doctrine domain, $F(1,1789) = 4.45$, $p<.035$; in Kosovo, $F(1,750) = .02$, $p<.890$; in NMD, $F(1,528) = 6.72$, $p<.010$.

Instead of explaining why differences in civilian and military use of history in Kosovo and analytic essays are relatively small, a look at current cases and the most recent war rather explains why NMD and doctrine exposes significant differences. While civilians have a higher average use of history in all four domains, the difference is only significant in both a statistical and substantive sense in NMD and doctrine. Two aspects of civilian use of history seem to make those domains more significant: a greater focus on the current 'case' *narrows* history gaps in operations and analytic strategy, while greater reference to the 'most recent war' *amplifies* history gaps in planning and organizational strategy. In both instances, civilians are citing "cases" at much greater rates than military, but not all "cases" are historical.

The dynamic for civil-military use of history thus seems to indicate that civilian strategy relies on *case-based reasoning* to a greater degree than the military, who perhaps relies on principles and models. Civilian use of history measures show relatively frequent citation of historical and current events, and case-based language is used with both types of citation. Though civilians and military are both citing history, the combinatorial effect of civilians citing current events and most recent wars (and, possibly, slightly more case-based language) is that what might be an otherwise marginal difference becomes statistically and substantively significant in NMD and doctrine domains of strategy. In these domains, an observer focusing on history cites will see more civilian use of history; meanwhile, the military may—particularly in these planning and forecasting types of strategy—be using model and explanation-based reasoning more than civilians do. The latter possibility points to this study's inability to measure whether any actor, and particularly the military, is using integrated history; that is, the study cannot see

whether invoked principles and tenets of strategy are themselves based on history.[5] Thus, an hypothesis for future study might be that the military uses model or explanation based reasoning in strategy, and that reasoning: a) is used at a higher rate than civilians; and b) integrates past history and lessons.

On the civil-military level of analysis, an examination of the use of history is quite informative. Overall, hypothesis A3 is supported, and civilians use history more in strategy than does the military. There are also three accompanying observations:

1. In the operational strategy or Kosovo domain, civilians were significantly more likely to invoke the current case in communicating strategy. Although this is not considered a 'use of history', it may be biasing the use of history assessment in that the actors still use case-based language to talk about 'current' cases. The effect is that an extant civil-military gap is narrowed because civilian cites of Kosovo in Kosovo strategy are not counted as history. More significantly, it is not immediately obvious why civilians would invoke the contemporary situation more than the military would in discussing strategy, unless civilians predominately rely on case-based reasoning, and the military mixes case and model-based reasoning.
2. Fighting the last war apparently matters more to civilians than the military. Across all domains of strategy, civilians refer to the 'last major war' (in this case, Desert Storm) more often in NMD and doctrine than does the military. Reinforcing the findings

[5] Nor should it. The original purpose of the study is to establish the foundation for considering use-of-history conjectures and hypotheses. Further study can examine why the difference exists; this shows that it does exist.

concerning 'current cases' (point 1 above), the greater invocation of the most recent war by civilians may show a greater predisposition for case-based reasoning in strategy. The statistical and substantive effect is that differences in NMD and doctrine between civilians and the military are significant.

3. The context of strategy matters in use of history. Civilian and military are not statistically different in their use of history in deciding "how-to" strategy questions; they are significantly different on "whether-to" deliberations. In how-to strategy, the military is only marginally less likely to refer to history than are civilians. The military's predisposition to use significantly less history in questions about intervention and commitment to courses of action may indicate a preference for avoiding the political dimension of strategy until the decision for action is made—past cases often highlight political choices and values.

Hypothesis B3. The services will vary on their use of history in strategy, with the Air Force being least likely of all the services to include historical cases in strategic analysis.

The second level of analysis questions whether there is any pattern of history use among subgroups of civilians and the military. Although hypothesis B3 focuses on differences between the military services, a first cut at testing this proposition includes the civilian groups of leaders, experts, and defense-related actors. As Figure 21 shows, across all domains of strategy the subgroups cluster into three "supergroups": all civilians; the Air Force, Navy and Army; and

the Marine Corps. These three clusters are statistically significant in their differences[6], and the finding remains consistent with the civil-military pattern in that the three civilian groups are the biggest users of history. What seems immediately of interest is the low use of history for Marine Corps actors in strategy.

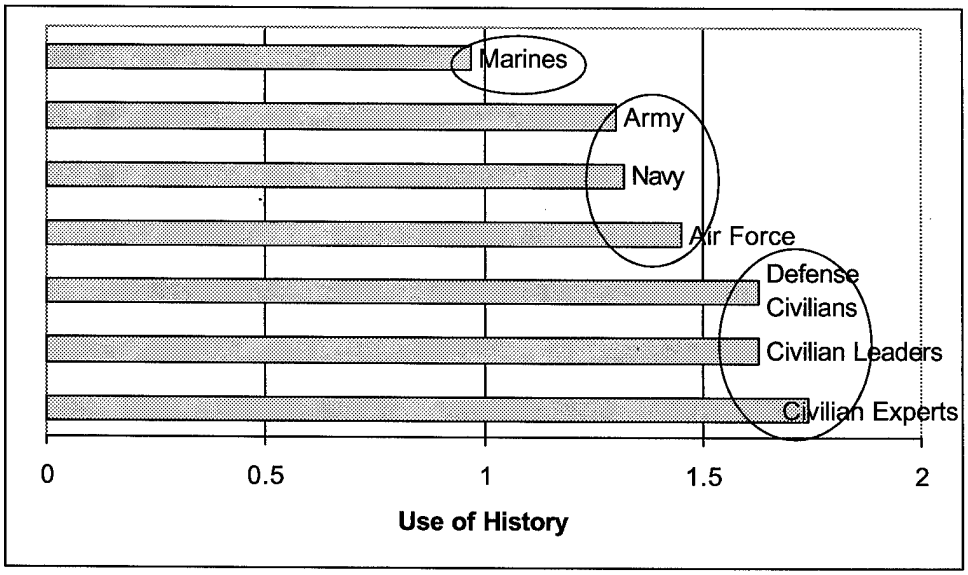


Figure 21 – Subgroups and Use of History

A closer look at the data shows that the Marine position as the lowest user of history is significant, but it rests on two interesting factors: the use of 'recent' history, and the significance of doctrine. As was discussed briefly at the beginning of this chapter, an alternative measure of the use of history was possible—labeled as the *statistically comparable* form (see also

[6] Meaning that any subgroup shown is statistically different from members of other clusters, and not statistically different from any member of their own group.

Appendix A for further details)—and an analysis of that alternative revealed an important aspect of Marine use of history. Marines, compared to their sister services, use significantly less references to the Gulf War or Kosovo in their strategy discussions. In the use of "other" history, they are quite comparable. Combined with the second aspect—the significance of the doctrine domain—much of the Marine difference is attributable to their approach in doctrine. As the figure below shows, the Marine 'cluster' gap is only significant in the doctrine domain.[7]

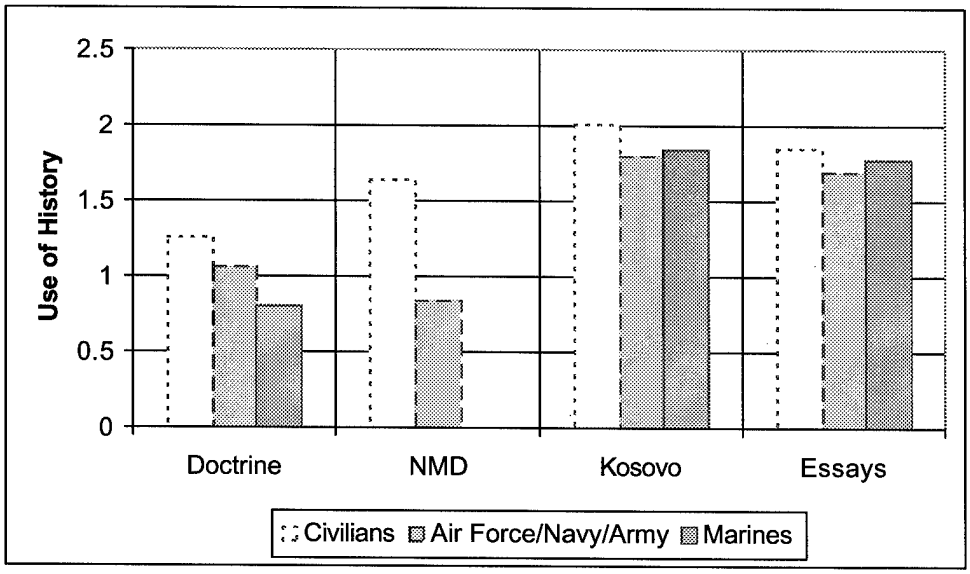


Figure 22 –Use of History by Cluster and Domain

[7] Note in the table that there are no examples of Marine NMD strategy and only a parsimonious handful in Kosovo; thus at the outset only the essay and doctrine domains are reasonable to use for drawing conclusions. The ANOVA test for the doctrine domain is $F(2,1759)=11.68$, $p<.000$; Tukey t-tests for the cluster differences are each significant at $p<.02$ overall.

There is a two-fold implication to these factors of Marine use of history: we can only be confident about the 'cluster' differences in doctrine, and the difference in that domain may indicate understandable Marine reluctance to rely on the Gulf War or Kosovo as examples of strategy. Figure 22 amply demonstrates that the primary difference between Marines and others in the use of history is doctrinal. The only other domain with sufficient Marine examples for comparison is analytic strategy essays, and in that domain Marines were inseparable from the other two clusters. One will need to determine what varies between doctrine and analysis before generalizing too much to other strategy. In this respect, the Marine difference may be due to a natural reluctance to use the Gulf War or Kosovo in discussing strategy. In both cases one can argue that the Marine role was either distasteful (the Gulf War role as an amphibious assault deception) or insignificant (only Marine air and rescue forces played direct roles in Allied Force.)

An examination of the whether-to and how-to contexts of strategy and some exploratory analysis reveals another facet of subgroup behavior: defense civilians are an independent subgroup. In a variance from patterns in offensiveness and uncertainty, whether-to deliberations of strategy seem to draw more distinctions between subgroups than do how-to discussions. While both contexts of strategy show significant differences between the 'cluster' groups of civilians, Air Force/Navy/Army, and Marines, the differences are larger in whether-to strategy. In an effort to understand this pattern, exploratory analysis on the role of each subgroup was performed. As Figure 23 shows, defense civilians play an independent role in using history in

strategy: they use significantly more history than others in how-to strategy, and occupy a unique intermediary point in whether-to strategy.[8]

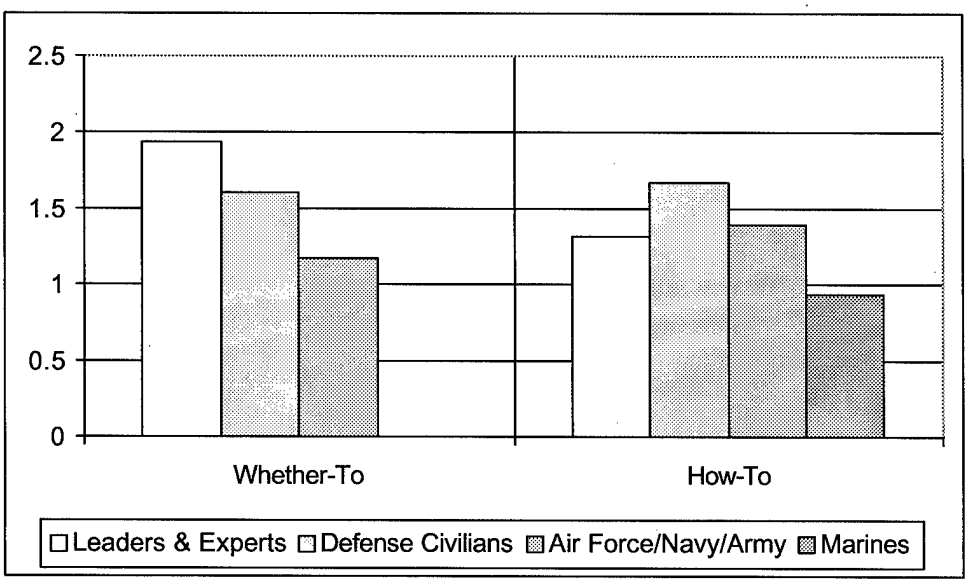


Figure 23 – Clusters and Context in Use of History

A potential explanation for defense civilian preferences lies in their bureaucratic role: these civilians are part of the civilian leadership, work closely with military, and therefore may possess some of the strategy qualities of both. As part of the civilian leadership, defense civilians are subordinate to Executive civilian lead in deciding whether-to intervene or commit to courses of action. Concomitantly, as civilians, these non-military defense personnel lack the competence to explain strategy in terms of principles and military models. Yet, defense civilians

[8] Figure 5 shows no value for Marine whether-to strategy because their contribution to this arena of strategy was too small for comparison (only 15 'chunks' or strategy texts.) The only clusters in this figure that are not statistically different from each other are leaders & experts from Air Force/Army/Navy in how-to strategy.

work closely with the military and presumably—with attention to the organization's responsibilities, the course of experience, and personal relationships—they may adopt some of the military perspective in strategy. The result, then, may be that defense civilians are intermediaries: like the military, they are more reluctant to argue about whether-to strategy and cite cases that may bring up political questions; like civilians, when they do foray strongly into strategy—as the Defense Department should in how-to discussions—they are forced to rely on case-based reasoning rather than principles.

Focusing on hypothesis B3—the difference between the Air Force and its sister services—it appears that the Air Force not only does not use less history than its military fellows, it may use more history because of the Marine Corps difference. While that is true, Marines contribute far less examples of publicly available strategy than the other services, so a conclusion for the hypothesis cannot be drawn directly from that difference. Instead one can assess this hypothesis by comparing the Air Force to all other services. From this perspective, it first seems conclusive that the Air Force uses significantly more history rather than less (though the gap is substantively small). Table 13 shows this result; yet it also reveals more going on underneath the surface. In looking at the domains of strategy, we find that only Kosovo and Doctrine show significant differences in the use of history—and in *opposing* directions.

		N	Mean Use of History	F	Sign.
Overall	**Air Force**	878	1.45	18.53	.000
	Other Military	1667	1.23		
Essays	**Air Force**	493	1.69	.152	.696
	Other Military	474	1.72		
Doctrine	**Air Force**	235	1.20	9.57	.002
	Other Military	991	.92		
Kosovo	**Air Force**	51	1.44	8.44	.004
	Other Military	120	1.98		
NMD	**Air Force**	82	.80	.712	.400
	Other Military	99	.88		

Table 13 – Air Force vs. Other Military Use of History

This table and the previous results show that the high overall average for Air Force use of history may be due to the impact of Marines and an additional artifact of sample sizes. First, recall the low overall and doctrinal use of history of the Marines; Marine use of history would tend to lower the average for "other military." This explains some of the difference shown in the table. Another impact may be due to sample sizes: essays form half of the overall Air Force data set, and average use of history for any actor was relatively higher in this domain. In the two domains which have few to no Marines and exclude the essays, the Air Force is marginally (and in one case, significantly) a smaller user of history than the other services.

Thus, an assessment for hypothesis B3 is that it is not supported: the Air Force does not use significantly less history than its fellow military services. Although it may appear that the Air Force actually uses more history rather than less, differences in data and domain create a misleading statistical significance at the broadest level of analysis—while the Air Force appears to use more history overall, in fact this difference is mitigated by acknowledging the effects of

Marines in the data and the preponderance of essays in the Air Force sample. There are also some corollary observations in summarizing the results of subgroup behavior:

1. The services are different from each other in at least one respect: the Marine Corps is a smaller user of history in organizational strategy (doctrine) and appears to bear a reluctance for citing the Gulf War and Kosovo as history that is relevant to strategy deliberations.
2. From the subgroup perspective, there are four significant clusters in use of history (in order from highest average users to lowest): Leaders and Experts; Defense Civilians; the Air Force, Army and Navy; and Marines. Defense civilians may play an intermediary role as demonstrated by their use of history in strategy: they prefer to use history and case-based reasoning to explain strategy when called upon to do so, yet are less likely than their civilian brethren to use politically-loaded cases when discussing strategy in whether-to contexts.
3. Finally, context matters again at the subgroup level. Unlike patterns in offensiveness and uncertainty, however, cluster differences in whether-to strategy are greater than differences in how-to strategy. Without the large effects of defense civilian use of history in how-to strategy, there might be no difference between civilians and the largest military cluster. This may be one indication that case-based reasoning is a preferred mode of civilian deliberations of strategy: civilians bear responsibility for whether-to strategy and therefore use relatively more history there.

Symbolic language and Organizational Use of History

If what is contained in the symbolic language of institutions is regarded as that organization's ideals or is related to its values, one might expect remembered history to be associated with those symbols. However, it appears that in strategy discussions relationships between symbols and use of history are spurious at best. Table 14 below shows the results of three different regressions of use of history and the symbolic language of civilians and military

	Model A: Overall Use of History	*Model B: Doctrinal Use of History*	*Model C: NMD Use of History*
Intercept	[+1.68**]	[1.35**]	[1.60**]
Civ-Mil (0=Civilian/ 1=Military)	-.115**	-.119**	-.322**
Civilian Symbols	-.012	-.056*	.055
Army Symbols	-.012	-.009	.065
Air Force Symbols	-.007	.065**	-.046
Navy Symbols	-.047**	-.023	.033
Marine Symbols	-.058**	-.049*	-.012
Model R^2	.16	.13	.34

Note: Cell values are standardized coefficients; * indicates p<.05, ** indicates p<.01

Table 14 – Symbolic language and Use of History Models

services. None of the models is very significant; and those coefficients that do show significance in one area are not significant in others. In sum, there seems to be no reason to consider any pattern or significance in symbolic language and the use of history in strategy.

Summary

Measuring the use of history in strategy requires a focus on "what kind" of uses are relevant to the theories being evaluated. In this study, the focus is on "how much" history is used, rather than notions of "how well" or in what ways the history is used. A formulaic measure for the use of history was created by a parallel analysis of manual and automated coding of history references and case-based reasoning language. The formula presents the notion that a measure of history use, as interpreted by human beings, is similar to adding specified amounts of "other case counts" and "case based reasoning" while adding "Kosovo references" and "Desert Storm" references when it is appropriate by timeframe. This generated three different formulas to cover the four domains of strategy.

On the civil-military level of analysis, an examination of the use of history is quite informative. Overall, hypothesis A3 is supported, and civilians use history more in strategy than does the military. There are also three accompanying observations:

1. In the operational strategy or Kosovo domain, civilians were significantly more likely to invoke the current case in communicating strategy. Although this is not considered a 'use of history', it may be biasing the use of history assessment in that the actors still use case-based language to talk about 'current' cases. The effect is that an extant civil-military gap is

narrowed because civilian cites of Kosovo in Kosovo strategy are not counted as history. More significantly, it is not immediately obvious why civilians would invoke the contemporary situation more than the military would in discussing strategy, unless civilians predominately rely on case-based reasoning, and the military mixes case and model-based reasoning.

2. Fighting the last war apparently matters more to civilians than the military. Across all domains of strategy, civilians refer to the 'last major war' (in this case, Desert Storm) more often in NMD and doctrine than does the military. Reinforcing the findings concerning 'current cases' (point 1 above), the greater invocation of the most recent war by civilians may show a greater predisposition for case-based reasoning in strategy. The statistical and substantive effect is that differences in NMD and doctrine between civilians and the military are significant.
3. The context of strategy matters in use of history. Civilian and military are not statistically different in their use of history in deciding "how-to" strategy questions; they are significantly different on "whether-to" deliberations. In how-to strategy, the military is only marginally less likely to refer to history than are civilians. The military's predisposition to use significantly less history in questions about intervention and commitment to courses of action may indicate a preference for avoiding the political dimension of strategy until the decision for action is made—past cases often highlight political choices and values.

At the subgroup level of analysis, hypothesis B3 is *not* supported—the Air Force is not a smaller user of history than all the other services. There are some important corollary observations, however:

1. The services are different from each other in at least one respect: the Marine Corps is a smaller user of history in organizational strategy (doctrine) and appears to bear a reluctance for citing the Gulf War and Kosovo as history that is relevant to strategy deliberations.
2. From the subgroup perspective, there are four significant clusters in use of history (in order from highest average users to lowest): Leaders and Experts; Defense Civilians; the Air Force, Army and Navy; and Marines. Defense civilians may play an intermediary role as demonstrated by their use of history in strategy: they prefer to use history and case-based reasoning to explain strategy when called upon to do so, yet are less likely than their civilian brethren to use politically-loaded cases when discussing strategy in whether-to contexts.
3. Finally, context matters again at the subgroup level. Unlike patterns in offensiveness and uncertainty, however, cluster differences in whether-to strategy are greater than differences in how-to strategy. Without the large effects of defense civilian use of history in how-to strategy, there might be no difference between civilians and the largest military cluster. This may be one indication that case-based reasoning is a preferred mode of civilian deliberations of strategy: civilians bear responsibility for whether-to strategy and therefore use relatively more history there.

CHAPTER 8

IMPLICATIONS FOR CIVIL-MILITARY RELATIONS

> *Civil-Military Relations: The type and extent of linkages between the military institution and various civilian institutions.*
>
> Juanita Firestone, "Overview of Warfare and Military Studies"

> *One reason for the confusion about the state of US post-Cold War civil-military relations is that there is a remarkably broad range of ideas of what constitutes "good" or "bad."*
>
> Michael Desch, "Soldiers, States, and Structures"

The notions of what constitutes good and bad procedures for the making of strategy are "sidelined" but not entirely separated from the hypotheses in this study. While each hypothesis searches for a relative difference in rhetorical style between groups, an underlying but unstated interest is whether such a difference may be problematic. For instance, the idea that civilians and the military have different preferences for offensive strategy is taken by some scholars to be a crucial starting point for past instances of faulty strategy (Snyder 1984, Van Evera 1984, Posen 1984). Others have noted a tendency for modern strategy to be ahistorical (Trachtenberg 1991), or that some military services are more ahistorical than others (Smith 1970, Mrozek 1988, Murray 1999), with a seeming presumption that ahistoricism is not a virtue. Finally, between classic military theory's "friction" and modern technology's

"information dominance" are conflicting notions of the necessity of uncertainty in decision-making and strategy (Vertzberger 1998, Murray 1999, Thomas 2000).

This study essentially sets out to lay a foundation by systematically measuring differences between specified groups in their communicated strategies. The foundation is concerned with establishing whether previously cited theories actually have an empirical basis for some critical propositions, but also is characterizing or describing the "lay of the land" for future study. It is not, however, comparing the differences found to any external standards, or determining whether particular differences or particular values are "good" or "bad." In consideration of the views of Firestone and Desch above, this study is examining the type and extent of linkages between civilians and the military in specified characteristics of strategy in order that future study—to include measured, normative or practical judgements of efficiency or value—may rest on more than a theoretical foundation.

The results are both significant and interesting for those interested in strategy and civil-military relations. Differences between civilians and military, and secondly civilian subgroups and the military services, were substantiated on each of the dependent variables of offensiveness, uncertainty, and use of history in strategy. Furthermore, exploration of some of these differences have important implications for *offensiveness* in strategy, *doctrine* as a realm of strategy, and *institutional identities* and organizational behavior. Finally, discussion of these findings can form the basis for a preliminary conclusion regarding civil-military relations and *culture*, the third perspective of this study's hypotheses.

Findings concerning the hypotheses

The first of three perspectives of civil-military relations and strategy concerned broad civilian-to-military comparisons, and differences exist at this level of analysis in the dimensions of offensiveness and use of history. An enduring theoretical notion about civil-military relations is supported by evidence that the military is indeed significantly more offensive than comparable civilians. However, this offensiveness differential only seemed substantively large in the arena of doctrine, and was reversed in national missile defense. More importantly, offensiveness is critically related to context: "whether-to" discussions of strategy reveal a more offensive civilian group, while only "how-to" discussions support the "offensive military" paradigm.

At the civil-military level, civilians are also greater users of history than is the military. The difference existed across all domains of strategy, but was most significant in doctrine and national missile defense. Interestingly, the difference is statistically negligible when looking at "how-to" contexts of strategy-making, but is significant in "whether-to" discussions. Combined with significance in the doctrine and national missile defense domains, one might theorize that civilians use more history in justifying and explaining strategy for notional cases or future scenarios than does the military. Civilians also invoke the current case and the most recent war more often than the military—a strong indication that civilians are predisposed towards case-based reasoning. The military may be relying more on principles, theories and models for explicating strategy—whether these principles and models may *themselves* be based on history is not observable for this study.

It is more difficult to provide a general characterization of civil-military differences in uncertainty and strategy. The two groups are approximately equal in including uncertainty in analytic and operational strategy, but are in opposing positions in the doctrine and national missile defense domains of strategy: civilians are significantly less uncertain in doctrine than the military, but more uncertain in NMD. Context is once again an important factor—civilians are more uncertain in "whether-to" strategy, but less uncertain in "how-to." While this does not completely explain the differences in domains, a possible generalization is that groups may be more likely to include uncertainty in strategy when they feel competence in or responsibility for that strategy. This "stake-holder" interpretation begins with the proposition that civilians generally make intervention and commitment decisions, while the military generally makes execution and implementation decisions. If true, each may be more unsure of their choices and options when they are "under the gun" for the responsibility of the decisions, and less uncertain about their proposals when they possess less responsibility.

Hypothesis	Supported?	Context?
A1. Militaries will prefer and advance more offensive strategies and foreign policy solutions than their civilian counterparts.	**Yes.** Military more offensive in all except NMD strategy. Difference sharpest in doctrine.	Civilians slightly more offensive in 'whether-to' strategy; military sharply more offensive in 'how-to.'
A2. Contemporary US military analysis and strategy downplays or disregards the role of uncertainty (in the entire situation, rather than merely choice options) compared to civilian analysis and policy on the same issue.	**No.** Military more uncertain in doctrine, but less in NMD, and about equal otherwise.	Civilians slightly more uncertain in 'whether-to' strategy, but sharply less uncertain than the military in 'how-to' strategy.
A3. Contemporary US military analysis and strategy discounts the importance of history (past cases of conflict and war), compared to civilian analysis and policy on the same issue.	**Yes.** Civilians use more history in all areas of strategy, particularly in doctrine and NMD.	Civilians and military close in use of history in 'how-to' contexts, but civilians use more history in 'whether-to' strategy.
B1. The services will vary on offense-oriented strategy preferences, with the Air Force and Navy significantly more offense-minded than the Army and Marine Corps.	**Yes.** Air Force and Navy 'cluster' together as more offensive across all domains. Army least offensive in all domains.	Military services are relatively homogenous in 'whether-to' discussions, but diverge in 'how-to' with Air Force and Navy more offensive.
B2. The services will vary on their consideration of uncertainty in strategy, with the Air Force being most deterministic of all the services in strategic analysis.	**Yes.** The Air Force is generally less uncertain, but particularly in doctrine. If clustered with Navy, there is a more significant pattern of being less uncertain.	Civilian experts are most uncertain in both contexts; military services about the same in 'whether-to' strategy, but clusters in 'how-to' with Air Force & Navy less uncertain than Army & Marines
B3. The services will vary on their use of history in strategy, with the Air Force being least likely of all the services to include historical cases in strategic analysis.	**No.** The Air Force is not the least likely user of history; rather, Marines are generally the least likely to use history across services.	Defense civilians display independent behavior in whether-to and how-to strategy: they appear as intermediaries between civilians and the military

Table 15 – Hypotheses and Findings

In considering subgroups of civilians and the military services, the evidence reveals that several scholars possessed an accurate, if intuitive, outlook on US strategy making. One outlook is that the more specialized services may be more offensive and less uncertain than the more generalist services (Murray 1999). In support of this proposition, the Air Force and Navy do form a 'cluster' or grouping with similar behavior in each of the dimensions: they are the most offensive military services, less uncertain in their strategy, and (along with the Army) the smallest users of history. Apparently, there is something common to the Air Force and Navy that leads to different strategy perspectives; whether that commonality is due to specialization, "distant firepower" versus "maneuver warfare" (Murray 1999), or service culture interest in technology (Mrozek 1988) remains to be uncovered, and is discussed more below.

There were also two unanticipated findings concerning the military services: the Army is least offensive service in strategy, across all domains; and the Marine Corps is the smallest user of history (of the services.) The Army finding comes from a fairly representative data base, since they contributed strategy examples to all of the domains (see Table 3 in Chapter 4.) One proposition here might be that the Army is a service most dependent on people and most affected by the legacies of Vietnam (see Gabriel & Savage 78; Campbell 1998), therefore this service is contemporarily the most cautious and casualty averse (Feaver & Gelpi 2000). Offensiveness and this proposition are discussed in more detail below. The Marine Corps finding, on the other hand, is based on fairly restricted data—most of the Marine strategy examples lie in the doctrine domain, and they have no contribution to the NMD domain. A tentative conclusion about Marine Corps use of history, based on manually comparing the

doctrine texts and looking at specific history counts, is that the Marine Corps may be reluctant to cite Allied Force and the Gulf War as significant history for their perspective on strategy. This may be due to either general dislike of the strategy employed (as in the Gulf War amphibious deception) or a relatively subordinate or minor role in the operations (as in Allied Force.)

Civilian subgroup behavior helps to unravel some mysteries in the data, too. Civilian experts cut their own paths when considering uncertainty in strategy: they are the most uncertain of all groups (to include the military services), while their civilian counterparts are the least uncertain. Most of the strength of this difference comes from the NMD data, but it does generally exist in other domains. A manual review of civilian expert contributions to NMD strategy reveals that their uniqueness may be due to two effects: a frequent citation of specific treaties in case-based reasoning (they were the highest subgroup user-of-history); and an apparent 'gadfly' role in explicating all the possibilities and uncertainties of missile defense.[1] Across the various analyses, the unique patterns of national missile defense data might be largely attributable to a combination of civilian experts setting high marks, and the Army setting low marks, both apart from their civil-military cohorts. Non-governmental civilian experts may be the "uncertainty hawks" that some feel are driving contemporary strategy (Connetta & Knight 1998), but the Army may simultaneously be an unexplained uncertainty "dove."

[1] See the next chapter for a discussion about "the price of admission" in strategy; civilian expert strategy contributions in NMD may be due to an external artifact that many commissions and reports are in response to the controversies and high cost of potential NMD programs. Uncertainty may naturally increase when the expert authors take on an 'investigative' or challenging role.

Offensiveness: a revised theory for civil-military relations and strategy

The evidence of offensiveness in strategy as it pertains to civil-military relations may be among the most important in this study. Scholars have considered differences between these two groups in a variety of ways associated with offensiveness: from the more direct cult of the offensive (Snyder, Van Evera 1984), to offensive doctrine (Posen 1984), to aggressiveness (Betts 1977), to military caution (Patraeus 1989, Mandelbaum 1994, Luttwak 1994, Campbell 1998), to notions of casualty aversion (Mueller 1994; Larson 1996; Feaver & Gelpi 1999). In each case there has been interest in the degree of difference between civilian and military behavior, and those differences have either been assumed or in varying degrees researched by case or survey methods. This study supports all of these efforts, although in a distinctly different manner using a broader data base, content analysis, and quantitative statistical tests.

The finding that the military is more offensive than civilians across most domains of strategy first seems to support assumptions in research about the cult of the offensive and offensive doctrine. Both Van Evera and Snyder perceive or describe a military *penchant for offense* which we can prima facie equate with the finding that the military is, on average, more offensive. Both scholar's writing imply that the military has at least an organizational, and perhaps cultural, *motivational* bias preferring offensive uses of military force, and that this preference can have pathological effects on civil-military relations and strategy. However, some serious qualifications must be added to the general finding, and in fact might change the focus of future research into cults of the offensive.

First, the overall "offensive stance" in contemporary US strategy is slightly *defensive* (a mean negative score for offensiveness.) In studying pre-World War I or between the wars strategy and doctrine, a scholar should assess overall stances prior to leveraging a civil-military difference into theories of behavior. If the state(s) involved also have overall defensive strategy, it is not clear that the more offensive preference of a subject military necessarily leads to any "cult" of offensive strategy. This may, in fact, be a problem with Posen's analysis of French military doctrine between the wars: he found French military doctrine to be somewhat defensive, and attributed it to civilian intervention in the strategy process. It is possible instead that both the military and civilians were defensive overall, with the military only slightly more offensive in comparison.

A second qualification concerns the context of strategy and offensiveness differences: questions of "whether-to" intervene or commit to action in situations are significantly different from discussions or planning for "how-to" intervene. Civilians are *more* offensive than the military in "whether-to" strategy, and the military more offensive than civilians in "how-to" strategy. This complements the findings of other case and survey-based research. Russett found in a systematic survey that military officers were more hawkish than a comparable group of professional civilians, but *only* on some explicit defense-related issues exhibiting characteristics of "how-to" strategy.[2] Betts found in Cold War case studies that the military was only slightly more aggressive than civilians in "whether-to" strategy, but sharply more

[2] Russett, "Political Perspectives of US Military and Business Elites," pp. 83, 86-88.

aggressive in "how-to."[3] Patraeus, expanding the case studies of Betts through 1989, found that civilians since 1960 were much more aggressive than the military in "whether-to" questions, but "once the decision has been made, the military have frequently, and understandably, sought to use as much as they believed was necessary to bring the commitment to a speedy and victorious conclusion."[4] Finally, Holsti has found in his survey analysis that between civilians and the military, "cleavages are better described as focused and limited rather than pervasive." In particular, differences in militancy and cooperation beliefs have narrowed since the 1960's, except for sharp contrasts on two issues: the legitimacy of CIA manipulation of foreign states and the necessity of striking at the heart of an enemy's power, both of which the military is strongly more supportive.[5]

The implication for the cult of the offensive and offensive doctrine theories is simple but critical: if the "cult of the offensive" is primarily concerned with decisions to act in specific crises or against specific foes, then one actually may have either equanimity or a civilian penchant for offense rather than military. If instead the focus is on general planning and practical issues of how to intervene or conduct actions, then the military preference is strongly supported. Neither Van Evera nor Snyder make any clear distinctions on the context of strategy they discuss in their studies—at various points they seem to be discussing both contexts without qualification.

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[3] Betts, Soldiers, Statesmen and Cold War Crises, especially Appendix 1.

[4] David Petraeus, "Military Influence and the Post-Vietnam Use of Force," Armed Forces & Society 15:4, Summer 1989, p. 492. For his strong finding that civilians can be much more aggressive in whether-to instances, see pp. 490 and 497.

[5] Ole Holsti, "A Widening Gap...", pp. 6, 8.

Posen's The Sources of Military Doctrine is, by the definitions of this study, ostensibly looking at "how-to" strategy, and therefore his assumptions are supported by this finding.

A third note for offensiveness in theory concerns the one domain of strategy that exhibited anomalous findings: national missile defense or NMD. This arena of strategy, dubbed planning or future strategy, exhibited civilians as more offensive relative to the military; however, the substantive positions included civilians who were still defensive, but a military that was sharply more defensive. The military's strong defensiveness in NMD was also attributable in large part to Army strategy. What made NMD so different, and what is the implication for other research?

While the proposition is largely speculative, this scholar believes that NMD strategy is particularly different because of an inherent focus on homeland defense versus intervention and warfighting. Homeland defense may invoke substantively different behaviors in military officers and their strategy: in particular, despite a modern expeditionary stance, the US Army is the service with the strongest traditions of homeland defense, civic duties, and populace protection.[6] Similarly, civilian experts may diverge in NMD strategy from other civilians because of their non-governmental roles as the "fourth estate" with a focus on *domestic* interests, instead of the foreign policy focus of other domains. Homeland defense does not often arise in US strategy, and thus it appears here (in this study) as an anomalous domain. However—in a very critical point—comparative research, particularly any involving European history and conflicts, may

[6] See for instance Eric Larson and John Peters, Preparing the US Army for Homeland Security, RAND M-1251/A, Santa Monica, 2001; also see Carl Builder, The Masks of War, pp. 33-34 and 86-92.

face a difficult problem in disentangling a state's homeland strategy preferences from intervention strategy preferences. If this proposition is accurate, these two arenas may invoke very different behaviors for some military and some civilians.

A final important implication of these offensiveness findings relates to military caution and casualty aversion propositions in civil-military relations: the context of strategy is critical to accounting for indirect military influence on decisions for intervention. Research on casualty aversion in civil-military relations has pointed to an overriding tension between acknowledged casualty sensitivity by all Americans and the perceived stakes of a potential or ongoing conflict.[7] In a survey study intended to isolate preferences of civilian and military groups regarding casualty aversion, Feaver and Gelpi generally find that military elites have the highest aversion, followed by civilian leaders, then the American public. However, their study is only roughly able to account for the stakes of potential conflicts, distinguishing between traditional and non-traditional interventions (where non-traditional would, by their descriptions, be more ambiguous about the national security stakes involved.)[8] Regardless of whether one accepts their questionable approach of asking respondents to specify the number of casualties it would take to forgo an intervention,[9] there is an open question of when and how disparate civil-military

[7] This tension is the major theme of Eric Larson's "Casualties and Consensus: The historical role of Casualties," MR-726-RC, Santa Monica: RAND, 1996. John Mueller also outlines this tension in Policy and Opinion in the Gulf War, University of Chicago Press, 1994, pp. xvii, 124-125.

[8] Feaver and Gelpi, "The Civil-Military Gap and Casualty Aversion," esp. pp. 29-34.

[9] Asking the military how many casualties are acceptable is akin to asking a parent to make a hypothetical choice between their children in an emergency scenario: there is a duty to do something if it happens, but the choice is utterly despised. Another view is that the choice is like the "Sorites" puzzle of Eubulides of

preferences actually matter. Even those scholars who focus on the sensitivity versus stakes tension (Mueller 94; Larson 96) may be missing an important specification of when the military is asked for its input.

Research into military caution in modern strategy has found that the military is primarily averse to conflicts with underspecified objectives and stakes rather than averse to conflicts—and presumably attendant casualties—in particular. K. J. Campbell writes:

> Whenever civilian leaders in the Bush and Clinton administrations have suggested applying military force to international crises, the Joint Chiefs have responded by stubbornly insisting that before US military forces be placed in harm's way, certain clear conditions for the proper use of force first be met. These military leaders pointed to costly failures and humiliating withdrawals from places such as Vietnam, Beirut, and Somalia as clear examples...[10]

Much of the debate over the Weinberger or Weinberger-Powell Doctrine has focused on exactly the same point (Twining 1990; Marthinsen 1990; Gacek 1994; Handel 1996; Hillen 1996), with occasional emphasis on the complexity and uncertainty of identifying interests and objectives (Haas 1994). Colin Powell first publicly indorsed the so-called doctrine in an editorial which directly calls attention to successful military action in a variety of contemporary conflicts, and only cites that "generals get nervous" when military force and political objectives are not matched in a careful and clear process.[11]

Miletus—how many grains of sand does it take to make a heap? The modern answer is that one knows it when they see it, but it cannot be put in a rule.

[10] Campbell, "Once Burned, Twice Cautious," p. 357.

[11] Gen. Colin Powell, "Why Generals Get Nervous," New York Times editorial, October 8, 1992.

The implication when one marries the findings of this study with the propositions of military caution and casualty aversion is that the military preferences for intervention or commitment of military force are critically related to the kinds of questions the military are asked. Since military offensiveness is true when the discourse concerns "how-to" strategy, one must expect less caution and less casualty aversion if the military is asked how to execute a potential conflict. If, however, the question is "whether-to" commit to an intervention, the military is expected to be more cautious and probably more casualty averse than comparable civilians. This becomes much more critical when one considers that military leaders may also express their whether-to preferences even when asked how-to questions: Petraeus has found in case studies from 1973-1989 that military leaders have had considerable influence on intervention decisions in exactly this manner.[12]

The conclusion, then, is that civil-military relations and strategy presents a complex mechanism when one focuses on offensiveness. If one is observing strategy at the broadest or all-encompassing level, it is true that the military is more offensive than comparable civilians. For contemporary US strategy, that overall stance is also somewhat defensive in orientation. As soon as one focuses on particular strategy situations, however, there are three critical factors that change—and can even reverse—the civilian and military preferences: casualty sensitivity, the perceived stakes, and the "whether-to" or "how-to" context.

[12] David Petraeus, "Military influence and the Post-Vietnam Use of Force," pp. 493-495.

1. Casualty sensitivity: Americans are generally casualty averse. The public may be least averse, civilian leaders more averse, and military elites most averse.[13] Extrapolating from other studies, offensiveness for all groups may proportionally decrease as actual or perceived risks of casualties increase. Therefore, the higher the casualty risk, the closer together civilians and military are in offensiveness, due to the military's higher 'starting point' and effects of this factor.
2. Perceived stakes: There are two dimensions to the 'stakes' of strategy—how specified and clear they are, and how important they are perceived to be. Based on findings in other studies, the proposition is that civilian offensiveness increases with perceived importance, while military offensiveness decreases with ambiguity in objectives but increases with the importance of objectives.
3. Context: Civilians are more offensive than the military when considering whether to use military force in situations. The military expresses more offensive strategy when considering how to use military force. A complicating issue is that the military may use questions of "how-to" use military force to express "whether-to" and therefore less offensive preferences, if it is perceived that the actual context is "whether-to" strategy.

Doctrine—is it Strategy? How is it Different?

[13] The author is most cautious and skeptical on this point. Only Feaver and Gelpi have supported this proposition, and there were a number of problems with that study. It can be a initial position for theory, however.

In order to address the argument that scholars may be too permissive in extending their study of one type of strategy to generalizations about all strategy, this study incorporated into its design the premise that different types of strategy might give rise to different characteristics in strategic reasoning. By selecting four representative domains of strategy—analysis, organization, operations, and planning at a politico-military level, including both grand and national military strategy—this research showed that there are both patterns across *all* domains and some dynamics *within* certain domains. In general, the least substantive differences between civilians and military, or their subgroups, occurred in the domains of analysis (strategy essays) and operations (Kosovo reports and testimony.) Important, and in some ways anomalous, differences were shown in the planning domain regarding National Missile Defense, as discussed in the previous section. But across all the evidence a separate and possibly vital pattern asserted itself: organizational strategy, as expressed by civilian and military doctrine, illustrated some of the strongest substantive differences and supported every basic hypothesis finding in the study.

Organizational strategy, as defined in this study, focuses on how resources will be organized in general terms for the accomplishment of broad or generic objectives. Several National Security Strategies served as examples of civilian leader doctrine, non-governmental experts were represented by prominent national security studies, and each service's vision statements and basic, warfighting, and operations doctrine publications served as the military examples. This study accepted doctrine as a type of strategy based on the general definition that treats strategy as a communicated concept that links ends desired with means required. While a

number of scholars agree that doctrine is a valid expression of strategy (Huntington 1961; Snyder 1984; Van Evera 1984; Posen 1984), this is not an uncontroversial assumption.

To assess whether doctrine really is strategy, and consider its differences, it is worthwhile to review two facets of the doctrine-strategy controversy: a definitional debate, and a words versus actions debate. Those who would argue that doctrine is not strategy per se fall into two separate camps, focusing on wholly different considerations. One camp is composed of civilian and military theorists who largely argue that doctrine does not focus on ends, or at least that it certainly does not focus on *policy* ends, and for this camp strategy is specifically something that links policy ends with military and other means. The other camp is composed of civil-military scholars who are concerned that doctrine is primarily a written concept, and that in the study of strategy one often assesses that strategy in material actions and physical outcomes which may be wholly different from the written concept.

The definitional debate over doctrine may be overly contrived, yet it also points to an important consideration for this study—the role of doctrine in civil-military strategy. The debate begins ironically within basic US military doctrine, which states:

> Military doctrine describes how a job should be done to accomplish military goals; strategy defines how it will be done to accomplish national political objectives. Strategy differs fundamentally from doctrine even though each is necessary for employing military forces. Strategy originates in policy and addresses broad objectives and the plans for achieving them. Doctrine evolves from military theory and experience and addresses how best to use military power.[14]

[14] Air Force Basic Doctrine, AFDD 1, Department of the Air Force, September 1997, p. 4. This definition is nearly identical to those that can be found in the other service doctrine documents.

A prominent theorist adds that, "Doctrine is guidance on how to fight, tactics is what forces do, while strategy is the meaning of what forces do for the course and outcome of a conflict."[15] These definitions, however, may be idealistic, unrealistically narrow, and may not recognize that written doctrine already includes some broad or generic policy objectives. Even one Air Force study concluded that:

> Doctrine, however, is often driven by a myriad of influences that slant its 'basic truths.' Not the least of these influences is policy. Often, doctrine is shaped significantly by the policies of the time and reflects more the influences of individuals, budgets, and emerging technological changes than the evidence of experience, critical analysis, and study.[16]

The key to this debate may lie in recognizing the role that military theorists are ascribing to doctrine. A recognized scholar on military strategy and doctrine, I.B. Holley, describes the difference between grand strategy and military strategy as follows:

> Although the dividing line between the two is at times hazy, it is not inappropriate to say that while grand strategy deals with ends, the national objectives, military strategy deals with means, and in particular the military means for achieving the national objectives.[17]

While not identifying doctrine in this statement, the focus of differences in strategy is on *responsibility*: national authorities produce grand strategy, but the military applies itself to military means for accomplishing given objectives. Barry Posen integrates this view into his

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[15] Colin Gray, Explorations in Strategy, Westport: Greenwood Press, 1996, p. 5.

[16] Lt. Col. Johnny Jones, Development of Air Force Basic Doctrine, Airpower Research Institute: Maxwell AFB, Air University Press, 1997, p. vii.

[17] I.B. Holley, "Technology and Strategy: A historical review," Technology, Strategy and National Security, edited by Franklin Margiotta and Ralph Sanders, Washington D.C.: National Defense University Press, 1985, p. 17.

definition of military doctrine as a subcomponent of grand strategy dealing explicitly with military means.[18] In other words, military doctrine is overtly separated from any process that develops national policy to preserve and uphold the civilian origin of "ends" and the military's functional role—and competency—for "means."

Doctrine still meets the broad definition of strategy used in this study, but it is strategy communicated with both an underlying functional role—how to execute a group's responsibility—and a general, principle-based purpose. The *functional role* means that doctrine asserts and devotes itself to those elements of strategy for which particular group is responsible; for the military, doctrine focuses on military means. Civilian doctrine such as the National Security Strategy focuses on military, diplomatic, economic and informational means. The *general purpose* describes doctrine's treatment of both ends and means in a routine or broad-based manner. Doctrine is often described by military theorists as "fundamental principles that guide the employment of forces...It provides the distilled insights and wisdom gained from our collective experience in warfare."[19] It is not focused on specific situations, nor does it deny adjustments or changes in particular circumstances. As Henry Kissinger states, doctrine allows a state to:

> ...act purposefully as a unit...by reducing most problems to a standard of average performance which enables the other members of the group to take certain actions accordingly...By explaining the significance of events in advance of their occurrence, [strategic doctrine] enables society to deal with most

[18] Posen, Sources of Military Doctrine, p. 13.

[19] As cited by Lt. Col. Jones from Joint Publication 1 of November 1991, the basic joint doctrine document for the US military forces; Development of Air Force Basic Doctrine, p. vii.

> problems as a matter of routine and reserves creative thought for unusual or unexpected situations.[20]

In summary, then, the definitional debate over doctrine is due to an interest by some observers in differentiating doctrine from strategy in order to emphasize or idealize its functional role (how a group will organize means to accomplish given ends) and its broad, generic purpose (establishing the means for "average" situations vice specific ones.)

The words versus actions debate over doctrine is more evidence or research-oriented than the definitional debate. This debate is concerned that some may "confuse strategy and doctrine" by asserting the equivalence of particular doctrines and strategies, or a causal role for doctrine in observed strategies or the outcomes of conflicts. Douglas Porch writes that

> Strategy and policy determine a military organization's offensive or defensive posture, not its doctrine...Doctrines are merely techniques, methods of organization...Armies apply their doctrines well or badly depending on the level of training and professionalism, the nature of the strategic goals, the terrain, and the actions of the enemy.[21]

Porch's critique, however, may itself be confused, in that neither doctrine nor strategy are necessarily congruent with observed outcomes or material actions in a situation. Labeling doctrine as "merely techniques" and strategy as determining "posture" is incorrect (see the prior discussion on definitions) and moreover it misconstrues the issue at hand. What may be problematic for research is the *relationship* between particular doctrines, strategies, and outcomes rather than their differences.

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[20] Henry A. Kissinger, Nuclear Weapons and Foreign Policy, New York: Harper & Bros., 1957, pp. 403-404.

[21] Douglas Porch, "Military 'Culture' and the Fall of France in 1940," International Security 24:4, Spring 2000, p. 164. The article reviews Elizabeth Kier's Imagining War: French and British Military Doctrine Between the Wars, Princeton: Princeton University Press, 1997.

Accepting doctrine as an expression of strategy does not mean that a state's doctrine, operational strategy in a situation, and observed behavior should be all be the same. As Jack Snyder writes,

> Unfortunately, actions can be just as ambiguous as words....examination of US strategic posture and doctrine suggests that the relationship between the two can be frequently tenuous. Doctrines sometimes change while postures do not. Conversely, postures sometimes change while doctrines do not.[22]

Note that Snyder is not saying that operational strategy or "strategic posture" and doctrine are different in a definitional sense, but rather that the in the US situations he was studying the extant strategy and doctrine might not be materially the same, or that one might not determine what the other was. Essentially, the relationship between operational strategy and organizational strategy is undetermined.

The present research does not address the problem that the words versus actions debate brings to the table: the only relationship asserted here between doctrine and other strategies (analytic, operational, and planning) is that *they are all communicated concepts of ends and means for national security.* If a particular doctrine is under study, or one examines situations to understand the relationship between the existing doctrine, operational strategy, and outcome, then treating doctrine separately from that operational strategy and that outcome makes eminent sense. As Alastair Johnston points out, "in some instances, military doctrine is the dependent variable, and this raises the under-explored question whether declared and operational doctrines

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[22] Jack Snyder, The Soviet Strategic Culture: Implications for Limited Nuclear Operations, R-2154, Santa Monica: RAND Corporation, Sept. 1977, p. 5.

are different."[23] The fundamental conclusion of the words versus actions debate over doctrine is not that doctrine is not strategy, but rather that it makes sense to keep doctrine or organizational strategy separate from operational (or any other) strategy in order to further understanding of their internal relationships (for state strategy) and external relationships (to state behavior and crisis outcomes.)

The review of these two debates does bring focus, however, to the findings of this study concerning doctrine. For there is now evidence that doctrine as a form of strategy exhibits notable characteristics pertaining to its nature as generic strategy, to the functional roles of groups, and to the distinct effects of organizational strategy on offensiveness, uncertainty, and use of history. From the civil-military perspective of this study, one may conclude that organizational strategy or doctrine plays a role as an exemplar of national strategy, one which clarifies group roles and reinforces group functions in national security.

1. Doctrine as an Exemplar. The evidence for civilian and military differences in offensiveness, uncertainty and use of history was *sharpest* in the strategy domain of doctrine and yet *consistent* (in direction) with other domains. Specifically, the biggest substantive difference in offensiveness, showing the military more offensive than civilians, was in doctrine. Likewise, the biggest substantive difference in uncertainty, showing that civilians were less uncertain than the military, was in doctrine. There was also a significant difference in use of history, with civilians using more history than the military, in doctrine. The implication is that organizational strategy—above and beyond analytic,

[23] Johnston, "Thinking about Strategic Culture," p. 42.

operational and planning strategy—presents the starkest differentiation between groups in the characteristics of strategy of interest in this study. *Doctrine is a paragon of strategy*: it not only illustrates the differences between approaches that any particular actor may have *in any area of strategy*, it also displays a heightened degree of difference, or an emphasis on differences.

2. Doctrine as role clarification. At the subgroup level of analysis, doctrine also exemplified important and consistent differences, particularly in the military services. Doctrine supported the otherwise general finding that the Air Force is the most offensive service, and the Air Force and Navy clustered together as more offensive and less uncertain than their ground-oriented counterparts. Civilians were generally equal to each other in doctrinal offensiveness (they were defensive), but civilian experts were greater users of history than all other subgroups—military or civilian. Finally, civilian experts, the Army, and the Marines clustered together as the most uncertain subgroups on their outlooks within organizational strategy. These findings imply that *doctrine clarifies roles*: the Air Force and Navy reveal their specialization vis-à-vis the other services through strong offensiveness and less uncertainty; civilians demonstrate a reliance on case-based reasoning for justifying and explaining national security postures; and civilian experts, the Marines, and the Army expose a distinctively uncertain perspective, perhaps based upon ground forces being the least-preferred tool of choice in contemporary strategy.

3. Doctrine as functional reinforcement. Doctrine is how-to strategy: within this study, doctrine texts were classified as how-to based on the definition of doctrine as organizational strategy, where policy objectives are generic and given. The research findings across all domains emphasized that groups show the most difference in offensiveness and uncertainty when the strategy dealt with "how-to" accomplish a given problem, rather than on decisions of "whether-to" get involved in a potential situation. For example, the military services are remarkably similar and homogeneous on offensiveness and uncertainty when one only looks at whether-to types of strategy, but are significantly different from each other, and from civilians, when expressing how-to strategy such as doctrine. In use of history, the Marines are different from their military counterparts, using significantly less history in doctrine Although these are not direct measurements of organizational advocacy, how-to strategy is displaying the greatest differentiation between groups, which might be expected if groups try to market their advantages. The implication is that *doctrine reinforces function*: differences in the dimensions of strategy found in this research reflect the differences in group competencies; i.e. organizational groups use doctrine to reinforce their own and other's beliefs about functional responsibilities. As Huntington describes,

> The importance of doctrine stems from the extent to which the military groups are perceived to be and perceive themselves to be simply the instruments of a higher national policy. The armed services explicitly rationalize their existence in terms of a higher national end, and each activity and unit is justified only by its contribution to the realization of the prescribed hierarchy of values and purposes. This instrumentalism is reflected in the emphasis, peculiar to the

military, on the concept of 'mission', and it manifests itself most concretely in the elaboration of doctrine.[24]

Institutional identities and bureaucracy

> The relation of the services to fundamental issues of strategy in a sense tended to resemble the relation of the political parties to fundamental issues of national policy. The two parties have different centers of gravity with respect to policy, and yet each includes groups representing almost all viewpoints on the political spectrum...At times, of course, there may be party votes on major issues of policy, and at times, *also differences over strategy may coincide with differences between the services.*[25] [emphasis added]

This study provides a wealth of evidence on differences over strategy, and a key question similar to Huntington's insight concerns what they reveal about differences between the services, or about differences between subgroups of civilians. One possible perspective is to treat any differences as cultural, if one can establish that they are persistent over time and areas of strategy and resistant to change. (Builder 84; Jacobsen 90; Snider 99) Cultural implications—and the answers to this study's third set of hypotheses—will be discussed in the next section. But another perspective can view such group differences as institutional: varying interests and authority in a bureaucratic environment can encourage competition and convergence in strategy development and expression. (Kanter 75; Betts 77; Kincade 90; Sarkesian et. al. 95) There were two important institutional identities uncovered in this study: the clustering of the Air Force and Navy versus Army and Marine Corps; and the intermediary nature of defense civilians in civil-military strategy.

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[24] Samuel Huntington, "Interservice Competition and the Political Roles of the Armed Services," American Political Science Review 55:1, March 1961, p. 48.

[25] Huntington, p. 51.

Some of the hypotheses of this study were based on intuitive propositions or observations based on sparse evidence, which have been perpetuated in civil-military relations scholarship. In particular, the notion that the Air Force and Navy might be both more offensive and less uncertain than their sister services of the Army and Marine Corps has arisen in different forms but rarely is empirically investigated.[26] What was interesting was that these hypotheses were strongly supported, and moreover that the Air Force and Navy "cluster" effect extended across domains of strategy and the three characteristics under study. As an Air Force officer with experience in strategy development, the author had expected either no support to the clustering proposition, or support only in some limited circumstances, such as a particular domain (doctrine) or particular characteristic (offensiveness.)

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[26] Williamson Murray has espoused this in an essay, and subsequently has been cited by others in civil-military relations. See Murray, "Does Military Culture Matter?", p. 31-32; for one example of replication, see Jim Smith, "USAF Culture and Cohesion," Institute for National Security Studies, Colorado Springs: INSS, 1997. Betts also proposed the Air Force and Navy might be more offensive than other services; see Betts, Soldiers, Civilians and Cold War Crises, pp. 120, 209. His study provided some evidence that advice of senior military leaders did reflect this difference. Stephen Rosen also proposed an Air Force and Navy cluster might be significant in comparing different states offensive power because these services will be less affected by social structures, but his cases did not focus on this proposition; see Rosen, Societies and Military Power, Cornell: Cornell University Press, 1996, p. 30.

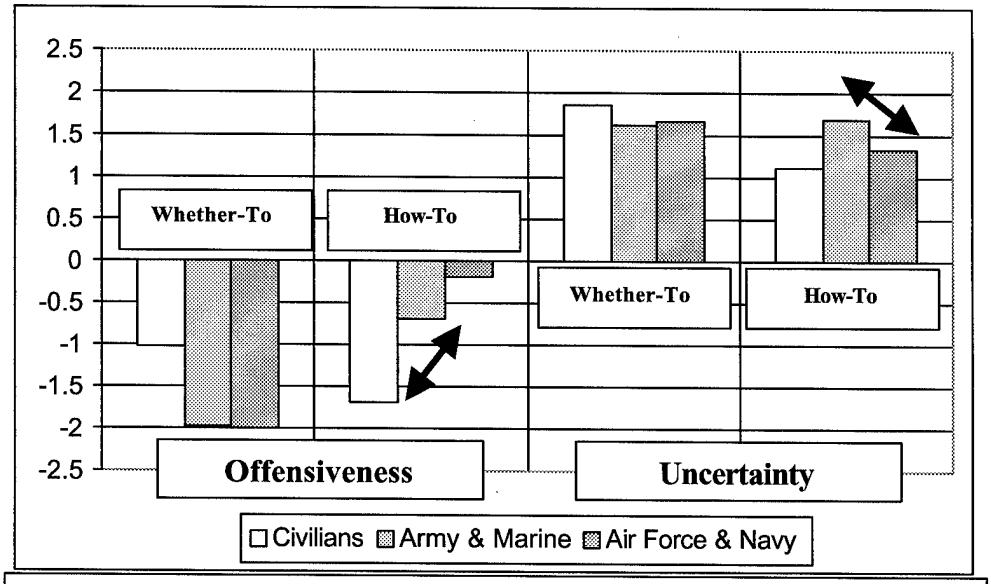

Figure 24 – Institutional "Clustering" Effect and How-To Strategy

While this finding is important to establishing the hypotheses and complements other scholars' intuitions, there is also a critical implication for civil-military relations displayed in Figure 24. The "clustering" effect is significant when the strategy under consideration is "how-to" in nature, and not when strategy is debating "whether-to" commit to a course of action.[27] This can be taken as an indication that while commitments of military force are being contemplated, the military is rather homogeneous in viewpoints and reasoning. However, in a parallel to the foreign policy dictum that Congressional politics "stops at the water's edge," military differences in perspective and reasoning about strategy begin once a commitment is

[27] In fact, in whether-to strategy, only the difference between civilians and all the military is significant at $p<.05$ for both offensiveness and uncertainty. In how-to strategy, all three groups are significantly different from each other at $p<.01$ using ANOVA with Tukey's HSD test.

made and an objective given. This may be empirical evidence that US civilians and military recognize the principle that civilians decide and the military implements. Institutional convergence of the Air Force and Navy, and Army and Marines, respectively, only occurs when discussing and formulating implementation strategy, and gives rise to a competition of views between the two clusters.

The notional representation in Figure 25 arrays the two military and one civilian cluster against dimensions of uncertainty and offensiveness in a manner described as a "psychogeography."[28] The center points represent the uncertainty and offensiveness means for each cluster, while the semicircles represent variance around those means for each group. This representation of the cluster effect of military services highlights two aspects of the research findings. The first is that, in general, the military clusters are not more uniform in outlooks than the civilian: the sizes of the circles, representing the variance of views for each group, are about the same.[29] The second aspect of note is that the groups overlap in their views. Huntington's proposition that the differences between groups may be much like political parties, which

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[28] I attribute the term and idea to Ronald Inglehart, who used it to show the relative positions of Western states based on a variety of measures (through survey instruments) of values. See Inglehart, Ronald, The Silent Revolution: Changing Values and Political Styles Among Western Publics. Princeton: Princeton University Press, 1977.

[29] Specifically, the military does not have significantly smaller variance in the distribution of measures of uncertainty and offensiveness. The circles are approximately one standard deviation; if drawn to scale, civilians have marginally smaller deviation in uncertainty (approx. 1.28 vs. 1.32) and marginally larger in offensiveness (1.95 vs 1.90), and the circles would be ellipses (1.3 wide by 1.9 high.) Uniformity—a significantly smaller variation in measures—might indicate greater agreement or cohesion in a group. Bruce Russett investigated the hypothesis that the military is more uniform in views than are civilians in his 1974 study of political perspectives; similar to these findings, he did not discover more uniformity in the military. See Russett, "Political Perspectives of US Military and Business Elites," Armed Forces and Society 1:1, Nov. 1974, pp. 79-108.

encompass a variety of viewpoints yet rest on "average" on different anchor points, seems an effective description of the differences between service clusters, and civilians.[30]

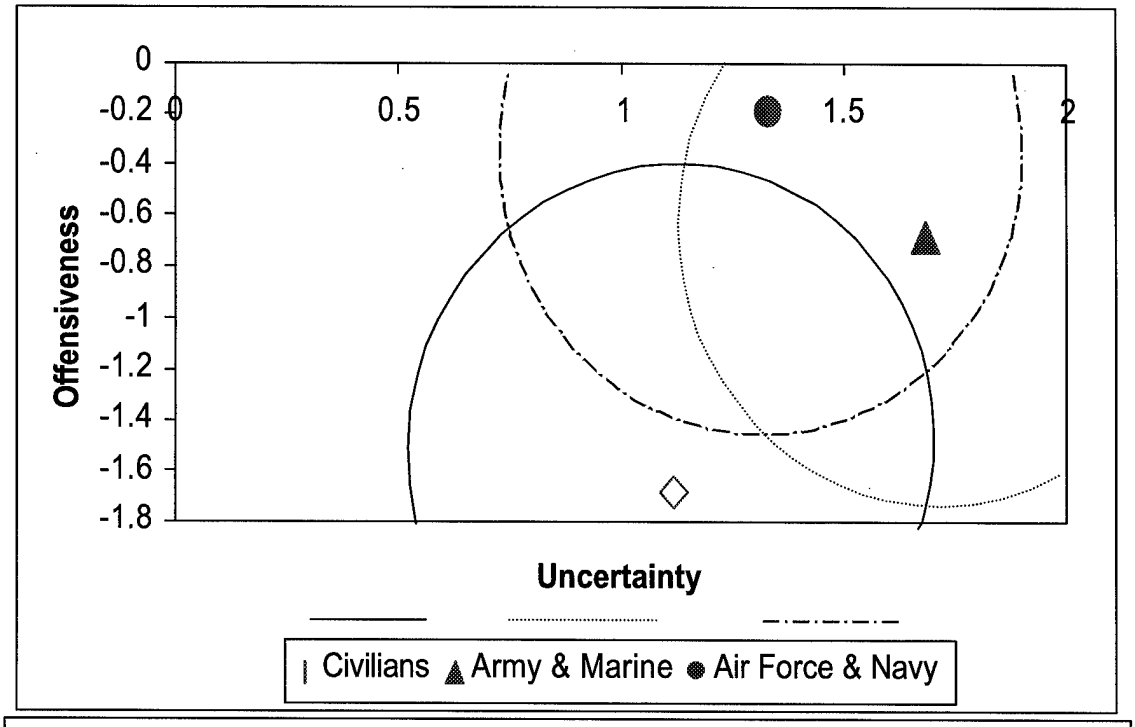

Figure 25 -- "Psychogeography" of Clusters

What can explain these relationships or institutional identities which arise in a political setting of developing and choosing strategy? One possibility is that there may simply be a bureaucratic explanation: the groupings of services illustrates hierarchical bargaining. The

[30] In fact, a discriminant analysis (predicting which cluster an observation belongs to) based on offensiveness, use of history, and uncertainty measures, yielded two functions. One loaded on offensiveness and use of history (and explains 90% of the variance), the other on uncertainty (explaining the remaining variance), but the overlap between groups is reflected by the canonical correlation of .25 which results in the analysis. In other words, any single set of measures of an 'unknown' actor will generally only yield a correct prediction about one in four times. The more sets of measures (taken from what is believed to be only one of the groups) available, the better the ability to accurately predict the 'owner' group.

clusters observed in the strategy process may reflect the current distribution of influence by both President and Congress to the services.[31] In the period of this study, 1995-2000, it is possible that the Air Force and Navy enjoyed differential treatment compared to the Army and Marines. Differential treatment then leads to divergence in outlooks between the service clusters, including offensiveness and uncertainty. As Betts suggests, "changes in service interests and ideologies are more likely to derive from civilian policy changes than to determine them."[32] Others agree. Sam Sarkesian writes:

> As a result of the changing agenda and the emerging domestic environment, the US military will need to compete aggressively for its share of federal resources. This will lead to a more clearly visible military involvement in the national political scene, sharpening interservice disputes as each service seeks political allies. Interservice issues will stem from a reduced defense budget, the need to delineate and clarify military contingencies and missions, and the need for more effective joint-service operational efforts.[33]

Huntington believes that interservice conflicts will have three power goals in view: jurisdiction, appropriations, and influence.[34]

The bureaucratic perspective can explain why one observes differences between groups, but it is insufficient in explaining the kinds of differences one finds and the particular convergence of specific groups into clusters. If, for instance, the Air Force and Navy are aligning as a cluster

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[31] See Arnold Kanter, Defense Politics, Chapter 7, pp. 95-115. In supporting this proposition he also cites the research of Vincent Davis and Perry Smith; see p. 100.

[32] Betts, Soldiers, Statesmen and Cold War Crises, p. 126.

[33] Sarkesian, Williams and Bryant, Soldiers, Society, and National Security, Boulder: Lynne Rienner Publishers, 1995, p. 11.

[34] Huntington, "Interservice Competition and Political Roles," p. 48.

in response to national security preferential politics, why those two services, and why their particular characteristics on offensiveness and uncertainty only in how-to strategy: why is there no evidence of differences in whether-to strategy? In one study of how similarities in strategy preferences might arise across different states, William Kincade suggested four factors for convergence:

1. The military 'demonstration effect' or imitative phenomenon, whereby a popular strategy becomes a desired symbol
2. Principles of warfare with broad application due to political or military problems presenting themselves in the same forms
3. The interactive nature of strategy which requires considering existing or presumed adversaries in order to shape forces and plans for war
4. The technical environment, including the state of the art and the symbolic importance of military technology[35]

Each of these factors relates to how-to strategy, rather than whether-to arguments. It is possible that service clusters form not because of direct political preferences, but rather around certain facets of how each service approaches warfighting (or other military applications.)

These factors offer a framework for explaining military clusters and strategy behavior: services may align and share preferences for strategy—including offensiveness, outlook on uncertainty, and use of history in strategy—based on technological symbolism, strategic symbolism, and functional competency. Bureaucratic politics provides the motivation for competition and sharpening of viewpoints, but other factors provide the catalysts for clustering and taking particular positions. Williamson Murray is a proponent of technological and strategic symbolism as an explanation of service clustering: the Navy and Air Force share a common

[35] William Kincade, "American National Style and Strategic Culture," in Strategic Power: USA/USSR, ed. by Carl Jacobsen, MacMillan Press, 1990, p. 14.

preference for both high technology and "distant firepower," or the ability to attack adversaries from a distance.[36] In his view, the predisposition for technology has a corresponding effect that its users become overly confident in capabilities—they are less uncertain about strategic situations—while the preference for distant firepower leads to greater desire and less restraint in exercising capabilities in every situation—a greater preference for offensive strategy, compared to other services. Thus, a political environment favoring technological solutions and distant attack forges an alliance between Air Force and Navy and similar strategy characteristics for how to prosecute a use of military force, but does not effect the same alliance on whether to get involved in the first place.

Don Snider, Richard Betts and Edward Luttwak offer more functional explanations. Snider quotes James Burk in citing a functional view that "warfighting still determines the central beliefs, values and complex symbolic formations" underlying service differences.[37] Services may view the nature of wars—whether to get involved—the same, but naturally differ on how to do it. Betts proposes that the Air Force and Navy (in the period of his study) have a wealth of capabilities, and that wealth restricts caution.[38] The Army and Marine Corps of his time—and perhaps today—offered fewer options to leaders, and were simultaneously more dependent on others to act. To press their political advantage, the Air Force and Navy both offer functional solutions—forces with greater flexibility in crises—with increased offensiveness (a 'we can do

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[36] Murray, "Does Military Culture Matter," primarily pp. 31-33.

[37] Snider, "An uninformed debate on military culture," Orbis 43:1, Winter 99, p. 14.

it' attitude) and less uncertainty (fewer dependencies to restrict action.) But those solutions and attitudes are generally only expressed when faced with "how-to" questions by leaders. In another functional view, Luttwak believes that a societal sensitivity to casualties leads to preference for Air Force and Navy action from air and sea—they use, and therefore risk, fewer soldiers—which in turn imbues those services with greater freedom to act in, but not necessarily prior to, strategy situations.[39]

In summary, one institutional identity revealed in this study is the clustering effect of Air Force and Navy versus Army and Marine Corps in characteristics of strategy, with the Air Force and Navy significantly more offensive and less uncertain than their sister services. This clustering may be due to bureaucratic competition over appropriations and influence, but it is only revealed when the services are presented "how-to" deliberations over strategy. In those situations, factors of technology, strategic principles or symbols, and functional competencies forge similarities in strategy between the air and sea services, and the ground and contingency services, respectively. The extent of the cluster's effects on the substance of strategy, and a more complete picture of which factor or combination of factors is a primary cause, awaits further study.

A second institutional identity revealed in this research concerns the role of defense civilians in strategy: this subgroup of civilians is unique in its own right, yet their place in strategy

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[38] Betts, Soldiers, Statesmen and Cold War Crises, p. 120.

[39] Edward Luttwak, "Where are the Great Powers? At home with the kids," Foreign Affairs 73:4, July/August 94, pp. 23-28.

processes has been relatively little examined by civil-military scholars. Civil-military relations scholarship has consistently been concerned with how civilians in a democracy can maintain their authority and control of the military, but has paid surprisingly little attention to the "front-line" of civilian leadership in the US: the Defense Department civilians.[40] Whether these civilians are different, or should be different, from the military in important characteristics is avoided in some prominent studies by selecting a comparison group of civilians from non-governmental professionals, or not screening a pool of civilians for such distinctions.[41] The problem for civil-military relations and strategy is, what if defense civilians are different from their cohort?

There is some speculation about defense civilians that warrants closer analysis of the evidence: some suggest defense civilians may exhibit characteristics of the military, as if they have been 'captured' by their close contact and relationship with military personnel and organizations. In organizational theory, Kurt Lang proposed in 1965 that the juncture of civil-military institutions such as the Defense Department may allow interpenetration of military personnel and civilians, a process that absorbs civilians into military beliefs and practices, and

[40] Gene Lyons explored the front line relationships in a 1961 article, but the author was unable to find more contemporary explorations. This is also unusual because the modern US Defense Department places an emphasis on "civilianizing" where possible, to minimize active duty personnel in staff positions and increase staff continuity and competence. See "The New Civil-Military Relations," American Political Science Review 55:1, March 1961, pp. 53-63.

[41] Russett's 1974 study deliberately selected non-governmental civilian professionals. Ole Holsti's more recent work with civil-military values uses the Foreign Policy Leadership Project surveys, which draws on Who's Who directories that span government and private positions. See Russett, "Political Perspectives of US Military and Business Elites," and Holsti, "A Widening Gap Between Military and Civil Society?"

likewise military into civilian beliefs and practices.[42] As mentioned earlier, Petraeus found that the only senior civilian in the post-Vietnam period who was consistently like the military in strategy discussions was the Secretary of Defense.[43] Similarly, Feaver and Gelpi proposed that civilians who attended professional military education were both defense-oriented because of their qualifying jobs, and defense indoctrinated due to the education experience. There was some support in their data that such civilians became more like their military coworkers.[44] Finally, Sarkesian and others extensively discuss the possibility that civilian graduate education "broadens" military officers and recommends it to make them more like civilian leaders and public, without addressing the complementary possibility that military education and relationships might broaden civilian professionals and draw them closer to the military.[45]

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[42] Lang, "Military Organizations," in Handbook of Organizations ed. by James March, Rand McNally, 1965, p. 842.

[43] Petraeus, "Military Influence and the Post-Vietnam Use of Force," fn. 38, p. 504.

[44] Feaver and Gelpi, "The Civil-Military Gap and Casualty Aversion," p. 28. The authors also controlled for a variety of 'affiliation' effects, including brief military experience and attitudes about the military, but most of these had no significance for their particular focus.

[45] Sarkesian, Williams, and Bryant, Soldiers, Society and National Security, esp. pp. 19-20.

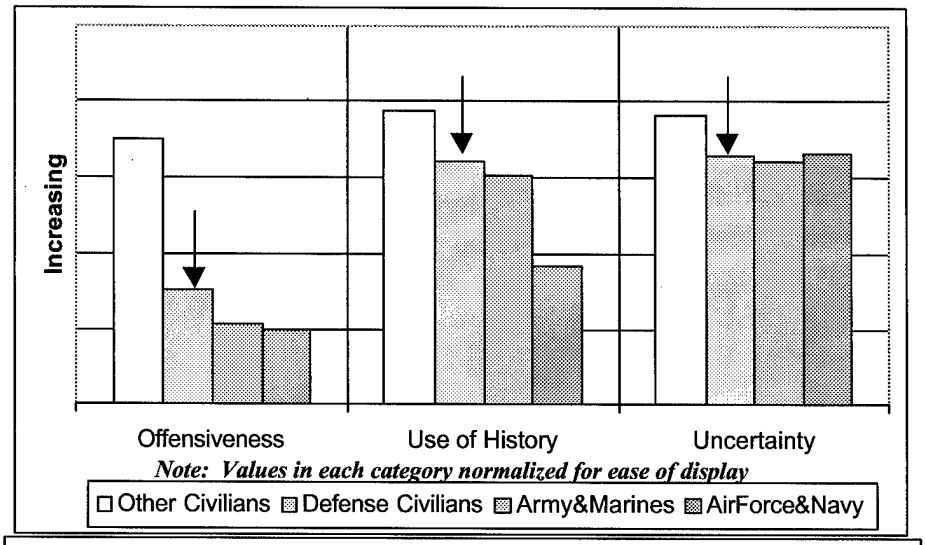

Figure 26 – Defense Civilians and Whether-To Strategy

The proposition that defense civilians may be uniquely different and more like their military coworkers than civilian cohort finds surprising support in the present research. The only civilians who aligned to any significant degree with the military in the characteristics of strategy studied were defense civilians. In addition, defense civilian positions were often statistically independent from both civilian counterparts and military services, and their positions establish a unique pattern.

Looking at whether-to and how-to contexts of strategy, defense civilians are: like the military in offensiveness, similar to one or the other cluster in use of history, and midway between other civilians and the Air Force and Navy cluster in uncertainty.[46] When the data is narrowed only to

[46] In overall Offensiveness, defense civilians are statistically indistinguishable from other civilians, but a focus on contexts shows differences at $p<.01$. In Use of History, they are statistically different from other civilians; in context, they are similar to the Army & Marine cluster in whether-to strategy, and the Air Force and Navy cluster in how-to, at $p<.05$. Finally, in overall Uncertainty, defense civilians are almost exactly midway between other civilians and the Air Force and Navy cluster, and cannot be distinguished from either

the doctrine domain, these trends persist, with the only exception being that defense civilians are so positioned *between* other civilians and the military in use of history that they are indistinguishable from all groups.

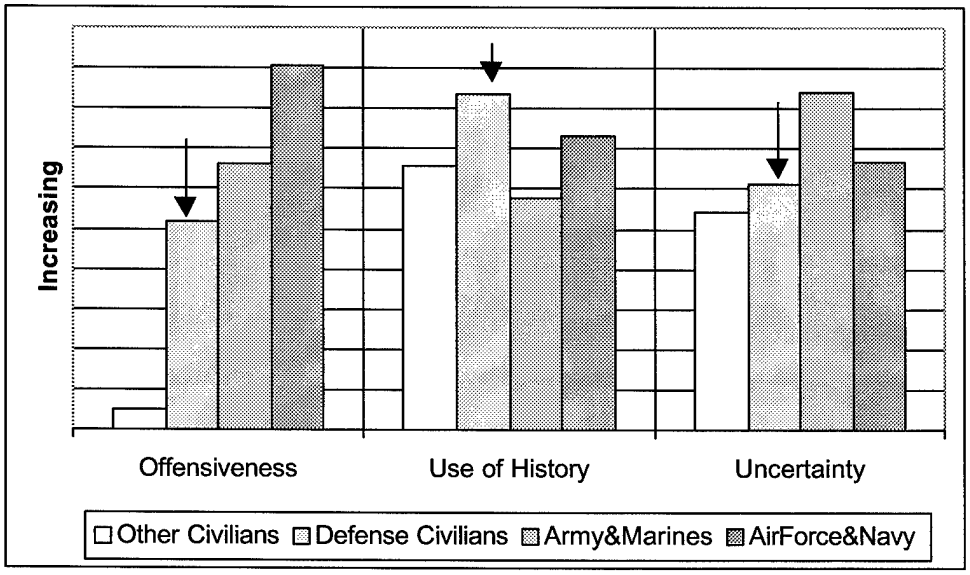

Figure 27 – Defense Civilians and How-To Strategy

When defense civilian behavior is examined in the light of strategy contexts—whether to versus how to strategy—their intermediary nature is most illuminated.[47] Interestingly, previous trends showing that whether-to strategy minimizes group differences are still present when

(though those two groups are different from each other). They are statistically independent of Marines and Army in how-to strategy uncertainty, at $p<.05$. [ANOVA using Tukey's HSD test.]

[47] Findings in this and the next paragraph are derived from ANOVA of defense civilians, other civilians, and the two military cluster groups on both how-to and whether-to strategy and each of the strategy characteristics. Defense civilian alignment with other groups comes from Tukey's HSD test and an evaluation of homogeneous subsets.

looking a the dynamics of defense civilians. One exception is in offensiveness—defense civilians align with all the military as being more defensive in whether-to strategy than other civilians. One can speculate that due to their relationships with military personnel and understanding of military capabilities, defense civilians are either less willing to commit their associates to potential conflicts, or more understanding of the limits of military force. Additionally, as the civilians at the front line of civilian control, defense professionals may desire—as do their military brethren—clear objectives and priorities, and in their absence be less offensive in whether-to strategy deliberations.

In how-to strategy, or formulation of strategy given commitments to a course of action, defense civilians continue a unique pattern of alignments between the military and other civilians. In offensiveness and how-to strategy, defense civilians are associated with the Army and Marine cluster, making them significantly more offensive than other civilians but significantly less offensive than the Air Force and Navy cluster. Examining use of history and how-to strategy, defense civilians are most like the Air Force and Navy and use significantly more history than other civilians. Finally, considering uncertainty in how-to strategy, defense civilians are perched between other civilians and the Air Force/Navy cluster—where other civilians are least uncertain, and the Air Force/Navy are second-most uncertain—and include significantly less uncertainty than does the Army/Marine cluster.

Taken together, these findings point to a unique institutional identity for defense civilians in civil-military relations and the making of strategy. Defense civilians display attributes of being an

interpenetrated group, but not a "captured" group; their variation from all other groups indicates they are institutionally unique; and finally, their particular positions in strategy characteristics may indicate that defense civilians play an intermediary role in civil-military relations.

1. Interpenetrated, not captured. Defense civilians are the only civilians who align with the military on strategy characteristics, across all domains of strategy. However, in most cases defense civilians are not taking on the same preferences as military in offensiveness, use of history, and uncertainty. Instead, they are often positioned between other civilians and one or more of the military clusters (Air Force/Navy or Army/Marines.) There is no evidence, therefore, that defense civilians have become military personnel without uniforms.
2. Unique professionals. Defense civilians do not display any simplistic alignment with any group, civilian or military. For example, they are like other civilians in general offensiveness (less offensive than military), like all military for offensiveness in whether-to strategy (less offensive than other civilians), and like the Army/Marine cluster for offensiveness in how-to strategy (more offensive than other civilians, less offensive than Air Force/Navy.) Though they are like the Army and Marines in offensiveness and how-to strategy, defense civilians 'switch' and are like Air Force and Navy in uncertainty and how-to strategy. Defense civilians have an independent and complex pattern in characteristics of strategy making.
3. Institutional intermediaries. Defense civilians rarely stake out a high or low ground in any characteristic of strategy—with the exception of use of history in how-to strategy,

they are always positioned with or between civilian and military groups. (Note in comparison that civilian *experts* do take the highest position in areas of uncertainty, while civilian *leaders* stake out low positions in uncertainty and general offensiveness.) A probable inference given this pattern of behavior and the nature of defense civilians—part of the civilian group, yet living and working in and with military institutions—is that defense civilians facilitate and mediate in strategy development and formulation between civilian leadership (and possibly public) and the military organizations.

The two institutional identities revealed in this research of military service clustering and defense civilian roles in the making of strategy are important findings for civil-military relations theory. In bureaucratic settings in particular, the military is neither a homogenous group of martial institutions, nor a simple set of four military organizations. Defense civilians, too, are not merely civilians with the closest contact to the military, nor are they captured bureaucrats who represent the military but do not wear uniforms. In examining Gen. MacArthur and the decision-making surrounding the Inchon landing, Ronald Carpenter wrote:

> Martial decision-making is not simply a matter of objective estimates of the capabilities of both one's own forces and those of the enemy, including assessments of numbers of personnel, ease of their movements, sophistication and reliability of their equipment, support of allies (or lacks thereof), and predictions about outcomes—both tactical and strategic. To affect outcomes of these deliberations, for good or ill, commanders inevitably engage in rhetoric as the process of 'adjusting ideas to people and people to ideas.'[48]

[48] Ronald Carpenter, "On Rhetoric in Martial Decision-making," Chapter 7 in Rhetoric and Community ed. by J. Michael Hogan, University of South Carolina Press, 1998, p. 135.

Explaining strategy requires that one understand and account for varying influences in organizational settings, and civil-military relations must account for the roles of military clusters such as the Air Force and Navy, and Army and Marines, and the independent yet intermediary role of defense civilians. For in the making of strategy, each of these institutional 'actors' is engaged in their own form of adjusting ideas to people and people to ideas, and each will have potentially different effects on the outcomes of deliberations.

The Organizational and Strategic Culture Hypotheses

Are the distinctive group behaviors and patterns in offensiveness, use of history, and uncertainty found in this study indications of culture at work in strategy making? The definition of culture borrowed for this investigation was:

> ...the body of attitudes and beliefs that guide and circumscribe thought on strategic questions, influences the way strategic issues are formulated, and sets the vocabulary and perceptual parameters of strategic debate...culture is generally considered to be a long-term phenomenon, a concept that is pervasive and which is taught or reinforced by those who possess it.[49]

This definition is fairly broad; it does not identify other possible explanations for strategy formulation or vocabulary as invalidating a cultural explanation, nor does it necessarily specify whether culture lies in the differences between groups or merely in *any* identifiable body of attitudes and beliefs. Using the above definition, and reviewing the findings discussed in this and the previous three chapters, one would probably conclude that the significant differences in

[49] As defined in Chapter 2. Also see Jack Snyder, "The Soviet Strategic Culture," R-2154, RAND Corporation, 1977; and Forrest Morgan, "Compellance and the Strategic Culture of Imperial Japan," Ph.D. dissertation (University of Maryland, 1998), Chapter 2.

strategy characteristics across the different domains does imply that there is both *military culture* and *bureaucratic cultures* at work in strategic processes.

There is, however, an aspect of the study of culture that has been reserved for discussion here: under what conditions should identifiable patterns of behavior be explained as stemming from culture rather than other factors? This question is important (and better examined at this point in the study) for at least two reasons. First, at some points in this analysis concepts such as technology, functional competency, or bureaucratic politics have been offered as explanations for differences in group behavior. Can these concepts be subsumed under the rubric of culture as a primary explanation? Second, there is an interest by some in international relations and civil-military relations to narrow examinations and make more rigorous studies of the effects of culture. To assert at this point that culture is evident in strategy making would only apply a label to the findings, rather than assist future scholars in isolating elements of culture and their proposed—or substantiated—effects.

Recommendations from three prominent scholars are critical to understanding the results of this analysis: culture investigations should be rigorously defined; the elements of culture should be identified and distinguished from other factors; culture should be found in differences between groups; and lastly, cultural explanations should demonstrate impact. In Bureaucracy, James Wilson proposes that culture is a "persistent, patterned way of thinking" about the central tasks and human relations within organizations, but criticizes most approaches of the time as being "journalistic" in simply describing differences and attributes, rather than rigorously

identifying relationships.[50] Jack Snyder agreed with this view, and went further over the course of three decades:

> Strategic culture [is] ... beliefs, attitudes and behavioral patterns ...with a semipermanence that makes them cultural rather than mere policy; ... problems are not assessed objectively...rather, as seen through a perceptual lens[51]

> Structural, situational or institutional explanations may be legitimate preferences to cultural ones simply on the grounds that they make sharper, more specific, more testable predictions...culture, if one may call it that, enters the story when a distinctive approach to strategy becomes ingrained in training, institutions, and force posture...it mediates strategic thought[52]

> Social theorists have always allowed that behavior [is related to] ... material circumstances, social structure, and cultural symbolism ... One advantage of the 'newer' definition, which limits culture to meaningful symbols, is that it facilitates distinguishing culture from other social phenomena, especially institutional patterns of behavior.[53]

Snyder essentially outlines what "more rigor" means in the study of culture. Initially he desires to see culture understood as an influence separate from factors of policy or "objective" assessments. Policy and "objectivity" become more defined in later writings: if there are structural or institutional factors with causal roles in the strategy under study, then differences observed may not be cultural per se. His most recent proposition, building on earlier theory, is that culture should be confined to meaningful symbols, and not aspects of material circumstances or institutional behavior.

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[50] Wilson, Bureaucracy, pp. 91-93.

[51] Jack Snyder, "The Soviet Strategic Culture," 1977, p. v.

[52] Jack Snyder, "The Concept of Strategic Culture: Caveat Emptor," in Strategic Power USA/USSR ed. by Carl Jacobsen, MacMillan Press: 1990, pp. 5-7.

[53] Jack Snyder, unpublished draft paper entitled "Anarchy and Culture: Insights from the Anthropology of War," February 2001, pp. 3, 12.

Alastair Johnston suggests the last element of a refined study of culture: focus on group *differences* which have observable *impacts*. In "Thinking about Strategic Culture," he writes:

> Much of the impetus behind the research on strategic culture has been the conviction that decision-makers in different [groups] do indeed think and act differently from one another when faced with similar strategic circumstances and choices. However, ...even if the procedures...uncover the presence of a strategic culture, we need to treat the possibility of a priori differences in the content of strategic cultures across [groups] with a great deal of caution for two very different sets of reasons. The first is that strategic culture may exist but may not have any measurable behavioral effects...The second reason for caution comes from the possibility that strategic culture may indeed exist, but that different [groups] share a common strategic culture...if this is the case, then strategic culture may [only] be an essential [macro-level] variable...[54]

Johnston is emphasizing that merely identifying characteristics of groups that might be commonly called culture is insufficient in offering *cultural explanations* of behavior: we need to instead suggest or demonstrate the impacts of those characteristics and simultaneously be assured that the groups under study differ on those characteristics.

The concerns of these authors are important here because the findings of the analysis offer only glimmerings of support to culture as an *explanation* of the patterns of differences (or, more properly, the effects of those differences), as opposed to using culture as a descriptive label. Integrating the concerns outlined above to the earlier definition of culture, a new approach to strategic culture is proposed:

Strategic culture exists if distinctions in characteristics (values, beliefs, symbols) and behavior (predispositions for action or reasoning) between groups exist, pervasive

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[54] Johnston's article was focusing on the study of state-level interactions and culture, and I have substituted the word "group" for his terms "society" and "state"; I believe the meaning and intent of Johnston is still intact. See Alastair I. Johnston, "Thinking about Strategic Culture," International Security 19:4, Spring 95, pp. 55-56.

over time, which significantly account for differences in behaviors of interest, apart from the impacts of material resources (capabilities, functions, and constraints) or social structure (hierarchy, authority, roles), which may also vary between groups.[55]

Using this definition and applying it to the results (and hypotheses), this study finds that distinctions in characteristics (specifically, symbolic language) have little effect on the strategy behaviors of interest, but does substantiate the possibility that distinctions in behavior (predispositions for rhetoric in strategy language) may account for differences in strategy. Symbolic language, as discussed further below, is shown to be used by groups in distinct patterns, but it does not impact substantially on the behaviors of offensiveness, use of history, and uncertainty in strategy. Predispositions for offensiveness, use of history, and uncertainty in strategy, do vary substantially between groups in discernible patterns in the 1995-2000 timeframe, but this study is unable to verify impacts to the substance of strategy, nor can it completely exclude material or structural accounts for these differences. The latter is also discussed below.

Symbolic Language: This study proposed that one element of culture in strategy communications could be evaluated by assessing differences in the use of civilian and military ideas, as expressed with particular uses of language. Military service vision statements and the civilian National Security Strategy were reviewed for oft-repeated terms and phrases, under the guidance that these publications had an express purpose of invoking official language and organizational symbols. As defined in Chapter 4, official language is concepts and language that constrains alternative strategies, undermines challenges to authority, mobilizes support and

[55] This definition is, without apology, the author's own.

upholds control of the decision process. The study design was focused on measuring the uses of these language sets to determine potential relationships between official language and the strategy characteristics of offensiveness, use of history, and uncertainty.

One finding not reported earlier was the fact that groups do invoke their own vision concepts within strategy discussions at significantly higher rates than other groups. Although this may be taken for granted, it is helpful to verify that the vision statements apparently play more than an obligatory role in organizational behavior—their effects extend beyond the vision statements themselves. The symbols were focused, semi-independent sets (approximately ten words each) of terms that were frequently invoked in civilian and military "vision" documents. Table 16 reports the rates of each actor's use of any of the symbolic language sets, across all the domains of strategy communication. While we have no standard for determining if the absolute rates of use are "normal", one can see that each group clearly uses their own symbols within strategy communications approximately two to two and a half times more often than do other groups.

Actor	N	Mean Civilian Symbols	Mean Air Force Symbols	Mean Army Symbols	Mean Navy Symbols	Mean Marine Corps Symbols
Civilian Leaders	738	**2.87****	.30	.08	.13	.03
Defense Civilians	457	1.19	.27	.11	.26	.13
Civilian Experts	396	1.33	.44	.17	.28	.05
Air Force	878	1.04	**1.09****	.11	.28	.09
Army	769	1.02	.31	**.53****	.31	.19
Navy	449	1.00	.33	.18	**2.88****	**.57****
Marine	384	1.01	.60	.17	**1.11****	**2.50****
Joint officer	60	1.13	.57	.22	.32	.12
Overall	4131	1.40	.51	.20	.62	.38
** = significantly different from other scores at p < .01 [Tukey's HSD]						

Table 16 – Use of Symbolic Language

Two other interesting findings are revealed in this table. First, the only civilians who frequently invoke symbols of the National Security Strategy are civilian leaders. Although civilian experts are non-governmental, one might expect defense civilians—many of them Administration appointees—to also use the official language. That they do not may be yet another indication of the independent and intermediary role of defense civilians. Secondly, the unique relationship of the Navy and Marine Corps—the Marine Corps is officially part of the

Navy Department—persists in their language used in strategy: both of these services invoke not only their own official language, but also that of their organizational partner. (The Marine Corps is slightly more cognizant of their parent, too, as they invoke Navy symbols about twice as often as the Navy invokes Marine language.)

Though the use of symbolic language may be interesting in itself, the study showed that it usually did not contribute to understanding the strategy characteristics of offensiveness, use of history, and uncertainty. In looking at each dependent variable, the study showed only weak relationships with symbolic language: in other words, one cannot explain how much offensiveness, history, or uncertainty one might find in strategy based on an actor's use of official language.[56] One "meager" relationship is worth reporting here, however, as it offers possibilities for future research: civilian symbols, including words like "democracy," "engagement," "humanitarian," and "prosperity," may be associated with expressing less uncertainty and offensiveness in strategy. The figures below show that as the number of civilian symbols found in a strategy text increase, the mean measurements of uncertainty and offensiveness decrease.[57] Although this was statistically significant, the variation around each mean measurement was so broad that civilian symbols offered little predictive power for those two characteristics. Civilian symbols also tended to show more significance than military symbol sets when focusing on specific domains of strategy for each characteristic. The indication for future research is that civilian symbology might be a contributor to models of strategic reasoning but not an

[56] See the end of Chapters 5, 6, and 7 for specific findings relating symbol use to the dependent variables.

[57] This accounts for finding civilian symbols significant in several area.

independent explanation; another possibility is that one might refine and build a more complete civilian language "set" that may have better explanatory power.[58]

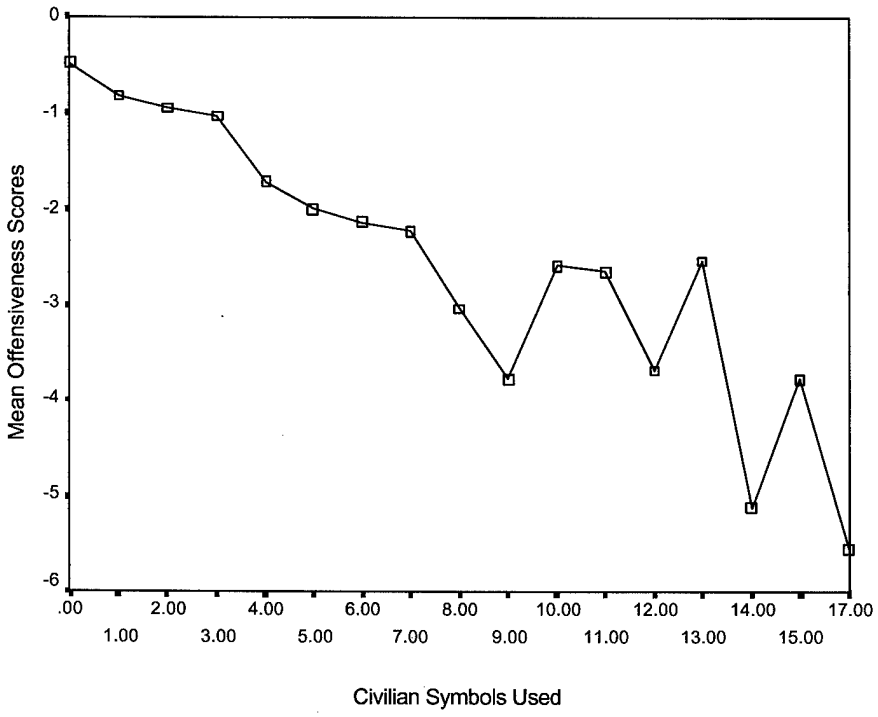

Figure 28 – Civilian Symbols and Offensiveness

[58] It may also be interesting to consider—and investigate—why uncertainty decreases as one talks more about democracy, prosperity, and engagement. Are these, in fact, confidence-boosting terms?

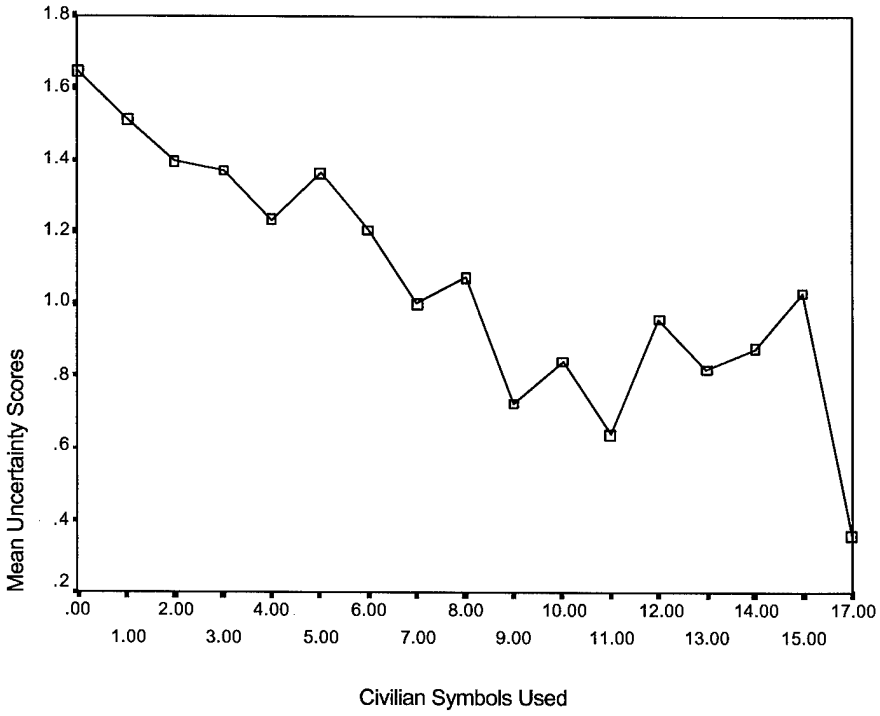

Figure 29 – Civilian Symbols and Uncertainty

Predispositions for action: Throughout this study, a number of distinctive patterns have been found on civilian and military expression of offensiveness, use of history, and uncertainty in strategy in the 1995-2000 timeframe.[59] Using the new definition of culture proposed above, this is an important first step in establishing that a "strategic culture" may exist for one or more of the groups. However, two hurdles remain to asserting culture as an important explanation for

[59] The author did not perform a longitudinal analysis of the strategy texts, as neither the 5-year time frame nor the texts collected support such analysis. In the author's opinion, the convergence between past studies and even intuitions of scholars and the findings here are partial evidence of pervasiveness. But it is admitted that the pervasiveness over time of the patterns of differences could use further study.

strategy: do the patterns discovered have a substantive impact on the outcomes of strategy deliberations, and can we discount or at least minimize the alternative explanations of material circumstances and social structure?

There are two possible approaches to understanding the substantive impact of these differences in characteristics on strategy outcomes: a simplistic assertion that offensiveness, use of history, and uncertainty rhetoric are themselves outcomes; or an admission that one needs to measure outcomes in the strategy texts or perform post-hoc reviews of what strategy resulted. The first approach is unsatisfying, but needs to be mentioned here. One could take the position that, for instance, the finding of greater offensiveness in military how-to strategy texts indicates offensive strategy preferences for the military. If military strategies themselves are more offensive than civilian strategies offered in the same domains, then we may have substance already: leaders may consider evidence of offensive military strategy important in selecting advisors and courses of action. However, this approach would miss an vital aspect of the findings: offensiveness in language may not indicate the "final" strategy recommended, nor can any particular actor's strategy text be taken as the "final" product of that actor, or the process they are involved in. The second approach takes these problems into account.

The second approach to substance recognizes that offensive predispositions (as an example) are just that—tendencies that may generally, but not always, result in offensive outcomes. Thus, the distinctive patterns discovered between groups for this study's strategy characteristics still require examination for outcomes and impact. Impact measurement would require an investigator to observe the results that any strategy text might have for the process

they were a part of: in the analytic essays, for example (which shared a common purpose and setting), one could seek to measure the strategy recommendations made by each actor. Then, a comparison of the recommendations and predispositions might verify that offensiveness, use of history, and/or uncertainty each had an impact on the recommendations made. If those impacts mirror the patterns discovered across domains, there is better evidence of culture—or at least the "second" hurdle will have been crossed.

Another possibility is a multi-method approach: perform some case studies on the domains chosen for this research to use for comparison and analysis. If an investigator examined the Kosovo operations (Allied Force) and deliberations of strategy in order to assess particular strategy recommendations and resulting decisions, the case study could highlight where civilian and military strategies impacted the decision process. Again, treating the strategy texts as actor inputs to the strategy process—advice or recommendations—allows the researcher to then measure the effects on outcomes. This, too, would establish whether the differences in question meet the second test for culture.

A preliminary conclusion, based on this review, is that this study does not provide evidence that sufficiently meets the requirements for asserting strategic culture effects in strategy. There needs to be an evaluation of the impact of the patterns discovered here on strategy, and this study is not designed to accomplish that task. Despite this shortcoming, it is also useful to examine the "third hurdle" for examining culture, to appreciate the full challenge for hypotheses about culture in strategy. The third test is to examine other alternative explanations for the

variations in predispositions found in the study; specifically, are there material or social factors which might account for the patterns in offensiveness, use of history, and uncertainty?

One of the most important patterns found in analysis concerned offensiveness in strategy and context effects: while civilians are more offensive than the military in deliberations of "whether-to" commit to a course of action, the military is sharply more offensive in "how-to" prosecute a course of action. As discussed previously, the military's offensiveness in how-to strategy could be taken as reasonable and natural: the military is responsible for forceful action (destruction is one element of offensiveness) and offense is a classic principle of military action, whatever service employs it (where the principle involves initiative and mobility, two other elements of offensiveness.) Additionally, as some scholars remind us, militaries should theoretically be less offensive in whether-to strategy, as it involves more than military force and the military is not responsible for whether-to decisions in an authoritative sense (Betts 77; Petraeus 87) Both of these observations lend themselves to attributing the primary offensiveness patterns of behavior to material resources—the military function is offensive—and social structure—the military is subordinate to civilians, who decide whether-to and delegate how-to strategy.

One of the primary findings in looking at uncertainty in strategy communications was that civilians are more uncertain in both whether-to strategy and the National Missile Defense domain, while the military is more uncertain in how-to strategy and doctrine. It was suggested that this "mixed result" in uncertainty characteristics might be explained as a product of actor's roles: organizations and their members may be more uncertain when expressing strategy for

which they possess more responsibility. In other words, civilians are uncertain in NMD because they must make the critical decisions about what kind of defense is necessary and how much resources must be spent to acquire it. In contrast, the military is more uncertain about the environment of war and the necessary actions to accomplish objectives using military force, because they will be held responsible for executing those actions. If the overall conclusion is that increasing responsibility is related to increasing uncertainty, then the pattern in this characteristic of strategy may be attributed to social structure—organizational authority and roles explains differences.

The general finding in patterns of group use of history within strategy was that civilians use more history than the military. Interestingly, while civilians and military were generally equal in their use of history for how-to strategy, civilians used sharply more history than the military in whether-to strategy. In addition, civilians were found to frequently invoke both current events and the Gulf War at rates much higher than the military. On its face this might be taken as indicating that civilians use far more case-based reasoning in deciding whether to accomplish national security objectives than the military, which is presumably reticent about discussing historical cases in a political, rather than military, context. A deeper concern, however, that was suggested in analyzing the findings is that perhaps the military also uses history (in both whether-to and how-to strategy), but that much of its own history use is integrated and subsumed by principles, theories, models and doctrine for war. This study is unable to assess either how history is integrated into the recorded texts, nor how well any actor uses history—the design was only to assess *how much* history is directly cited and used. The result is that one cannot

confidently assert that the patterns in use of history are not due to material resources—the military's use of less history may be a function of its tools, training, and documented experience.

Each of these points presents a formidable counter-argument to a cultural explanation of the patterns of differences between civilians and the military (and their subgroups). The evidence clearly shows distinct patterns of differences between groups, in a myriad of ways, and those differences can be considered as behavioral predispositions that are observed through each actor's rhetoric in strategy communications. However, a rigorous definition and approach to culture, as offered in this section above, requires assessment of the impact of those differences and accounting for alternative explanations. On both of these counts the evidence is found wanting: the impacts are unobserved, and functional responsibilities and organizational roles of civilian and military groups *may* be the dominant source of variation found in this study. A cautious and wise conclusion for the cultural hypotheses of this study, therefore, is that only tentative evidence has been established, and further work remains—the hypotheses are neither supported, nor denied, as a result of the study.

Hypothesis	Supported?	Context?
C1. A pattern of differences between the military and civilian strategy will remain coherent and stable across domains (i.e. there is military culture at work in strategic processes.)	**Partially.** Meaningful patterns of differences were discovered at civil-military and subgroup levels, that were also coherent across domains. However, the impacts of those differences are not observed; and, the possibility they are due to material resources (capabilities, functions) or social structure (authority, roles, hierarchy) cannot be excluded.	A large part of the "action" in differences between groups lies in appreciating the effects of *how-to* strategy. That arena of strategy, however, calls both material and social explanations into the foreground—*how* one does something is often related to one's capabilities, tools, roles and authority.
C2. A pattern of differences between civilian subgroups and military service strategies will remain coherent and stable across domains (i.e. there is bureaucratic or service culture at work in strategic processes.)		

Table 17 – Cultural Hypotheses Findings

CHAPTER 9

HYPOTHESES FOR FUTURE STUDY

> *International relations scholars are just beginning to grapple with problems of how to systematically analyze phenomena that arise from highly non-linear, and contingent, processes. Case study researchers tend to deal with these problems as they arise in individual cases, but they face the problem of how to generalize their findings to other cases and validate those generalizations empirically. More quantitatively oriented scholars have recently begun to develop methods for dealing with such problems, and the further refinement of these methods is an important task for future researchers.*
>
> Jack Levy, "Reflections on the Scientific Study of War"

The foundation of this study is the application of a relatively new methodology to the study of strategy and decision making in civil-military affairs. In taking strategy communications as the unit of analysis, and focusing attention on the differences between important civilian and military groups, it succeeds at establishing an empirical assessment of a number of propositions about civil-military behavior and a baseline measurement on some characteristics of strategy. In addition to the assessment and measurement efforts, this study also proposes new theories regarding offensiveness in strategy, the role of doctrine vis-à-vis other strategy, the function of military 'clusters' and defense civilians in politico-military organizational relations, and the

appreciation of culture as an explanation of civil-military behavior. Each of these results is owed to the systematic approach afforded by manual and automated content analysis.

It is intriguing that Levy's observation concerning how scholars can bring new insights and evidence to international relations actually concerns quantitative methodologies and events data, rather than content analysis.[1] Nonetheless, his statements also encompass the efforts of many to study decision-making in international relations and civil-military affairs by using content analysis, and his recommendation that further refinement and research needs to be accomplished is worthy of some discussion. The findings reported here generate a variety of potential topics for future study, all of which can add both to the knowledge of civil-military strategy and the productivity and accuracy of content analysis methodology.

This is not to state that other methods cannot contribute to the topics of this research—they certainly have in the past and will continue to do so—but rather that it is useful to describe future research in the light of the need to refine content analysis. An underlying assertion of this study is that there are some things that content analysis can provide more systematic and generalizable results to than is possible for case study, or possibly survey and experimental methods. The "proof is in the pudding," however, and only future study will provide a broader baseline upon which others might make such an assertion agreeable to the field of scholars and statesmen interested in these topics. The focus of this chapter is to describe future topics generated by or

[1] Although events data research does share many commonalities with content analysis methods. See Levy, "Reflections on the Scientific Study of War," Chapter 15 in What do we know about War ed. by John Vasquez, Rowmand & Littlefield Publishers, 2000, p. 326.

related to the results of this study, with a purposeful focus on content analysis development, often in conjunction with other methods.

Actors in Strategy Making and Going beyond the US

How many different actors are relevant to the making of national strategy? The answer depends upon the type of study being undertaken, and the theoretical framework encompassing national strategy. For example, a minimum requirement for the use of content analysis in research is the availability of texts, that are either generated by the actors one is studying (decision-making and personality assessments), or are directly related to the phenomena (events data derived from news reports.) In this study, this requirement drove the selection of three civilian and five military subgroups, with a focus on the United States. But, which civilians and which military are theoretically relevant to state strategy making—are they all contained in this data set? One classic theoretical framework for the relationship between a state and its strategy comes from Clausewitz and his proposition of a societal trinity.[2] As shown in Figure 30, the trinity consists of the government (reason), the military (creativity and action) and the people (emotions and violence.)[3]

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[2] Karl von Clausewitz, On War, ed. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), p. 89.

[3] David Jablonsky, "Why is Strategy Difficult," in The Search For Strategy ed. by Gary Guertner, Westport: Greenwood Press, 1993, p. 6.

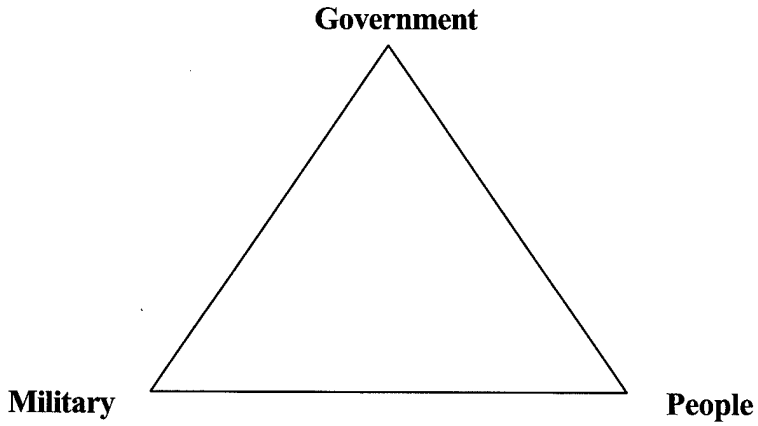

Figure 30 – Clausewitzian Trinity

The first possibility of 'incompleteness' in the study may be its focus on US actors and strategy: some of the hypotheses examined were derived from international relations propositions, and were not intended to be purely US-oriented observations. The Clausewitzian trinity—and a fair amount of civil-military scholarship—are similarly not confined to US national security organizations and relations. Since a number of international actors possess militaries, governments and people, there is no a priori reason to exclude the applicability of the hypotheses and utility of the methodology employed in this study. Therefore, a first challenge to the findings concerns whether they can be generalized to other states.

Secondly, the theory of the trinity's role in strategy may present another potential challenge to the findings, in that one pole of the trinity is under-appreciated: the people. Clausewitz proposed (and many scholars have indorsed) the notion that the military acts "in subordination, as an instrument of policy" to the government, while the people provided "primordial violence, hatred and enmity, which are to be regarded as a blind

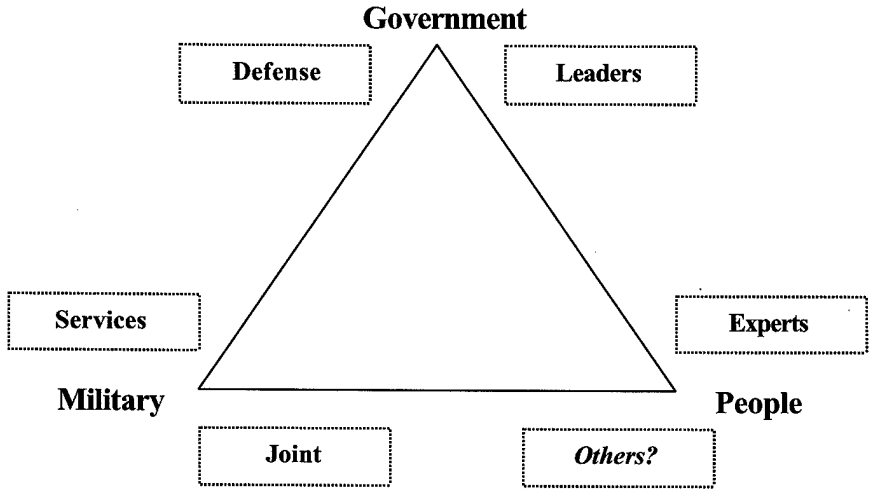

Figure 31 – Trinity Representatives

natural force."[4] The subgroups for this analysis, when arrayed against the trinity, ostensibly span all three points: the military represented by the four services and joint officers; the government by civilian leaders and defense civilians; and, thirdly, the people by non-governmental civilian experts. However, civilian experts, who in most cases in the data were either members of

[4] Clausewitz, On War, p. 89, and discussion by Jablonsky, "Why Strategy is Difficult," p. 5-10.

"think tanks" or commissions, or recognized experts writing in the media or testifying in Congress, may not be representative of the people or "blind natural force" Clausewitz proposes. Survey studies focusing on foreign policy and national security issues have often used other civilian professionals and businessmen as domain-competent and comparable sets of actors to military personnel. (Russett 1974; Holsti 1997; Herrmann 2000) Though not a complete answer to the problem of assessing the mass public in strategy, the addition of professionals and business people could offer significant support to the third 'pole.'

Thus, a twofold challenge for future study is analysis and comparison of other state's civil-military strategy, and the integration of another civilian subgroup—potentially, professionals in business. The first step in a comparative application of this research may be to select a state with similar institutions and an event or set of events that are common to both. This would allow a straightforward application of the same set of hypotheses to the second state, with a macro-hypothesis that both states will exhibit the same civil-military patterns. One suggestion is the United Kingdom: it is a 'great power' partner of the US in numerous international actions, a comparable large democracy with very similar civilian and military institutions, and possesses the added advantage—for content analysis methods—of being an English-speaking country. To narrow a prospective study to a reasonable size, a first effort could focus on Allied Force operational strategy, where both states acted in similar timeframes, with similar objectives, leadership roles, and national media attention that should provide a wealth of comparable text units.

D_1: US and UK civil-military patterns in strategy characteristics of offensiveness, use of history, and uncertainty will be identical.

A separate study might address the problem of expanding the civilian subgroup to include professional civilians. Based on the results of this analysis, we might expect two dispositions for these additional civilians: first, they will be much like civilian experts; and second, due to their decreased responsibility for policy decisions, they may be less offensive (as military are in whether-to strategy) and less uncertain (as either civilians or military are in similar situations.)

D_2: Civilian professionals in society will be less offensive and less uncertain than government civilians and the military in national strategy preferences, and most similar to civilian experts.

Systematic study of this hypothesis will require added sophistication in data collection and content analysis. In order to access civilian professionals' expressions of strategy, the researcher may need to consider two possibilities. One approach would be the use of extensive survey interviews, such as those of professionals and businessmen included in the Foreign Policy Leadership Project or FPLP (begun in 1974; see Holsti 1997). An extensive interview approach to the questions of this study might be efficiently executed as an addition to the analytic strategy domain, and interview subjects selected from a pool similar to the FPLP could be asked for a narrative opinion of how to approach a hypothetical policy problem including the use of force. A second approach may be to collect non-expert opinions on strategy from the editorial pages of leading newspapers; in major newspapers, letters to the editor are often from professionals with an interest in policy. In this case, a select group of newspapers could be

scoured for appropriate letters to the editor regarding either the Allied Force operations (Kosovo in 1999) or National Missile Defense in the 1995-2000 timeframe.

The "Price of Admission," Contexts of Strategy, and Theoretical Category Construction

An additional issue for this research arises when one considers the "price of admission" to strategic discussions: who is allowed to speak out publicly, and for what purposes? Civilian leaders may speak out on strategy issues to explain decisions and courses of action, to justify positions, and to advocate future possibilities to generate approval and support. In comparison, defense civilians—restricted somewhat in their organizational role—may only explain and justify, while military personnel may only publicly explain courses of action. An exception to the latter might be senior retired military officers, who often testify and speak out in adversarial roles to current policies; such people were still classified as military in this study. And as discussed in earlier chapters, civilian experts—the only representative of the people in this analysis—may also be primarily adversarial (advocates of alternative policies.) Experts may be more likely to testify before Congress or be published in newspapers and journals when their positions challenge established governmental policy. Based on the proposition that justification and advocacy are much like whether-to strategy, and explanation similar to how-to, an trial hypothesis is:

D_3: Strategy communications that are advocating or justifying courses of action will exhibit <u>less differentiation</u> of civilian and military groups than strategy communications which are explanatory in nature.

In addition to communicative roles and the price of admission, this study has highlighted the importance of the context of strategy deliberations: whether-to and how-to strategy display distinctly different patterns at both the civil-military and subgroup levels of analysis. If whether-to and how-to strategy display such different behaviors, it could be very useful to perform 'fine-grain' analysis of those contexts in order to better understand the roles of the actors and institutions involved. For instance, if one possessed a means of isolating a data set of only whether-to strategy communications, the dynamics of civilian offensiveness in this area might be better explained: is the concept of modern military caution (Patraeus 1989, Mandelbaum 1994, Luttwak 1994, Campbell 1998) supported with strategy examples of pertinent civilian and military groups, or is it an artifact of military (and possible defense civilian) reticence in situations with ambiguous objectives (Twining 1990; Marthinsen 1990; Gacek 1994; Haas 1994, Handel 1996; Hillen 1996)? A second example concerns how-to strategy: is it possible that actor or institutional roles explain uncertainty outlooks, whereby increasing responsibility for decisions is indicative of increasing uncertainty? Apprehending this set of questions requires a great deal of work in conceptual categories.

D_4: Strategy communications that deliberate "whether-to" commit to a course of action will show civilians as being more offensive than military because the military will be concerned about ambiguity in national and military objectives. Put alternatively, civil-military offensiveness in "whether-to" strategy will be directly related to perceptions of ambiguity in national interests and objectives.

D_5: Uncertainty outlooks in strategy communications that deliberate "how-to" accomplish given objectives will be directly related to role responsibility: as an actor's responsibility for the strategy increases, uncertainty in outlook increases, relative to all other actors in the strategy process.

Testing strategy for these hypotheses about communication purposes and strategy contexts using content analysis requires that the researcher have a means for classifying strategy texts into theoretical categories. Since one might rarely expect any actor to state precisely why they are speaking or writing, or with what purpose (as opposed to other purposes), there must be some means of classification developed in order to assemble the data set. One must somehow translate the concept of justification, advocacy, explanation, ambiguity in objectives, and role responsibility and select and measure the appropriate texts. A potential answer to this problem and addition to the content analysis repertoire is *abduction*.

Scholars interested in computational models of politics continually face the problem of how construct the 'parts' of a theoretical mechanism when political actors or situations do not share their theoretical understanding—the behavior, language or actions can not, in other words, be directly substituted into the model. As one group of scholars describe, the issue is "how to move from archival materials to model-specific data, without in the process losing the critical nuances by which policy recommendations are differentiated from each other."[5] Although the task of computational model construction is different from content analysis of theoretical categories, the general solution the authors suggest—"grounded theorizing"—can be adapted,

[5] David Sylvan, Stephen Majeski, and Jennifer Milliken, "Theoretical Categories and Data Construction in Computational Models of Foreign Policy," in Artificial Intelligence and International Politics ed. by Valerie Hudson, Westview Press, 1991, pp. 327-345.

using a similar process. The authors propose two broad steps: entering documents and abducing[6] categories; and constructing and categorizing data.

1. Abducing categories: In order to develop what is meant by justification, advocacy, explanation, ambiguity in objectives, and role responsibility, actual archival material (strategy texts) must be gathered, reviewed, and divided into types that are drawn from the subject material itself. For instance, if a review of Kosovo-related texts reveals repetition of the theme, "we must help the Kosovar refugees", a justification type can be assigned, and all the texts coded for that type. This process continues--developing and assigning type classifications for the data set—until the researcher has sufficient type classes to begin associating types with the concepts desired. In this manner, the researcher develops a grounded relationship between the texts and the concepts under study, that aids classification. An essential distinction between the efforts of computational modelers and evaluative content analysis is that the data set for developing categories should be a representative *subset* of the research data. Using the entire set for both theory development and analysis threatens the validity of the analysis.[7]
2. Constructing and categorizing data: The content analysis categories and variables must be constructed, and then the entire data set classified. Construction describes the

[6] Inspection of desk dictionaries may reveal quite different meanings for the word "abduction." In the context here (and in logic), it is generally taken to mean an intuitive leap from theory to practical use, or the opposite, from a single event to a complete theory. This is similar to "leading away by force," but is not meant to be similar to "leading away by fraud," which some definitions indicate as a possibility. The irony, however, is palpable.

[7] Sylvan, Majeski, and Milliken, pp. 329-332. Instead of the term "type" that I have used, the authors describe "summaries." Their target concept was "bona fide policy recommendations."

necessary steps of deciding: a) how to reduce strategy texts to the selected categories; and b) how to transform category scores to the variable(s) for analysis. For example, if several types or themes are associated with each concept of justification, advocacy, and explanation, the researcher must decide whether texts can be primarily one or all categories. Additionally, the decision must be made on whether repeated types within one text unit constitutes a greater degree of each concept's presence. Next, these category decisions must also be translated into one or more variables for analysis; for example, is "justification" measured for a text unit as a category count of justification-type phrases, or simply as the predominate type when all three categories (justification, explanation, advocacy) are compared? Finally, the constructed categories and variables are used in content analysis to classify the entire data set.

Theoretical category construction provides a means for exploring the issues of communicative role and strategy contexts with content analysis. What is needed is a relevant domain of strategy, that will provide variation in both actors and communication types, while focusing on the same strategy problem. The best candidate may be the Quadrennial Defense Review process, which in the past involved the military services, Defense Department leadership, and civilian experts in direct (National Defense Panel) and indirect roles. Whether sufficient documentation of this case is available remains to be explored.

Doctrinal strategy as leverage for case-based reasoning and service cluster investigation

Doctrine's exemplary characteristics and content analysis methodology provides the means for investigating two important findings: the role of history and case-based reasoning in strategy; and the function of service clusters in the development of strategy. Doctrine was discovered to have three strong characteristics as a result of this study—it is an *exemplar* that exhibits greater differentiation yet consistency with civil-military patterns in strategy, and a *role* and *function clarifier* of civilian and military subgroups. Coupled with the more obvious fact that doctrine is primarily a textual strategy available to the public,[8] this provides researchers interested in civil-military relations and national strategy a significant domain for exploring hypotheses.

One question arising in the findings of this study concerns the use of history by civilians and the military: why are civilians found citing the past more often, and in particular why do they cite the "last major war" more than the military? Civilians use more history in strategy—particularly when the deliberations are over whether-to apply military force—and they cited the Gulf War in NMD and doctrine at a significantly greater rate than military groups. One proposition offered in reviewing this data was that it is possible military strategists integrate relevant historical cases into principles, models, and explanations, and therefore do not need to cite specifics when reasoning. On the other hand, civilians have little in the way of shared principles and theory, and may therefore rely on case-based reasoning and specific precedents to formulate strategy.

[8] There are, of course, classified doctrine publications in the US national security inventory. However, there are a large number of unclassified doctrine texts that are meaningful to military and civilians yet publicly available.

Because of this, the "last war" also figures more prominently for them when reasoning about contemporary problems.

An potentially promising investigation would be to "unpack" the historical reasoning in strategy to look at these issues: instead of merely measuring citations of history and case-based language terms, one could also assess the use of identifiable principles, theories, models, and integrated explanations. If the military's use of history is mitigated by the fact that their history is integrated into their reasoning, then an assessment of their use of principles and models should show greater uses by military than civilians. Indeed, the greater use should be amplified in how-to strategy, where one might expect to see more models and integrated explanations. Doctrine provides the ideal domain of strategy, and theoretical categories will need to be constructed to measure models, principles, and explanations in strategy. The primary hypothesis is:

D_6: Civilians display greater case-based reasoning in strategy, while the military displays greater model- and explanation-based reasoning. Specifically, the military uses more principles, models, and theories than civilians in the formulation of strategy, while civilians use more citations of history.

A second question arising in the findings concerns the implications of service clusters: does the Air Force and Navy versus Army and Marine Corps clustering on dimensions of offensiveness and uncertainty extend into more substantive issues of strategy? This study found that the Air Force and Navy grouped together on all three characteristics of strategy studied (the Army 'joined' them in use of history), which led to an observation that this clustering portended an important institutional identity in strategy. A potential issue in military strategy and

doctrine may allow an investigator to explore the clustering effects while investigating a contemporary problem: essentially, the question is whether joint doctrine is truly joint?

Within US military circles (and largely undocumented) are a number of issues about joint doctrine; it is intended to represent the US military's unified views on how to marshal forces to accomplish national objectives. Yet, due to organizational competence and some perceptions of dominance in joint leadership positions, the Army's doctrine is alleged to be the primary supplement to joint doctrine. On some warfighting issues, such as something called the Fire Support Coordination Line (FSCL), this perceived dominance in doctrine is the basis of a great deal of bureaucratic infighting. Joint doctrine may be an optimal issue for investigating service influence on strategy and the potential existence of service clustering.

D_7: On identifiable principles and procedures for organizing military forces, joint doctrine displays Air Force/Navy and Army/Marine Corps alignments, and a dominance across joint doctrine by the latter 'cluster.'

A study of this hypothesis would be very similar to the methodology employed in this study, with three proposed modifications. First, the actors included would be military only—examples of each service and comparable joint doctrine publications. Domains in this study would then be doctrine series—for instance, domains of Basic, Warfighting, Operations and Logistics are common to all services and joint doctrine. Second, categories measured could include offensiveness and uncertainty, but also would require some inductively-constructed categories for service-oriented principles—language associated with each particular service's warfighting

methods. Third, the dependent variable would be joint doctrine measures of the selected characteristics and principles, and the test would be which service or combination of services best "predicts" the joint doctrine result.

Content Analysis factors

The content analysis approach used in this study is an example of a methodological endeavor called "at-a-distance assessment," and the measurement strategies applied carry with them a number of technical concerns. A recent symposium in the journal Political Psychology addressed some of these concerns and presented findings that are relevant to this study.[9] Specifically, the design procedure that measured behavioral characteristics of several groups by analysis of strategic statements and speeches raises three concerns: individual versus aggregate levels of analysis; prepared versus spontaneous material; and social cognition versus personality traits.

1. Individual versus aggregate levels of analysis: If a generalization can be made about the use of at-a-distance techniques, it is that it is most often applied to individual subjects and the results extended to explain state behavior. The extension is accomplished either by assuming the particular individual directly influences the state's behavior (as in assessing a state leader), or by aggregating one or more individuals who as a leadership group have direct influence on behavior. This kind of ecological inference has inherent logic problems.

[9] Mark Schafer, "Assessing Psychological Characteristics at a distance," introductory article to "Symposium on At-a-Distance Psychological Assessment" in Political Psychology 21:3 (Sept. 2000): 511-527.

In this study, although individuals are usually the subject of analysis (the exception is the doctrine domain), they are not treated as individuals per se, but rather as representatives of particular groups. The important assumption made is that subject measurements are aggregated to particular military or civilian groups, and it is valid to compare group behavior tendencies. To elaborate on this somewhat, consider that each text unit has an author, and that authors are only classified by type of actor (civilian and military subgroups.) Any author may produce several text units, and all units are aggregated only by type of actor, not author. Therefore, the study compares and analyzes types of actors, not specific authors. Attribution of behavior characteristics of the group to any specific individual is not warranted, and not necessary to establishing the truth of the hypotheses.

	Analysis *Strategy Essays*	**Organization** *Doctrine*	**Operations** *Kosovo*	**Planning** *NMD*	**Totals**	**Frequency**
Male	757	0	512	452	1721	0.42
Female	300	44	172	0	516	0.12
Group	0	1747	68	78	1893	0.46

Table 18 – Text Units authored by Groups and Individuals

This study design does hint at another possibility for analysis, however: do individuals formulate strategy differently than organizational actors? All of the text units in this study can be classified as to their authors being an individual or a group (additionally, individuals can be classified as to their gender.) In other words, the study allows a control variable for types of author—individuals (male/female) or groups. Table 18 shows these classifications with respect

to the text units in this study. Note that the Organization domain did include female strategists due to statements by the Secretary of State and a Secretary of the Air Force, and that none of the Planning or NMD strategy texts came from females. Only the Analysis and Operations domains allow thorough looks at male versus female strategy within a domain, and only the Operations category includes all three classes, both genders and group. There is little prior theorizing about differences between individuals and organizations, or men and women, in strategy formulation. But two tentative hypothesis may be:

D_8: Organizational strategy, particularly doctrine, frames the pattern and direction of differences between civilian and military individuals when they express strategy.

D_9: In comparable domains of strategy, male strategists will exhibit greater offensiveness and less uncertainty than female strategists, while use of history will be indistinguishable between men and women.

These hypotheses are offered here because the data gathered for this study did not allow either to be explored, even as tangential concerns. Ideally, research on either topic will require more than one domain in which there are sufficient examples of the actors being compared—for individual versus group, there were no acceptable domains, while for male versus female only the analytic essays came close.[10]

2. Prepared versus spontaneous material: In content analysis, the nature of the source material is often a concern. One common assumption in the past has been that spontaneous material

[10] Though not reported in the study, in essays there was evidence of greater offensiveness by men than women, but the data also indicated men being more rather than less uncertain. I chose the hypothesis of less offensiveness and less uncertainty for women based on broader psychological work on gender and risk taking.

such as interview responses more directly reflects an individual's traits than prepared material such as speeches that may be ghostwritten.[11] In a series of research findings, the symposium cited earlier found that there generally is a significant difference in measurements of the same subjects based on type of source material. However, the differences usually trended in the same direction—that is, prepared sources have a systematic bias from spontaneous materials. The inherent problem, then, is that one must be cautious in comparing results from spontaneous sources to results from prepared sources, or take particular care in using both sources together in measurement. In this study, most of the data for analysis, operations and planning domains could be classified as prepared—although there are certainly instances where congressional testimony or senior official responses and statements contain spontaneous remarks. The doctrine domain is predominately prepared material. Table 6 shows the division of textual units in this study by source types of communication. A basic proposition from other research is that the spontaneous material will enhance the magnitude of certain characteristics. If true:

D_{10}: Spontaneous expressions of strategy will display more offensiveness and less uncertainty than prepared statements of strategy.

A proper investigation would require more spontaneous materials, and more balance within domains, than available in this study, as can be seen in Table 19.

[11] For one instance of such a claim, see "Assessing Leadership Style: A Trait Analysis" by Margaret Hermann, Social Science Automation, Inc., 1999, p. 2.

	Analysis *Strategy Essays*	**Organization** *Doctrine*	**Operations** *Kosovo*	**Planning** *NMD*	**Totals**	**Frequency**
Spontaneous	0	44	586	317	947	0.23
Prepared	1057	1747	166	213	3183	0.77

Table 19 – Source types of Text Units in Study

3. Social cognition versus personality traits: Another generalization that can be made about at-a-distance measurement is that it is generally employed either to assess the existence of particular cognitions (such as beliefs, attitudes or perceptions) or evaluate underlying personality traits (motivations or psychological mechanisms such as need for power or ego-defense.)[12] This distinction becomes important both in the selection of source material (where personality is assumed to be more directly accessible in spontaneous material) and in the issue of *stability.* While personality traits are often assumed to be more stable across different dimensions due to their subconscious nature, social cognition may be subject to both temporal and domain instability. In other words, one should not assume that a cognitive measurement like a belief is necessarily the same in another situation or at another point in time.

In this study, the dependent variables are generally attitudinal or perceptual—i.e., they are most like social cognition. Stability across domains or time would be an inherent concern; however, this investigation controlled for time in the selection of data (1995-2000), and

[12] Schafer, "Assessing Psychological Characteristics at a distance," pp. 517-518.

specifically focused on assessing stability across domains in the design. Therefore, this issue is integrated to the structure of the study.

Summary

Content analysis and at-a-distance techniques are rigorous methodologies, and often raise concerns in observers who wonder how psychological characteristics can be measured outside a controlled environment. Indeed, the most important assumption in at-a-distance research is that it is possible to assess such characteristics with a systematic analysis of texts and speeches.[13] It may, perhaps, be better to say that the fundamental assumption is that texts and speeches include better evidence of these characteristics than is available in case interpretation, or even that it is the only direct evidence beyond having the subjects in a controlled environment like a laboratory. Military strategy, however, is inherently a communicated concept—non-linear, contingent, and most often expressed in text or speech—and the problems in obtaining either the appropriate subjects or a generalizable context for experimentation are legion. Though challenging, content analysis is salient to the subject, and can be an effective, productive, and thought-provoking methodology in civil-military relations study.

The myriad of findings this application of content analysis produced also generated a number of future topics for amplification and study. Civil-military strategy patterns discovered here should be verified in a comparative context—such as the US versus the UK—and the

[13] Schafer, p. 512.

concepts of civilian subgroups refined to better encompass government and people poles of Clausewitz' trinity. The 'price of admission' to strategy deliberations needs to be examined by exploring communication roles of explanation, justification, and advocacy, while the contextual effects of whether-to and how-to strategy on civilian offensiveness and military caution also warrant attention. Doctrine, in particular, is argued to be a type of strategy that can be leveraged into critical explorations of the role of history in strategy and the dynamics of service clustering in predispositions, and possibly substance. Finally, there are technical issues of content analysis of strategy that can also yield some findings of relevance to civil-military relations and the use of this method in research.

Taken together, ten hypotheses for future study in civil-military relations and strategy are offered in Table 20. As described in this chapter, each one can be explored with content analysis, supplemented by a variety of other methods, and data similar to that used in this study.

New Hypotheses for Civil-Military Relations and Strategy
D_1: United States and United Kingdom civil-military patterns in strategy characteristics of offensiveness, use of history, and uncertainty will be identical.
D_2: Civilian professionals in society will be less offensive and less uncertain than government civilians and the military in national strategy preferences, and most similar to civilian experts.
D_3: Strategy communications that are advocating or justifying courses of action will exhibit less differentiation of civilian and military groups than strategy communications which are explanatory in nature.
D_4: Strategy communications that deliberate "whether-to" commit to a course of action will show civilians as being more offensive than military because the military will be concerned about ambiguity in national and military objectives. Put alternatively, civil-military offensiveness in "whether-to" strategy will be directly related to perceptions of ambiguity in national interests and objectives.
D_5: Uncertainty outlooks in strategy communications that deliberate "how-to" accomplish given objectives will be directly related to role responsibility: as an actor's responsibility for the strategy increases, uncertainty in outlook increases, relative to all other actors in the strategy process.
D_6: Civilians display greater case-based reasoning in strategy, while the military displays greater model- and explanation-based reasoning. Specifically, the military uses more principles, models, and theories than civilians in the formulation of strategy, while civilians use more citations of history.
D_7: On identifiable principles and procedures for organizing military forces, joint doctrine displays Air Force/Navy and Army/Marine Corps alignments, and a dominance across joint doctrine by the latter 'cluster.'
D_8: Organizational strategy, particularly doctrine, determines the pattern and direction of differences between civilian and military individuals when they express strategy.
D_9: In comparable domains of strategy, male strategists will exhibit greater offensiveness and less uncertainty than female strategists, while use of history will be indistinguishable between men and women.
D_{10}: Spontaneous expressions of strategy will display more offensiveness and less uncertainty than prepared statements of strategy.

Table 20 – Hypotheses for future research

CHAPTER 10

CONCLUSION

The first advice I'm going to give my successor is to watch the generals and avoid feeling that just because they were military men their opinion on military matters were worth a damn. –President John F. Kennedy

Benjamin Bradlee, Conversations with Kennedy

The concept of civilian control of the military ignores two other factors that complicate civil-military relations. On the one hand, the military themselves accept the principle of civilian supremacy; on the other, they have been thrown into a political role in the formation of policy...Their advice as experts is not only used by the Executive to bolster its case, but is eagerly courted by Congress and the public as a basis for testing the caliber of executive action.

Gene Lyons, "The New Civil-Military Relations"

Do civilians deliberate national strategy differently than military officers? This study began with that question because civil-military relations—a cross-disciplinary effort spanning sociology, international relations, domestic politics, management, democratic theory, security studies, and history—has to date shown relatively little empirical evidence on the differences between civilian and military strategy.[1] This is important since there are a number of

[1] Among the large number of works reviewed and cited in this study, only three are regarded by the author as attempting empirical investigation of civil-military relations and strategy. Those are Betts 1977, Petraeus 1989, and Kanter 1975. Most others, including outstanding work by Russett 1974 and Holsti 1997, either focus on values and beliefs, or do not address civil-military differences systematically in any manner.

propositions about such differences that lie at the heart of theories of state and group behavior at international and domestic levels. In addition to thinking about civilians and the military as homogeneous groups, this research proposed a closer look at civilian and military subgroups in order to better understand the different influences such groups exert on (or through) strategy as it is being developed.

This research tested some fundamental notions and also characterized several dimensions of strategy-making using the methodology of automated content analysis. An ideal approach to studying differences in civilian and military strategy might be situations where a scholar could observe: a) representatives of every group of interest, who b) possessed the competence and responsibility for national strategy, deliberating c) the very same strategic problem(s) in a d) semi-public setting amenable to analysis and reporting. Unfortunately, these types of situations are not available, and to date the most common approach has been case studies of crisis situations (Betts 1977, Petraeus 1989) or budgetary strategies (Kanter 1975, Builder 1989), or comparative survey analyses of civilian and military values instead of actual strategy-making (Russett 1974, Holsti 1997, CSIS 2000.) While each of these have contributed valuable information to explaining civil-military relations and strategy, content analysis offered a means to assess the same concepts of interest from another direction and thereby increase the robustness of understanding in this area.[2]

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[2] There are other methodologies that may be under-utilized in civil-military relations study. Given sufficient resources and willing subjects, a scholar could also try scenario experiments by 'piggybacking' on routine national security exercises and workshops, or even field study as an authorized observer to National Security Council sessions over an extended period.

Automated content analysis supported the study of civilian and military motivations as captured in their rhetorical style when they talked or wrote about strategy. The approach capitalized on a primary assumption that *strategy is a communicated concept* of how a state will exercise specified means to attain national objectives. Because it is communicated, one can analyze the texts which include the strategic reasoning of members of groups and attribute patterns of language and reasoning found there to be representative of that group's strategy characteristics. Automated content analysis does not assess the actual meanings or substance of strategy as well as case study might, but it does complement that approach and adds to it a systematic means for assessing behavioral characteristics in large amounts of primary data across a breadth of strategy types.

The evaluation of a variety of strategy texts in this manner—divided into "domains" of analysis, organization, operations, and planning—verified some propositions, discounted others, and gave rise to a number of new insights about civil-military relations and strategy. The degree to which this study's findings confirmed the conclusions of Betts and Petraeus regarding civil-military offensiveness, for example, is impressive when one considers this research uses an entirely different data set and method. In addition, the systematic approach added to their previous insights by more rigorously evaluating differences in subgroups of civilians and the military services, and confirming that previously established patterns appear "alive and well" in the late 1990's. One firm conclusion of this research therefore is that automated content analysis should be further developed and applied to the study of civil-military relations as a another valuable tool in the scholar's arsenal.

Probably the most theoretically significant findings included the patterns of offensiveness in strategy and the influence of context on group behaviors. Civilians are less offensive, in general, than the military, a result that supports both apocryphal understandings and some limited studies accomplished in the past. However, that difference in offensiveness requires a significant qualification: the military is only more offensive than civilians when deliberating "how to" accomplish courses of action, which was described in this study as the "how-to" context of strategy. In "whether-to" strategy which deliberates commitments to action or intervention with military force, civilians were found to be more offensive than the military. As previously mentioned, this conclusion supported and expanded upon previous studies by Richard Betts and David Petraeus, in addition to propositions put forward by others.

Hypothesis	Supported?	Context?
A1. Militaries will prefer and advance more offensive strategies and foreign policy solutions than their civilian counterparts.	**Yes**. Military more offensive in all except NMD strategy. Difference sharpest in doctrine.	Civilians slightly more offensive in 'whether-to' strategy; military sharply more offensive in 'how-to.'
A2. Contemporary US military analysis and strategy downplays or disregards the role of uncertainty (in the entire situation, rather than merely choice options) compared to civilian analysis and policy on the same issue.	**No**. Military more uncertain in doctrine, but less in NMD, and about equal otherwise.	Civilians slightly more uncertain in 'whether-to' strategy, but sharply less uncertain than the military in 'how-to' strategy.
A3. Contemporary US military analysis and strategy discounts the importance of history (past cases of conflict and war), compared to civilian analysis and policy on the same issue.	**Yes**. Civilians use more history in all areas of strategy, particularly in doctrine and NMD.	Civilians and military close in use of history in 'how-to' contexts, but civilians use more history in 'whether-to' strategy.

Table 21 – The Tests and the Findings (continued on next page)

Table 21 – The Tests and the Findings (continued from previous)

B1. The services will vary on offense-oriented strategy preferences, with the Air Force and Navy significantly more offense-minded than the Army and Marine Corps.	**Yes**. Air Force and Navy 'cluster' together as more offensive across all domains. Army least offensive in all domains.	Military services are relatively homogenous in 'whether-to' discussions, but diverge in 'how-to' with Air Force and Navy more offensive.
B2. The services will vary on their consideration of uncertainty in strategy, with the Air Force being most deterministic of all the services in strategic analysis.	**Yes**. The Air Force is generally less uncertain, but particularly in doctrine. If clustered with Navy, there is a more significant pattern of being less uncertain.	Civilian experts are most uncertain in both contexts; military services about the same in 'whether-to' strategy, but clusters in 'how-to' with Air Force & Navy less uncertain than Army & Marines
B3. The services will vary on their use of history in strategy, with the Air Force being least likely of all the services to include historical cases in strategic analysis.	**No**. The Air Force is not the least likely user of history; rather, Marines are generally the least likely to use history across services.	Defense civilians display independent behavior in whether-to and how-to strategy: they appear as intermediaries between civilians and the military
C1. A pattern of differences between the military and civilian strategy will remain coherent and stable across domains (i.e. there is military culture at work in strategic processes.)	**Partially.** Meaningful patterns of differences were discovered at civil-military and subgroup levels, that were also coherent across domains. However, the impacts of those differences are not observed; and, the possibility they are due to material resources (capabilities, functions) or social structure (authority, roles, hierarchy) cannot be excluded.	A large part of the "action" in differences between groups lies in appreciating the effects of *how-to* strategy. That arena of strategy, however, calls both material and social explanations into the foreground—*how* one does something is often related to one's capabilities, tools, roles and authority.
C2. A pattern of differences between civilian subgroups and military service strategies will remain coherent and stable across domains (i.e. there is bureaucratic or service culture at work in strategic processes.)		

The effects of context upon group behaviors in strategy-making also highlighted another important finding for the study of civil-military strategy—monolithic perspectives may only be appropriate in whether-to deliberations of strategy. Many theorists and scholars in the past

have treated civilians and military as monolithic groups in describing their values, beliefs, and behavior in political settings. In this study, civilians and military were most homogeneous in offensiveness, use of history, and uncertainty outlooks in strategy when deliberating whether-to commit or intervene. Subgroups became important and significant—in all three of the studied characteristics—when strategy was how-to in nature.[3] Two key findings here were the clustering effect of military services into Air Force/Navy and Army/Marine groups, and the intermediary role of defense civilians. Civil-military scholars will be well advised in future studies to consider that subgroups may vary in values, beliefs and behavior if the context of the questions or situations is on how to do a job, rather than more general questions of the commitment of military force.

The study also revealed a consistency in trends across domains of strategy and the exemplary nature of doctrine. One of the motivations for examining different arenas of strategy was an interest in the extendibility of findings: previous research, such as Kanter's study of defense politics in budgeting for military forces, was limited in making observations about other types of strategy and intergroup behavior. This research found that civil-military patterns are similar on most characteristics across most domains. National Missile Defense examples (NMD) were most likely to vary from overall patterns, and this possibly indicates that homeland

[3] One exception to this was that civilian experts are still significantly different from other civilians and the military in uncertainty outlooks and whether-to strategy, in addition to being different on the how-to dimension.

defense is distinctively different in national security affairs from general strategy-making.[4] Doctrine, or organizational strategy, was on the other hand the domain of strategy most likely to show the greatest differentiation in groups, at either civil-military or subgroup levels of analysis.

Doctrine is an exemplar of strategy, an area within which groups clarify their roles and reinforce uniqueness of function. If civilians are less offensive in practical strategy than the military, then in doctrine they are clearly less offensive. If the Air Force is an inherently offensive arm of military force, doctrine shows it to be the most offensive of the military services in expressing strategy. Uncertainty of outlook, as expressed in strategy communications, is associated with how much relative responsibility a group has for the strategy in question: civilians are more uncertain in whether-to strategy and National Missile Defense in particular, while the military is more uncertain in how-to strategy and Doctrine. Civilians also showed a greater use of history examples in doctrine than the military; though initially surprising, this may be evidence of functional differences in which the military has integrated history into principles and models, while civilians generally rely upon case-based reasoning to explicate strategy points and positions.

Patterns of civil-military differences possessed a coherence across domains, and consistency with previous research, that potentially could be attributed to culture—but careful scholars should not draw this conclusion. Drawing upon international and civil-military relations works, this study proposes that:

[4] The distinctive differences in NMD were largely due to different behavior by two groups: civilian experts and the Army. Speculation was that these two groups, more than others, see homeland strategy in a different light.

Strategic culture exists if distinctions in characteristics (values, beliefs, symbols) and behavior (predispositions for action or reasoning) between groups exist, pervasive over time, which significantly account for differences in behaviors of interest, apart from the impacts of material resources (capabilities, functions, and constraints) or social structure (hierarchy, authority, roles), which may also vary between groups.[5]

This approach to the use of strategic culture as an explanation of the civil-military patterns in strategy highlights two challenges to a finding of "culture" as a cause. First, the design of this study did not allow examination of the substantive impacts of the group differences: we could not observe whether, for example, military offensiveness in how-to strategy actually resulted in more offensive strategy choices than civilians desired. Nor could we observe whether the military's predisposition for using less history in doctrine somehow limited their influence in the decision-making process surrounding strategy. Without demonstrable impacts, culture is insufficient as an explanation for differences.

Perhaps more significant than unobserved impacts is the possibility of material or structural explanations for civil-military strategy. On each of the characteristics of strategy studied—offensiveness, use of history, and uncertainty—reasonable explanations generated in the analysis of findings relate to both material resources and social structure. As elaborated above, it is possible that increasing responsibility is related to increasing uncertainty in strategy outlooks, which is an indication the pattern in this characteristic of strategy may be attributed to social structure—organizational authority and roles explains differences. The patterns in use of history similarly have a non-cultural factor of material resource differences—the military's use of less

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[5] This is the author's definition. See the end of Chapter 8 for discussion and development.

history may be a function of its tools, training, and documented experience, whereby history is integrated into assumptions and preferences, rather than cited in case-based reasoning.

Offensiveness may have the most significant non-cultural explanation for the patterns found in this study. As discussed in this research, the military's preference for offensiveness in how-to strategy might be taken as reasonable and natural: the military is responsible for forceful action (destruction is one element of offensiveness) and offense is a classic principle of military action, whatever service employs it (initiative and mobility are time-honored tenets of warfighting.) Additionally, as some scholars remind us, militaries should theoretically be less offensive in whether-to strategy, as it involves more than military force considerations and the military is not responsible for whether-to decisions in an authoritative sense. (Betts 1977; Petraeus 1989) Both of these observations lend themselves to attributing the primary offensiveness patterns of behavior to material resources—the military function is offensive—and social structure—the military is subordinate to civilians, who decide whether-to and delegate how-to strategy.

These conclusions about civil-military relations and strategy are significant in themselves and also generate a myriad of new theories and testable hypotheses. Taken together, the hypothesis tests and findings support and complement a number of contentions that have existed in the field of civil-military relations. For example, it may be simultaneously true that the military is *more offensive* than civilians, yet also *cautious* in contemporary strategy: the differences in whether-to and how-to contexts between civilians and the military mirror this seeming contradiction. Another supported proposition is that the Air Force and Navy do cluster

together in preferences as being both more offensive and less uncertain than their counterpart services of Army and Marine Corps. This "institutional identity" may reflect that the Air Force and Navy have similar approaches to strategy due to their interest in technology, shared strategic assumptions such as "distant attack", and functional competencies of being more flexible and independent forces.

Each area of findings generated new propositions and potential areas for exploration. The content analysis methodology used here offers another route to scientific understanding of non-linear processes such as the formulation of strategy. As discussed in Chapter 9, it is possible to investigate a number of new propositions about civil-military relations and strategy in a manner that will also refine and improve this relatively new methodology. The hypotheses for future study offered below are by no means the only questions generated by this research. Civil-military relations and strategy remains an area of scholarship with relatively little or no rigorous and systematic research into its leading propositions and theories. This is not meant to be an overly critical observation, for the phenomena of interest in this area are notoriously difficult to appraise without a modern combination of extensive archival materials, new quantitative methods, and computer processing capabilities.

New Hypotheses for Civil-Military Relations and Strategy
D_1: United States and United Kingdom civil-military patterns in strategy characteristics of offensiveness, use of history, and uncertainty will be identical.
D_2: Civilian professionals in society will be less offensive and less uncertain than government civilians and the military in national strategy preferences, and most similar to civilian experts.
D_3: Strategy communications that are advocating or justifying courses of action will exhibit less differentiation of civilian and military groups than strategy communications which are explanatory in nature.
D_4: Strategy communications that deliberate "whether-to" commit to a course of action will show civilians as being more offensive than military because the military will be concerned about ambiguity in national and military objectives. Put alternatively, civil-military offensiveness in "whether-to" strategy will be directly related to perceptions of ambiguity in national interests and objectives.
D_5: Uncertainty outlooks in strategy communications that deliberate "how-to" accomplish given objectives will be directly related to role responsibility: as an actor's responsibility for the strategy increases, uncertainty in outlook increases, relative to all other actors in the strategy process.
D_6: Civilians display greater case-based reasoning in strategy, while the military displays greater model- and explanation-based reasoning. Specifically, the military uses more principles, models, and theories than civilians in the formulation of strategy, while civilians use more citations of history.
D_7: On identifiable principles and procedures for organizing military forces, joint doctrine displays Air Force/Navy and Army/Marine Corps alignments, and a dominance across joint doctrine by the latter 'cluster.'
D_8: Organizational strategy, particularly doctrine, frames the pattern and direction of differences between civilian and military individuals when they express strategy.
D_9: In comparable domains of strategy, male strategists will exhibit greater offensiveness and less uncertainty than female strategists, while use of history will be indistinguishable between men and women.
D_{10}: Spontaneous expressions of strategy will display more offensiveness and less uncertainty than prepared statements of strategy.

Table 22 – New Hypotheses for Research

This research effort constitutes an experiment, a different way to consider, study, and understand strategy. As another scholar wrote about the use of automated content analysis,

> This volume constitutes an experiment ... in a particular kind of discernment ... To use a computer to understand ... behavior may seem an alien thing to do.

> To convert words into numbers ... is itself a process fraught with uncertainty, a process rendered even more troublesome when one infers political consequences from such rarified, numerical data.[6]

The method is extremely useful and appropriate, however, when the subject of investigation is itself an expression of language. Strategies are found in the language used by and shared between people. Words and syntax choice carry meaning, even when there are other holistic or 'gestalt' meanings to be drawn by readers who appreciate and interpret whole texts. Inferences about speakers and writers can be drawn from observing patterns in their rhetoric.

Whatever one may think about President Kennedy's opinion of military advice, and generals in particular, there is an element of truth in the belief that membership in the military, or the variety of subgroups of civilians and military, can tell an observer something about the strategy they may hear or read. Knowledge of existing group tendencies can be helpful in explaining the past, in understanding decision-making processes, and in choosing advisors and deliberating recommendations.

> Under the best of circumstances (a consensus on interests, objectives, and threats), strategy formulation is an intensely political process, heavily influenced by parochial interests, conflict, bargaining, and ultimately compromise. We do what we can agree to do; rational decision-making in a democracy is the ability to harmonize competing strategic visions and interests...the dominant factor in the search for strategy is the domestic political environment.[7]

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[6] Roderick Hart wrote this his first book-length analysis that used Diction, an automated content analysis program also utilized in this research. See Verbal Style and the Presidency: A Computer-based Analysis, Academic Press, 1984, p. 239-240.

[7] Gary Guertner, "Introduction," The Search For Strategy: Politics and Strategic Vision, Westport: Greenwood Press, 1993, p. xvi.

APPENDIX A

CORRESPONDENCE AND VARIABLE FUNCTIONS

This study uses an automated approach to content analysis in order to efficiently process a large amount of textual data. Automated content analysis, however, is a burgeoning field, and faces a number of critiques and misunderstandings for scholars who choose to use it. Two important critiques are addressed in this study by performing a parallel analysis of a subsample of the data—parallel, meaning manual and automated coding are both performed, and subsample, meaning a small and partially stratified group of data files selected from all of the data. These two critiques may be summarized as:

1. "What if individuals are subtle or sophisticated communicators who might say one thing literally but mean quite another contextually? How do we know that language assessment is in fact capturing the concepts in action?"
2. "How can one be sure that measurement of 'elements' somehow corresponds to a reasonable measurement of the greater concept when those elemental categories are combined? In other words, what mechanism combines the 'parts' from content analysis into conceptual 'wholes', and what is the mechanism's validity?"

An approach that is somewhat more common to psychological studies is applied in this study to provide answers to these two critiques—a parallel analysis that shows *correspondence*[1] and yet also generates *variable functions*[2] or mechanisms for the research's dependent variables. That is, to enhance the validity of this study's methodology, a comparison of manual and automated coding was performed to show consistency in measurement. Then, the two sets of coding were secondarily used in discriminant analysis to generate weightings for the element categories which best predicted the manual coding of particular concepts. Descriptions of these steps and their results follow.

Consistency and Correspondence

An underlying challenge in all content analysis is implementing a method which supports systematic processing of the data, accurate identification and classification of textual "messages" into variable categories, and replication of analysis by other scholars. A common approach to this challenge is to develop codebooks describing identification and classification in detail, and then select and train two or more coders to execute the codebooks. The coding team is assigned a set of data (often a subsample) which it processes, checks for divergence among coders, and reprocesses if necessary. A guiding characteristic for the training period is 'intercoder reliability': a statistic indicating the degree to which coders are classifying the same

[1] Correspondence is defined here as "a positive association between measurements obtained by one means and measurements obtained by a second of the same phenomena."

[2] Variable functions are formula which combine multiple, raw elements into a single measure. In this section, and the study, I refer to the larger single measure as the "conceptual variable." For some readers, that may seem a redundant term, but it suffices to distinguish the dependent variable measure from multiple content analysis category measures.

set of data in similar ways, where 0 indicates no agreement and 1.0 perfect agreement. If an intercoder reliability greater than .80 can be attained, scholars often are comfortable proceeding with analysis of a full data set.

Although there are other types of reliability checks involved in content analysis, intercoder reliability is the key check in such research. This is because it is often taken as the first indication of how well the scholar's theory and variables translate to empirical data—if several coders can agree on the presence or absence of a concept in many examples of the data units, then perhaps the categorical variables across the entire data set represent meaningful measures of the scholar's variables. While the more obvious, and intentional, use of intercoder reliability is an assurance of replicability of research, the *underlying* purpose is more of a validity and consistency examination of the variables, the scholar's definitions, and the efficacy of a content analysis method.

Automated analysis presents an interesting conundrum to the scholar in this regard. On the one hand, automated methods present perfect reliability—once defined by the researcher, we could have any number of computers execute the 'codebooks' or dictionaries and reach the same results every time. On the other hand, the underlying purpose of intercoder reliability checks described above is ignored: no one can be assured that human beings would see the scholar's concepts in the data processed by the computer and classify the texts in a similar manner. This situation calls for a 'correspondence' check by the scholar: a test that shows human coding (and interpretation) would reach similar conclusions as the automated coding.

It is not clear in content analysis methodology how correspondence checks should take place; i.e., there is not yet any accepted practice among scholars.[3] This study proposes and executes a **parallel analysis** to address correspondence. Parallel analysis is defined here as a reliability test applied to a set of data by using two separate content analytic definitions and processes rather than two or more coders. In this case, the two methods are:

1. Manual analysis: A coding handbook was developed for the author's *conceptual variables*[4] of offensiveness, use of history, and uncertainty. This handbook (at Appendix B) focuses at the conceptual level vice the *elements* or characteristics level used in the study to define the operationalization of variables. Three coders processed 278 files in a partially stratified subsample (described below). The coders were predoctoral graduate students, two in political science and one in military history. Coders were trained and the sample processed until intercoder reliability was greater than .80 (actual figures reported below.)
2. Automated analysis: Coding dictionaries were developed for the author's categorical variables described in the text of this study (Chapters 3 and 4.) Most of these categorical variables correspond to the elements or characteristics of the conceptual variables. (Appendix C reports the dictionaries.) The same 278 files were processed and coded for these categorical variables.

[3] See Appendix D, Methodological Background, for a description of some other approaches.

[4] To reiterate for the reader: the term conceptual variable is this author's choice for distinguishing between dependent variable measures—the measure of the entire concept—and categorical measures which are focused on the elements of the concepts.

The key to the parallel analysis is that the two methods do not code according to the same definitions; if they did, the computer coding would always be more accurate. Instead, the object is to have one method which the scholar feels is 'privileged' in assessing the conceptual variables; i.e. one of the methods is assumed to 'get at' the concepts better than another. In this case, manual analysis according to definitions focused at the dependent variable level is treated as a better approximation of textual meaning than is automated analysis. The subsequent task of correspondence is to show that the automated codes track with the manual codes at an acceptable or reasonable rate of accuracy.

Three sets of figures are shown for the correspondence test: intercoder reliability for the manual analysis; inter-method correlation when categorical variables are simply aggregated; and canonical correlation for each dependent variable in a discriminant analysis of the two method's results.

Sub-sample set

The sample of data selected for both tests was partially stratified—file selection was guided by concerns for coding all types of data and subjects involved in the study. Files within any type were selected at random, however; for example, while 5 essays of each military service were purposely included, the particular Air Force officer writers of the five Air Force essays were randomly drawn. The table below shows the distribution of data units between subject types and data domains. Data units in this study are file 'chunks': coherent paragraph sequences

averaging 300 words, produced by breaking up the larger data units, which may have been interviews, reports, statements, articles or essays, or hearing transcripts.

	Leaders	Defense	Experts	Air Force	Army	Navy	Marine	Totals
Essays		25		29	28	27	27	136
Doctrine	35			10	5	10	10	70
Kosovo	44		7	5	6	4	6	72
								278

Table A1 – Subsample Distribution

Reliability and Consistency

The figures in Table A2 show test results in comparisons of manual and automated coding. The reliability figures (row one) are only for three-coder reliability of the manual coding. The "inter-method" correlation aggregates automated codes for the conceptual elements (e.g., for offensiveness there is mobility, initiative, and destruction minus immobility, passivity, and expectancy) and compares the simple aggregate to the manually coded dependent variable. The "canonical" correlation is the first order (first function) correlation resulting from discriminant analysis which treats the manual codes as a grouping variable and the automated codes as input (classification) variables.

	Offensiveness	Uncertainty	Use of History
Reliability (Manual code only)	0.85	0.87	0.97
Inter-method correlation (Manual to Automated-simple)	.432**	.382**	.389**
Canonical correlation (Manual to Automated-discriminant)	0.471**	0.414**	0.454**
** = *signif. @ p<.001*			

Table A2 – Consistency and Correspondence Tests

The figures show that the automated coding for the conceptual variables trends positively and significantly with the manual coding. The substantive correlations are not ideal, but can be considered reasonably good for an automated analysis application. Automated analysis relies substantially on the assumption that particular word/phrase usage by an individual is *associated* with particular, target concepts. This means that an automated method—even at its best performance—is always assuming non-perfect relationships between its categories and the scholar's concepts. The degree of association necessary to identify patterns in the data is wholly dependent on the nature of the concepts involved, the amount and breadth of data available, and the "grain" or precision of the measurement desired. For this study, correlations of .40 or greater were desired between the manual coding and the automated coding, and these were achieved when relying on discriminant functions to operationalize the variables.

Conceptual Variable Mechanisms

Each of the conceptual or dependent variables for this study were developed as a combination of theory and derivations from other research. Each was found to have several elements or characteristics which together might indicate the presence or degree of presence of

the target characteristics of offensiveness, uncertainty, and use of history. The elements are represented by, and measured through, independent dictionaries or lists of words associated with that characteristic. The actual operationalization of the concept variables—in other words, how the elements are specifically combined to make an overall measure—is something that is neither given through theory nor a practical result of content analysis.

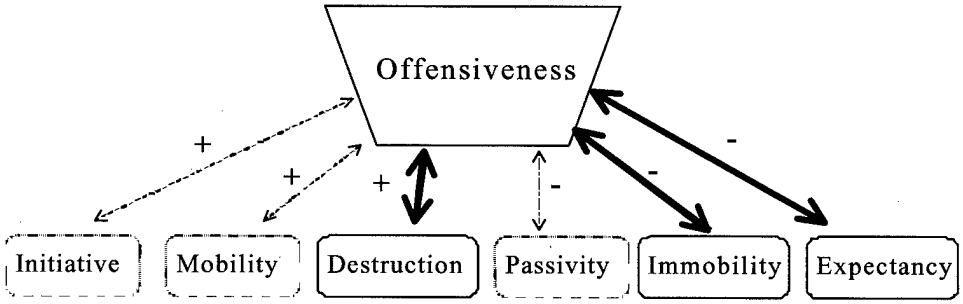
Offensiveness, uncertainty and use of history are by nature either psychological or rhetorical characteristics (or both), and possess no external standards for measurement or definition. In order to investigate and measure these characteristics, the author faced two options—either theorize and define particular operationalizations for each concept, or find a standard which could be converted into particular operationalizations. Due to the study's choice of automated content analysis and the effort (described above) to verify correspondence between manual and automated coding, the latter option became feasible.

Discriminant analysis of the manual and automated coding generated best-fit functions for classifying the offensiveness, uncertainty or use of history in each text unit based on automated measurements of the 'elements.' The discriminant functions therefore provide specific mechanisms that connect the elements to the concepts; in essence, the functions are formulas involving weights, signs, and the element measures. These mechanisms were chosen as the study's operationalizations for the conceptual variables because they provide the best statistical match between the automated analysis and the manual, interpretative analysis.

The following figures illustrate the results of the discriminant analysis and the operationalizations chosen for the conceptual variables. Since each discriminant function used

standardized values of the categorical variables, the formulas below include sample mean divisors.

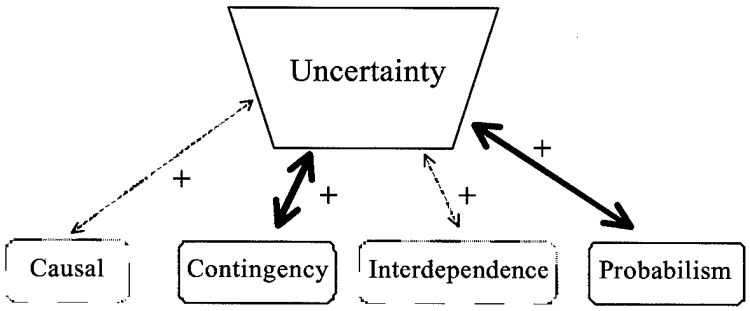
Figure A1 – Offensiveness



Offensiveness = .628*Destr/1.21 - .706*Immob/1.29 - .485*Expect/.651

First discriminant function only; explains 77.8% of variance
Chi-square = 89.8 , df = 12, sign. P<.000

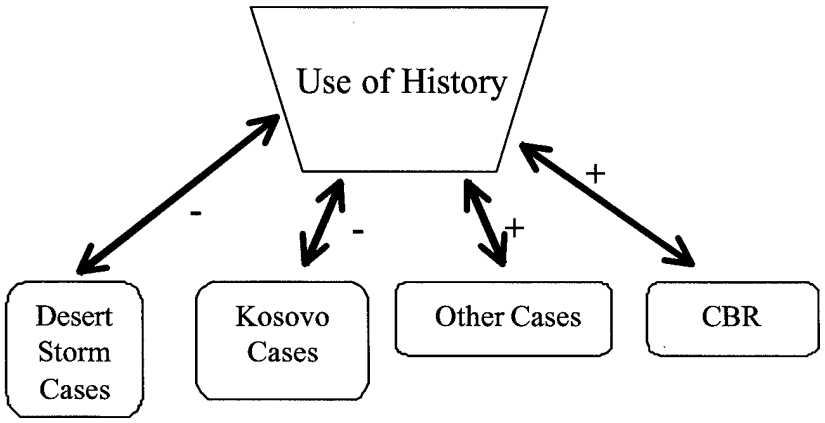
Figure A2 – Uncertainty



Uncertainty = .434*Contg/1.21 + .905*Probab/1.72

First discriminant function only; explains 92.6% of variance
Chi-square = 56.02; df = 6; p<.000

Figure A3 – Use of History



Use of History =

.975*Ocases/2.33 + .617*CBR/2.7 - .790* DSCases/2.38 - .424*KoCases/.85

First discriminant function only; explains 96.6% of variance

Chi-square = 65.7; df = 8; p<.000

It should be noted that the Use of History operationalization includes a counterintuitive result: that both Desert Storm and Kosovo case citations are negatively associated with use of history as measured by the human coders. There is a practical and reasonable explanation, however, and it relates directly to the data sets in use. Two major domains of data—the student essays used for analytic strategy, and the variety of texts used for Kosovo and operational strategy—include numerous text citations that are not "history" related! Recall that history is events in the past, and for two of the domains of strategy, this affects the counting of event citations. The essay question in the analytic strategy domain specifically tasked students to examine and redevelop strategy for the situation following the Gulf War as if the student was

in that scenario, while the Kosovo data deals with Allied Force as its current, rather than historical, subject.

In both domains, then, while the computer notes numerous case citations, the human coders did not note actual references to (or use of) history. The discriminant function is, in effect, adjusting all data for Desert Storm and Kosovo references which in some instances are not historical references. This presented an important challenge for measurement: what kind of formula(s) were necessary for a "moving target" such as citations of history? Two choices were implemented, and one subsequently chosen for reporting in this study. One choice is for *logical validity*: adjust the mechanism depending on what is history for that domain, resulting in three formula. The second choice is (more or less) a *statistical validity* approach: for consistency across domains, the functional form illustrated above was used for data in all domains.

It seems logical to adjust the calculation of use of history for whatever is history in a particular domain, and the first approach does this. Three formula are produced:

1. **$\text{History}_{\text{Essay}}$: .975 * (Other Cases/2.33) + .617 * (CBR/2.7)** ... In the analytic strategy domain, Desert Storm is the crisis under consideration; additionally, the essays were written prior to the Kosovo crisis. Therefore neither of those categorical counts should be part of history measures in this domain.
2. **$\text{History}_{\text{Kosovo}}$: .975 * (DesertStorm/1.34 + Other Cases/2.33) + .617 * (CBR/2.7)** ... In operational strategy, Kosovo is the current crisis, but Desert Storm does lie in the past.

3. **History$_{Doctrine,NMD}$: .975 * (Kosovo/.5 + DesertStorm/1.34 + Other Cases/2.33) + .617 * (CBR/2.7)** … Both organizational and planning strategy domains can refer to either the Gulf War or Allied Force as history, and those citations are therefore included.

Ideally, the use of history measure would be adjusted for the knowledge of the strategy author and the timeframe within which they were writing. In this research, the simple but crude approach was to instead use one formula for each domain. This meant that some of the doctrine or some of the NMD strategy texts, for example, were allowed to mention Kosovo as history even though they may have been written prior to Allied Force operations. Reviews of the data showed this not to have any noticeable effects on results.

The second approach favoring statistical validity certainly seems counterintuitive in actually subtracting citations of Kosovo and Desert Storm from "use of history," but was worth implementing for background comparison and accuracy checks. The basic formula shown in figure A3 adds the weighted elements of case-based reasoning and all other cases, but subtracts weighted elements of Kosovo and Desert Storm. When applied equally to all domains, this meant there were cases in both Doctrine and National Missile Defense where valid uses of Kosovo or Gulf War history occurred, but the instrumental function treated them as non-references. Although logically suspect, statistically this allowed the mechanism to adjust for these instances, and one gains the advantage of keeping the domains comparable for statistical analysis.

Analysis results of using this method supported the same hypothesis findings reported in the study, and uncovered some peculiarities with both civilian and Marine Corps use of history. The unitary formula applied to all four domains still generated evidence that civilians use more history than the military, that the Air Force was not a less common user of history than its sister services, and also showed other important subgroup variations. However, these alternative findings depended on somewhat different explanations. The unitary formula measurements would indicate that civilians use less history in the Kosovo domain, that context effects (whether-to versus how-to strategy) would reverse from the logical approach, and that Marines were—across the domains—the larger users-of-history than the other military services.

These indications run contrary to the chosen method's results for two reasons. First, analysis shows that civilians invoke Kosovo-related terms in Kosovo strategy at a significantly greater rate than the military. Using the unitary formula, this created a systematic bias against civilians in their use of history in Kosovo. Though corrected by the preferred method chosen in the study, it is noteworthy: why, after all, should civilians be invoking the current crisis at such a greater rate? The second reason for this method's contrary results regards the Marine Corps use of history: it seems that service is, by a significant margin, the service least likely to mention either Desert Storm or Kosovo in 1995-2000 strategy. Because of this, the unitary formula biased all other service's use of history downward, but the Marines were relatively unaffected. The Marine Corps' relatively low use of history seems to be related to its lack of enthusiasm for reflecting on Desert Storm or Kosovo in contemporary strategy. Although the unitary formula

approach is not reported in the study, these two peculiarities are cited within as a result of examining its utility.

The "logical consistency" approach was the preferred method for the study: it seems to best fit the concept of use of history, it produced results comparable (in magnitude) across domains, and it is more easily explained than the "statistical validity" method. In addition, background analysis of the results generated by both methods showed, as discussed in the research and above, that although the hypothesis findings would not change, use of the "statistical" method might incorrectly report civilian and Marine Corps behavior if it were the only basis of the findings.

APPENDIX B

CODING HANDBOOK: A COMPARISON FOR MEASUREMENT ACCURACY AND CONCEPTUAL VALIDITY

The methodology of this study proposes that one can measure conceptual variables[1] in text and speech by the use of automated content analysis. The conceptual variables are captured through dictionaries that contain language—usually individual words—that are associated with expression of the particular concepts in typical communication. The computer programs Diction and Profiler count the instances of each term in the dictionaries, and output aggregate totals in categorical variables. Those categorical variables, in turn, are mathematically transformed into the final conceptual variables.

The automated method allows analysis of a substantially greater amount of data in a shorter period of time as compared to manual coding. However, the automated method also is less capable of capturing the ***context*** of any subject's use of the terms in the dictionary. For example, in discussions about "offensiveness" it has been noted that most definitions of the

[1] In this section, and the study, I refer to the measure of the strategy characteristic—the dependent variable—as the "conceptual variable." For some readers, that may seem a redundant term, but it suffices to distinguish the dependent variable measure from multiple content analysis category measures.

concept include not only notions of initiative, attack, and destruction, but also the locality of the action—outward or outside one's sphere of control. The "use of history" concept involves not only a subject's mention of a historical event, but also some degree of reasoning dependent on that event. Automated analysis is not, at this date, sophisticated enough to capture the object of words indicating initiative, attack and destruction, nor can it explicitly link every mention of a case with all the reasoning relative to that case.[2] In contrast, manual coding—though less efficient in time resources and consistency—is very capable of contextual measurement.

The purpose of this coding handbook and sample test is to demonstrate that the automated coding chosen for this study possesses both measurement accuracy and conceptual validity. A comparison of content analysis using both the automated coding and a manual coding method can show whether the outputs of both measures are similar in substance and trend in the same directions across the domains of data in question. If both outputs do correlate on substance and direction of change, it is reasonable to use the more efficient method. It is also incumbent on such a test to chose a manual coding protocol that focuses on the presence of the concepts in the context of subject communications, rather than any counting of terms.

[2] The field of computational linguistics does, in fact, focus on exactly this type of problem. Many models are extremely sophisticated, and capable of tackling this issue with a significant investment of time and effort. The investment addresses building complex, combinatorial and syntactic dictionaries and linguistic 'trees' that will support contextual inferences. My statement applies to the existence of generic or ready-to-use automated analysis programs that do not require unique development for each possible variable/subject combination.

A Codebook for Manual Content Analysis

Manual coding in content analysis demands that human coders possess concept definitions and measurement procedures for processing data. These definitions and procedures can be considered the coding handbook or protocol for analysis. The codebook that was used by human coders for the study—in particular, the parallel analysis described in Appendix A—for each of the conceptual variables follows below. The instructions are, for the most part, exactly as they appeared in a separate handbook given to each coder.

Offensiveness

Offensiveness is an relative measure within a communication, indicating the degree to which offense is preferred over defense to accomplish tasks. The concept of offensiveness will be inferred by a coder, and measured on a scale reflecting the overall offensiveness of a passage. The inference requires the coder to interpret intentions of offense and defense expressed by an author, and subsequently weigh offensiveness as a resultant vector when all these intentions are taken together.

Offense is inferred or interpreted by classifying strategy statements in ways similar to dictionary definitions of offense and defense: offense is quick, takes the initiative, and decisively defeats or destroys opponents, while defense is protective and reactive to opponent actions. Sentences within paragraph units will be classified as ***offense*** when they describe proactive operations, attacking the adversary, destroying their forces, and rapid and decisive defeats. Additionally, these actions described must focus on territory under the adversary's control, or

outside friendly sphere of control. Contextually, this could be reduced to *initiative*, *mobility* and *destruction*, with an *external location of the action*.

1. Initiative: the choice of immediate objectives and direction of attack, and the organization and timing of attack.
2. Mobility: operations requiring movement towards the enemy, maneuver to exploit a situation, and reaching and accessing targets, locations, or adversaries in order to execute an action.
3. Destruction: operations focused on eliminating, largely reducing, obliterating, dominating, and decisively defeating the adversary.
4. External location: the adversary or target is not currently engaged at friendly positions, but is outside of or removed from friendly sphere(s) of control.

Defense is protective and reactive; it seeks to prevent degradation to one's own populace, territory, or forces. ***Defense*** is indicated in a sentence when the actions describe a focus on protection, security, reaction to adversary forces, and degradation or disruption of adversary attacks. Additionally, defense contrasts with offense in locality, by dealing with actions within the friendly sphere of control. Contextually, defense includes *security*, *relative passivity*, *immobility*, and a *state of expectancy*, and an *internal location of action*. While defense may involve or even prefer destroying enemy forces, it typically is more focused on reducing effects on friendly forces and resources.

1. Security: operations predominately involve protection of one's own forces, reducing the effects of adversary action, or degrading the opponent's ability to conduct operations in friendly areas.
2. Relative passivity: one's own forces are reacting to, or intended to react to, an adversary's initiative, or an adversary's timetable.
3. Immobility: Operations require relatively little or no movement by friendly forces toward other positions or locations.
4. State of expectancy: similar to passivity, operations will only occur as a reaction to other events, rather than as proactive operations using initiative.
5. Internal location of action: the locus of events is at friendly positions or within friendly sphere(s) of control.

Manual content analysis should not count the presence of offense or defense terms, but an awareness of such terms can facilitate the interpretation of statements. To that end, the following list supplements the above definitions.

> Offense: attack, destroy, defeat, decisive, maneuver, preempt, surprise, act first, force, initiate; words or phrases indicating adversary space, and targets external to one's own or an ally's space
>
> Defense: prevent, protect, secure, degrade, disrupt, attrit, restrict, deny, react, respond, defend; words or phrases indicating friendly space and targets internal to one's own or an ally's space

Coding Offensiveness: Offensiveness of textual units will be assessed by the coder using the following scale:

-2 = **Defensive**: Author recommends or discusses primarily defensive means

-1 = **Slightly Defensive**: Statements and intentions lean towards defense, but are not clear or unambiguous

0 = **Neutral**: Either the text seems to include neither offense nor defense, or the intentions seem balanced, preferring neither.

1 = **Slightly Offensive**: Statements and intentions lean towards offense, but are not clear or unambiguous

2 = **Offensive**: Author recommends or discusses primarily offensive means

Uncertainty

Uncertainty in this study describes how much or to what degree individuals consider generalized uncertainty, contingency, and interdependence in aspects of their strategy. A person is regarded as expressing uncertainty in their strategic reasoning when descriptions or statements of the following areas reflect **recognition of and/or ambiguity in**:

1. Generalized uncertainty: any lack of causal understanding of the situation or the environment
2. Contingency: outcomes that are dependent on situational events which may not be anticipated fully
3. Interdependence: outcomes that are dependent on the complex interaction of components

Manual coding of ***uncertainty*** will be a single, aggregate assessment of discernible recognition or doubt across these three areas within a text unit. The human coder can, for example, focus on the range of alternatives, options, or events (number of decision nodes), the perceived conditionality between and within these events (chance nodes), the estimated probability of any individual event occurring (probability), and the estimated consequences of options (payoffs.) Attention to these areas by any subject reflects some aspects of uncertainty. In addition, when a subject describes ambiguity (a lack of full knowledge) in these areas, or also focuses on perceived complexities which hamper full understanding, uncertainty is also being considered. The measurement is an inference of the author's overall inclusion of uncertainty in reasoning about intended actions, operations, or the events in the world at large.

0 = **None**: The subject does not seem to reveal or express any view or perspective on uncertainty

1 = **Low uncertainty**: The subject acknowledges that not all causes-effects can be known, or that actions are contingent, or some degree of complexity in the situation, but generally seems to feel most things can be anticipated or easily integrated to the strategy.

2 = **Medium uncertainty**: The subject consistently qualifies their outlook for the role of chance, or believes outcomes or adversary choices are difficult to predict. This kind of outlook may mention efforts at forecasting and estimation to identify all the possibilities, consider probabilities of occurrence, and recommend gathering

more information.

3 = **High uncertainty:** The subject believes the real world is ambiguous, and plans and actions cannot possibly anticipate all alternatives. A successful course of action always adapts to the changing circumstances. There are things one can never know, and information that is unobtainable.

Similar to the offensiveness variable, a terminology list for uncertainty facilitates but does not substitute for interpretation of the text. English language terms associated with uncertainty are listed below.

> Uncertainty: Probability, probably, likely/unlikely, chance/chances, possible/possibility; gamble; risk/risky; underestimate, overestimate; complex, complexities; depends/depended on, depends upon; connected; linked; might/might have; may/may have; perhaps; maybe/may be; uncertain, unknown/not known, remote; range of options/range of alternatives

Use of History

The question for this study regarding use of history is not *how* or *how well* history is used in strategy—instead, it is whether history is used at all, or *how much*. Case-based reasoning (CBR) provides the framework for automated measurement of how much history is used in strategy, and will also be used for manual coding. However, the human coder will not count both cases and reasoning terms to produce an interactive measurement. Instead, manual coding will be a single assessment of how much of the author's reasoning relies on comparisons and contrasts of cited historical cases, or draws lessons from historical events as a basis for statements.

Use of history is inferred from an author's treatment of history in the following ways.

1. Recognition and retrieval: the identification, recall or assertion of a salient case, and its relevant details
2. Inspection of likeness/differences: comparison and contrast of the case to the problem at hand, or to other cases
3. Evaluation of utility: assessing what parts or lessons of a case apply to the problem at hand by some secondary reasoning or calculation of its value

Two aspects will key the manual coding process: identifying a case reference, and recognizing language that reflects comparison and evaluation of historical cases.

1. Case References: The mention of a specific event, recognized participant, or past military operation. This can range from "World War II" to "Hitler" or "Milosevic" to "Operation Desert Storm." Additionally, some case references may simply state locations or countries which call to mind particular events; e.g., "similar to Rwanda…" Finally, a case reference must refer to history or events distinct from the author's context; for instance, what one did last week or experienced last month may inform today's plans, but they are not a case reference. However, the 1992 events in Bosnia are an historical case reference when discussing Kosovo in 1999.

2. Case-based language: Manual coders should note not only case references, but also the amount of reasoning associated with it. A simple statement of "like World War II" should be treated as less a use of history than "World War II taught three lessons about airpower…" Essentially, the coder is giving greater weight to historical references that are used in reasoning than to those that are "name-dropped," although both count as use of history.

Terms which may indicate the presence of case based language include the below, and are intended to facilitate recognition.

> CBR: applicable; due to; because, if...then; if [we] consider, considering; recalling, recall, remember, remembering, lessons of, the lesson; in order to understand; need to understand; of course; keep in mind; is apparent; it seems clear; obviously; case of, this case/instance, previous case/instance, past case/cases/instances, classic case, previously; in comparison, comparable, comparing; in contrast, contrasting; the difference/differences; like, similar, similarity, similarities, same; precedent, precedents; in the past; recent events, recent history, most recent example; example of, examples of; shows/has shown

Use of History will be coded as an aggregate assessment of each textual unit, using the following scale:

0 = **None**: No discernible use of history. Case-based language terms may be present, but are without any direct historical case.

1 = **Medium**: At least one reference to a historical case. Reasoning about that/those cases is minimal; i.e. the cases do not extensively inform the author's reasoning. Most of the text unit does not relate to this/these case(s).

2 = **High**: One or more references to history that include case based language, and a discernible degree of influence on the author's reasoning is present. As compared to 'medium', this level reflects a concentration in the text unit of case-based reasoning.

A Secondary Analysis: Tools and Symbols

The fourth dependent variable for this study is a measure of symbolic communication and reasoning by civilians, the military at large, and individual military services. Similar to the use of history variable, the intent is not to measure how or how well symbols are used, but rather how much. The symbols of interest in this investigation are terms or phrases which might indicate an "official language." However, these tools or symbols are to be derived from government and military vision statements, and the measurement in the larger study will simply be counts of these terms or phrases in all text units.

Although this approach leaves little difference between what manual and automated coding would achieve for this particular variable (i.e., context is not a direct issue), the manual coders can still establish a baseline for comparison. Coders will note the use of terms and phrases which may be regarded as official language, and which are in a preliminary ***tools and symbols***

dictionary. While the coder is measuring offensiveness, uncertainty, and use of history, texts will be 'flagged' for the presence of official language. The focus of this task is to identify individual terms or phrases which seem to be oft repeated or invoked by subjects. A symbolic word or phrase has a purpose of accomplishing one or more of the following:

1. Shaping a 'toolkit' of habits, skills and styles from which people construct 'strategies of action'[3]
2. Setting the boundaries of strategic debate by language, logic and conceptual categories[4]
3. Guiding and circumscribing thought, influencing the way strategic issues are formalized, and setting the vocabulary and conceptual parameters of strategic debate[5]

Five coding categories will be evaluated: Sym-Civ, Sym-AirForce, Sym-Army, Sym-Navy, and Sym-Marines. Coders will simply note the use of terms in each category by the authors of text units when such use seems to communicate *more than the literal meanings of the words*. Such use will be coded with a "1" to indicate presence and a "0" to indicate their absence. The preliminary dictionary for ***Symbols*** is:

[3] Ann Swidler, American Sociological Review 51:2 (April 1986), p. 273-277.

[4] Johnston, "Thinking about Strategic Culture," p. 58.

Navy	Marine Corps	Air Force	Army	Civilian
Power projection	Self-contained	Aerospace	Land force	Prosperity
Naval expeditionary force	Air-ground (team)	Aerospace expeditionary Force	Soldier(s)	*Leadership
Littoral(s)	First to fight	Effects	Institution	Engagement
Forward-deployed	Battle(s)	*Responsive/ responsiveness	Deploy(ed)(able)	Humanitarian
Forward presence	Warfighting	Versatile/ versatility	*Responsive/ responsiveness	Democracy/ democratic
			*Leadership	

Table B1 – Symbols and Tools categories and terms

** indicates duplication with another category*
Note: the final symbols dictionary (see Appendix C and Chapter 4) revised the above and included some different terms

Test Sample

The comparison test will use a small subsample of the available data. Both manual and automated coding will focus on paragraph units of analysis. To provide some variation across types of data (essays, prepared text, and testimony) the subsample will include data from the analysis, doctrine, and Kosovo operations domains, as follows:

[5] Snyder, "The Soviet Strategic Culture: Implications for Limited Nuclear Options," RAND R-2154-AF (RAND Press, Sept. 1977), p. 9.

1. Essays: a stratified sample of 5 randomly selected essays from each subject type: civilians, Army, Air Force, Navy, and Marines. (25 essays) The total sample of essays is approximately 200, and this subsample will provide variation across the independent variables of the study.
2. Doctrine: One Vision statement from each subject type. (5 data files) Each vision statement is approximately 6-8 pages, or 25 paragraph units of text. Again, this subsample will provide typical examples of Doctrine text and variation across the independent variables.
3. Kosovo: Two interviews or testimony from each subject type (10 data files) Each interview or testimony extract includes from 3-6 pages of text, or 8-20 paragraph units, providing a sufficient sample with variation across independent variables of interest.

Coding Reference Guide

1. Offensiveness:

-2 = **Defensive**: Author recommends or discusses primarily defensive means

-1 = **Slightly Defensive**: Statements and intentions lean towards defense, but are not clear or unambiguous

0 = **Neutral**: Either the text seems to include neither offense nor defense, or the intentions seem balanced, preferring neither.

1 = **Slightly Offensive**: Statements and intentions lean towards offense, but are not clear or unambiguous

2 = **Offensive**: Author recommends or discusses primarily offensive means

2. Uncertainty: The measurement is an inference of the author's perspective concerning intended actions, operations, or the events in the world at large.

-2 = **Certain**: The subject believes all important aspects of the situation are controllable, the alternatives have all been considered, and operations or actions will successfully create the intended effects.

-1 = **Relatively Certain**: The subject believes chance only plays important roles in a few areas. These areas can usually be anticipated, and probabilities assessed and assigned to different courses of action and events.

0 = **Neutral**: The subject does not seem to reveal or express any view or perspective on uncertainty ... **OR** The subject recognizes events in the world that involve uncertainty, but emphasizes making plans or taking actions that will account for the most likely situations; barring any defects or unreasonable actions by people involved, the actions should be successful.

1 = **Relatively Uncertain**: The subject always qualifies their outlook for the role of chance, and believes adversary choices are difficult to predict. This kind of world demands efforts at forecasting and estimation to identify all the possibilities, consider probabilities of occurrence, and continually gather more information.

2 = **Uncertain**: The subject believes the real world is ambiguous, and plans and actions cannot possibly anticipate all alternatives. A successful course of action always adapts to the changing circumstances. There are things one can never know, and information that is unobtainable.

3. Use of History: an aggregate assessment of each textual unit, using the following:

0 = **None**: No discernible use of history. Case-based language terms may be present, but are without any direct historical case.

1 = **Medium**: At least one reference to a historical case. Reasoning about that/those cases is minimal; i.e. the cases do not extensively inform the author's reasoning. Most of the text unit does not relate to this/these case(s).

2 = **High**: One or more references to history that include case based language, and a discernible degree of influence on the author's reasoning is present. As compared to 'medium', this level reflects a concentration in the text unit of case-based reasoning.

4. Symbols: Coders will simply note the use of terms in each category by the authors of text units when such use seems to communicate *more than the literal meanings of the words.* Such use will be coded with a "1" to indicate presence and a "0" to indicate their absence. The preliminary dictionary for ***Symbols*** is:

Navy	Marine Corps	Air Force	Army	Civilian
Power projection	Self-contained	Aerospace	Land force	Prosperity
Naval expeditionary force	Air-ground (team)	Aerospace expeditionary Force	Soldier(s)	*Leadership
Littoral(s)	First to fight	Effects	Institution	Engagement
Forward-deployed	Battle(s)	*Responsive/ responsiveness	Deploy(ed)(able)	Humanitarian
Forward presence	Warfighting	Versatile/ Versatility	*Responsive/ responsiveness	Democracy/ democratic
			*Leadership	

Symbols and Tools categories and terms

* indicates duplication with another category

APPENDIX C

CONCEPTUAL ELEMENTS AND DICTIONARIES

Dictionaries in content analysis are generally derived from a scholar's understanding of the concept under study. Most research using this methodology shares a common approach of breaking down larger concepts into narrower elements or ingredients. These elements are often what the researcher then builds unique dictionaries for, in order to enable the content analysis coder (human or machine) to score a text or communication in separate categories corresponding to the elements.

Dictionaries are developed in a variety of ways—sometimes scholars merely present the coding dictionary with little background as to how they were composed or what process was followed. Across all the dictionaries presented in this appendix, a similar process was used:

1. Theoretical explication of the concepts, which is found primarily in chapters 3 and 4. Here concepts were developed or defined as containing disparate elements, each of which focus on different ideas which rely on differing language. Language terms associated with the element were gathered.
2. An intensive review of similar content analysis variables by other scholars often revealed some additional code possibilities. These were added to the elemental dictionaries.

3. A consistency test of the automated coding schemes (Appendix A), in which manual coding of a sub-sample was compared to automated results, also revealed some word usage associated with each concept. Appropriate terms were then added to dictionaries. In some cases, the manual analysis also revealed that certain words would be inappropriate for coding because of alternate meanings and usage.
4. Some amount of manual analysis of the data, in particular for the 'use of history' variable and case-based reasoning, to inductively gather other relevant terms and language. In some situations, the element dictionaries require some domain-specific work, or reading and use of the data itself, to generate appropriate terms.
5. Feedback is a final but often necessary step. This describes working back after the data has been completely coded to assess whether conceptual variables are 'scoring' correctly; i.e., does a particularly high concept score correspond to a text file that can be read as high on that concept? Sometimes coding anomalies are uncovered which may necessitate changes in the dictionaries and recoding of the data.

What follows are separate tables for each of the elements corresponding to the concepts of Offensiveness, Uncertainty, Use of History, and Symbolic language.

Table C1 – Offensiveness Element Dictionaries

Initiative	Mobility	Destruction	Passivity	Immobility	Expectancy
active	advance	annihilate	attrit	arrest	anticipate
actively	advances	annihilates	attriting	arrested	anticipated
aggression	advancing	annihilating	attrition	arresting	anticipates
aggressive	agile	assault	cede	arrests	anticipating
begin	agility	assaulted	ceded	block	await
challenge	deploy	assaulting	cedes	blocked	awaiting
challenging	deployed	assaults	ceding	blocking	awaits
coerce	deploying	attack	degrade	blocks	defend
coerced	deploys	attacked	degraded	contest	defending
coerces	envelop	attacking	degrades	contested	defends
coercing	enveloping	attacks	denial	contesting	defense
commence	flexibility	conquer	denied	contests	delay
commences	flexible	conquered	deny	curb	delayed
commencing	insert	conquering	denying	curbed	delaying
compel	inserting	crush	disrupt	curbing	delays
compelling	insertion	crushes	disrupting	curbs	expect
compels	inserts	crushing	disruption	immobile	expected
decisive	leap	damage	disrupts	immobility	expecting
decisively	leapfrog	damages	forgo	immobilized	expects
escalate	leaping	damaging	inhibit	neutralize	pause
escalated	mobile	decimate	inhibited	neutralized	pauses
escalates	mobility	decimated	inhibiting	neutralizes	pausing
escalating	move	decimates	inhibits	neutralizing	react
exploit	movement	decimating	interfere	pacified	reacting
exploiting	moves	defeat	interfered	pacifies	reaction
exploits	moving	defeated	interference	pacify	reacts
forced	occupies	defeating	interferes	pacifying	respond
forcing	occupy	defeats	protest	prevent	responding
initiate	occupying	destroy	protested	preventing	response
initiative	skirt	destroyed	protesting	prevention	responses
introduce	skirting	destroying	protests	prevents	stand
introduced	storm	destroys	reduce	protect	standing
introducing	stormed	devastate	reduced	protecting	stands
preempt	storming	devastated	reduces	protection	wait
preempting	surround	devastates	reducing	protects	waiting
preemptive	surrounding	devastating	refrain	restrain	waits
preemptively	surrounds	dismantle	refrained	restraining	
preemptory	thrust	dismantles	refraining	restraint	
preempts	thrusting	dismantling	refrains	restrict	
seize	thrusts	dominance	reject	restricting	
seized		dominate	rejected	restriction	
seizing		dominated	rejecting	restrictions	

Table C1 – Offensiveness Element Dictionaries (continued)

Initiative	Mobility	Destruction	Passivity	Immobility	Expectancy
start		dominates	rejects	restricts	
starting		dominating	resist	secure	
surprise		eliminate	resisted	secured	
surprises		eliminates	resisting	secures	
take		eliminating	resists	securing	
taking		eradicate	retreat	security	
threaten		eradicated	retreated	stasis	
threatening		eradicates	retreating	static	
unleash		eradicating	retreats	unmovable	
unleashed		kill	submission	unmoving	
unleashes		killing	submit		
		kills	submits		
		obliterate	submitted		
		obliterating	submitting		
		overwhelm	surrender		
		overwhelming	surrendered		
		overwhelms	surrendering		
		smash	surrenders		
		smashes	yield		
		smashing	yielding		
		subdue	yields		
		subduing			
		unlimited			
		unrestrained			
		win			
		winning			
		wins			

Table C2 – Uncertainty Element Dictionaries

Causal	Contingency	Interdependence	Probabilism
ambiguities	alternative	associated	about
ambiguity	alternatively	complex	approximate
ambiguous	alternatives	complexities	approximately
ambivalence	branch	complexity	approximates
ambivalent	branches	conflicting	approximating
baffled	branching	connected	bet
baffles	choice	connects	bets
baffling	choices	coordinate	betting
doubt	conditional	coordinated	chance

Table C2 – Uncertainty Element Dictionaries (continued)

Causal	Contingency	Interdependence	Probabilism
doubtful	conditionally	coordinating	chances
doubts	course	depend	could
dubious	courses	depended	dice
dubiously	if	dependencies	dicey
guess	next	depending	estimate
guessed	option	depends	estimated
guesses	optional	interconnected	estimates
guessing	optionally	interdependencies	estimating
imperceptible	options	interdependency	gamble
imperceptibly	possibilities	interdependent	gambled
incoherent	provisional	interrelated	gambles
maybe	risk	linked	gambling
mayhap	risking	linking	improbable
mysterious	risks	links	likelihood
mystery	sequel	numerous	likely
obscure	sequels	related	may
obscurely	sequence	requires	might
obscurity	sequences	requiring	overestimate
ostensibly	sequencing	synergetic	overestimated
ought	simultaneous	theory	overestimates
perhaps	simultaneously	upon	overestimating
puzzle	variable		possibility
puzzled	variables		possible
puzzles			probabilities
puzzling			probability
quandaries			probable
quandary			probably
Seem/seems			remote
seemed			risky
seeming			sometime
seemingly			sometimes
unclear			theorize
unclearly			theorizes
unexpected			tossup
unexpectedly			uncertain
unimaginable			uncertainty
unimaginably			underestimate
unimagined			underestimated
unknown			underestimates
unsure			underestimating
vagaries			unlikely
vague			
vaguely			

Table C3 – Use of History Element Dictionaries

Desert Storm Cases	Kosovo Cases	Other Cases	Case Based Reasoning
Iraq	Allied	Afghanistan	accordingly
Khafji	Kosovo	Andrew	ago
Kuwait	Milosevic	Balkans	alike
Persian	Rambouillet	BALTOPS	apparent
Saddam		Bangladesh	apparently
Safwan		Barbary	applicable
Shield		Belleau	aspect
Storm		Berlin	aspects
		blitzkrieg	because
		Bosnia	case
		BREEZE	cases
		Cambodia	centuries
		Cole	classic
		Cuba	comparable
		Dayton	comparably
		Dominican	compared
		Dorado	comparing
		Falklands	comparison
		Fox	consider
		Grenada	considering
		Guadalcanal	consistent
		Guardian	consistently
		Haiti	contemporary
		Hitler	contrast
		Hook	contrasting
		Hugo	contrasts
		Inchon	correlate
		Iniki	correlates
		Iran-Iraq	correlating
		Khartoum	correlation
		Khashmir	decades
		Khobar	demonstrated
		Korean	demonstrates
		Kosovo	difference
		Kurds	differences
		Kuwait	different
		Kyoto	distinguish
		Lebanon	distinguishing

Table C3 – Use of History Element Dictionaries (continued)

		Other Cases	Case Based Reasoning
		Liberty	due
		Libya	earlier
		Maldives	eons
		Marshall	event
		Mayaguez	events
		Midway	example
		Nairobi	examples
		Nicaragua	fact
		Normandy	facts
		Northern	generally
		Osirak	heretofore
		Palestine	historical
		Panama	historically
		Persian	history
		Philippines	identical
		Pinatubo	illustrate
		Pueblo	illustrates
		Rhine	illustratively
		Rwanda	instance
		Salvador	instances
		Sentry	lesson
		Sinai	lessons
		Somalia	like
		Southern	likewise
		Stark	matches
		Strike	matching
		Sword	mirroring
		Thunder	mirrors
		Treaty	now
		UNAMIR	nowadays
		UNOSOM	obviously
		UNPROFOR	parallel
		Uphold	paralleling
		Veracruz	parallels
		Vietnam	past
		Vigil	precedent
		Vigilant	precedents
		WW	previous
		Yorktown	previously
			proved
			proves

Table C3 – Use of History Element Dictionaries (continued)

			Case Based Reasoning
			recall
			recalling
			recent
			recently
			recurrent
			recurrently
			regularly
			remember
			remembering
			repeated
			repeatedly
			resemble
			resembles
			resembling
			routinely
			same
			sameness
			seems
			show
			showing
			shown
			shows
			similar
			similarities
			similarity
			therefore
			thus
			time-honored
			timeless
			tradition
			traditional
			traditionally
			traditions
			unlike
			warranting
			warrants

Table C4 – Symbolic Language Dictionaries

Sym-USA	Sym-USAF	Sym-Navy	Sym-USMC	Sym-Civ
deployable	aerospace	expeditionary	air-ground	democracy
forward-deployed	airmen	forward-deployed	amphibious	democratic
institution	airpower	littoral	battles	economic
invincible	effects	littorals	forcible	engagement
land	expeditionary	maritime	marine	humanitarian
safeguard	global	naval	marines	leadership
safeguarding	responsiveness	presence	scalable	prosperity
soldier	targeting	projection	self-contained	security
soldiers	versatility	sea	warfighting	
	vigilance			

APPENDIX D

METHODOLOGICAL BACKGROUND

Automated content analysis is a developing endeavor, particularly in political psychology, which has a rich history of content analysis methods applied to a variety of problems. In the past, content analysis has been a primary tool in research involving operational codes, schema, cognitive mapping, and image theory, in addition to a variety of computation models of decision-making.[1] In most of these applications, however, manual analysis by one or more coders of a tremendous depth of data hampered broader research because of the resource costs. As one writer in this field notes:

> ...how do we deal with the huge volumes of text that are generated by our subjects? In many cases the vast majority of this material is ignored or used for valuable but idiosyncratic qualitative studies. In other cases a few researchers develop manual techniques to turn text into quantitative data but they can reduce the text from only a few subjects into data. This produces interesting small N studies that are hard to validate; the cost of the techniques in time and money inhibits their adoption by others.[2]

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[1] For an excellent overview of many of these research applications, see Michael D. Young and Mark Schafer, "Is There a Method in our Madness? Ways of Assessing Cognition in International Relations," Mershon International Studies Review 42, 1998, pp. 63-96.

[2] Michael Young, in an introduction to Profiler+, copyright 2000, www.socialscience.net.

This appendix briefly describes computerized techniques for content analysis adopted by three researchers, each of whom have applied or are applying these methods to contemporary political problems. Following the brief descriptions, a comparison is made to the conceptual design of the author's current study.

Description and Taxonomy

Content analysis classifies communicative materials—usually texts—by reducing them to relevant, measurable and manipulable pieces of data.[3] The techniques associated with content analysis allow social scientists to apply quantitative approaches in research involving politics, communications, sociology, and psychology, to problems that previously could only be appreciated with qualitative methods. Some might say that the quantitative approach supports more scientific testing of hypotheses and theories; however, it is more accurate and meaningful to say that the quantitative approach complements other study methods, does support more rigorous statistical testing, and in some cases may better support those problems with either a broad focus (such as international crisis or conflict events) or large data sets (such as the public statements and speeches of a set of state leaders.) Content analysis is a set of techniques that help a researcher transform a large set of communications into a set of measures that researcher believes is associated with variables of interest.

[3] This definition paraphrases one presented in Robert Weber's Basic Content Analysis, Sage Publications, 1990, p. 5. That definition specified texts rather than communications; since its publication, the analysis of voice and video communications has become more common.

While content analysis, done manually or with a computer, is quite rigorous and systematic as a methodology for research, those who employ it have relatively few standard references to rely on. Two classic texts often cited by researchers are Klaus Krippendorf's Content Analysis: An Introduction to its Methodology, Sage Publications, 1980, and Robert Weber's Basic Content Analysis, 2 ed., Sage Publications, 1990. Neither delves deeply into automated applications; Weber discusses computer technology and software programs, but his examples are extremely dated. Two new texts on automated content analysis are expected as this is being written, both by Mark West: Applications of Computer Content Analysis and Theory, Method and Practice in Computer Content Analysis, Ablex Publishing, 2001.

Despite the paucity of information available on content analysis, it is possible to describe a general taxonomy for its use in political science. Content analysis is a method most often applied to political language rather than other observable behaviors. The common assumption is that political language reveals aspects of an actor's values, beliefs, attitudes, cognitive processes, and decision-making characteristics, in addition to an actor's substantive choice or position on issues and events of interest. To get at any of these factors, the researcher focuses on some unit of analysis in the communication record that is available. Robert Weber describes the units of language as: words, word senses, sentences, themes, paragraphs, and whole text.[4]

The choice of content analysis unit is associated with the general division of techniques in content analysis: word; simple semantic classification; complex semantic classification; and

[4] Weber, Basic Content Analysis, pp. 22-23.

universalist classification.[5] Word-oriented techniques are commonly referred to as keyword searches or word frequency correlation; in this type of approach a researcher only counts words associated with categories established beforehand. Simple semantic classification involves sentence-level analysis through structural or syntactic reduction of sentences, in order to assess conjunctions of words and words in context. Complex semantic classification builds on simple techniques in a variety of ways, and generally involves classification schemes that may either provide cross-sentence measurements or whole-paragraph classifications of meaning. One author Finally, universalist classification—the most complex form of content analysis--involves reduction of communications into "a set of universal semantic primitives," and is sometimes employed to support computational modeling of political phenomena.[6]

Figure D1 depicts this taxonomy of content analysis techniques, and some research associated with each branch. It must be noted than none of these techniques is necessarily restricted to automated approaches—all can also be implemented manually. Automated techniques are most efficient at word-level analysis, and can tackle simple semantic, complex, and universalist tasks with increasing degrees of difficulty. Manual or human-coding techniques are (arguably) most efficient at the universalist end, and can accomplish the complex, simple, and word-centered tasks with increasing degrees of difficulty. The difficulties, of course, are not

[5] This scheme is the author's arrangement, or abridgment, of John Mallery's taxonomy presented in "Thinking about Foreign Policy: Finding an appropriate role for Artificially Intelligent Computers," a Paper for the 1988 International Studies Association meeting, 3 April 1988, pp. 47-52.

[6] For a richer description, see Mallery, "Thinking about Foreign Policy," pp. 47-52.

the same: computers require more difficult programming and initial inputs, while human beings require more time, resources, and attention to detail.

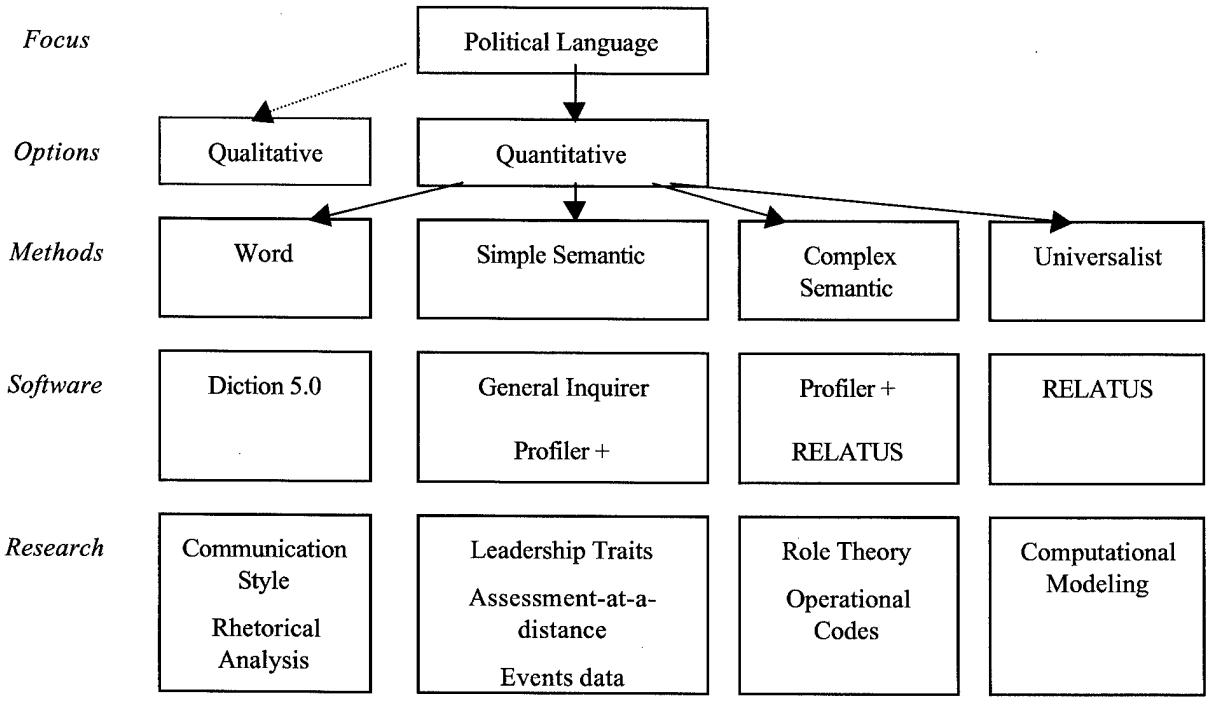

Figure D1 – A Simple Content Analysis Taxonomy

To present the background to the content analysis choices made in this study, the next section briefly describes leading examples—using automated approaches—of the first three content analysis techniques. These examples are: political communication style; leadership trait analysis; and role theory and operational coding.

Political Communication Style

Roderick Hart has studied political communication and rhetoric for a number of years, specializing in presidential, campaign, and media communications.[7] He maintains that a systematic study of style in presidential communications requires a method that will offer precision, quantitative measurement, the ability to process a comprehensive set of data (speeches), and the ability to compare measurements across subjects and type of communications. In order to achieve these goals, he developed an automated content analysis program called Diction.[8]

Diction is a relatively simple system of content analysis which assesses elemental styles or characteristics based on word dictionaries, then builds conceptual variables from combinations of the elemental scores. As an example, Certainty indicates resoluteness, inflexibility, and completeness and a tendency to speak ex cathedra. Certainty measures are constructed using the following formula:[9]

Certainty = [Tenacity + Leveling + Collectives + Insistence] – [Numerical Terms + Ambivalence + Self Reference + Variety]

Each of the 'elemental' variables in the formula possesses a dictionary defining that term. Thus, in the above formula for Certainty, Tenacity is measured in a prospective text as:

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[7] One broad example is his Verbal Style and the Presidency: A computer-based analysis (Academic Press, 1984), in which he analyzes the speeches of eight presidents (Truman through Reagan).

[8] Ibid., pp. 14-17.

[9] Roderick Hart, Diction 5.0 User's Manual, 2000, p. 32-33.

> Tenacity: All uses of the verb *to be* (is, am, will, shall), three definitive verb forms (has, must, do) and their variants, as well as all associated contractions (he'll, they've, ain't). These verbs connote confidence and totality.[10]

Diction possesses dictionaries for 35 elemental variables which are used to create five conceptual style measures of Certainty, Optimism, Activity, Realism, and Commonality. All of the dictionaries are singular terms or words, rather than word combinations and phrases. Diction does not evaluate syntax or grammatical structure; instead, various word forms are included in the dictionaries. One sophisticated addition to this word search and classification scheme is word frequency weighting: using pre-established word frequency tables, word occurrences are weighted for probable meanings. For example, if 'light' is used 50% of the time to indicate electromagnetic radiation, and 50% of the time to indicate weight, then in a dictionary which favors the weight but not radiation interpretation, each occurrence will be weighted by half. This increases accuracy of the measures, but it should be noted, does not assess actual meanings in prospective texts.

Hart's content analysis method and application shares characteristics of both Leadership Trait analysis and Operational Coding. Like trait analysis, Diction establishes a baseline measure for the conceptual variables by comparing them to communications 'norms.' Norms are average measures for each of the concepts and elements across 20,000 texts divided into six classes (Business, Daily Life, Entertainment, Journalism, Literature, Politics, and Scholarship.) Norms allow the researcher to compare both between subjects and across types of communication. Similar to operational coding and VICS, though, Diction's conceptual

[10] Ibid., p. 33

variables have no external means for establishing reliability and validity, beyond interpretative comparisons in certain cases.

Leadership Trait Analysis

Margaret Hermann has spent a number of years developing a technique for at-a-distance assessment of political leaders. Leadership Trait Analysis rests upon evaluating public speeches and statements of political personalities and measuring seven trait characteristics: Belief, Need for Power, Self-Confidence, Conceptual Complexity, Task Focus, Ingroup Bias, and Distrust of Others. Once measures are made of these traits, psychological profiles can be developed on the subject of study by combining trait scores in a variety of ways.

> Once a leader's interview responses have been coded and overall scores have been calculated for each of the seven traits described here, it is time to put the scores into perspective by determining how they compare with those of other leaders. Without doing such a comparison, there is little basis on which to judge if the particular leader's traits are unusually high or low or about average. The issue is deciding what group of leaders to use as the comparison--or norming--group. Table 7 *[not included]* presents scores on all seven traits for the 87 heads of state and 122 more general political leaders mentioned earlier. The table presents the mean or average score on a particular trait for the two samples of leaders as well as the scores that are one standard deviation above and below that mean. If the leader under study has a score that exceeds that listed as one standard deviation above the mean for the sample of leaders, he or she is high on the trait; if the leader's score is more than one standard deviation below the mean for the sample of leaders, he or she is low on the trait. If the leader's score falls around the mean for the sample (neither one standard deviation above or below the mean), he or she is moderate in the trait and like the average leader in that comparison group. The 87 heads of state represent some 46 countries from all parts of the globe; the 122 leaders are drawn from 48 countries and include members of cabinets, revolutionary leaders, legislative leaders, leaders of opposition parties, and terrorist leaders in addition to the 87 heads of state. The sample includes leaders who held positions of authority from

1945 to the present. Scores for particular regional, country, or cultural groups embedded in these 122 leaders are available from the author.[11]

While the above describes how the traits are related to leadership profiles, and presents the standard for comparison, it does not describe how the traits themselves are measured. In past research, each trait was manually coded using an extensive handbook and training for each coder. Currently, an automated system is being refined to perform the same coding of traits using only text data files of a subject's speeches and statements. As an example, consider a description of Conceptual Complexity coding:

> Conceptual complexity is the degree of differentiation which an individual shows in describing or discussing other people, places, policies, ideas, or things. The more conceptually complex individual can see varying reasons for a particular position, is willing to entertain the possibility that there is ambiguity in the environment, and is flexible in reacting to objects or ideas. In the opposite manner, the more conceptually simple individual tends to classify objects and ideas into good-bad, black-white, either-or dimensions; has difficulty in perceiving ambiguity in the environment; and reacts rather inflexibly to stimuli.
>
> In coding for conceptual complexity, the focus is on particular words--words that suggest the speaker can see different dimensions in the environment as opposed to words that indicate the speaker sees only a few categories along which to classify objects and ideas. Words that are suggestive of high conceptual complexity are: approximately, possibility, trend, and for example; words indicative of low conceptual complexity include: absolutely, without a doubt, certainly, and irreversible. As with the other traits above, the score for conceptual complexity is the percentage of high and low complexity words in any interview response that suggest high complexity. The overall score for any leader is his or her average score across interview responses.

Thus, some of the traits are measured in a relatively simple manner by automated search for particular words associated with the concept in question. These words are commonly collected

[11] Margaret G. Hermann, "Assessing Leadership Style: A Trait Analysis," Social Science Automation, November 1999.

and used in the software programs as **dictionaries** or tables of designated search terms. Other traits may require slightly more complicated measurement. To accomplish both forms of measurement, Hermann and others have developed the program Profiler+.[12]

> Profiler+ is a general purpose content analysis engine designed for leadership analysis...The basic strategy of content analysis used by Profiler+ is very simple; Profiler+ searches a sentence from left to right for ordered sets of tokens (words and/or punctuation) that have been identified as indicators of a trait, of another measure of interest or perhaps of a particular type of communication. Profiler+ examines each token in turn and queries a database to determine if the token serves as the anchor for any target sets. If the token does serve as an anchor in one or more target sets the program determines if the other tokens in the set are also present in the sentence in the appropriate order. If all the tokens in a set can be matched then the indicated actions are taken--in the simplest case a code is written to a file. Any remaining target sets that have not been eliminated are ignored.
>
> This straightforward strategy is sufficient to code texts for indicators of conceptual complexity and task focus, two of the seven traits used for leadership trait analysis. However, this type of simple pattern matching can be rather inefficient and limited in English due the ability of words to serve multiple functions (that is to have multiple parts of speech) depending on their placement within a sentence and their relationship to other words. For example, consider the following simple examples:
>
> She broke her *promise* and married another. (noun)
>
> I *promise* to be faithful. (verb)
>
> The car turned *left* at the intersection. (adverb)
>
> He *left* the room. (verb)
>
> Content analysis for actions can be made more efficient if target sets can be eliminated after considering the smallest number of tokens in the sentence. In the examples above, if we are looking for the verbs 'promise' and 'leave', then the

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[12] The description that follows is excerpted from Profiler+ User's Guide, Social Science Automation, June 2000.

> first and third sentences can be eliminated after considering only one token provided the program knows that they are not verbs. In addition the coding schemes for VICS and WorldView pay close attention to the tense of verbs including normative and hypothetical statements. To accommodate these coding schemes and the coding schemes for the other five leadership analysis traits Profiler+ performs the following steps as it processes each text file:
>
> parses the input text to identify sentence boundaries, tokenizes, assigns parts, of speech to all tokens and assigns canonical forms (lemmas) to verbs,
>
> builds a sentence where each token is represented by a data structure,
>
> and, for each sentence,
>
> performs token reduction,
>
> transforms passive voice structures,
>
> codes the sentence.

This more sophisticated approach to automated analysis is often referred to as "words in context" coding. However, one should be careful to note that the context referred to is sentence or syntactical context, not meaning or interpretative context. The program is still only assessing positions and conjunctive occurrences of words as a tool to inferring their meaning, whereas the 'simpler' methods rely only on word or term occurrences and frequencies to infer meaning.

Given that Leadership Trait analysis has a research history that includes reliance on manual content analysis, how does manual and automated analysis compare?

> Across a number of studies (e.g., Hermann, 1980a, 1980b, 1984a, 1987b; Hermann and Hermann, 1989), the inter-coder agreement for the seven traits described in this chapter have ranged from 0.78 to 1.00 between a set of coders and the author. Where there were disagreements, the discussions that followed between coders permitted refinements of the coding system. Generally, currently, a coder is not permitted to content analyze a leader's interview responses to be included in the larger data set until he or she achieves

> inter-coder reliabilities with the author on all traits that are 0.90 or higher. As the automated coding system is being developed, similar types of reliability coefficients are being calculated to determine how accurately that coding system reflects the original intent of this author.

Therefore, as a developmental program, the reliability of automated coding remains to be established. A similar question can be raised as to validity of trait analysis: i.e., do the trait measures correspond to some other, established standard for personality trait assessment?

> Although the author has received numerous suggestions about how to determine the validity of this technique ranging from running experiments with college students to participant observation in city councils, it seemed important to find some means of comparing the results from this coding system with the experiences of those who had interacted with heads of state. In a series of studies, this writer (Hermann, 1984b, 1985, 1986b, 1988b) developed profiles on 21 leaders following the procedure described here and based on these profiles indicated on a series of rating scales the nature of the leadership behaviors a particular head of state should exhibit given a particular leadership style. These ratings were compared with those made by journalists and former government personnel who had had the opportunity to observe or interact with the particular leaders. The correlations between the two sets of ratings averaged 0.84 across the set of leaders suggesting that the profiles derived from this at-a-distance technique furnished the author with similar types of information on which to judge behavior as had the other raters' experiences with the actual figures.

Operational Codes and VICS

Stephen Walker also conducts political psychological research involving content analysis, and has spent some time developing Role Theory in foreign policy analysis. More recently, he has been developing an automated approach to the assessment of Operational Codes of

political leaders, and he is involved with Social Science Automation's Profiler+ project.[13] His approach to measuring variables which relate to leader's operational codes differs from that of trait analysis, but similarly relies on a syntactic or words in context method which he calls the Verbs in Context System, or VICS.

> As a method of content analysis, VICS is a set of techniques for retrieving belief patterns from a leader's public statements and drawing inferences about public behavior that are compatible with these beliefs...While the retrieval unit is the public statement, the recording unit is the "utterance," which is each verb in the statement and the corresponding parts of speech associated with each verb—the subject and object (if it is a transitive verb) or the subject and predicate nominative or adjective (if it is an intransitive verb)...the VICS method extracts values for six attributes from each recording unit (verb) and its surrounding context: *subject, verb category, domain of politics, tense of the verb, intended target, and context.*[14]

Profiler+ measures the six essential variables through a series of steps involving tables and dictionaries produced by Walker. These tables identify verbs, reduce texts to grammatical structures, and classify words and variable values according to predetermined settings in the dictionaries. This takes place in six general steps:[15]

1. Identify the Subject as Self or Other
2. Identify the tense of the transitive verb as Past, Present, or Future; identify the category of the verb as positive or negative; and assign values according to meanings, including Words (appeals [1], promises [2], resistance [-1], threats [-2]) and Deeds (rewards [+3], punishments [-3])

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[13] See "Integrative Complexity And British Decisions During The Munich And Polish Crises," by Stephen G. Walker and George L. Watson in Journal of Conflict Resolution, Mar94, Vol. 38 Issue 1, p3, 21p; and Stephen Walker, "The Political Universe of Lyndon B. Johnson and His Advisors," Political Psychology 21:3, Sept. 2000, pp. 529-544.

[14] Stephen Walker, "Role Identities and the Operational Codes of Political Leaders," paper presented at the Annual Meeting for the International Society of Political Psychology, Seattle, WA, July 1-4, 2000, p. 12.

[15] Ibid., Figure 3 on p. 29.

3. Identify the domain as Domestic or Foreign
4. Identify the Target and place in context

These measurements are used to classify each subject's role position according to an operational code typology and a number of theoretical assumptions. Compared to leadership trait analysis, little exists to establish either reliability (compared to other operational code work) or validity of the operational code and role measurements. Walker has used the method to assess roles and predicted behaviors or perspectives of leaders in a small number of case studies, and found it consistent and useful, which could be considered a baseline validity evaluation. As a macrotheoretic endeavor, his method is proposed as a means to further research and generalization in role theory, rather than as an means to assessing known behavioral characteristics.

In Comparison: This Study's Method

The brief review of three methods of automated content analysis highlights a number of guidelines for this study. Similar to all three, this study focuses on a particular type of political communication—in this case, politico-military strategy—and requires analysis of a large body of data. And as specifically noted by Hart, a systematic analysis also requires a means that allows precision, quantitative measurement, and comparison. A third shared concern among these examples is a measurement design that proceeds from some categorical or elemental measures to the conceptual variable measure. Finally, each treat issues of reliability and validity differently; if they share anything on this count, it is that external or a priori measures of either is difficult when dealing with political and/or psychological concepts.

This study borrows from each of the three's intellectual history for its own design methodology. While Offensiveness, Use of History, and Uncertainty can be considered behavioral, reasoning style, and psychological measures respectively, it is possible to ground the automated measurement of these variables. This study conducted a manual coding of a significant subsample of the data, using variable definitions directed at the meanings associated with the concepts. (See Appendix A for details.) The manual coding serves both as an instrument to conducting automated measurement, and a partial measure of reliability. Thus, like some parts of leadership trait analysis and operational coding projects, the conceptual measures will possess a background in manual coding.

A second similarity in this study's design is that each conceptual variable is derived from a combination of elemental measures performed on the textual data. Like Hermann's traits and Hart's styles, Offensiveness, for example, is derived from measures of initiative, mobility, and destruction, and moderated by passivity, immobility, and expectancy. A characteristic differing from the above studies, however, is that these elemental measures are combined using the manual analysis as an instrument. Rather than simply, a priori, establish Offensiveness as an addition of the first three measures and subtraction of the latter three, this study performs a factor analysis of the elemental measures versus manually coded conceptual measures. The factor analysis provides the operationalization of concepts by mapping the automatically coded elements into their conceptual parents using factor weightings. This step increases the reliability of the study and grounds its variables indirectly in interpretative measures.

A final similarity to the previous studies is that dictionaries for elemental measures—the content analysis' direct measurement—are, for the most part, unique products of the researcher. In each of the cases above, the scholars' dictionaries were created by their own understandings of the concepts in question, with little explicit justification, and in fact rare citation of the dictionaries themselves. In this study, the complete dictionaries are provided; in addition, though they are the author's creation, they are based on theoretical arguments and some assimilation of other research. Each dictionary is created by aggregating: words associated with the definitions cited in the main body discussion; words found in sample readings of the strategy texts (the data itself); and words drawn from (for example) other researcher's 'aggression' or 'pro-active' dictionaries that were appropriate for offensiveness elements. A final step in dictionary formation rests in the analysis process, where the initial automated coding is reviewed and compared to the source texts, in order to identify anomalies and possible candidates for addition to the dictionaries. Each of these steps are largely interpretative acts of the author with little explication in the study itself.

APPENDIX E

STRATEGY ESSAYS DATA

Analytic strategy exhibits problem-solving reasoning. Ideal examples of analytic strategy would be the estimates and proposed courses of action produced by military officers and civilians for real-world crises and situations. However, these types of estimates are usually classified (making them unavailable for public research) in addition to varying in structure and content across different situations.[1] The type of reasoning in these estimates may be simulated, fortunately, by problems presented to experienced officers and civilians at military colleges. One such source is essay tests on hypothetical (but 'real world' based) strategy problems administered to officers attending professional military school. The Air Command and Staff College (ACSC) at Maxwell AFB, Alabama, is a year long school for mid-career officers in which military strategy is a primary topic, and the student population includes officers from all services. A major advantage of this school's environment is that all essay tests are submitted and stored in electronic form by student number, and the student population's demographics are already collected and can be correlated to the student numbers.

[1] In other words, in order to make a systematic study, a large amount of data is needed, yet only a few estimates may exist for any particular crisis, and they may vary by region and command responsibility.

The larger study examines communications in text form and analyzes them for patterns across authors, situations, and types of communication. It is not a study in personality, and does not examine particular texts nor in most cases report particular individual's (authors) characteristics. The focus of study is a concern, however, with this particular sample of data—student essays written to meet professional military study requirements. It is important with this portion of the overall study's data to protect individual's privacy and not analyze or report individual characteristics without consent. There are three levels of protection and authorization involved:

1. The use of essays in the manner described and executed in this study was approved in an Ohio State University Institutional Review Board process. Protocol OOE0318 was approved on 30 Oct 2000 with provisos noted in (3) below. [Ohio State University Institutional Review Board, Columbus, OH 43210.]
2. Essays were gathered from two sources. The bulk of the data—military officers and defense civilian essays—was released by the Air Command and Staff College from class year 1998-99 for one course by ACSC/DEV, 225 Chennault Circle, Maxwell AFB AL 36112-642. The remaining essays were solicited from Ohio State University graduate history and political science students under additional guidelines of human subjects protocol OOE0318.
3. The provisos for use of these essays were that: a) all personal data was stripped, if present, from essays; b) none of the military essays would be released further without permission of ACSC; c) essays would not be extensively quoted nor critiqued for

specific wordings of any individual; d) all research use would focus on authors as representatives of groups (military service, or gender, or career specialties) and not on personality factors of any individual qua themselves.

The essays selected for the analysis domain of strategy form a stratified sample of ACSC students: mid-career professional education schools strive to have students from all services, along with professional civilians and international officers, but the host service dominates the class in representation. Thus the sample (see Table E1) consists of about a third of Air Force students and nearly all of other service students out of a total class size of about 600 for class year 1998-99.

	Frequency
Air Force	92
Navy	34
Army	46
Marines	10
Total	182

Table E1 – Sample Distribution of Military Officer Strategy Essays

Essays were written to fulfill final requirements for a course of military study in "conflict resolution." The essay topic therefore presented a situation involving real events and history, yet also asked the students to speculate and develop alternative strategy in considering the issues put before them. The test question is provided below in Figure E1. Students had approximately four hours to write a 4-5 page, double spaced, original composition, without any further guidelines than those included in the question below.

CR 600

CONFLICT RESOLUTION FINAL EXAMINATION QUESTION:

Almost eight years after the 1990-1991 Persian Gulf War considerable debate surrounds its conclusion and a host of commentators have criticized the war's untidy end. Few, however, have paused to consider how the military instrument of power was employed in support of conflict resolution. What did US forces do in support of conflict resolution during and immediately after the war? Analyze war and MOOTW at the operational/theater level supporting conflict resolution.

- Your response must address (a.) end state, (b.) objectives and center(s) of gravity, and (c.) course(s) of action. Include what US forces could have done differently to attain a "better state of peace."
- *Do not restate the history of the Gulf War or Operation DESERT STORM,* but any response should reflect the context. Be sure to support your answer.

Figure E1 – Strategy Test question

One question concerning this data set was whether the defense civilians present could in some way be linked to civilian leaders and civilian experts in other domains of strategy. If some linkage could be established, generalizations about leaders and experts in analytic strategy might have firmer foundations. One attempt at this was to solicit graduate students at Ohio State University to take the same essay, under the presumption that they were competent for such a

question and possibly representative of civilian experts in other domains of strategy. Initial analysis, comparing the graduate students to defense civilians on the project's primary dependent variables, is shown below in Table E2.

	Subjects	N	Mean	Std. Deviation	F	Sig.
Offensiveness	Defense Civilians	91	2.87	3.40	21.80	0.00
	Graduate Students	46	5.61	2.90	(1,135)	
	Total	137	3.79	3.48		
Use of History	Defense Civilians	91	19.42	29.87	0.43	0.51
	Graduate Students	46	16.30	17.14	(1,135)	
	Total	137	18.37	26.26		
Uncertainty	Defense Civilians	91	2.54	2.15	15.20	0.00
	Graduate Students	46	4.04	2.10	(1,135)	
	Total	137	3.04	2.24		

Table E2 – Analysis of Civilian Essays

This analysis shows that it is proper to treat defense civilians as a separate or distinct subgroup of civilians in general. On at least two dimensions, graduate students are significantly different from defense civilians in analytic strategy. What this analysis does not help, however, is in making specific links to civilian leaders and experts in the broader project. Although the data is not presented here, graduate student trends or differences from defense civilians are distinct from the differences between defense civilians, leaders, and experts in all other domains. In essence it can be said that graduate students seem to form yet another category of civilians, if such a category was significant or relevant to strategy research.

BIBLIOGRAPHY

Allison, G. (1971) *Essence of Decision*, Boston: Little, Brown and Co.

Annual Report to the Congress, Fiscal Year 1987. (1986) Washington, D.C.: Government Printing Office, 5 Feb 1986.

Art, R. and K. Waltz, ed.s. (1999) *The Use of Force*, 5th ed., Rowman and Littlefield Publishers.

Betts, R. (1977) *Soldiers, Statesmen, and Cold War Crises*, Cambridge, MA: Harvard University Press.

Beyerchen, A. (1993) Clausewitz, Non-linearity, and the Unpredictability of War. *International Security*, 17:3 (Winter 92/93), 59-90.

Booth, K. (1990) The Concept of Strategic Culture Affirmed. *Strategic Power: USA/USSR*, ed. by Carl Jacobsen, MacMillan Press, 10-34.

Bradlee, B. (1975) *Conversations with Kennedy*, New York: W.W. Norton.

Builder, C. (1989) *The Masks of War*, Santa Monica: RAND.

Builder, C. (1995) *Rethinking National Security and the role of the military*, P-7943, Santa Monica: RAND.

Builder, C. (1986) On the Army Style in analysis, RAND P-7267, Santa Monica: RAND.

Burk, J. (1999) Military Culture. *Encyclopedia of Violence, Peace and Conflict, Vol. 2*, ed. by Kurtz, L. and Turpin, J., Academic Press, 447-462.

Burk, J. (1998) The Logic of Crisis and Civil-Military Theory: A comment. *Armed Forces and Society*, 24:4, 455-462.

Campbell, K.J. (1998) Once Burned, Twice Cautious: Explaining the Weinberger-Powell Doctrine. *Armed Forces and Society*, 24:3 (Spring), 357-374.

Carpenter, R. (1998) On Rhetoric in Martial Decision-making. Chapter 7 in *Rhetoric and Community* ed. by J. Michael Hogan, University of South Carolina Press.

Carter, Maj. J. (1998) *Airpower and the Cult of the Offensive*, Maxwell AFB: Air University Press.

Clausewitz, C. (1976) *On War*, ed. and translated by Peter Paret and Michael Howard. Princeton: Princeton University Press.

Collins, J. (2000) American Military Culture in the 21st Century. *Army*, March 2000, 14-18.

Collins, J. (1998) The Complex Content of American Military Culture: A Practitioner's View. *Washington Quarterly*, 21:4 (August), 213-228.

Conetta, C. and Knight, C. (1998) *Dueling with Uncertainty: the New Logic Of American Military Planning.* Project on Defense Alternatives, Commonwealth Institute.

Correll, J. (2000) Visions. *Air Force Magazine*, 83:9, 35-39.

CSIS, Center for Strategic and International Studies. (2000) *American Military Culture in the 21st Century.* Washington, D.C.

Department of the Army. (1994) *FM 100-23, Peacekeeping Operations.* US Army, Washington, D.C.

Department of the Navy. (1997) *MCDP 1, Warfighting.* US Marine Corps, Washington, D.C.

Department of the Air Force. (1997) *AFDD 1, Air Force Basic Doctrine.* US Air Force, Washington D.C.

Desch, M. (1998) Soldiers, States, and Structures. *Armed Forces and Society*, 24:3 (Spring), 389-406.

Dupuy, Col. T. N. (1988) *Military History and Case-Based Reasoning.* Proceedings of a Workshop on Case-Based Reasoning,ed. by Janet Kolodner, DARPA, 125-135.

Edmonds, M. (1988) *Armed Services and Society*, Leicester University Press.

Ehrhard, Lt. Col. T. (2000) *Unmanned Aerial Vehicles in the United States Armed Services: A Comparative Study of Weapon System Innovation*, dissertation presented to Johns Hopkins University, June 2000.

Feaver, P. and Gelpi, C. (1999) *The Civil-Military Gap and Casualty Aversion*. Paper for the TISS Project on the Gap between Military and Civil Society.

Feaver, P. (1998) Modeling Civil-military relations: A Reply. *Armed Forces and Society*, 24:4, 595-602.

Feaver, P. (1998) Crisis as Shirking: An agency theory explanation of the souring of American Civil-Military relations. *Armed Forces and Society*, 24:3, 407-434.

Firestone, J. (1999) Overview of Warfare and Military Studies. *Encyclopedia of Violence, Peace and Conflict Vol. 3,* ed. by Kurtz, L and Turpin, J., Academic Press, 739-750.

Friedman, M. (1953) The methodology of Positive Economics. *Essays in Positive Economics*, Chicago: University of Chicago Press, 3-43.

Gacek, C. (1994) *The Logic of Force: The Dilemma of Limited War in American Foreign Policy*, New York: Colubmia University Press.

Gat, A. (1989) *The Origins of Military Thought*, Oxford: Clarendon Press.

Gray, C. (1996) *Explorations in Strategy*, Westport: Greenwood Press.

Gray, C. (1999) Why Strategy Is Difficult. Joint Forces Quarterly, 22 (Summer), 7-12.

Guertner, G. (1993) Introduction. *The Search For Strategy: Politics and Strategic Vision*, ed. by Gary Guertner, Westport: Greenwood Press, xv-xix.

Haas, R. (1994) Military Force: A User's Guide. *Foreign Policy*, 96, 21-37.

Hadley, A. (1971) *The Straw Giant: America's Armed Forces: Triumphs and Failures*, Avon Books.

Handel, M. (1996) Appendix B: The Weinberger Doctrine. *Masters of War: Classical Strategic Thought* by Handel, M., London: Rank Cass Publishers.

Hart, R.P. (1984) *Verbal Style and the Presidency: A Computer-based Analysis*, Academic Press.

Hart, R.P. (2000) *Diction 5.0 User's Manual*, Scolari Software, Sage Press.

Hart, R. (1984) *Systematic Analysis of Political Discourse.* Political Communication Yearbook 1984, ed. by Sanders, K., et. al., Southern Illinois University Press, 97-134.

Hart, R. (2000) *Campaign Talk: Why Elections are good for us*, Princeton University Press.

Hermann, M. (1999) *Assessing Leadership Style: A Trait Analysis*, Social Science Automation, Inc.

Hillen, J. (1996) *American Military Intervention: A User's Guide*, Heritage Foundation Backgrounder #1079, May 96.

Hillen, J. (1999) Must Military Culture Reform? *Parameters*, August, 9-23.

Holley, I.B. (1985) Technology and Strategy: A historical review. *Technology, Strategy and National Security,* edited by Franklin Margiotta and Ralph Sanders, Washington D.C.: National Defense University Press, 15-36.

Holsti, O. (1997) *A Widening Gap between Military and Civil Society? Some evidence, 1976-1996*, John M. Olin Institute for Strategic Studies, Harvard University.

Howard, M. (1974) Military Science in an Age of Peace. *Journal of the Royal United Services Institute* (RUSI), 119:1, 3-9.

Hudson, V. and Sampson, M. (1999) Culture is more than static residual: Introduction to special section on Culture and Foreign Policy. *Political Psychology*, 20:4 (December), 667-675.

Huntington, S. (1986) *The Elements of American Strategy.* Policy Papers in International Affairs, Number 28, Berkeley: Institute of International Studies.

Huntington, S. (1961) Interservice Competition and the Political Roles of the Armed Services. *American Political Science Review*, 55:1 (March), 40-52.

Inglehart, R. (1977) *The Silent Revolution: Changing Values and Political Styles Among Western Publics.* Princeton: Princeton University Press.

Jablonsky, D. (1993) Why is Strategy Difficult. *The Search For Strategy*, ed. by Gary Guertner, Westport: Greenwood Press, 3-46.

Jacobsen, C., ed. (1990) *Strategic Power: USA/USSR*, London: St. Martins Press.

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

Jervis, R. (1978) Cooperation Under the Security Dilemma. *World Politics*, 30:2 (January), 186-214.

Jervis, R. (1996) Offense, Defense and the Security Dilemma. *International Politics*, 4th ed. by Robert Art and Robert Jervis, Harper-Collins, 183-203.

Johnson, H. (1999) Warfare, Strategies and Tactics of. *Encyclopedia of Violence, Peace and Conflict Vol. 3*, ed. by Kurtz, L and Turpin, J., Academic Press, 759-762.

Johnston, A. I. (1995) *Cultural Realism*, Princeton: Princeton University Press.

Johnston, A. I. (1995) Thinking about Strategic Culture. *International Security*, 19:4 (Spring), 32-64.

Jones, Lt. Col. J. (1997) *Development of Air Force Basic Doctrine*, Airpower Research Institute: Maxwell AFB, Air University Press.

Kanter, A. (1975) *Defense Politics: A Budgetary Perspective*, University of Chicago Press.

Kanwisher, N. (1989) Cognitive Heuristics and American Security Policy. *Journal of Conflict Resolution,* 33:4, 652-675.

Kaplan, A. (1998) *The Conduct of Inquiry*, Transaction Publishers, 2nd ed.

Khong, Y. (1992) *Analogies at War*, Princeton: Princeton University Press.

Kier, E. (1997) *Imagining War: French and British Military Doctrine Between the Wars*, Princeton: Princeton University Press.

Kincade, W. (1990) American National Style and Strategic Culture. *Strategic Power: USA/USSR*, ed. by Carl Jacobsen, MacMillan Press, 10-34.

Kissinger, H. A. (1957) *Nuclear Weapons and Foreign Policy*, New York: Harper & Bros.

Kolodner, J. (1991) Improving Human Decision Making through Case-based Decision Aiding. *AI Magazine* (Summer), 52-68.

Krippendorf, K. (1980) *Content Analysis: An Introduction to its Methodology*, Sage Commtext Series.

Lake, D. and Powell, R. (1999) *Strategic Choice and International Relations*, Princeton: Princeton University Press.

Lang, K. (1965) Military Organizations. *Handbook of Organizations* by James March, Rand McNally Press, 838-878.

Larson, E. (1996) *Casualties and Consensus: The historical role of Casualties*, MR-726-RC, Santa Monica: RAND.

Larson E. and John Peters. (2001) *Preparing the US Army for Homeland Security*, MR-1251/A, Santa Monica: RAND.

Lederman, G. (1999) *Reorganizing the JCS: The Goldwater-Nichols Act of 1986*, Greenwood Press.

Legro, J. (1995) *Cooperation Under Fire*, Cornell University Press.

Legro, J. (1994) Military Culture and Inadvertent Escalation in World War II. *International Security*, 18:4 (Spring), 108-142.

Legro, J. (1996) Culture and Preferences in the International Cooperation Two-Step. *American Political Science Review*, 90:1 (March), 118-137.

Levy, J. (1984) The Offensive-Defensive balance of military technology: A theoretical and historical analysis. *International Studies Quarterly*, 28 (1984), 219-238.

Levy, J. (2000) Reflections on the Scientific Study of War. *What do we know about War* ed. by John Vasquez, Rowmand & Littlefield Publishers, 319-328.

Luttwak, E. (1994) Where are the Great Powers? At home with the kids. *Foreign Affairs*, 73:4 (July/August), 23-28.

Lykke, Col. A. (1997) Defining Military Strategy. *Military Review*, Jan-Feb 1997, 1-8.

Lyons, G. (1961) The New Civil-Military Relations. *American Political Science Review*, 55:1 (March), 53-63.

Mallery, J. (1988) *Thinking about Foreign Policy: Finding an appropriate role for Artificially Intelligent Computers*, Paper for the 1988 International Studies Association meeting, 3 April 1988.

Mandelbaum, M. (1994) The Reluctance to Intervene. *Foreign Policy*, 95 (Summer), 3-18.

Marsden, P. and Swingle, J. (1993) *Conceptualizing and Measuring Culture in Surveys: Values, Strategies, and Symbols*, paper for American Sociological Association Meeting of August 1993.

May, E. (1973) *'Lessons' of the Past: The Use and Misuse of History in American Foreign Policy,* Oxford: Oxford University Press.

May, E. and Neustadt, R. (1986) *Thinking in Time: The uses of history for decision makers*, Detroit: Free Press.

Mefford, D. (1990) Case Based Reasoning, Legal Reasoning, and the Study of Politics. *Political Behavior*, 12:2, 125-158.

Meilinger, Col. P. (1995) *10 Propositions Regarding Air Power*, Air Force History and Museums Program.

Miller, S., Lynn-Jones, S., and Van Evera, S. (1991) *Military Strategy and the Origins of the First World War*, Princeton: Princeton University Press.

Morgan, Lt. Col. F. (1998) *Compellance and the Strategic Culture of Imperial Japan*, Ph.D. dissertation, University of Maryland.

Morrow, J. (1994) *Game Theory for Political Scientists*, Princeton: Princeton University Press.

Mrozek, D. (1988) *Air Power and the Ground War in Vietnam*, Maxwell AFB, AL: Air University Press.

Mueller, J. (1994) *Policy and Opinion in the Gulf War*, University of Chicago Press.

Murray, W. (1999) Does Military Culture Matter. *Orbis*, 43:1 (Winter), 27-43.

Murray, W. (1997) Clausewitz Out, Computer In: Military Culture and Technological Hubris. *The National Interest* (Summer), 57-64.

Nowlin, D. and Stupak, R. (1998) *War as an Instrument of Policy*, New York: University Press of America.

Pearson, J. (1998) *Terms in Context*, John Benjamin Publishing.

Petraeus, D. (1989) Military Influence and the Post-Vietnam Use of Force. *Armed Forces & Society,* 15:4 (Summer), 489-505.

Farrell, T. (1996) Figuring Out Fighting Organizations. *Journal of Security Studies*, 19:1 (March), 122-135.

Porch, D. (2000) Military Culture and the Fall of France in 1940. *International Security*, 24:4 (Spring), 157-181.

Posen, B. (1984) *The Sources of Military Doctrine*, Cornell University Press.

Powell, Gen. C. (1992) Why Generals Get Nervous. *New York Times*, Oct 8 1992 editorial.

Rapaport, D. (1962) A Comparative Theory of Military and Political Types. *Changing Patterns of Military Politics,* ed. by Huntington, S., Free Press of Glencoe, 71-101.

Ricks, T. (1997) The Widening Gap Between the Military and Society. *The Atlantic Monthly*, 280:1 (July), 66-78.

Ripley, B. (1995) Cognition, Culture and Bureaucratic Politics. *Foreign Policy Analysis: Continuity and Change,* ed. by Neuck, J. and Henry, P., Prentice Hall, 85-97.

Rosen, S. (1996) *Societies and Military Power: India and its Armies*, Cornell University Press.

Rosen, S. (1991) *Winning the Next War: Innovation and the Modern Military*, Cornell University Press.

Rothmann, D. (1993) The NMS. *The Search For Strategy*, ed. by Gary Guertner, Westport: Greenwood Press, 58-67.

Russett, B. (1974) Political Perspectives of US Military and Business Elites. *Armed Forces and Society,* 1:1 (November), 79-108.

Russett, B. and Hanson, E. (1975) *Interest and Ideology: The Foreign Policy Beliefs of American Businessmen*, Yale University Press.

Sarkesian, S., Williams, J. and Bryant, F. (1995) *Soldiers, Society, and National Security*, Lynne Rienner Publishers.

Schafer, M. (2000) Assessing Psychological Characteristics at a distance. *Political Psychology*, 21:3 (September), 511-527.

Simon, H. (1985) Human Nature in Politics: The dialogue of psychology with political science. *American Political Science Review*, 79, 293-304.

Smith, P. M. (1970) *The Air Force Plans for Peace, 1943-45*, Johns Hopkins University Press.

Smith, J. (1997) *USAF Culture and Cohesion*, Colorado Springs: Institute for National Security Studies.

Snider, D. (1993) The NSS: Documenting Strategic Vision. *The Search For Strategy*, ed. by Gary Guertner, Westport: Greenwood Press, 47-57.

Snider, D. (1999) An Uninformed Debate on Military Culture. *Orbis*, 43:1 (Winter), 11-27.

Snyder, R, Bruck, H. and Sapin, B. (1962) *Foreign Policy Decision Making*, MacMillan Co.

Snyder, J. (1991) Civil-Military Relations and the Cult of the Offensive, 1914 and 1984. *Military Strategy and the Origins of the First World War*, ed. by Miller, S., Lunn-Jones, S. and Van Evera, S., International Security Reader, Princeton University Press, 20-58.

Snyder, J. (2001) *Anarchy and Culture: Insights from the Anthropology of War*, draft paper presented at Ohio State University, February 2000.

Snyder, J. (1984) *The Ideology of the Offensive: Military Decision-Making and the Disasters of 1914,* Ithaca: Cornell University Press.

Snyder, J. (1977) *The Soviet Strategic Culture*, R-2154-AF, Santa Monica: RAND.

Snyder, J. (1990) The Concept of Strategic Culture: Caveat Emptor. *Strategic Power USA/USSR*, ed. by Carl Jacobsen, MacMillan Press, 5-7.

Stokey, E. and Zeckhauser, R. (1978) *A Primer for Policy Analysis*, W.W. Norton and Company.

Stubbing, R. (1986) *The Defense Game*, Harper & Row Publishers.

Swidler, A. (1986) Cluture in Action: Symbols and Strategies. *American Sociological Review*, 51:2 (April), 273-286.

Sylvan, D. and Voss, J. (1998) *Problem Representation in Foreign Policy Decision Making*, Cambridge University Press.

Sylvan, D., Diascro, M. and Haddad, D. (1996) *Stories, Ledgers, and Bayesian Calculations: Studying Problem Representation in Foreign Policy*, International Society for Political Psychology presentation, July 1996.

Sylvan, D., Ostrum, T. and Gannon, K. (1994) Case-based, Model-based and Explanation-based Styles of Reasoning in Foreign Policy. *International Studies Quarterly*, 38 (1994), 61-90.

Sylvan, David, Majeski, S. and Milliken, J. (1991) Theoretical Categories and Data Construction in Computational Models of Foreign Policy. *Artificial Intelligence and International Politics* ed. by Valerie Hudson, Westview Press, 327-345.

Tetlock, P., Hamman, K. and Micheletti, P. (1984) Stability and Change in Complexity of Senatorial Debate: Testing Cognitive versus Rhetorical Style Hypotheses. *Journal of Personality and Social Psychology*, 46:5, 979-990.

Thomas, T. (2000) Kosovo and the current myth of Information Superiority. *Parameters*, 30:1 (Spring), 14-27.

Thompson, J. (1967) *Organizations in Action*, New York: McGraw Hill.

Towell, P. (1999) Is the Military's Warrior Culture in America's Best Interest? *Congressional Quarterly Weekly*, 57:1, 25-29.

Trachtenberg, M. (1991) *History and Strategy*, Princeton: Princeton University Press.

United States Code. (1995) US Code version 1994 Volume 4, Title 10, Subtitle D, Washington D.C.: US Government Printing Office.

Van Evera, S. (1991) The Cult of the Offensive and the Origins of First World War. *Military Strategy and the Origins of the First World War*, ed. by Miller, S., Lunn-Jones, S. and Van Evera, S., International Security Reader, Princeton University Press, 59-108.

Van Evera, S. (1986) Why Cooperation Failed in 1914. *Cooperation Under Anarchy* ed. by Oye, K., Princeton: Princeton University Press.

Van Evera, S. (1984) *Causes of War*, Ph.D. dissertation, Berkeley: University of California.

Vertzberger, Y. (1998) *Risk Taking and Decision Making*, Stanford University Press.

Walker, S. and Watson, G. (1994) Integrative Complexity And British Decisions During The Munich And Polish Crises. *Journal of Conflict Resolution*, 38:1 (March), 3-24.

Walker, S. (2000) The Political Universe of Lyndon B. Johnson and His Advisors. *Political Psychology*, 21:3 (September), 529-544.

Walker, S. (2000) *Role Identities and the Operational Codes of Political Leaders*, paper presented at the Annual Meeting for the International Society of Political Psychology, Seattle, WA, July 1-4, 2000.

Walt, S. (1996) *Revolution and War*, Cornell University Press.

Walt, S. (1985) Alliance Formation and the Balance of World Power. *International Security*, 9:4 (Spring).

Warren, J. (1999) Small Wars and Military Culture. *Society*, 36:6 (Sept/Oct), 56-62.

Weber, R. (1990) *Basic Content Analysis*, 2nd ed., Sage Publications.

West, M. (2001) *Theory, Method and Practice in Computer Content Analysis*, Ablex Publishing.

Wilson, J.Q. (1989) *Bureaucracy*, Basic Books.

Young, M.D. and Schafer, M. (1998) Is There a Method in our Madness? Ways of Assessing Cognition in International Relations. *Mershon International Studies Review*, 42, 63-96.

Young, M.D. (2000) *Profiler+ User's Guide*, Social Science Automation, June.

Data Set Bibliography

Doctrine

Albright, Secretary of State Madeleine K. (1999) *Statement before the Senate Appropriations Committee on Foreign Operations*. US Department of State Press Release, May 20, 1999.

Chairman, US Joint Chiefs of Staff. (1995) *National Military Strategy of 1995*. Washington DC.

Chairman, US Joint Chiefs of Staff. (1997) National Military Strategy. *Shape, Respond, Prepare Now*, Washington, DC, September 1997.

Department of the Air Force. (1997) Air Force Doctrine Document 1. *Basic Doctrine*, September 1997.

Department of the Air Force. (1999) *America's Air Force/Vision 2020: Global Vigilance, Reach and Power*. US Air Force Vision Statement, Washington, DC, 1999.

Department of the Air Force. (2000) Air Force Doctrine Document 2. *Organization And Employment Of Aerospace Power*, 17 February 2000.

Department of the Air Force. (2000) Air Force Doctrine Document 2-1. *Air Warfare*, 22 January 2000.

Department of the Army. (1993) Field Manual 100-5. *Operations*, Washington, DC, 14 June 1993.

Department of the Army. (1994) Field Manual 100-1. *The Army*, Washington, DC, 14 June 1994.

Department of the Army. (1994) Field Manual 100-23, *Peace Operations*, Washington, DC, 30 December 1994.

Department of the Army. (2000) *The Army Vision: Soldiers on Point for the Nation—Persuasive in Peace, Invincible in War*. US Army Vision Statement, February 2000.

Department of the Navy. (1994) *Forward from the Sea*. US Navy Vision Statement, Washington, DC, November 1994.

Department of the Navy. (1994) Naval Doctrine Publication 1. *Naval Warfare*, Washington, DC, 28 March 1994.

Department of the Navy. (1995) Naval Doctrine Publication 6. *Naval Command And Control*, Washington, DC, 19 May 1995.

Department of the Navy. (1996) Naval Doctrine Publication 5. *Naval Planning*, Washington, DC, January, 1996.

Department of the Navy. (1997) Marine Corps Doctrine Pamphlet 1-1. *Strategy*, HQ USMC, 12 November 1997.

Department of the Navy. (1997) Marine Corps Doctrine Pamphlet 1. *Warfighting*, HQ USMC, 20 June 1997.

Department of the Navy. (1999) *Making Marines, Winning Battles*. US Marine Corps Vision Statement, Washington, DC, 1999.

Department of the Navy. (1999) Marine Corps Warfighting Publication 0-1. *Marine Corps Operations*, U.S. Marine Corps, 25 June 1999.

Hart-Rudman Commission on National Security. (1999) *A New World Coming: American Security in the 21st Century*. Major Themes and Implications: The Phase 1 report on the Emerging Global Security Environment for the First Quarter of the 21st Century, September 15, 1999.

Hart-Rudman Commission on National Security. (2000) *A New World Coming: American Security in the 21st Century*. Seeking A National Strategy: A Concert For Preserving Security And Promoting Freedom, the Phase 2 report on the Emerging Global Security Environment for the First Quarter of the 21st Century, April 15, 2000.

Kugler, Richard. (1995) *National Strategy analysis*. RAND, Santa Monica, CA.

National Defense Panel. (1997) *Transforming Defense: National Security in the 21st Century*. Report of the National Defense Panel, December 1997.

The White House. (1996) National Security Strategy, *A National Security Strategy of Engagement and Enlargement*. White House, Feb 1996.

The White House. (1997) National Security Strategy. *A National Security Strategy for A New Century*, White House, May 1997.

The White House. (1999) National Security Strategy. *National Security Strategy For A New Century*, White House, December 1999.

US Department of Defense. (1997) Quadrennial Defense Review. *Secretary of Defense Preface*, Washington, DC, May 1997.

US Joint Chiefs of Staff. (2000) *Joint Vision 2020*. Washington, DC, June 2000.

Widnall, Secretary of the Air Force Sheila E. (1996) Remarks to the Institute on World Affairs. Department of Defense Public Affairs release, February 8, 1996.

Kosovo Operations

Adolph, Robert B. (1999) Lbj's Mistake Is Now Clinton's: Bombing Alone Won't Win War. *The Army Times*, 31 May 1999.

Albright, US Secretary of State Madeleine K. (1999) Public release of transcripts, US Department of State.
Children's Hospital Washington, D.C., January 18, 1999
Statement on NATO Final Warning on Kosovo Washington, DC, January 30, 1999
U.S. Institute of Peace, Washington, D.C., February 4, 1999
Press briefing following meeting with Contact Group on Kosovo, Kleber Centre, Paris, France, February 14, 1999
Press conference on the Kosovo peace talks Rambouillet, France, February 20, 1999
Press availability on the Kosovo Peace Talks Rambouillet, France, February 21, 1999
Interview on *CNN Late Edition*, Rambouillet, France, February 21, 1999
Remarks on Developments in Kosovo prior to meeting with members of Congress, Washington, D.C., March 18, 1999
Interview on Serbia on CNN's *Larry King Live,* March 23, 1999
Press Conference on Kosovo, Washington, DC, March 25, 1999
Interview on Kosovo on NBC's *Today Show* with Katie Couric, Washington, D.C., March 26, 1999
Interview on CBS's *Face the Nation* Washington, DC, March 28, 1999

The Brookings Institution, National Issues Forum: A New NATO for a New Century, Washington, D.C., April 6, 1999
Press Conference at NATO Headquarters, Brussels, Belgium, April 12, 1999
"U.S. and NATO Policy Toward the Crisis in Kosovo", statement before the SASC, Apr 20, 1999
Press Briefing on NATO Summit and Kosovo, The Briefing Room, The White House, Washington, D.C., April 20, 1999
PBS Newshour with Jim Lehrer May 7, 1999, Washington, D.C.
"NATO Must Continue Airstrikes Until Milosevic Relents", Op-Ed for *USA Today*, May 21, 1999

Allard, Kenneth. (1999) Glimmer of Hope or Recipe for Surrender? *The Scotsman*, May 7, 1999.

Allard, Kenneth. (1999) Has Anyone Asked What NATO Will Do If It Wins? *The Scotsman*, April 22, 1999.

Bacon, Kenneth. (1999) Assistant Secretary of Defense for Public Affairs. *DoD News Briefing*, Tuesday, March 23, 1999 1:45 p.m.

Bandow, Doug. (1999) *The U.S. Role in Kosovo.* Testimony of Doug Bandow, Senior Fellow, Cato Institute before the House International Relations Committee Hearing, March 10, 1999.

Berger, Sandy. (1999) Assistant to the President for National Security Affairs. Joint Briefing in May 1999.

Brzezinski, Zbigniew. (1999) Get Serious: The planned celebrations of NATO's 50th anniversary., *National Review*, April, 1999.

Clark, Gen. Wesley. (1999) *Interview with Jim Lehrer*. March 29, 1999, MacNeil-Lehrer Productions, www.newshour.org.

Clinton, President William. (1999) Public releases by the White House, released by the Office of the Press Secretary, Washington, DC.
Radio Address, February 13, 1999
Excerpt from press conference, March 19, 1999
Address to the Nation, March 24, 1999
Remarks at photo opportunity, March 25, 1999
Radio Address to the Nation, March 27, 1999
Remarks to Hampton Roads Military Community, Norfolk, Virginia, April 1, 1999

Joint statement with Secretary of Defense Cohen on Kosovo, April 5, 1999
Remarks upon departure to Philadelphia, April 9, 1999
Statement on Kosovo, April 13, 1999
Statement on Kosovo, April 28, 1999
Remarks aboard Air Force One, May 25, 1999
Commencement address at the United States Air Force Academy, Colorado Springs, Colorado, June 2, 1999

Cohen, Dr. Eliot. (1999) Statement before the House Armed Services Committee. April 1999.

Cohen, Secretary of Defense William and General Hugh Shelton. (1999) *DoD News Briefing.* Wednesday, May 12, 1999.

Cohen, Hon. William S. (1999) Public statements released by the Public Affairs office, US Department of Defense.
Statement before House Armed Services Committee, April 1999
Interview with Jim Lehrer, March 25, 1999
Prepared Statement for the Senate Armed Services Committee Hearing on Operation Allied Force, 15 April 1999

Collins, Joseph. (1999) 10 Reasons to Avoid a Land War. *The Boston Globe*, p. C7, May 23, 1999.

Cordesman, Anthony H. (1999) *Kosovo: Unpleasant Questions, Unpleasant Answers.* Center for Strategic and International Studies, Washington, DC, April 6, 1999.

Daalder, Ivo H. (1999) We are in a major war, having moved too little and too late at each stage. *San Diego Union-Tribune*, April 4, 1999.

Dole, Bob. (1998) We Must Stop the Kosovo Terror. *Washington Post*, p. A19, Monday, September 14, 1998.

Eagleton, Thomas F. (1999) Clinton succeeded despite the generals, statesmen, pundits. *The Kansas City Star*, June 13, 1999.

Garamone, Jim. (1999) NATO Holds, So Ask Milosevic When He'll Fold. *American Forces Press Service*, April 1999.

Griffin, Capt. Jalesia. (1999) If Ground Troops Go In, Don't Let Politicians Decide Strategy. *The Army Times*, 17 May 1999.

Haas, Richard N. (1999) U.S. Needs to Consider Ground Forces. *Newsday*, April 1, 1999.

Hill, Ambassador Christopher and US Envoy Robert Dole. (1999) Press Conference on Kosovo. U.S. Embassy London, England, March 6, 1999.

Hillen, John and Robert Zoellick. (1999) A Little Clarity of Purpose, Please. *The Washington Post*, March 17, 1999.

Hillen, John. (1999) In and Out NATO countries need to define a strategy for the desired outcome of the NATO-Yugoslavia conflict. *National Review*, May 17, 1999.

Kozaryn, Linda D. (1999) Refugee Exodus Spurs NATO Strikes. *American Forces Press Service*, March 1999.

Kozaryn, Linda D. (1999) U.S. Defense Chiefs Plan Small U.S. Force for Kosovo. *American Forces Press Service*, February 1999.

Luttwak, Edward N. (1999) Milosevic is in charge of this conflict—the West has trapped itself. *The Sunday Telegraph* (London), March 28, 1999.

Luttwak, Edward N. (1999) Will NATO be able to Survive the War? *Los Angeles Times*, April 28, 1999.

Macneil-Lehrer Newshour. (1999) *Strategic Thinking*. April 6, 1999, McNeil-Lehrer Newshour, including former Secretaries of Defense Harold Brown, Frank Carlucci, and James Schlesinger.

Matthew, William. (1999) Ground Strategy Not Clear-cut. *Marine Times*, 26 April 1999.

Matthews, William. (1999) Should Balkan Bombings Be More Aggressive? *Air Force Times*, 19 April 1999.

McCain, Senator John. (1999) The Balkans Crisis Statement of Senator John McCain (R-AZ) at the Center for Strategic and International Studies. April 13, 1999.

Navy Times-Marine Corps Ed. (1999) Define The Mission First. Editorial, 15 February, 1999.

O'Hanlon, Michael. (1999) Invade Kosovo, But Let Serbs Keep a Slice. *The Wall Street Journal*, April 6, 1999.

Palmer, Jennifer. (1999) 'Gradual Bombings' Don't Work, Vet Says. *Air Force Times*, 26 April 1999.

Pickering, Thomas. (1999) Interview on Fox News with the Under Secretary for Political Affairs. Fox News Network, Washington, DC, March 28, 1999.

Ponce, Phil. (1999) *Civilian Casualties*. News Hour with Jim Lehrer Transcript, May 14, 1999; Phil Ponce with USAF Lt. Gen. Ret. McInerney; Army Gen. Ret. Robert Gard; MacNeil-Lehrer Productions, www.newshour.org.

Shelton, Gen. Henry. (1999) Chairman, Joint Chiefs Of Staff Statement before House Armed Services Committee. April 1999.

Slocombe, Hon. Walter B. (1999) Prepared statement of the Undersecretary of Defense for Policy. HASC Hearing on the Balkans, March 17, 1999.

Talbott, Strobe. (1999) Interview with the Deputy Secretary of State. NBC TV's *Meet the Press*, April 18, 1999.

US Department of Defense. (1999) *DoD News Briefing*. March 30, 1999; with Vice Adm. Scott A. Fry, Rear Adm. Thomas R. Wilson.

US Department of Defense. (1999) *DoD News Briefing*. May 14, 1999; participating in the briefing were Gen. John P. Jumper, CINCUSAFE and Major General Chuck Wald, J-5.

US House Armed Services Committee. (1999) US Policy Toward FRY. House ASC Hearings HASC 106-13, held April 15 And 28, 1999.
Statements Of Maj. Gen. Charles Link, USAF (Ret.), President, Air Force Memorial Foundation; Col. Robert Killebrew, USA (Ret.), Former Director, Army After Next Program; Maj. Gen. Bill Nash, USA (Ret.), Director, Civil-Military Programs, National Democratic Institute For International Affairs; Col. Harry Summers, USA (Ret.), Military Analyst And Columnist, Author, *On Strategy*; Lt. Gen. Paul Van Riper, USMC (Ret.), Former Assistant Commandant Of The Marine Corps, (Command, Control, And Communications)

US Senate. (1999) *The War in Kosovo*. Senate ASC Hearing 106-265, Held April 20, 1999.

Wagner, Robert F. (1999) In Kosovo, The Army's Guns Were Silent And Forgotten. *The Army Times*, 12 July 1999.

Warner, Margaret. (1999) *Military Options*. News Hour with Jim Lehrer Transcript, April 15, 1999; Margaret Warner hosts discussions with USAF Ret. Colonel David Tretler; USMC Gen. Ret. Richard Neal; MacNeil-Lehrer Productions, www.newshour.org.

Warner, Margaret. (1999) *The Next Step*. News Hour with Jim Lehrer Transcript, March 31, 1999; Margaret Warner with USAF Gen. Ret. Merrill McPeak, former USAF Chief of Staff; Army Gen. Ret. George Joulwan; Army Lt. Gen. William Odom; Navy Rear Admiral Eugene Carrol; MacNeil-Lehrer Productions, www.newshour.org.

Wilson, George C. (1999) Exit Strategy A Must For Army Invasion Endorsement. *The Army Times*, 10 May 1999.

NMD

Bacon, Kenneth. (1999) Assistant Secretary of Defense for Public Affairs briefing. *DoD News Briefing*, January 7, 1999.

Clinton, President William. (2000) Clinton speech at Georgetown University on national missile defense. *Reuters News Service*, Washington, DC, Sept 1, 2000.

Cohen, Secretary of Defense William S. (1999) Cohen Announces Plan To Augment Missile Defense Programs. *Reuters News Service*, January 20, 1999.

Cohen, Secretary of Defense William S. (1999) National Missile Defense Issues. *DoD News Briefing*, January 2,0 1999.

Cohen, Secretary of Defense William S. (2000) A Look at...Missile Defense. *The Washington Post*, Sunday, June 11, 2000.

Cohen, Secretary of Defense William S. (2000) Interview with National Public Radio. *DoD News Briefing*, July 7 2000.

Commission to Assess the Ballistic Missile Threat to the US. (1998) Executive Summary. *Report of the Commission To Assess The Ballistic Missile Threat To The United States*, Washington, DC, July 15, 1998.

Estes, Gen. Howell M. III. (1997) Sustaining the Strategic Space Advantage. Prepared statement of Air Force Gen. Howell M. Estes III, commander in chief, North American

Aerospace Defense Command and U.S. Space Command, before the Senate Armed Services Committee, *Defense Issues* Vol. 12 Num. 15, March 13, 1997.

Fogleman, Gen. Ronald R. (1996) National Missile Defense Program: When, not Whether. Prepared remarks by Gen. Ronald R. Fogleman, Air Force chief of staff, to American Defense Preparedness Association/National Defense University Missile Defense Breakfast, *Defense Issues* Vol. 11 Num. 48, Washington, May 16, 1996.

Gansler, Hon. Dr. Jacques. (2000) *DoD News Briefing.* With Lt. Gen. Ronald Kadish, June 20, 2000.

Gansler, Hon. Jacques S. (1999) Statement Of Honorable Jacques S. Gansler, USD/AT, before the House Armed Services Committee. *FY 2000 Budget For Ballistic Missile Defense*, February 25, 1999.

Gansler, Hon. Jacques S. and Lt. Gen. Ronald Kadish. (2000) Briefing on National Missile Defense programs. *DoD News Briefing*, June 20, 2000.

Garwin, Richard L. (2000) National Missile Defense. *Bulletin of the Atomic Scientists*, March/April 2000 Vol. 56, No. 2, 36-41.

Gilmore, Gerry J. (2000) President Defers Missile Defense System Decision. *American Forces Press Service*, Washington, DC, Sept. 1, 2000.

Hawkins, William. (1997) Space Based Missile Defense. *National Security Studies Council* report.

Isaacs, John. (2000) Anatomy Of A Victory: Clinton Decides Against National Missile Defense. *Council For a Livable World*, September 5, 2000.

Kadish, Lt. Gen. Ronald T. (2000) Statement of Lieutenant General Ronald T. Kadish, USAF Director, Ballistic Missile Defense Organization Before the Senate Armed Services Committee Strategic Forces Subcommittee. Monday, February 28, 2000.

Kaminski, Paul G. (1996) DoD's Ballistic Missile Defense Strategy. Prepared statement to the Senate Armed Services Committee, *Defense Issues* Vol.11 Num. 25, March 6, 1996.

Kaminski, Paul G. (1997) DoD's Ballistic Missile Defense Programs. Prepared statement to the Military Research and Development Subcommittee, House National Security Committee, *Defense Issues* Vol.12 Num. 14, March 6, 1997.

Lyles, Lt. Gen. Lester L. (1999) *DoD News Briefing*. January 20, 1999.

Lyles, Lt. Gen. Lester L. (1999) Statement of Director, Ballistic Missile Defense Organization before the Subcommittees on Strategic Forces Committee on Armed Services. US Senate, March 11, 1999.

O'Neill, Lt. Gen. Malcom R. (1995) Ballistic Missile Defense: 12 Years of Achievement. Prepared statement of Lt. Gen. Malcolm R. O'Neill, USA, director, Ballistic Missile Defense Organization, to the House National Security Committee, *Defense Issues* Vol. 10 Num. 37, April 4, 1995.

O'Neill, Lt. Gen. Malcom R. (1996) Staying Prepared Against Ballistic Missiles. Prepared statement of Lt. Gen. Malcolm R. O'Neill, USA, director, Ballistic Missile Defense Organization, to the House National Security Committee, March 7, 1996, and Strategic Forces Subcommittee, Senate Armed Services Committee, March 25, 1996, *Defense Issues* Volume 11, Number 18, March, 1996.

Pena, Charles V. (2000) From the Sea: National Missile Defense Is Neither Cheap Nor Easy. *Foreign Policy Briefing* No.60, Cato Institute, September 6, 2000.

Perry, Secretary of Defense William J. (1996) Protecting the Nation Through Ballistic Missile Defense. Prepared remarks at George Washington University, *Defense Issues* Vol.11 Num. 37, April 25, 1996.

Slocombe, Hon. Walter B. (1999) Statement Of Walter B. Slocombe, Under Secretary Of Defense For Policy. *Center for Strategic and International Studies Statesmen's Forum*, November 5, 1999.

US House Armed Services Committee. (1999) *US National Missile Defense Policy And The Anti-Ballistic Missile Treaty.* HASC 106-33 Hearing held October 13, 1999.
Statement Of Dr. Keith Payne, President, National Institute For Public Policy
Statement Of Hon. Floyd D. Spence (SC), Chairman, Committee On Armed Services
Statement Of Hon. R. James Woolsey, Former Director Of Central Intelligence
Statement Of Hon. William R. Graham, Former Director, White House Office Of Science And Technology Policy
Statement Of Lucas Fischer, Deputy Assistant Secretary Of State For Strategic Affairs
Statement Of Michael Krepon, President, The Henry L. Stimson Center

US House Armed Services Committee. (2000) National Missile Defense: Countering the ballistic missile threat. *National Security Report* Vol. 4 Iss. 3 (House Armed Services

Committee public bulletin), September, 2000. Includes a separate editorial by Rep. Floyd Spence (SC), Chairmain, HASC.

West, Rear Adm. Richard D. (1996) Statement of Rear Admiral Richard D. West, USN, Director (Acting), Ballistic Missile Defense Organization before the Committee on National Security. US House of Representatives, June 18, 1996.

Woolsey, R. J. (2000) The Way to Missile Defense: Dealing with Russia and Ourselves. *National Strategy Forum Review* Vol. 10 Iss. 1, Autumn 2000.