

**STRATEGIC THEORY FOR THE 21<sup>st</sup> CENTURY:  
THE LITTLE BOOK ON BIG STRATEGY**

**Harry R. Yarger**

**February 2006**

This publication is a work of the United States Government as defined in Title 17, United States Code, section 101. As such, it is in the public domain, and under the provisions of Title 17, United States Code, Section 105, it may not be copyrighted.

Visit our website for other free publication downloads  
<http://www.StrategicStudiesInstitute.army.mil/>

[To rate this publication click here.](#)

\*\*\*\*\*

The views expressed in this report are those of the author and do not necessarily reflect the official policy or position of the Department of the Army, the Department of Defense, or the U.S. Government. This report is cleared for public release; distribution is unlimited.

\*\*\*\*\*

Comments pertaining to this report are invited and should be forwarded to: Director, Strategic Studies Institute, U.S. Army War College, 122 Forbes Ave, Carlisle, PA 17013-5244.

\*\*\*\*\*

All Strategic Studies Institute (SSI) monographs are available on the SSI homepage for electronic dissemination. Hard copies of this report also may be ordered from our homepage. SSI's homepage address is: *www.StrategicStudiesInstitute.army.mil*.

\*\*\*\*\*

The Strategic Studies Institute publishes a monthly e-mail newsletter to update the national security community on the research of our analysts, recent and forthcoming publications, and upcoming conferences sponsored by the Institute. Each newsletter also provides a strategic commentary by one of our research analysts. If you are interested in receiving this newsletter, please subscribe on our homepage at *www.StrategicStudiesInstitute.army.mil/newsletter/*.

ISBN 1-58487-233-0

# CONTENTS

Foreword.....	v
Preface.....	vii
Summary.....	ix
I. Introduction.....	1
II. A Theory Stated: Strategy's Logic.....	5
III. The Strategic Environment.....	17
IV. Theory in the Real World.....	31
V. The Strategy Paradigm in Short: A Theory Restated.....	65
VI. Concluding Thoughts.....	73
Endnotes.....	77
About the Author.....	83



## FOREWORD

The word “strategy” pervades American conversation and our news media. We tend to use strategy as a general term for a plan, a concept, a course of action, or a “vision” of the direction in which to proceed at the personal, organizational, and governmental—local, state, or federal—levels. Such casual use of the term to describe nothing more than “what we would like to do next” is inappropriate and belies the complexity of true strategy and strategic thinking. It reduces strategy to just a good idea without the necessary underlying thought or development. It also leads to confusion between strategy and planning, confining strategic possibilities to near-time planning assumptions and details, while limiting the flexibility of strategic thought and setting inappropriately specific expectations of outcomes.

This “little book”—actually a monograph—talks about big strategy, strategy at the highest levels of the nation-state. It is applicable to grand strategy, national security strategy, national military strategy, and regional or theater strategy. The monograph does not propose a strategy for the United States; rather, it provides a framework for considering strategy at any of the levels mentioned above. It is an examination of theory, exploring those aspects of strategy that appear to have universal application. The theory also may have application to the strategy of nonstate actors, institutions, and businesses, but the explicit purpose and perspective offered herein focus on the nation-state.

This Letort Paper is written to expose emerging senior leaders and strategists at the U.S. Army War College to the vocabulary, ideas, and concepts that will enable them to construct a framework for developing their own strategic perspective of the trends, issues, opportunities, and threats confronting the United States in the 21st century.



DOUGLAS C. LOVELACE, JR.

Director

Strategic Studies Institute



## PREFACE

This monograph has been constructed by borrowing freely from the ideas and concepts of others, some of whom have global recognition and others who toiled namelessly as faculty members and students at various senior service colleges. I apologize to all for those instances wherein I may have misrepresented their ideas or paraphrased too closely without proper recognition in my quest for a synthesis of thought that might qualify as pure theory. I also apologize to readers for the frequent redundancy and complexity of my work – but strategy is a complex thing that is better understood when examined from different perspectives. In the same light, I have used examples very sparingly and reluctantly, only as a means to indicate the path of my thinking. To do more would beg for the illustration to be challenged instead of the thought, or suggest the direct application of the “lessons” of the example to similar circumstances. A theory of strategy is neither a simple checklist nor a cookbook solution. It is a way to understand how you might develop a perspective and approach for defining and selecting alternative choices in an increasingly complex and rapidly changing world – focusing on “how to think” as opposed to “what to think” – and articulating your choices in ways that can be understood and implemented. Strategy is neither simple nor easy, but the good strategist seeks to express the logic of strategy in the simplest, clearest terms.





## SUMMARY

Strategy for the nation-state is neither simple nor easy. Good strategy demands much of the military professional whether he is formulating, articulating, evaluating, or executing strategy. Few do it well. It requires the professional to step out of the planning mindset and adopt one more suited for the strategic environment. This is particularly true in periods of great change and turmoil when a successful military strategy must be closely integrated with and may depend on other national strategies of the interagency community. A theory of strategy helps in this transition by educating the professional and disciplining his thinking in any of his roles. This monograph advances a theory of strategy that provides essential terminology and definitions, explanations of the underlying assumptions and premises, and substantive hypotheses that explain the nature of the strategic environment and the role and expectations of strategy. The environment is explained in theoretical and practical terms, and the implications for strategic thinking are developed with a distinction being made between strategy and planning mindsets. The typical problems practitioners have in formulating and articulating strategy are discussed. Strategy formulation is recognized as both an art and science, and the U.S. Army War College strategy model of ends, ways, and means is expounded on and advocated as a methodology for articulating strategies.



# I. INTRODUCTION

Like politics, strategy is the art of the possible; but few can discern what is possible.<sup>1</sup>

William Murray and Mark Grimsley

In simplistic terms, strategy at all levels is the calculation of objectives, concepts, and resources within acceptable bounds of risk to create more favorable outcomes than might otherwise exist by chance or at the hands of others. Strategy is defined in Joint Publication 1-02 as “the art and science of developing and employing instruments of national power in a synchronized and integrated fashion to achieve theater, national, and/or multinational objectives.”<sup>2</sup> Both of these definitions are useful, but neither fully conveys the role and complexity of strategic thought at the highest levels of the state. At these levels, strategy is the art and science of developing and using the political, economic, social-psychological, and military powers of the state in accordance with policy guidance to create effects that protect or advance national interests relative to other states, actors, or circumstances. Strategy seeks a synergy and symmetry of objectives, concepts, and resources to increase the probability of policy success and the favorable consequences that follow from that success. It is a process that seeks to apply a degree of rationality and linearity to circumstances that may or may not be either. Strategy accomplishes this by expressing its logic in rational, linear terms – ends, ways, and means.

Strategy is far from simple, and understanding a theory of strategy allows us to grasp and work with its complexity by understanding its logic. A theory of strategy provides essential terminology and definitions, explanations of the underlying assumptions and premises, substantive propositions translated into testable hypotheses, and methods that can be used to test the hypotheses and modify the theory as appropriate.<sup>3</sup>

Why study a theory of strategy? Theory’s value lies not in a prescription for success but in how it helps us expand and discipline our thinking. As Clausewitz reminds us, theory should be for study, not doctrine.

Theory then becomes a guide to anyone who wants to learn about war from books; it will light his way, ease his progress, training his judgment, and help him to avoid pitfalls. . . . Theory exists so that one need not start afresh each time sorting out the material and plowing through it, but will find it ready to hand and in good order. It is meant to educate the mind of the future commander. . . .<sup>4</sup>

A theory of strategy educates the strategist's mind. It helps discipline our thinking in order to deal with the complexity and volatility of the strategic environment and the changes and continuities, issues, opportunities, and threats inherent to it. It encourages us to rethink our own assumptions and prejudices, but it also encourages us to consider the possible assumptions and prejudices of our adversaries and other actors. Strategic theory opens the mind to all the possibilities and forces at play, prompting us to consider the costs and risks of our decisions and weigh the consequences of those of our adversaries, allies, and others. On another level, theory allows the members of the military profession and the interagency community to communicate intelligently in regard to strategy. It serves as a common frame of reference for the development and evaluation of an appropriate strategy and the communication of it to those who must implement it. A disciplined theory of strategy also allows the professional to evaluate the merits of a particular strategy and critique it in meaningful terms for those who determine policy and make decisions.

Strategic thinking is difficult. It is best viewed as both an art and a science. The framework of theory provides a methodological basis for a disciplined thought process to assist the strategist in developing strategy, and it also serves as a guide for others to follow in comprehending, evaluating, and critiquing the merits of a particular strategy. While theory is an important aid for educating the mind, it is not a substitute for "genius" as described by Clausewitz. History's great strategists possessed "a very highly developed mental aptitude" for both the art and science. They had the ability to perceive the realities and relationships of their environment, and apply them successfully in developing strategy.<sup>5</sup> True genius is rare, and some say that it is no longer applicable in the modern, complex world. It is, they argue, too difficult for a single person—even a genius—to

comprehend all the nuances of the modern world, and they propose that strategy is better served by an organizational process. In spite of these views, however, strategies often are linked to individual personalities in the public eye, and some individuals appear to have a particular talent for this art and science.<sup>6</sup>

It is useful to consider the roles of strategists today. At the U.S. Army War College, three roles for strategists are considered: leader, practitioner, and theorist. Each of these roles requires a distinct set of skills and competencies. The leader provides the vision, inspiration, organizational skills, direction, and personal impetus necessary to enable others to act in a focused and coherent manner. The practitioner thoroughly comprehends the levels of strategy and their relationships and develops strategy. He translates broad policy guidance into integrated strategies that lead to policy success. The theorist develops theoretical concepts through study and thought and teaches and mentors others. A master of the strategic art is proficient in all three of these areas and may approach Clausewitz's genius.<sup>7</sup> Strategists function at different levels or in different roles within the state's organizational hierarchy, but they all need to understand comprehensive strategies and communicate them effectively among themselves and to the leadership, the planners, and the people who make up the organizations that ultimately implement strategy.

Strategy, then, provides direction for the state, seeking to maximize positive outcomes and minimize negative outcomes, as the state moves through a complex and rapidly changing environment into the future. Strategists thoroughly examine the environment and develop a strategy that identifies objectives, concepts, and resources required to accomplish the goals established by policy. Theory disciplines strategic thinking by explaining strategy's inherent logic; it serves to remind all involved with strategy neither to promise too much nor fail to consider any of the attributes of strategy. A coherent theory also helps leaders, planners, and others to evaluate and execute strategy.



## II. A THEORY STATED: STRATEGY'S LOGIC

There is an essential unity to all strategic experience in all periods of history because nothing vital to the nature and function of war and strategy changes.<sup>8</sup>

Colin S. Gray

Strategy provides a coherent blueprint to bridge the gap between the realities of today and a desired future. It is the disciplined calculation of overarching objectives, concepts, and resources within acceptable bounds of risk to create more favorable future outcomes than might otherwise exist if left to chance or the hands of others. It is the consideration of the relation of how to apply resources to achieve desired results in a specific strategic environment over time. In the context of the state, strategy is the employment of specific instruments of power (political/diplomatic, economic, military, and informational) to achieve the political objectives of the state in cooperation or in competition with other actors pursuing their own – possibly conflicting – objectives.<sup>9</sup> In other words, it is the application of the power inherent in the natural and societal resources of the state toward policy ends in an emerging, dynamic, and competitive strategic environment. Both strategy and planning are subordinate to the nature of the environment. Strategy has distinct attributes and differs from planning in its scope, assumptions, and premises, but it provides the structure and parameters for more detailed long-range and short-term planning. Both strategy and planning use ends, ways, and means, and are bounded by the criteria of suitability, feasibility, and acceptability. Strategy has its own inherent logic that can be understood and applied.

An underlying assumption of strategy from a national perspective is that all nation-states and nonstate actors have interests they will pursue to the best of their abilities. Interests are desired end states categorized in terms such as survival, economic well-being, favorable world order, and enduring national or group values. Interests are derived from these broad categories as reflected in the strategic environment and can be stated more specifically in the context of issues. The elements of power are the resources used to promote or

advance national or group interests. Resources are applied through the use of instruments of power.

The role of strategy is to ensure that the pursuit, protection, or advancement of these interests—which are achieved through the application of the instruments of power to specific objectives to create strategic effects in favor of the interest based on policy guidance—is accomplished in a coherent and optimal manner. Strategy is fundamentally about choices; it reflects a preference for a future state or condition and determines how best to get there. In doing so, strategy confronts adversaries, allies, and other actors; and it addresses resource and organizational issues; even then some factors simply will remain beyond control or maybe unforeseen.<sup>10</sup> Rational choice, chance and probability, irrational actors, allies, and competitors are all part of the strategic paradigm.<sup>11</sup> Strategy is inherently comprehensive; its foremost purpose is to favorably influence the complex and volatile strategic environment by providing direction for the judicious application of power toward achievement of policy-driven objectives.<sup>12</sup>

The strategic process is all about *how* (concept or way) leadership will use the *power* (resources or means) available to the state to exercise control over sets of circumstances and geographic locations to achieve *objectives* (ends) in accordance with state policy.<sup>13</sup> Strategy provides direction for the coercive or persuasive use of this power to achieve specified objectives. This direction is by nature proactive, but it is not predictive. Strategy assumes that while the future cannot be predicted, the strategic environment can be studied, assessed, and, to varying degrees, anticipated and manipulated. Only with proper analysis can trends, issues, opportunities, and threats be identified, influenced, and shaped through what the state chooses to do or not do. Thus good strategy seeks to influence and shape the future environment as opposed to merely reacting to it. Strategy is not crisis management. It is to a large degree its antithesis. Crisis management occurs when there is no strategy or the strategy fails to properly anticipate. Thus, the first premise of a theory of strategy is that strategy is proactive and anticipatory, but not predictive.

A second premise is that political purpose dominates all strategy; this idea has been perhaps best set forth in Clausewitz' famous dictum, "War is merely the continuation of policy by other means."<sup>14</sup>



Political purpose is stated in policy. Policy is the expression of the desired end state sought by the government. In its finest form, policy is the clear articulation of guidance for the employment of the instruments of power towards the attainment of one or more objectives or end states. In practice, it tends to be much vaguer. Nonetheless, policy dominates strategy by its articulation of the end state and its guidance regarding resources, limitations on actions, or similar considerations. The analysis of the end state and guidance yields strategic objectives. Objectives provide purpose, focus, and justification for the actions embodied in a strategy.<sup>15</sup> Achievement of the objectives creates strategic effects contributing to the desired end state. National strategy is concerned with a hierarchy of objectives determined by the political purpose. Yet, as Clausewitz notes, that does not mean that policy is a tyrant. The development of strategy informs policy; policy must adapt itself to the realities of the strategic environment and the limits of power. Thus, policy ensures that strategy pursues appropriate aims, while strategy informs policy of the art of the possible.<sup>16</sup>

A third premise is that strategy is subordinate to the nature of the strategic environment. Strategy is developed from a thorough consideration of the strategic situation and knowledge of the nature of the strategic environment. The strategic environment possesses both physical and metaphysical attributes. It has both domestic and external components. The international environment is the external component, consisting of the physical geographic environment, the international system, and other external actors—and their cultures, beliefs, and actions. The domestic environment consists of internal physical realities and the internal actors, constituencies, institutions, and organizational roles at play within the United States. Indeed, within the United States, there are groups that have worldviews significantly different from those of the national leadership, which makes the domestic element of strategy formulation even more complex. Nascent contradictions always exist to challenge the status quo and initiate a search for a new equilibrium. Stability within the environment resists change; instability within the environment urges adoption of a new strategy. The nature of the strategic environment can be described as an interactive, chaotic, complex system of

systems. Strategy must be consistent with the nature of the strategic environment in its formulation and execution.

A fourth premise is that strategy is holistic in outlook. It demands comprehensive consideration. That is to say, while the strategist may be devising a strategy from a particular perspective, he must consider the whole of the strategic environment in his analysis in order to arrive at a proper strategy to serve his intended purpose at his level. He is concerned with external and internal factors at all levels and the horizontal and vertical integration of his strategy. In formulating a strategy, the strategist must also be cognizant that each aspect, objective, concept, and resource has effects on the environment around him. Thus, the strategist must have a comprehensive knowledge of what else is happening within the strategic environment and the potential first-, second-, third-, etc., order effects of his own choices on the efforts of those above, below, and on the same level with him, whether they be friendly, adversary, or indifferent actors. The strategist's efforts must be integrated fully with the strategies or efforts of senior, coordinate, and subordinate elements. Strategists must think holistically – that is, comprehensively. They must be cognizant of both the “big picture,” their own organization's capabilities and resources, and the impact of their actions on the whole of the environment. Good strategy is never developed piecemeal or in isolation.

A fifth premise is that any strategy creates a security dilemma for the strategist and other actors.<sup>17</sup> Any strategy, once known or implemented, introduces change into the strategic environment, even when it seeks to maintain the status quo. Change can occur on multiordered levels and may be nonlinear. Change threatens the existing equilibrium or status quo in the strategic environment, raising the question of whether the results of doing nothing are better or worse than the consequences of doing something. Strategy can anticipate the future through the pursuit of proper objectives, but strategy cannot predict the future with absolute certainty, neither the achievement of its objectives nor the precise consequences of achievement or failure. The strategist must determine whether the attainment of the specified end justifies the risks of initiating action, and the strategist must also consider how other actors may react.

## Comprehensiveness of Strategy

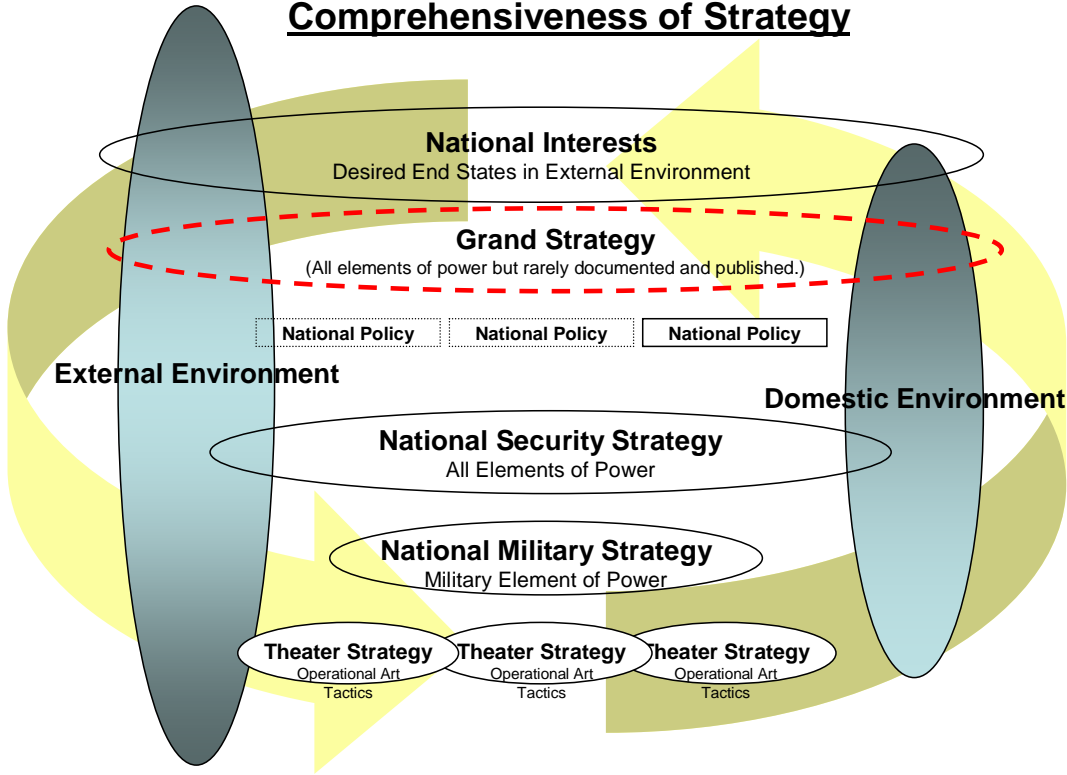


Figure 1.

Strategy thus poses a dilemma for the strategist and other states and actors.

A sixth premise is that strategy is grounded in what is to be accomplished and why it is to be accomplished—strategy cannot be formulated in a policy or intellectual vacuum. The strategist must know the end state he is trying to achieve. Strategy rightfully focuses on a desired or preferred end state among an array of possible end states in a dynamic environment. Strategy provides direction for the persuasive or coercive use of the instruments of power to achieve specified objectives to create strategic effects leading to the desired end state. It is essential that the strategist analyze and fully understand the desired end state in the context of the strategic environment (both domestic and external) in order to develop appropriate objectives in regard to the desired end state. Hence, before proper objectives can be determined, the strategist must comprehend the nature of the strategic environment, the intent of the policy, and the nation's aggregate interests as determinative of necessary and appropriate strategic effects.

A seventh premise is that strategy is an inherently human enterprise. Not solely a consideration of objective factors, “strategy involves human passions, values, and beliefs, few of which are quantifiable.”<sup>18</sup> The role of belief systems, worldviews, and cultural perceptions of all the players is important in the formulation of strategy. Strategists must be careful to eliminate counterproductive bias while ensuring the strategy meets criteria of acceptability at home and abroad – compensating for differences as appropriate.

An eighth premise is that friction is an inherent part of strategy. Friction is the difference between the ideal strategy and the applied strategy – how it is supposed to work versus how it actually unfolds in execution. Friction is a natural consequence of the chaotic and complex nature of the strategic environment, chance, and human frailty.<sup>19</sup> Friction cannot be eliminated, but it can be understood and accounted for by the strategist to a greater or lesser extent in the formulation of the strategy.

A ninth premise is that strategy focuses on root causes and purposes. Such primary foci make strategy inherently adaptable and flexible by emphasizing strategic purpose and empowering subordinate levels. Strategy incorporates learning from experience and is sufficiently broad in its construction to adapt to unfolding events and an adversary’s countermoves.<sup>20</sup> Strategy addresses linear and nonlinear phenomena. Unlike planning, which is largely cause and effect, strategy is a process interacting with the strategic environment: “strategy is a process, a constant adaptation to shifting conditions and circumstances in a world where chance, uncertainty, and ambiguity dominate.”<sup>21</sup> Process is facilitated by constructing strategy with flexibility and adaptability in its component parts. Strategy’s focus on root causes and purposes ensures that the direction provided to subordinate levels is sufficiently broad to allow adaptability and flexibility while not deviating from strategic purpose.

A 10th premise is that strategy is hierarchical. The political leadership ensures and maintains its control and influence over the instruments of power through the hierarchical nature of state strategy. Strategy cascades from the national level down to the lower levels. Generally strategy originates at the top as a consequence of a grand strategy (often undocumented), national security strategy

or other stated national-level strategies and policy statements in regard to specific issues. Grand and national security strategies lay out broad objectives and direction for the use of all the instruments of power. National policy provides broad strategic guidance from political leaders, generally articulating the national interests as they relate to specific strategic circumstances. From these strategies and policies the major activities and departments develop subordinate strategies. For the military, a National Defense Strategy and National Military Strategy are derived from the National Security Strategy. In turn, the National Military Strategy leads to theater strategies.

The U.S. Army War College (in consonance with Joint Pub 1-02) defines the levels of strategy as they pertain to the military element of power within the state as:

*Grand Strategy.* An overarching strategy summarizing the national vision for developing, applying, and coordinating all the instruments of national power in order to accomplish the grand strategic objectives, viz., preserve national security; bolster national economic prosperity; and promote national values. Grand Strategy may be stated or implied.<sup>22</sup>

*National Security Strategy* (also sometimes referred to as Grand Strategy and National Strategy). The art and science of developing, applying, and coordinating the instruments of national power (diplomatic, economic, military, and informational) to achieve objectives that contribute to national security.<sup>23</sup>

*National Military Strategy.* The art and science of distributing and applying military power to attain national objectives in peace and war.<sup>24</sup>

*Theater Strategy.* The art and science of developing integrated strategic concepts and courses of action directed toward securing the objectives of national and alliance or coalition security policy and strategy by the use of force, threatened use of force, or operations not involving the use of force within a theater.<sup>25</sup>

Other levels of strategy, such as *The National Defense Strategy of The United States of America*, may be inserted in the hierarchy by leadership at various times.<sup>26</sup> The hierarchical nature of strategy facilitates span of control. It provides a logical means of delegating responsibility, authority, and accountability within the senior leadership. It also

suggests that if strategy consists of objectives, concepts, and resources, each should be appropriate to the level of strategy and consistent with one another. Thus strategy at the national military level should articulate military objectives at the national level and express the concepts and resources in terms appropriate to the national level for the specified objective.

At some level, thinking and action fall below the strategic threshold. Under the National Military Strategy, the Combatant Commanders develop Theater Strategy and subsequent campaign plans. At this juncture, the line between strategy and planning blurs with campaign planning that may be either at the theater strategic level or in the realm of pure operational art. Graphically, the relationship between strategy and the levels of war is shown in Figure 2.

**Levels of War and Hierarchy of Strategy**



**Figure 2.**

Strategy differs from operational art and tactics in functional, temporal, and geographic aspects. Functionally and temporally, tactics is the domain of battles, engagements of relative short

duration that can be as small as a firefight between two small units or as large as a battle between corps. Operational art is the domain of the campaign, a series of battles taking place over a longer period of time. Strategy is the domain of war which encompasses the spectrum of conflict among nations and other international actors. Tactics concerns itself with the parts or pieces, operational art with the combination of the pieces, and strategy with the combinations of these combinations. Geographically, tactics are very narrowly defined, the operational level is broader and more regional in orientation, and strategy is theater-wide, intercontinental, or global. The time horizon is greater at the strategic level than at the operational and tactical levels. However, it is worth noting that with the advances in transportation and communications, there has been a spatial and temporal convergence of strategy, operational art, and tactics. Increasingly, in part due to increasing communications capabilities, events at the tactical level have strategic consequences.<sup>27</sup>

An 11th premise of strategic theory is that strategy has a symbiotic relationship with time. A key component of strategic competency is thinking in time – the ability to foresee continuity of strategic choices with the past and the consequences of their intended and unintended effects in the future. A strategic choice must have continuity with the past as it bridges to the future. Strategy must account for the past in its formulation, acknowledging preceding interaction and history within the strategic environment. A strategic action that has characteristics contrary to the past experience or culture of the society it affects is less likely to be successful. The strategist extrapolates the possible futures from the present strategic circumstances with a clear sense of the long past from which these possible futures flow; he then constructs a paradigm of change from which planning seeks to shape a more favorable future. Deciding when to undertake a strategy is also critical. If the historical timing is correct, then small actions can have large strategic effects. If the timing is wrong, results invariably take larger efforts and cost more in terms of tangible and intangible resources. The strategist is concerned with continuities and change, with both history and the future. History suggests the right questions to ask and provides perspective for the future consequences of the available choices.<sup>28</sup> Futurism identifies the

possibilities and probabilities of change. Strategic analysis suggests the timing.

A 12th premise is that strategy is cumulative. Effects in the strategic environment are cumulative; once enacted, they become a part of the play of continuity and change. Strategy is cumulative from several different perspectives. It is cumulative from the perspective that once implemented, a strategy becomes part of the continuities of the strategic environment. Regardless of whether it is successful or not, it becomes a part of the fabric of change and interaction in the strategic environment, and its consequences must be considered in any future strategy. Strategy is cumulative from a stratified perspective also. The effect of a policy is the summation of the strategy and subordinate planning at all levels and the interaction related to them; the cumulative effect often exceeds the sum of the parts. It is also possible that the value of one level of strategic efforts might be negated by the effects of another level. Strategies at different levels interact, with the cumulative effects influencing the success of higher and lower strategy and planning over time.

A 13th premise is that efficiency is subordinate to effectiveness in strategy. This is not to say that efficiency is not desired. Good strategy is both effective and efficient, but the purpose of strategy is to create strategic effect. Strategic objectives, if accomplished, create or contribute to the creation of strategic effects that favor the achievement of the desired end state at the level of strategy being analyzed and, ultimately, serve national interests. Strategy must emphasize effectiveness because failure, however efficiently executed, creates much greater risk of undesirable and unanticipated multiordered consequences. Concepts and resources serve objectives without undue risk of failure or unintended effects—efficiency is necessarily subordinate to effectiveness in strategy.<sup>29</sup>

A 14th premise is that strategy provides a proper relationship or balance among the objectives sought, the methods used to pursue the objectives, and the resources available for the effects sought at its level in the hierarchy. In formulating a strategy, the ends, ways, and means are part of an integral whole and work synergistically to achieve strategic effect at that level of the strategy, as well as contribute to cumulative effects at higher levels. Ends, ways, and means must be in concert qualitatively and quantitatively, internally



and externally. Thus qualitatively, a National Security Strategy (NSS) objective seeks to achieve the desired effect using any of the necessary and appropriate instruments of power available to the state – the qualitative questions ask whether achieving the objective will produce the strategic effects and whether the effects will justify the objective chosen, the methods used, the resources required, and the social and political costs incurred. A National Military Strategy will identify at the national level appropriate military ends using national military concepts and resources. The National Military Strategy is bounded by the NSS and is subject to the qualitative questions, but the state cannot logically ask the military to do what it is incapable of accomplishing because of lack of ability or resources – which are qualitative relationships. In a similar manner, a theater or combatant commander would have appropriate theater-level objectives for which he would develop theater concepts and use resources allocated to his theater. In some cases, concepts might include the integration of other than military instruments of power, if they can be integrated and capabilities and resources are available.

The levels of strategy, as well as war, are distinct but interrelated because of the hierarchical and comprehensive nature of strategy and war. Hence, operational or tactical concepts achieve operational or tactical objectives and cannot be elevated to a strategic level even though operational or tactical objectives contribute to the cumulative nature of strategy, and actions at these levels on occasion create strategic consequences. In a similar manner, strategic objectives and concepts have a proper relationship within a strategy, but must also relate properly within the hierarchy. The quantitative relationship suggests that the concept employs and is resourced with the appropriate types and quantity of resources. From the synergistic balance of ends, ways, and means, the strategy achieves suitability and acceptability – the attainment of the objectives using the instruments of power in the manner envisioned accomplishes the strategic effects desired at acceptable costs. The synergistic balance also achieves feasibility – the strategic concept is executable with the resources made available.

The 15th and final premise of strategy is that risk is inherent in all activity. The best we can do is seriously consider the risks involved, producing a favorable balance against failure. Strategy is subject to

the nature of the strategic environment, and uncertainty is inherent in that environment as a result of chance, nonlinearity, and interaction with other states and actors. Risk can be assessed and often mitigated by questioning the thinking behind the strategy. For example, what assumptions were made in developing the strategy, and what are the consequences if an assumption is wrong? What internal or external factors are the bases for this strategy? What changes would enhance or detract from this strategy? What flexibility or adaptability is inherent in the components of the strategy? How can the strategy be modified and at what costs? Nonetheless, no matter how probing the questions, risk of failure will always remain. Failure can be either the failure to achieve one's own objectives, thus providing a significant advantage to one's adversaries, or creating unintended adverse effects.

In sum, strategy has an inherent logic that can be understood and applied. It is distinct from planning and serves a unique purpose. It differs from planning in its attributes, scope, assumptions, and premises, but provides the overall structure and parameters for more detailed long-range and short-term planning. Both strategy and planning use ends, ways, and means, and are bounded by the criteria of suitability, feasibility, and acceptability. Good strategy is founded in a proper understanding and analysis of the strategic environment and national interests and policy, and an understanding of the theory and role of strategy. The strategist accepts that the future cannot be predicted, but believes that it can be anticipated and shaped in favorable terms through creation of judicious strategic effects. Strategic theory guides and disciplines the development and execution of good strategy.

### III. THE STRATEGIC ENVIRONMENT

Everything in strategy is very simple, but that does not mean that everything is very easy.<sup>30</sup>

Clausewitz

Strategy seeks to cause specific effects in the environment—to advance favorable outcomes and preclude unfavorable ones. For the state, the strategic environment is the realm in which the leadership interacts with other states or actors to advance the well-being of the state. This environment consists of the internal and external context, conditions, relationships, trends, issues, threats, opportunities, interactions, and effects that influence the success of the state in relation to the physical world, other states and actors, chance, and the possible futures. The strategic environment functions as a self-organizing complex system. It seeks to maintain its current relative equilibrium, or to find a new acceptable balance. In this environment, some things are known (predictable), some are probable, some are plausible, some are possible, and some remain simply unknown. It is a dynamic environment that reacts to input but not necessarily in a direct cause-and-effect manner. Strategy may focus on a particular interest or policy, but the holistic nature of the environment results in both intended and unintended effects.<sup>31</sup> The strategist ultimately seeks to protect and advance the interests of the state within the strategic environment through creation of multiordered effects. Conceptually, a model of strategy is simple—ends, ways, and means—but the nature of the strategic environment makes it difficult to apply. To be successful, the strategist must comprehend the nature of the strategic environment and construct strategy that is consistent with it, neither denying its nature nor capitulating to other actors or to chance.

The nature of the strategic environment has been described numerous times by different authorities. This environment, encapsulated by the U.S. Army War College in the acronym VUCA, is marked by:

a world order where the threats are both diffuse and uncertain, where conflict is inherent yet unpredictable, and where our capability to defend

and promote our national interests may be restricted by materiel and personnel resource constraints. In short, an environment marked by volatility, uncertainty, complexity, and ambiguity (VUCA).<sup>32</sup>

Characterized by the four earmarks—volatility, uncertainty, complexity, and ambiguity (VUCA)—the strategic environment is always in a greater or lesser state of dynamic instability or “chaos.” The role of the strategist is to exercise influence over the volatility, manage the uncertainty, simplify the complexity, and resolve the ambiguity, all in terms favorable to the interests of the state and in compliance with policy guidance.

VUCA thinking argues that the strategic environment is volatile. It is subject to rapid and explosive reaction and change, often characterized by violence. Uncertainty also characterizes this environment, which is inherently problematic and unstable. New issues appear, and old problems repeat or reveal themselves in new ways so that past solutions are dubious, and the perceived greater truth often vacillates with time. Everything is subject to question and change. This environment is extremely complex. It is composed of many parts that are intricately related in such a manner that understanding them collectively or separating them distinctly is extremely difficult and often impossible. Sometimes the environment is so complicated or entangled that complete understanding and permanent solutions are improbable. The strategic environment is also characterized by ambiguity. The environment can be interpreted from multiple perspectives with various conclusions that may suggest a variety of equally attractive solutions, some of which will prove to be good and others bad. Certain knowledge is often lacking and intentions may be surmised, but never entirely known. VUCA thinking describes the appearance of the environment without providing a theoretical understanding of it. Since the role of the strategist is ultimately to advocate actions that will lead to desirable outcomes while avoiding undesirable ones, the strategist must understand the nature of the environment in order to exert influence within it.<sup>33</sup>

The nature of the strategic environment, as the VUCA acronym suggests, is difficult to grasp and is perhaps the most challenging task for the strategist. Yet understanding its nature explains strategy’s possibilities and limitations, and provides the insight and parameters

for articulating strategic objectives, concepts, and resources. Two theories – chaos theory and complexity theory – serve as appropriate metaphors for understanding the nature of the strategic environment, providing an analogous description of its attributes and functioning. While founded in abstract mathematical extrapolations, these two theories capture the essence of the observed VUCA behavior of the strategic environment and have been adapted by some political scientists to describe the international strategic environment. Some even suggest these theories might be applied directly to the evaluation and selection of strategic choices, but that is not the purpose of their use in this monograph.<sup>34</sup> Here, chaos theory and complexity theory are used to help the strategist think conceptually and pragmatically about the functioning of the strategic environment.

Chaos theory was popularized by Edward Lorenz, a diligent meteorologist who, while searching for a way to produce more accurate weather predictions, discovered the “butterfly effect.” He noticed that miniscule changes in his initial input to mathematical calculations for weather predictions could have extraordinary and unpredictable effects on the outcomes. He concluded that the future behavior of complex and dynamic systems is incredibly sensitive to tiny variations in initial conditions.<sup>35</sup> Over 150 years earlier, Clausewitz understood and described this phenomenon in war and wrapped it into his definition of friction: “Everything in war is very simple, but the simplest thing is difficult. The difficulties accumulate and end by producing a kind of friction that is inconceivable unless one has experienced war.”<sup>36</sup> Likewise, folklore captured this same reality: “For want of a nail, the shoe was lost; for want of a shoe, the horse was lost; for want of a horse . . . , the kingdom was lost!” Computers allow scientists to do the calculations to study this effect in mathematically simple systems, thereby illuminating the “chaotic” behavior of the strategic environment and other complex systems.

Chaos theory is a different way of viewing reality. Prior to the development of chaos theory, two world views dominated thinking. Systems were defined as deterministic and predictable, or random and disordered—thus unpredictable. Deterministic systems are predictable because the same inputs will yield the same outputs every time the experiment is conducted. In math’s chaos theory, chaos is not a state of utter confusion—random, unpredictable, and

uncontrollable – but an observable reality that adheres to certain rules even as it appears chaotic in the evident sense. It explains observed physical behavior that possesses characteristics in common with both order *and* randomness as opposed to the more traditional either orderliness *or* randomness. Put more scientifically, chaos theory describes unstable aperiodic behavior in deterministic nonlinear dynamical systems. A dynamical system is one that interacts and changes over time. Behavior in chaotic systems is aperiodic, meaning that no variable describing the state of the system undergoes a regular repetition of values – each changes in some part over time. The behavior in a chaotic system continues to manifest the effects of any small difference, and consequently a *precise* prediction of a future state in a given system that is aperiodic is impossible. On the other hand, chaotic behavior as a mathematical process does possess structure or patterns and, as a consequence, can be predicted and influenced to some extent, with the most influence occurring in the initial conditions.<sup>37</sup>

Chaos theory is important because it helps explain why deterministic or linear systems sometimes produce unpredictable behavior. Chaos theory also demonstrates that much that appears as random, in reality is not – there are indirect cause-and-effect relationships at work, sometimes not detectable. The deterministic nature of a chaotic system ensures there is some manifestation of continuity from one state to the next, while the nonlinearity means that the consequences of any changes may appear as spontaneous and extreme. In a chaotic system, early changes can have an extraordinary effect on the long term, but the results are bounded from the extremity of total randomness. Thus chaotic systems are a mixture of continuities and change. The strategic environment can be viewed as a chaotic system in which human history represents aperiodic behavior – broad patterns in the rise and fall of civilizations are evident, but no event is ever repeated exactly.<sup>38</sup>

Complexity theory also offers insights into the nature of the strategic environment, often shared by or augmenting chaos theory. The strategic environment is by definition a complex system. A system exists when a set of elements are interconnected so that changes in some elements or their relations produce changes in other parts of the system, and the system taken as a whole exhibits properties and

behaviors that are different from those of the sum of the parts. Systems are generally dynamic, and social systems are especially so. Systems may be very large or very small, and in some complex systems, large and small components live cooperatively. Complexity occurs in both natural and man-made systems. The level of complexity depends on the character of the systems, the environment, and the nature of the interactions among them. The different parts of complex systems are linked and affect one another in a synergistic manner through both positive and negative feedback. In a complex system, the numerous independent elements continuously interact and spontaneously self-organize and adapt for survival in increasingly more elaborate and sophisticated structures over time. Cause and effect are not proportional to each other and often cannot be related. Such a system is neither completely deterministic nor completely random, but rather exhibits both characteristics—adhering to the chaos theory model. Complex systems, therefore, are not precisely predictable, and the sum of their interactions is greater than the parts.

Complex systems appear to evolve naturally to a state of self-organized criticality, at which time they lie on the border of order and disorder, teetering on the “edge of chaos.” At the point where a complex, dynamical, chaotic system becomes sufficiently unstable, an attractor (such as a minor event similar to Lorenz’s tiny mathematical changes) instigates the stress, and the system splits. This is called bifurcation—the point at which significant change occurs, and the newly resulting systems are distinct from the original while still having continuities. The edge of chaos is important; it is the stage when the system can carry out the most complex operations and the point when both opportunities (positive feedbacks) and threats (negative feedbacks) are greatest. If the system cannot maintain its balance, it seeks a new equilibrium. At the point of bifurcation, little changes produce great outcomes.<sup>39</sup>

Chaos and complexity theories offer a perspective that describes the strategic environment as it is, as opposed to a direct and simplistic cause-and-effect linear model. These theories recognize that the world is composed of both linear and nonlinear dynamics. Grasping this distinction is critical to the kind of analysis the strategist undertakes! Complexity theory does not seek prediction but understanding of the various elements of the environment and the actors involved. It

offers a complex worldview that accepts contradictions, anomalies, and dialectic processes. It alerts the strategist to the existence of multicausal situations, unintended consequences, circumstances ripe for change, the roles of feedback and self-fulfilling expectations, and other abnormalities discounted, or even disparaged, by the rational planning model.<sup>40</sup>

Chaos and complexity theories serve as useful metaphors for the strategic environment because they provide insights to VUCA phenomena and the relationship between the strategic environment and strategy. The strategic environment is composed of elements representing both continuity and change. Relationships and interaction are the keys to understanding the nature and dynamism of the strategic environment. Characterized by instability and aperiodic behavior, it does not repeat itself precisely, although situations may closely approximate those of the past. Thus it possesses the attributes of both linearity and nonlinearity. The strategic environment is deterministic in that change is bounded by a variety of factors, including, to some degree, by what has occurred before. It will have continuities, but the exact nature and extremity of change are not necessarily predictable because of the nonlinear attributes. The strategic environment is often particularly sensitive to early changes at critical times, and the outcomes are often not proportional to the inputs, thus creating unpredictable, and at times unintended, outcomes.

Major changes at the strategic level often can have very simple causes. Any change that occurs creates feedback (effect) which eventually must be accounted for within the equilibrium of the strategic environment. Chaotic behavior is more evident in long-term systems than in short-term systems. This observation illuminates why planning's shorter time horizons support more certainty than strategy's longer view. At the same time, a chaotic system actually can evolve in a way that appears to be smooth and ordered, suggesting that strategy is practical and can produce results. Strategy therefore must account for the chaotic, complex nature of the strategic environment and shape it by creating and anticipating effects in order to be successful.<sup>41</sup>

Often referred to as a system of systems in order to emphasize its complexity, the strategic environment is a composite of complex



systems, linked vertically and horizontally. As such, the strategic environment exhibits complex, self-organizing behavior—it continuously seeks to find an acceptable order or relative balance in which it can exist. Its complexity results from individual decisions or acts and the interactions resulting from the decisions or changing circumstances. Its numerous parts and agents act individually or collectively, according to their own circumstances and interests. In acting, these parts and agents can globally affect the circumstances and interests of all other parts or agents. Some of the interactions are predictable, some are chaotic, and some are stochastic (determined by chance). What this means is that the strategic environment is inherently uncertain, and that unpredictability must be taken as a natural part of the system. As a result, traditional ideas of control—direct cause and effect—are not as applicable. We find instead a form of control that is macroscopic, not seeking to impose precise domination over details because these are inherently uncontrollable at the strategic level. Strategy provides broad, meaningful direction and structure suitable to the changing complexity of the strategic environment—retaining adaptability and flexibility by directing actions to favorably alter the environment rather than trying to control it absolutely.<sup>42</sup>

As the theories illustrate, all complex systems are inherently nonlinear, and outcomes cannot be predicted or understood by the simple act of adding up the parts and the relationships. In linear systems, changes in output are nearly proportional to input; the sum of the inputs equals the output in a more-or-less predictable fashion. Most people think from a linear perspective and in a linear fashion, and indeed planning operates in large measure on linear assumptions even though practical experience often belies this approach. The difference is accounted for in planning with reserve forces and planned branches and sequels. In a system at the strategic level, complexity enters the simplest actions, no matter how deterministic they appear. The effect of one action may depend on or conflict with the status of another variable, and the net effect may change the conditions that affect other or all variables. On a primary level, then, to understand outcomes the strategist must examine his own choices in light of the goals, resources, and policies of the opposing actor and the continuities and variables of the rest of the strategic

environment. However, strategic acts are not one-sided, and the opposing or other actors may make choices in regard to responding to an action or even preempt it, so that the complexity confronting the strategist is compounded by what the other actors may choose to do. On yet another level, the chaotic nature of complex systems means that initial behaviors and outcomes cause changes that produce unintended dynamics with cascading effects that can alter, limit, enhance, or otherwise affect future choices or require reaction.<sup>43</sup> Thus the nonlinear characteristics of the strategic environment result from the interaction among chance and subordinate or integral self-organizing and adaptive systems—states, other actors, and the physical world.

Nonlinearity suggests a world in which the future has both continuities and unpredicted threats and opportunities. It suggests an interactive process in which strategic choices produce effects that in turn generate reactions that may or may not create major or complex changes. Other actors—friendly, adversarial, or indifferent—with regard to a strategy’s objectives may choose to act, react, or preempt. The smallest “friction,” whether by lack of foresight, slow execution, or factors beyond the actor’s control, can amplify itself into a cascade of things going wrong to create potential chaos. Further, chance events, purely stochastic phenomena, occur and shape the strategic environment in favor of or against the strategy. And, of course, actors, friction, and chance function interactively to further influence the strategic environment and affect the strategy.

Thus the world is more a place of instability, discontinuity, synergies, and unpredictability than planners prefer. Although a meaningful degree of linearity can be achieved, results often vary from the original intent, at times costing more than anticipated because of the need to manage the chaos within the strategic environment over the strategy’s timeline. Thus, in the strategy process, scientific analysis must be combined with historical perspective to create a comprehensive strategy that provides for dynamic change, innovation, responsiveness, flexibility, and adaptability.<sup>44</sup> The art of strategy allows the strategist to see the nature of the strategic environment and a path or multiple paths to his goals; and the scientific aspect of strategy provides a methodology to quantify a

path and marshal the resources to shape the strategic environment in favorable terms.

As a complex system, the strategic environment is interactive and adaptive because the states and actors have the capacity to respond individually and collectively (in a myriad of bilateral and multilateral relationships) to new challenges to the relationships and structures that provided stability in the past. When the balance is lost, the states and actors, individually and collectively, seek to self-organize their patterns of behavior into new patterns intended either to restore the former equilibrium or to obtain changes favorable to their interests. As in any complex system, to do this they must accommodate change, changing or responding in ways that provide for success in the new environment. At the same time, continuities with the past remain and are embedded in the emergent order. The adaptive task for the state or other actor is to maintain an acceptable balance between internal needs and external demands; sufficient actions and resources must be dedicated to the demands of the external environment, but at the same time the needs and expectations of the domestic environment must be appropriately addressed. The actors must adapt more or less in concert with the strategic environment, making external adjustments of their relationships with each other and the overall environment in order to survive.

If sufficient coevolution does not occur—whether because of a lack of adaptability on the part of leadership, insufficient material resources, or whatever other reason—one or more states or actors and their internal systems collapse, and new structures and relationships emerge in their place. This process of adaptation and change does not have to occur continuously or evenly; varying periods of stasis may be punctuated by rapid change until a new equilibrium is reached. Given this phenomenon, small events can sometimes seemingly trigger major changes—the so-called “butterfly effect.” In a similar manner, small decisions made or not made early in a period of environmental change can have a dramatic impact, possibly leading to irreversible consequences that may result in significantly different outcomes than would otherwise be the case. The strategist can fall victim to this phenomenon—reacting to its consequences—or, through judicious study and analysis, seek to use it to advance the interests of the state.

Again, the strategic environment is a complex system consisting of systems within systems. The strategist must recognize that, to be successful, a strategy must account for both the external and internal components of the strategic environment. For the political state, these can be identified as the domestic and international environments on a grand scale, but external elements can be further divided into adversaries, allies, and other actors. In addition, the physical or natural environment is one of the external elements, acting as another complex system within the strategic environment. Internal environments can be subdivided into the general public, interest groups, other parts of the governmental bureaucracy, and the subsystems or actors of the strategist's own organization. The strategic environment on all its levels is characterized by VUCA, but to say that the strategic environment is VUCA is not to say that it defies study, analysis, and evaluation, or that future changes or developments cannot be anticipated. It is simply to say that to predict or control it with any significant degree of certainty is exceptionally complex and difficult. The chaotic and complex nature of the strategic environment has implications for the development of strategy at all levels.

Like any complex system, the international environment is constantly subject to change, experiencing periods of stability and instability. Instability tends to increase as the degree of interaction rises, particularly if one or more actors seek to impose change on the strategic environment. Periods exhibiting lower degrees of interaction are generally more stable. Periods characterized by stability tend to favor linear approaches to problems or challenges, while periods exhibiting greater instability tend to require nonlinear perspectives and problem-solving. As the level or complexity of interaction rises, the strategic environment potentially moves into a state of self-organizing criticality, at which time it lies on the border of order and disorder, and then is highly susceptible to a radical new rebalancing. The strategic equilibrium is adjusted continuously, but on these occasions the strategic environment experiences dramatic change. Such major changes really reflect upheavals in the key continuities of the strategic environment. Strategists in the first quarter of the 21st century must recognize that the emerging strategic environment is the product of such an upheaval. In terms of chaos or complexity

theory, the strategic environment is in the process of bifurcation. The order or relative balance of the bipolar Cold War becomes part of the past as a new order is formed. While not all the rules must change, many will need to be changed or reinterpreted as states and actors seek a new equilibrium.

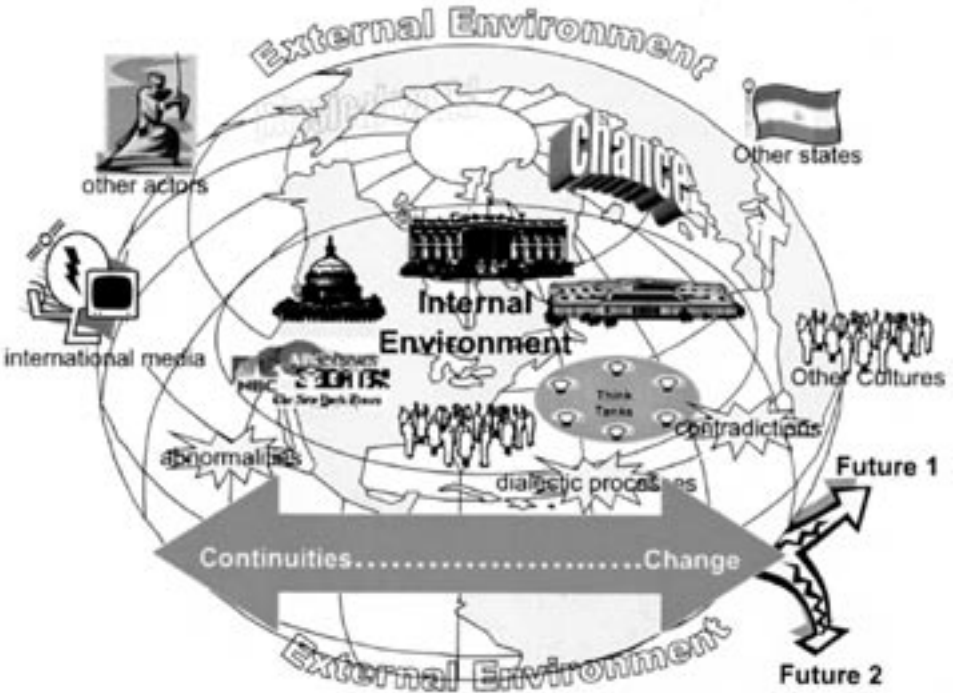


Figure 3.

What is the nature of this new strategic environment? A vast array of existing literature that attempts to grasp or describe the new strategic environment in terms meaningful to different communities—business, government, academic, military, religion, etc.<sup>45</sup> What they share in common is an appreciation that the strategic environment is in the midst of a major reshaping as a result of changes generally attributed to the convergence of a number of events or trends: the end of the Cold War, massive changes in economic relationships, the rise of globalization, and seminal advances in technology. At the heart of these changes is the “establishment of information and knowledge—their production, dissemination, storage, and

use—as the fundamental social and economic activity, rather than the cultivation of agriculture or the production of manufactured goods.”<sup>46</sup> It is a transformation of social and economic life on a global scale. Such a widespread change in multiple subsystems has dramatic implications for the strategic environment and the states and actors that compose the international system. Moreover, it will impose further change both at the international and domestic levels of most, if not all, actors.

This period of great and rapid change presents both threats and opportunities. The period has already displayed its characteristics in broad terms. It favors service economies over industrial manufacturing economies; it is global and local in scope at the same time—global in its reach and local in its focus; it allows and encourages decentralized production while it democratizes decisionmaking; it challenges and replaces authorities who cannot compete; and it appears to be ushering in a period of hyper-competition among businesses, cultures, and nation-states or other new state-like actors.<sup>47</sup> In essence, it will be a period of revolutionary change until a new equilibrium is achieved, with the strategic environment now teetering on the edge of chaos. It is a period of great opportunity and risk for the strategist in any system. In retrospect, the latter Cold War period appears to have been relatively stable, with established rules for the international strategic environment that orchestrated the relationships and interaction among the states and actors—in short, an equilibrium.

Strategy is made difficult by the chaotic and complex nature of the strategic environment. It represents a daunting challenge for the military profession, but it is this very nature that justifies a discipline of strategy—otherwise, planning would suffice. If chaos and complexity theory apply, the radical alteration of the strategic environment that resulted from the end of the Cold War offers even greater opportunities and risks (or threats) as the strategic environment reorders itself toward a new and as-yet undefined equilibrium in the 21st century. The role of the strategist is even more critical in this period as policymakers seek help in ensuring that the reshaping of the strategic environment occurs in terms favorable to the state. The strategist’s role increases in importance as the instability and difficulty increase. Yet the fundamental tasks

remain the same: understand the nature of the strategic environment and its various subsystems and construct a strategy that focuses the state on its long-term well-being. How well the strategist is able to do this depends on his ability to anticipate the interaction within the strategic environment and to develop appropriate strategic actions to serve national interests.





## IV. THEORY IN THE REAL WORLD

In theory there is no difference between theory and practice. In practice there is.

Yogi Berra

If strategy is simply the calculation of objectives, concepts, and resources within acceptable bounds of risk to create more favorable possibilities than might otherwise exist by chance or at the hands of others, why do effective strategies so often appear to elude the strategist? The answer, of course, is that successful strategy is much more complex than the calculation of objectives, concepts, and resources. Strategic theory in the real world confronts the dynamic nature of the strategic environment and the mind of the strategist—how strategists approach strategy-making in the context of their strategic environments. It also depends on the caliber of the execution of the strategy. Good strategy flows from understanding the nature of the environment and *creating a symmetry and synergy of objectives, concepts, and resources* that offer the best probability of achieving the policy aims. The strategist is assisted by the logic of strategy and the construct of planning, but the strategist is not a planner. Good strategy development provides for flexibility and adaptability so that planning and execution can be tailored to more immediate circumstances and respond to unanticipated opportunities and constraints. Good strategy remains, however, valid in its focus and direction and achieves its intent even when these opportunities and constraints are taken into account. This chapter discusses the implications of the environment for strategy development, the necessary and distinct mindset required of the strategist, and the obstacles encountered as the theory of strategy is applied in the real world.

### **Implications of the Strategic Environment.**

Strategists must comprehend the nature of the environment in which the strategy they are developing is to be applied—understand the kind of world they live in or that will emerge.<sup>48</sup> As advanced in Part III with the analogies of chaos and complexity theories,

the strategic environment is not totally random, unpredictable, or uncontrollable. Rather, the environment exhibits some characteristics of both randomness and order. Change may be induced in it by design or chance, but, because of its complexity, any change may produce results totally out of proportion to the initiating change—either greater or lesser than anticipated—and thus a degree of uncertainty and unpredictability is inherent to its nature. Changes come from actors, interactive circumstances, or chance. Actors may introduce rational and irrational changes through action or selective inaction, or through simple indifference or ignorance. Yet many strategists reduce strategy to overly linear and detailed directives that do not allow for the flexibility and adaptability to accommodate such unpredictability.

On the other hand, much of the strategic environment is deterministic and adheres to certain rules; continuities guide its general behavior over time and extend—to varying degrees—into periods of major upheaval and new equilibriums. These rules are both physical, as is the case with gravity, geography, and weather, and incorporeal. Rules of international behavior are an example of an incorporeal continuity. When in effect, these rules bound what is workable and acceptable within the international environment. Continuities may be codified and thus formally acknowledged, or may just be accepted practices. In some cases, they exist below the awareness level of the actors in the environment. Continuities always seek to reassert themselves, but their validity cannot be taken for granted. Continuities can be leveraged so that a strategy is assisted by the environment's natural inclinations, thus moving with the flow of history. Collective security is arguably a continuity that emerged in the 20th century and may be leveraged into the 21st century. On the other hand, a particular continuity's role may not be the same even though it still exists. Gravity continued to exist after the invention of the airplane, but its effect on warfare changed. Too few strategists critically consider the role of continuities in strategy development, missing opportunities or making invalid assumptions. For example, with the collapse the Soviet Union, many strategists focused on the promises of liberal capitalism and globalization and missed the implications of the resurgence of the continuities of nationalism and religion. Critical examination of continuities and change focuses

the strategist on what needs to change, what continuities can be leveraged for the necessary changes, and what should not or cannot be changed. All are important!

Understanding the strategic environment as a system of systems is a daunting intellectual challenge. Each system within it has external and internal components – and all interrelate to varying degrees. The multilayered interaction results in complexity and nonlinearity. The chaotic nature of this interaction is difficult to fathom, and it is even more difficult to manipulate effectively. Nothing is ever quite what it seems and all is subject to greater or lesser changes. It is a world of unlimited possibilities and seemingly great promise, tempered by competing interests and often unclear or less than desirable alternatives. Much appears insidious and Machiavellian or subject to nature and chance. Policy is often stated in lofty and ideal terms with too little regard for political reality and available resources – leaving the strategist without practical goals and adequate resources. All are interrelated, often confusing and convoluted, and very complex. A strategist must be comfortable in the VUCA environment. Too few professional military officers are prepared for this actuality.

The strategist is immersed in the complexity of the system of systems represented by the strategic environment. For example, a U.S. strategist assigned to NATO sees it from a national perspective as an external component even as he works within NATO to shape the rest of the international environment. Within NATO, he is an internal part of an organizational actor in the international environment. The complexity of relationships and interactions grows exponentially. The domestic environment is an internal component of the strategic environment relative to any national defense strategy. It consists of domestic actors, constituencies, institutions, and organizational roles, as well as the physical realities of resources and capabilities. The strategist is confronted with the domestic interaction of individuals, news media, special interest groups, civilian think tanks, branches of government, other departments of the executive branch, and offices and sub-organizations within DOD itself. Thus, any strategy is subject to interaction and reaction with domestic interests and actors, the nuances of interests within the strategist's own organization, and the interests and actors of the international arena. Some domestic interests may actually be working at odds with the strategist, trying

to frustrate his efforts for political or other reasons. Too few national security professionals are willingly capable of accepting and working with this complexity and nonlinearity. Strategy remains in the too-hard box, and insufficient time and resources are devoted to its consideration. As a result, strategic thinking is often reduced to simple assumptions that are often ill-founded, but misleadingly seem to allow “strategy” to unfold like good planning. Strategists must study and analyze the whole environment and then shape it by the design and articulation of strategy.

Strategy is too critical to be ignored or placed at risk by virtue of erroneous assumptions or by relegating it to a planning model. Strategic environments may be difficult to analyze, but good strategy – which must be based on sound strategic-level analysis – can shape the environment more positively than chance or lack of strategic direction. For as surely as uncertainty characterizes the future, the future will nonetheless come: “Strategy abhors a vacuum: if the strategic function is lacking, strategic effect will be generated by the casual accumulation of tactical and operational outcomes.”<sup>49</sup> Carefully crafted strategic initiatives bound future results in outcomes more acceptable to policymakers than those offered by chance, expediency, or adversaries. As chaos theory suggests, early actions can have a disproportionate effect on the overall pattern of change in the strategic environment. Strategists, particularly when over-focused on immediate demands of decisionmakers, often fail to look to the future with sufficient depth of analysis and act too late to create positive strategic effects at relatively low costs. Relying on expediency and planning methodologies in lieu of proper strategic thinking ignores the advantages that accrue from intended cumulative effects and increases the costs for and risks to the state’s security.

The strategic environment can be analyzed from different perspectives. In this monograph, the reader is asked to consider it from the perspective of systems within systems *interacting* in both linear and nonlinear ways. The strategist must understand the systems, but the proper focus of strategy is on the dimensions of interaction. Strategy has many dimensions, and all are in play to a greater or lesser extent at all times. A weakness in considering any one dimension can prove fatal to the whole enterprise. Colin Gray suggests that there are 17

or more of these dimensions: people, society, culture, politics, ethics, economics and logistics, organization, administration, information and intelligence, strategic theory and doctrine, technology, operations, command, geography, friction/chance/uncertainty, adversary, and time. These must be considered holistically – that is, individually – but at the same time in context with the others.<sup>50</sup> Some have argued that the transformation of strategy has occurred over the last 2,400 years on a more extended and integrated scale. They would list the major dimensions as bureaucracy, mass politics, ideology, technology and economic power. Here, too, it is recognized that the interaction of these affect outcomes exponentially.<sup>51</sup> History makes clear that particular dimensions play a greater role or are more critical at particular times, and that none can be ignored over time. Hence, as the Cold War wound down and the new world order began to emerge, ideology (communism versus liberal capitalism) appeared to wane in importance only to reemerge in the Global War On Terror (radical Islam versus secularism). It matters significantly what the topic of confrontation or the dimension of competition or collaboration is in developing a strategy. An economic issue may demand a conceptualization or model of interaction different from an ideological one and a different weighting of effort among the instruments of power. Just so, any other dimension may be affected, and all must be considered in the development of a strategy. As a complex system of systems, the strategic environment may evolve into new dimensions that must also be considered. Many strategists think too little about interaction, the dimensions in which it occurs, and the relationships among the dimensions.

All strategy is about “the future.” The future is where strategy has its effect. In dealing with unknowns and uncertainties, strategy forecasts from a knowledge and understanding of the systems of the strategic environment – what they are (facts and assumptions) and how they interact (observation, reason, and assumptions) within the dimensions of strategy. From this understanding, the strategist derives the key factors which contribute causally to the achievement of policy aims – assisting or precluding success. These factors may be tangible or intangible, representing any aspect of the environment. The existence of other states and actors, internal and external, is one of many factors that must be considered in any strategy development

effort. Factors constitute the key facts, continuities, and emerging trends—they are at the point of interaction within the system and among systems. In strategic analysis these factors are keys to developing an effective strategy, because using or influencing them is how policy goals are achieved. The strategist seeks to change, leverage, or overcome these, in effect modifying the equilibrium within the strategic environment to support policy aims. Balancing continuities and emerging trends is the most intellectually challenging task in developing strategy—seeking to address one aspect of a complex system without inducing unfavorable ripple effects elsewhere in the system. The strategist’s analysis of how best to do this is reflected in his selection of ends, ways, and means—the rational output of strategic thought. Too often in strategy development, insufficient analysis is applied to the identification and use of key factors, and as a consequence key factors are often overlooked, misidentified, or ill addressed.

Strategy is about thinking big and over time. Strategic thinking is not about reductionism, although the strategy eventually will be simplified and stated clearly as ends, ways, and means. Strategic thinking is about thoroughness and holistic thinking. It seeks to understand how the parts interact to form the whole by looking at parts and relationships among them—the effects they have on one another in the past, present, and anticipated future. It shares this perspective with chaos and complexity theories. Articulating strategic thinking as ends, ways, and means is only one step in a sophisticated intellectual process seeking to create a synthesis of consensus, efforts, and circumstances to influence the overall environment favorably while managing the risks involved in pursuing opportunities or reacting to threats.<sup>52</sup> While ends, ways, and means get at the essence of the strategy and must flow from a strategic perspective, thus collectively creating a strategic effect, they do not obviate an explanation of “why,” one of the paramount purposes of strategy. A strategy must work on different planes and speak to different audiences. In this sense, another purpose of strategy development is to explain and forecast in order to generate a domestic and foreign consensus in favor of the policy pursued. To do this, strategy must have a sense of where the state has been and where it is headed. Anything less in regard to the past “is to neglect

the direction in which the historical winds have been blowing. And the best grand strategies, like the most efficient navigators, keep the winds behind them.”<sup>53</sup> Anything less in regard to the future is to strike blindly into the dark at nothing, even while asking others to follow you into the darkness. Balancing continuities of the past and emerging possibilities is essential; a strategy must articulate the transition from the past state to the future in a manner that resonates with multiple audiences.

As a result of the complexity of the environment, strategy inherently creates a “security dilemma” for other states and actors that must be considered. Actions taken or not taken by one state or actor always have the potential to affect other states and actors, particularly their role in the strategic environment and their perception of that role. Any action risks changing the status quo for friends and adversaries alike, creating an element of instability in the equilibrium and introducing an element of risk for all. Because of its chaotic nature, the environment is subject to unintended multiordered effects and chance.<sup>54</sup> Strategy is never to be undertaken lightly and must be approached comprehensively. At the state level, according to MacGregor Knox, “Violence, chance, and politics; danger and friction; escalatory interaction between adversaries, remain the terrain of those who make strategy.”<sup>55</sup> The stakes are always potentially high! Many strategists too often focus on one-dimensional first-order effects, foregoing consideration of second- and third-order effects, how a strategy will be perceived by others, or the role of chance. In failing to properly consider the multidimensional and multiordered effects, strategists increase the potential risks.

Effects in the strategic environment are cumulative, but can be accommodated or nullified by interactions within the system, counterstrategies, or chance. As a complex system of systems, the environment seeks an equilibrium that allows its subsystems to coexist. As subsystems, states and actors seek to survive or advance in the environment according to what they deem acceptable and the system will tolerate. Changes can cancel one another in whole or part—although states and actors tend to have long memories, and important interests persevere. Once a change becomes part of the fabric of the environment, it lingers, influencing the nature of future

change. It then becomes one level of consideration among many for future strategies but often reemerges in a different context. Much of this activity may appear below the noise level of the strategist, but the role of the strategist is to be aware of what and who influence the well-being of the state and how. Too few strategists give consideration to the role of continuities—what they are, the roles they play, and when they are important to strategy.

As a chaotic, complex system, the strategic environment is also time sensitive—timing and rate of change matter. Somewhat paradoxically, periods of stability are the best time to contemplate bold shifts in strategy and the most difficult time to get a decision to do it. The environment is always rebalancing itself at the margins, and states apply the nuances of diplomacy and force in a peaceful world very carefully. At such times of relative stability, strategy rightfully focuses on what the state wants to achieve and then considers how the state will accomplish its goals over the long term. Yet few decisionmakers are willing to risk disturbances in the equilibrium or expend political capital for future gains without a clear threat or clarion opportunity, particularly in a democratic state. This makes it difficult to advocate strategies to preclude major upheavals in the environment. Thus, the governments of France and Great Britain appeased Germany during the 1930s instead of confronting it. President Franklin D. Roosevelt was able to move the United States only incrementally, and relatively insufficiently, toward preparedness for World War II. Yet strategy serves the state best when it anticipates and leads change. Preemptive or proactive strategies—or well-articulated grand strategies—too often are ignored by the strategic community as a result of the preference for near-term stability and the avoidance of political risk.

When the strategic equilibrium is disrupted in a major way, in chaos theory termed a potential bifurcation, the more numerous, rapid, and complex changes require a much more responsive strategy. Again, paradoxically, periods of major instability are the best time to advocate bold, broad strategies but provide the least time for consideration, thus magnifying the risk. Here decisionmakers perceive the risks of not changing to be greater than the risks of adopting a bold strategy. Thus, Japan's attack on Pearl Harbor opened the way for Roosevelt to go to war to defeat Japan and the Axis



Powers. But the Roosevelt administration, in concert with its allies, used success in the war to establish a “new world order” defined by the establishment of the United Nations and the institutions for international finance. In periods of great instability, strategy-making is accelerated but can be enhanced by the strategist’s preparation prior to the upheaval. The strategist who fully comprehends the nature of the environment and its continuities and manifestations during periods of stability can leverage this mastery during such periods. This leverage could be particularly useful if the instability cannot be preempted favorably through proactive strategies. Such mastery also allows the clarification of what constitutes well-being and anticipates objectives, while fostering familiarity with potential courses of action and resource requirements. In the unstable environment, the strategist gives great consideration to the multioverlapping effects of the rate and significance of change, and the fact that predictability decreases as change increases in rate and scope. This means that change itself is magnified in the process and must be managed carefully. In these circumstances, the strategist must compete on the edge, creating a relentless flow of competitive advantages that collectively move the state forward in the preferred strategic direction. The demands upon the strategist and strategy differ from those of a stable environment in that they are now confronting less clear boundaries, less predictable adversaries and allies, a more VUCA-like future, less time in which to develop strategy, or various combinations of these factors. In such an environment, the strategist anticipates whenever possible, reacts when necessary, and leads when circumstances are right.<sup>56</sup> Strategists must prepare themselves in times of stability for periods of instability by mastering knowledge and understanding of the many subsystems and their interactions, as well as the whole of the strategic environment.

The strategic environment readily compares to a chaotic, complex system. To be successful, the strategist and senior military professionals must understand its nature and implications for the development of good strategies that advance and protect the interests of the state. It requires that the professional maintain a level of interest and knowledge in the past, the present, and the future, and immerse himself in the continued study of the strategic environment.

## The Strategist's Mindset.

Strategic thinking is both an art and science and an essential element of military professionalism. True strategic genius is able to comprehend the nature of the strategic environment, especially its complexity and multiordered interactions, and derive rational ends, ways, and means that solicit consensus and create strategic effects leading to the desired end state. Not all senior military officers can aspire to reach the apex of strategic skill, but all senior leaders should be able to evaluate and execute a coherent and relevant strategy. In this regard, a proper understanding of the strategist's mindset further helps the professional, genius or not, to assess his role and responsibilities in regard to strategy. Leadership can delegate the strategy formulation function to strategic genius if it is present and can be recognized, but the leader retains responsibility for the quality of both the strategy and its execution.

Strategy is essentially a human enterprise, with all of humanity's genius, frailties, and shortcomings. It is both an individual and collective undertaking that bears fruit from its successful anticipation of requirements and effects and the successful execution of its methodology. The strategist and the implementers of strategy are actors pitted against other actors—including other strategists, circumstance, and chance in the chaotic and complex strategic environment. History is replete with examples of people making irrational, as opposed to rational, decisions, and wrong rational decisions based on inaccurate information and assumptions. Study can help gain insight into human behavior, but simplicity, stability, and universality do not apply to human behavior, even as assumptions about human behavior help us deal with it.<sup>57</sup> As a human enterprise, every aspect of strategy is subject to exception, and the strategist must be open to this reality. This reality applies to all participant allies and their enemies, and even to onlookers, whether they be strategist, leader, or executor.

Ideology and culture are powerful influences on the shaping of strategy and strategic success. Both influence the making and execution of strategy in multiple ways. Human participants in strategy all wear a set of analytical blinders composed of their ideological and cultural assumptions and preferences regarding

the strategic environment and how to shape it. These blinders are a potential weakness for exploitation by our adversaries and other actors when we wear them, but opportunities for exploitation by us when they are worn by others.<sup>58</sup> The strategist's frame of reference affects how he sees the world and how he advocates interacting within it. These human preferences influence how strategy is constructed and executed. For example, strategists looking at the world from the perspective of realism, liberalism, or constructivism will have divergent worldviews and will likely arrive at different strategic approaches.<sup>59</sup> Strategists are both aided and limited by these constructs. Such constructs discipline thinking but also potentially limit consideration of alternatives.

Ideology and culture not only shape the expectations and goals of those who formulate and approve strategy but the ferocity and stamina of those who execute it. In addition, ideology and culture influence national popular support and global acceptance of the legitimacy of a national strategy.<sup>60</sup> Consequently, the strategist must consider the cultural and ideological perspectives of strategy internally and externally, as well as personally. Internally, there are preferences that garner and sustain acceptability and support, and externally there are differences based on nationality, ideology, religion, and culture that must be considered in the development and execution of strategy. One needs to look no further than the American experience in Vietnam to illustrate this. Once the war was publicly reframed into a nationalist struggle for Vietnamese unity, both domestic and foreign support waned. For Americans, sustainment of a nonrepresentative South Vietnamese government no longer justified the costs in lives on both sides. The strategist must know what motivates him and others, and what meets the criteria of both internal and external acceptability. Strategy founded on false constructs or beliefs, or on inconsistency with acceptability criteria at home or abroad, is at greater risk.

Strategy must be consistent with national values and acceptable to international norms. For the United States, this can be particularly problematic. U.S. liberal culture (free markets, equal opportunity, free elections, liberal democracy, constitutionalism, rule of law, and individualism) fundamentally clashes with that of many other societies. Cultural conflicts about faith and identity are reflected

at the individual and societal levels. As the universal nation, the modern United States has a distinct culture that does not include to the same degree the elements of hierarchy, community, tradition, and custom so evident in older, more stratified societies. Consequently, U.S. strategy is prone to clash with the elites and populations of non-Western cultures and to differ on specific issues even with traditional Europe.<sup>61</sup> Historical experience and outlook differ by nationality and culture, with these differences often posing issues for strategy formulation and execution. It does not follow, however, that the United States must change these elements in other societies; they need only to be recognized and accommodated by strategy. Legitimacy, morality, and cultural appreciation are keys to long-term effective strategy because they address the human dimension of interaction within the strategic environment. Expediency in regard to them may produce short-term gains but risks alienating too many other actors. In the end, we must learn to see ourselves, our allies, our adversaries, and others as an integral part of strategy.<sup>62</sup> We must understand that “strategy is as much about psychology as it is facts on the ground.”<sup>63</sup> Above all, strategy is about seeing the complexity and long-term possibilities inherent in the strategic circumstances.

As a minimum they [strategists] must see clearly both themselves and potential adversaries, their strengths, weaknesses, preconceptions, and limits—through humility, relentless and historically informed critical analysis, and restless dissatisfaction even in victory. They must weigh imponderables through structured debates that pare away personal, organizational, and national illusions and conceits. They must squarely address issues that are bureaucratic orphans. They must unerringly discern and prepare to strike the enemy jugular—whether by surprise attack or attrition, in war or in political and economic struggle. And in the end, makers of strategy must cheerfully face the uncertainties of decision and the dangers of action.<sup>64</sup>

Strategists must swim in complexity to understand the strategic environment and be open to all its possibilities, while planners seek to simplify and clarify so that they can act directly.<sup>65</sup> These distinct roles call for two different thought processes, but Westerners, with their unitary outlooks, are culturally at a disadvantage in perceiving possibilities from the strategic realm, marked by complexity and ambiguity. Western thinking is primarily scientific or Newtonian.

To get the rationality of western logic, the reality of the world is expressed in either *or* terms – it is assumed to be either black or white. The strategic environment is much less objective than Western logic portrays it, often containing more gray than black and white. Good strategists have always recognized this ambiguity and how to think about it. It is only recently that a discipline of so-called “fuzzy logic” has emerged to describe the greater complexity and corresponding openness in thinking required of the strategic environment. Fuzzy logic or “fuzzy thinking,” however poorly named, helps illuminate the realities of the strategic environment because it provides allowance for degree, probability, and ambiguity in the formulation of objectives and concepts.

The science of fuzzy logic is an attempt to contrast reality with the binary logic inherent to Western scientific thought. Binary logic is rooted in Aristotle’s philosophical law that something is either A *or* “not A.” It cannot be A *and* “not A.” It is either true or false. Thus in Western science, math, logic, and much of culture, we assume a world of blacks and whites that does not change – this is bivalent logic – two-valuedness. This assumption permeates Western thinking. For example, you are either with us or against us. Every statement is either true or false; it has a truth value of 1 or 0. Thus if you are asked if a number is a 1 or a 0, it is clearly one or the other. In reality, the world is very much gray. If you are asked if 0.4 is a 1 or a 0, in Western bivalent thinking you must decide which it is and act accordingly. In reality it is more than a 0 and less than a 1, something in between, or gray. Hence, fuzzy logic argues that everything is a matter of degree or multivalence – with three or more options or an infinite spectrum of options instead of the two extremes of true or false. Fuzzy logic advocates argue that, for the sake of simplicity, our culture traded off accuracy – the way the world is in reality – for a black or white answer. Western scientific thought is limited or hindered by this bivalent logic. As shown by recent developments, “fuzzy thinking” better reflects reality in both math and science. New “smarter” appliances, computers, and other products are already in the marketplace as a result of the application of this science.<sup>66</sup>

Fuzzy logic also has application in strategy, but scientific or Newtonian thought dominates most Western thought. As a result, military planners tend to seek certainty in their planning

processes – direct cause and effect – even at the expense of accuracy or reality. In the sense that executors of strategy need to work from facts and concrete assumptions about cause and effect to coordinate and implement their activities, this practice serves organizational planning needs well. But such Newtonian thinking at the strategic levels distorts reality and obscures the actual complexity, leading to faulty assumptions and hiding potential issues and options. Strategic thinking is better served by openness to possibilities rather than a constrained perspective.

Again, Clausewitz recognized the difference in reality and planning with his concept of friction. He cautions that: “The good general must know friction in order to overcome it whenever possible, and in order not to expect a standard of achievement in his operations which this very friction makes impossible.”<sup>67</sup> Friction results from what cannot be known, what changes from what you knew, and all those glitches that can beset an operation – the reality of war. Friction at the operational and tactical levels is mitigated by proper planning and appropriate anticipation and reaction – branches and sequels to the plan. In essence, the good general creates a black and white reality by attempting to account for everything possible in the planning process. Since friction affects the enemy army as well as one’s own, the commander who creates reality best is at an advantage in overcoming friction and winning the engagement.<sup>68</sup> At the strategic level, the degree of uncertainty and complexity is much greater because of the scope of time and nature of the environment. The future cannot be predicted with sufficient precision because the “frictions” are too great to plan for successfully. Good strategy is designed to accommodate, deter, and seek advantages in the realities of degree, probability, and ambiguity – all incident to a complex chaotic system. It accommodates and uses friction. Fuzzy logic helps to explain the ambiguity and uncertainty observed at this level – revealing more of the possibilities to the strategist, while at the same time qualifying expectations. The future is shaped from the structuring of these “possibilities” and expectations into a coherent strategy, expressed as ends, ways, and means, leading to a better end state.

Since strategy can be formulated at different levels, the strategist should be clear in regard to the level at which he is working even

as he remains holistic in his outlook. At the national level, strategy is concerned with maintaining internal systems in balance with one another, while creating effects in the external environment that favor the state over time. When it focuses on lower levels or specific issues, strategy is really a case of particular generalization – what strategic effect is required to what purpose and how does it affect the whole of the environment. On the other hand, strategy at any level is not problem-solving in a classic sense. It does not seek to solve a specific problem as much as to anticipate a future and shape an environment in which fewer problems arise and those that do can be resolved in favorable terms. Causation in strategy is contingent, not categorical. Context always matters. Ultimately the success of strategic effects depends on what the adversary and others choose to do and on what reality turns out to be. Hence strategists must cultivate a web-like sense of reality, seeing everything as connected in some way to everything else and being open to all possibilities. The strategist provides direction that is consistent with the past as it bridges to the future.<sup>69</sup> In this process, strategy must be inherently flexible as it anticipates the future. Thus, strategy is always seeking a balance between specificity and flexibility in establishing boundaries for planning. Strategy does not dictate the future, but it does anticipate it and seeks to shape it in favorable terms at whatever level it functions, maintaining an appropriate degree of adaptability and flexibility.

The true purpose of strategy is to create favorable effects in support of policy goals for the advancement or protection of national interests. Strategic effects are the impact that *the accomplishment* of strategic objectives has on the environment. Effect flows from strategic performance – the synergy of the objective(s) achieved, the concept(s) employed, and the resources used. Thus, strategic performance is the measure of the quality of actions actually executed to achieve the policy aims.<sup>70</sup> Effects occur on different levels and from different causes within the environment. Effects must be comprehended in at least three dimensions. First, good strategy deliberately seeks to create multiple-order effects – a chain of effects that culminates in strategic-level success. Such intended first-, second-, and third-order effects, etc. are a rational product of the strategist's analysis, with the purpose of stimulating and influencing interaction or conditions within the environment in favor of the policy aims.

When a strategic concept is implemented to achieve an objective that produces an intended reaction from the adversary or a direct change within the environment—a first-order effect is created. But if the strategist has foreseen and sought multiordered effects as a result of the concept in action, he has deliberately created cascading effects—intended second- and third-order effects. On the other hand, a different dimension of effects occurs when the strategist fails to fully comprehend the consequences of his choices, with the strategy creating unanticipated consequences in the environment. A third dimension of effects that must be considered is the intervention of chance or adversaries and others in reacting to the effects of the original strategy. The good strategist seeks to understand all these dimensions of effects and to capitalize on or compensate for them in his strategy. Thus, he prepares for those effects he foresees and maintains a degree of adaptability and flexibility for those he cannot foresee. Fuzzy “thinking” helps the strategist to understand the possible manifestations of effects by revealing the shades of reality.



Figure 4.



Ultimately the role of the strategist is to evaluate the complex and evolving environment and translate policy goals into terms from which planning can proceed. Strategic thinking must see the environment as it actually is, identify the factors that favor or hinder the policy aims, and anticipate the possibilities for achievement of policy goals. The strategist is concerned with facts, factors, and assumptions in this process. Each must be right. Facts are reality as it is—the grayness of fuzzy thinking as opposed to invariable black and white. Factors are facts that affect policy aims. Assumptions bridge the unknown. Through the formulation of appropriate ends, ways, and means to manipulate the factors and take advantage of the possibilities, the strategist creates favorable effects on behalf of policy goals. Openness and recognition of personal biases and preferences move the strategist closer to a proper assessment of reality. This assessment tempered by an appreciation of chance and others’ ideological and cultural biases and preferences—in light of interests and policy goals—defines the effects desired. A proper mindset on the part of the strategist is critical to the development of good strategy.

### **Strategy is Not Planning.**

Military professionals come from a world of very adept planners; they learn planning methodologies from the day they enter service. *Strategy is not planning.* As described above, it partakes of a different mindset. Planning makes strategy actionable. It relies on a high degree of certainty—a world that is concrete and can be addressed in explicit terms. In essence, it takes a gray world and makes it black and white through its analysis of the facts and assumptions about the unknown. Planning is essentially linear and deterministic, focusing heavily on first-order cause and effect. It assumes that the future results can be precisely known if enough is known about the facts and the conditions affecting the undertaking. The planning process is essential to reduce uncertainty at the tactical level—it allows detailed actions to be prescribed. In reality, uncertainty can never quite be achieved even at that level, and it increases exponentially as we ascend from the tactical to the operational to the strategic level. The planning process works because the lower the level, the more

limited the scope and complexity, and the shorter the timeline; hence, the number of unknowns is limited and can be compensated for in branches and sequels to create “certainty.” *Planning is not strategy.* It is essential for the successful execution of a strategy—making strategy actionable, but requires a different mindset. The military professional is trained for the certainty of planning throughout his career, but must be educated for uncertainty as he enters the strategic realm.

The strategist must understand the difference between strategy and planning in order to produce good strategy. The planner must understand the difference between planning and strategy in order to execute strategy successfully. Planning bridges the gap between strategy and execution. The purpose of planning is to create certainty so that people and organizations can act. The purpose of strategy formulation is to clarify, influence, manage, or resolve the VUCA of the strategic environment through the identification and creation of strategic effects in support of policy goals. Strategy lays down what is important and to be achieved, sets the parameters for the necessary actions, and prescribes what the state is willing to allocate in terms of resources. Thus, strategy, through its hierarchal nature, identifies the objectives to be achieved and defines the box in which detailed planning can be accomplished—it bounds planning. Within that box, planning adapts strategy to a concrete world with facts, figures, and interrelated and sequenced actions calculated to achieve the strategy’s objectives. The planner is Newtonian or scientific in his approach; the strategist is more “fuzzy.” Both share the paradigm of ends, ways, and means. Too many military professionals confuse strategy and planning. As a consequence, planning-level thinking is often applied in the strategy development process or when planning objectives and concepts are elevated to the strategic level. When this occurs, even though the plan may be successful, the resulting strategic effects fail to adequately support, or are actually counterproductive to, the stated policy goals or other interests.

### **Development of Strategic Objectives.**

In strategy formulation, getting the objectives (ends) right matters most! Too often in strategy development, too little time is

spent on consideration of the appropriate objectives in the context of the desired policy, national interests, and the environment. Yet it is the identification and achievement of the right objectives that creates the desired strategic effect. Objectives are the true focus of strategy formulation and, if not properly selected and articulated, a proposed strategy is fundamentally flawed and cannot be effective. If the wrong objectives are identified, the concepts and resources serve no strategic purpose. Thus, the logic of strategy argues that objectives are primary even though concepts and resources are also crucial to success—action and costs are subordinate to purpose in strategy. Yet in strategy formulation, efficiency is often confused with effectiveness by both strategists and leadership. Strategy must reflect a preference for effectiveness. In this regard, objectives are concerned with doing the right things. Concepts are concerned with doing things right. Resources are concerned with costs. Objectives determine effectiveness; concepts and resources are measures of efficiency. A lack of efficiency increases the cost of success, but a lack of effectiveness precludes success. Ultimately, strategy's success can be measured only in terms of the degree to which its objectives are accomplished. Thus, again, efficiency is subordinate to effectiveness.<sup>71</sup> At the point where constraints on concepts or resources risk achievement of the objectives, the strategy is in question.

For the nation-state, strategy and strategic objectives are derived from the policy consideration of protecting or advancing national interests within the context of the strategic environment as it is, and as it may become. In the past, security policy largely has focused on the international strategic environment in regard to national security needs—the external strategic environment. The domestic strategic environment, the internal component, was less identified with national security concerns. “Globalization” and its derivatives, such as an integrated world economy and the Global War On Terror, have forced a general acceptance that the concept of internal and external strategic environments is less distinct than in the past. Within the United States, such realization has subordinated national security strategy to a larger grand strategy concerned with both domestic and international issues in many current theorists' thinking. In either case, strategy is driven by national interests at the state level, and the

strategist must consider both the external and internal components of the strategic environment in the development of strategy.

Donald E. Nuechterlein, in *America Overcommitted: United States National Interests in the 1980's*, describes *national interests* as the perceived needs and desires of a sovereign state in relation to other sovereign states which constitute its external environment.<sup>72</sup> The *DoD Dictionary of Military Terms* defines national security interests as “the foundation for the development of valid national objectives that define U.S. goals or purposes. National security interests include preserving U.S. political identity, framework, and institutions; fostering economic well-being; and bolstering international order supporting the vital interests of the United States and its allies.”<sup>73</sup> The nature of the strategic environment, as developed in this monograph, suggests a more generalized definition, such as “the perceived needs and desires of a sovereign state in relation to other sovereign states and actors in the emerging strategic environment expressed as desired end states.” This broader definition encapsulates the dynamism of a strategic environment in which multiple actors, chance, and interaction play a role, and both external and internal components are recognized. Interests are expressed as general or particular desired end states or conditions. “U.S. economic well-being” would be a generalized interest; “international access to Middle Eastern oil” illustrates a more particular economic interest. Interests may change over time, although general interests such as free trade and defense of the homeland are immutable.

At the highest level, political leadership uses policy to articulate state interests and guidance in achieving them. Policy provides guidance for strategy. Such guidance may be quite general, as in a vision statement that relates interests to the strategic environment, or a more specific statement of guidance containing elements of ends, ways, and means. It is found in various documents, speeches, policy statements, and other pronouncements made on behalf of the government by various officials or provided by leadership as direct guidance for the development of strategy. Policy may be implied as well as stated. It may be the result of a detailed strategic appraisal or arrived at intuitively. The strategist must understand national interests and policy in order to formulate appropriate strategy. Given the complexity of the strategic environment, the strategist must

be holistic in his deliberations and apprise the policymaker of the interaction and any conflict between a particular policy and larger interests or policies. Lower-level leaders may state more definitive guidance as policy, but such policy is subordinate to higher-level policy and strategy. Strategists at lower organizational levels must have a comprehensive grasp of interests, higher policy and strategy, and their own guidance in order to formulate subordinate strategies. In all cases, strategy is subordinate to policy and hierarchical in application. Nonetheless, the strategy development process by its nature evaluates the appropriateness, practicality, and consequences of policy, and thus informs policy of the art of the possible and the costs and benefits of achievement or failure.

Military subordination to civilian policymakers is a recurring and sensitive issue in civil-military relations within the United States. The political leadership and the American people expect their military to execute the guidance provided by elected officials faithfully. Yet, the American people also demand that their military perform professionally and win the nation's wars. Civil-military relations are not an exclusively American issue. Clausewitz provided a proper perspective on the relationship of the military and policy in *On War*: "The assertion that a major military development or the plan for one, should be a matter of *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 for a war, and ask them for *purely military* advice."<sup>74</sup> Policy provides guidance for objectives and use of the instruments of power, but the strategy formulation process logically informs policy. In a democratic society, the military professional must build a relationship with civilian leadership that facilitates the essential two-way communication between policy and strategy. If policy misguides, asks the improbable, or unnecessarily confines strategy, the level of risk associated with the strategy rises.

In the world of the military strategist, strategy can be demanded even when inadequate or no policy guidance has been provided. In such a case, the strategist's responsibility is to seek policy clarification from leadership. Often this is best done by recommending alternative policy choices based on an analysis of interests in relation to strategic circumstances – a necessary analysis for strategy formulation also. The distinction is that the policy alternatives are derived directly from

the interests. Both policy and strategy should be consistent with the protection or advancement of overall state interests in the strategic environment. It is the responsibility of the strategist to identify all the viable alternatives.

Strategy seeks to protect or advance a particular interest, or the general interest, of the state within the strategic environment relative to other actors, circumstances, and chance in accordance with guidance provided by policy. In doing this, strategy uses analysis to determine the relevant factors—facts, issues, threats, and opportunities—that act or interact to affect the interest. Strategy seeks to act on or use these factors to influence the strategic environment favorably without inadvertently creating other unfavorable circumstances within the environment. These factors are the primary focus of strategy; their relationship to the interest and policy guidance leads to appropriate objectives and concepts—what is to be accomplished and how to use the state’s instruments of power to accomplish the objectives. Instruments of power may be used singularly or in combination, and directly or indirectly. Given the complex and chaotic nature of the environment, defining the right objectives for desired strategic effect, developing a proper concept, and providing resources are all formidable tasks.

Since strategy is hierarchical, the strategist must understand the level of strategy at which he is working, the nature of the strategic environment at his level in regard to internal and external factors, and the comprehensiveness of strategy—the consequences of his choices in regard to other levels of strategy. With this in mind, the strategist can develop objectives. Strategic objectives may be derived from policy, higher levels of strategy, or independent analysis of the strategic environment. The primary question in determining objectives is this: What end(s), if accomplished, will create the desired strategic effect in support of policy or interests without detrimental collateral effects?

*Objectives (ends)* explain “what” is to be accomplished. They flow from a consideration of the interest, which is expressed as a desired end state, and the factors in the strategic environment affecting the realization of this desired end state. Objectives are bounded by policy guidance, higher strategy, the nature of the strategic environment, and the capabilities and limitations of the instruments of power available. Objectives are selected to create strategic effect. Strategic objectives, if

accomplished, create or contribute to creation of strategic effects that lead to the achievement of the desired end state at the corresponding level of strategy, ultimately serving national interests. In strategy, objectives are expressed with explicit verbs (e.g., deter war, promote regional stability, destroy Iraqi armed forces). Explicit verbs force the strategist to consider and qualify what is to be accomplished and help establish the parameters for the use of power.

A number of problems plague the strategic community in regard to the development of objectives. Objectives too seldom receive the depth of thought and reflection they merit. The objectives establish the parameters of all that follows. Objectives must reflect a thorough understanding of the end state desired, the nature of the environment, policy guidance, and the multiordered effects required to create the conditions for the end state. The diversity of outcomes possible in the environment means that the totality of specific results rarely can be predicted at the outset.<sup>75</sup> Strategy, as a matter of principle, must be flexible and adaptable. Thus, strategy cannot be made static by objectives that are too confining. In its formulation, it must focus on “comprehensive” objectives that reflect an understanding of the dynamic nature of the strategic environment and are sufficiently encompassing to allow for change in execution without losing focus on policy or interests. On the other hand, objectives so broad or vague that they can be misinterpreted or fail to provide appropriate direction risk the success of policy. Strategic objectives logically bound but do not unnecessarily confine subordinate levels.

Strategic objectives maintain their validity, while providing for adaptability and flexibility, by focusing on root purposes and causes. If objectives are set at the strategic level with a focus on root purposes and causes and an appreciation of the nature of the strategic environment (chaos, complexity, human nature, chance, friction, etc.), they are logically of sufficient breadth to provide the necessary adaptability and flexibility to confront the unforeseen. In turn, they also logically broaden the scope of consideration for ways and means—further enhancing the preconsideration of adaptability. Most strategists make the objectives too narrow and precise, pushing their thinking down to the planning level. At the planning level, exactness of detail is more valued because it can be quantified and made actionable. Such detail works in the planning

realm because of the reduced scope and greater certainty. Planning-level objectives elevated to the strategic level are more susceptible to failure as a result of the scope and chaotic nature of the strategic environment, which exponentially multiplies possibilities for friction and asymmetric reactions by others. In strategy, the focus is on clarity of objectives appropriate for the level, not prescribing detailed instructions for lower levels. Strategic objectives directly serve the strategic purpose – the desired end state.

Simply put, if the strategic objective is to win the war, then losing a battle is regrettable but does not necessarily preclude achievement of the strategic objective. The state can seek additional battles or apply other instruments of power. On the other hand, if the objective is to win every battle, then the state has been denied its strategic objective as soon as a single battle is lost. The strategy has failed, producing different repercussions in the internal and external components of the strategic environment, even if the war is ultimately won. The “win-every-battle” strategy also has confined its use of power to the military instrument. In modern war, winning battles is a planning objective; winning wars is a strategic objective. Strategy focuses on root purposes and causes. To do otherwise is to divert focus and power, lessening probabilities for success and increasing the probability of unintended second- and third-order effects. This eventuality appears evident in the U.S. national-level strategic approach in the second Iraq War.

While the Bush administration has been somewhat ambiguous on root purposes in the second Iraq War, one expressed root purpose in going to war with Iraq was to effect a regime change in Baghdad so that international terrorists would be denied state sponsorship and potential weapons of mass destruction. A number of “strategic” objectives emerged from this purpose: (1) defeat Iraqi military forces in war, (2) remove Saddam Hussein from power, and (3) establish a new democratic Iraqi regime. One could postulate that the first objective, defeat Iraqi military forces, was inappropriate as a national security-level objective and should have been subordinated by locating it at the theater-military level. In practice, these objectives were sought sequentially. Through its elevation and sequential expression, the defeat of Iraq military forces became the focal point of the strategy when, in fact, the key objective and point of focus should have been



the establishment of a new democratic regime, with the military defeat of Iraqi forces and the removal of Saddam Hussein expressed as acceptable strategic outcomes in guiding subordinate levels.

As a consequence of this misdirected focus, the military objective occupied the time and talent of the policymakers and national-level military leadership with consequent neglect of the third objective. While this proposition is debatable, it is clear that the presumption of the strategy was that the defeat of the Iraqi military would lead directly to accomplishment of the other objectives. In actual fact, more thought and a more intense focus and effort on how to achieve the democratic regime objective was needed. The inappropriate elevation of the objective and the sequencing also illustrate the mindset that inflicting military defeat is essential to the achievement of the other two objectives. Again, this may or may not have been true, but the point is that defeat of the Iraq military forces was an appropriate focus for a lower level of strategy or planning. The closer you approach planning, the easier the conceptualization becomes – it quantifies and can be made more precise. People prefer certainty and migrate toward it – it is more comfortable. Strategy deals with ambiguity and uncertainty. Most people are uncomfortable with these and seek to move toward the known at the expense of improperly analyzing and thus jeopardizing the recognition and achievement of the proper objectives.

### **Developing Strategic Concepts.**

*Strategic concepts (ways)* explain “how” the objectives are to be accomplished by the employment of the instruments of power. Instruments of power are the manifestation of the elements of power (the state’s resources) in action. Thus a naval blockade might be the instrument to apply the economic and military elements of power. Strategic concepts link resources to the objectives by addressing who does what, where, when, and why to explain how an objective will be achieved. Since concepts convey action, they often employ verbs in their construction, but are descriptions of “how” the objective of a strategy is to be accomplished. However, the verb choice is important, as is word choice throughout the articulation of strategy. Word choices imply levels of effort and degrees of acceptability.

Strategic concepts provide direction and boundaries for subordinate strategies and planning—words matter! A strategic concept must be explicit enough to provide planning guidance to those selected to implement and resource it, but not so detailed as to eliminate creativity and initiative at subordinate strategy and planning levels. Logically, concepts become more specific at lower levels as details are pushed down to the subordinate strategic and planning levels, but the complexity of the strategic environment is resolved at the responsible strategic level.

Strategic concepts are often the central focus of a strategy. Some would label the concept as the strategy, but strategy always consists of ends, ways, and means—and the focus is on how they interact synergistically with the strategic environment to produce the desired effects. Some concepts are so accepted that their names have been given to specific strategies. Containment, forward defense, assured destruction, and forward presence are illustrative. In actual practice, these strategies had specific objectives and resources associated with them, and the concept was better developed than the short title might imply. Good strategy is an integral whole of the right objectives pursued through appropriate concepts and supported with the necessary resources. Wrong objectives supported by brilliant concepts will not protect or advance national interests.

Concept development can be understood best as a competitive enterprise. Good ideas and capabilities compete for consideration and adoption and/or adaptation and inclusion. More than at the tactical, or even the operational, level, strategic success comes from diversity of thought and approaches that leads to a full consideration of the complexity involved and development of simple but comprehensive concepts that ensure accomplishment of the objectives. Few strategic objectives are accomplished with only one element or instrument of power, and strategy must consider, prioritize, and assign dominant and subordinate roles to the elements and instruments of power in the concepts and resources based on the environment and the objectives. Our earlier examination of the nature of the environment suggests how problematic this can be for the strategist in light of linear, nonlinear, and stochastic behavior. Given the nature of the environment, “how” you seek to accomplish an objective will itself produce interaction within the environment. Part of the complexity

is that an inappropriate instrument or a faulty application may well produce undesired second- and third-order effects. It is entirely possible to achieve a specified strategic objective but have the positive results sought subverted in the long run by the negative effect of the methods used. For example, the German military strategy in 1914 required that France be defeated rapidly first in order to preclude a prolonged two-front war. In order to accomplish the defeat of France, the German Army's strategic concept called for the army to invade through Belgium. However, Belgium's neutrality was guaranteed by treaty, and the British leadership honored its commitment. Implementation of the German strategic concept thus led to Great Britain's entry into the war, which in turn precluded a rapid defeat of France and eventually led to the entry of the United States. The United States provided the resources to defeat Germany.

The strategist must actively seek and consider diverse and multiple concepts for the achievement of strategy's objectives. A thorough examination of multiple strategic concepts allows the strategist to avoid concepts entailing the most egregious undesirable second- and third-order effects, or to develop appropriate ways to mitigate them. It allows for the selection of the concept that best meets the criteria of suitability, acceptability, and affordability. Examination of all strategic concepts has the additional advantage of allowing the strategist to consider flexibility and adaptability in the selection of an appropriate concept. Moreover, if a concept employed is not successful, the effort devoted to considering multiple approaches allows for the quicker shift to a new concept—so that national efforts can be more rapidly redirected toward accomplishment of the objective. Good strategy is about examining all viable concepts.

One area of particular confusion associated with concepts results from the hierarchical nature of strategy. The concept for a higher strategy often states or implies the objectives of subordinate levels of strategy or planning as part of the "how" of achieving the strategic objective. Strategists or others often want to elevate these to an objective for the higher strategy. Such elevation is inappropriate as discussed earlier. It appears to add precision but actually detracts from the focus of what is most important to achieve. A simple test for distinguishing whether such an objective is part of the concept

is to ask “in order to do what?” The answer to this question should lead directly back to the appropriate strategic objective. What you need to accomplish as an end when you ask this question is the real strategic objective. At the same time, a higher-level objective may transfer directly to the lower level, or the higher strategic concept may establish objectives for lower levels. Both the higher-level objective and concept may create implied objectives for the lower levels. In a hierarchical strategic system, higher strategy dictates to lower levels of strategy plus planning in objectives, concepts, and resources; lower levels inform higher but are subordinate to higher strategy.

Another alluring trap for the strategist and leadership is strategic monism, the belief that one strategic concept fits all situations.<sup>76</sup> History is replete with overzealous advocates of such strategic singularity. Usually the appeal appears to lie in its directness, application of technology, and appearance of efficiency—cheaper, quicker, and less complex. Nuclear deterrence was a strategic concept initially embraced by the United States following World War II in large part as a substitute for conventional forces. Yet when conflicts emerged, such as the Korean War, use of nuclear weapons was barred on policy grounds, and conventional military forces were required—a failure of the strategist to see the environment as it really existed. The initial strategic monism of nuclear deterrence left the United States without an appropriate military instrument to support policy short of nuclear war until the adoption by the Kennedy administration of a strategy of flexible response.<sup>77</sup> The precision strike argument, a modern version of strategic bombing, is a potential contemporary military example of strategic monism. It substitutes technology for manpower, reduces casualties, and seeks to force the adversary to concede with limited collateral damage. It is a powerful capability, and may be an essential one, but it is not a singular solution to military strategy. Technology does not change the essence of war, or even the cruel face of it in all circumstances. Technology is an enabler at the strategic level, not a substitute for a strategic concept.<sup>78</sup> But technology often outruns political and strategic maturity, creating strategic conditions or consequences that neither are prepared to deal with appropriately.<sup>79</sup> The strategist thus must avoid strategic monism.

Strategic monism can occur on a grander scale. Strategic flexibility and adaptability at the highest levels are relative to the ability of the state to bring to bear the whole range of the capabilities inherent to its elements of power. A State Department that is inadequately resourced limits the application of diplomatic instruments. An inadequately funded military would create a similar problem. On the other hand, if all the state has is a strong military, every strategic issue begins to look like a nail calling for the application of the military hammer. Expediency also can instigate a siren's call for the use of an existing capability. Strategists at the highest levels must recognize the value of flexibility and, as a part of a grand strategy, determine what instruments to maintain and at what levels.

Another disastrous tendency in concept development is to elevate an operational concept to the strategic level. German blitzkrieg in World War II offers a classic example. Blitzkrieg sought to capitalize on the combined technology of armor and air power to create a modern "*Kesselschlacht*," in effect a strategic envelopment of the French army to force France's capitulation. While this operational concept enjoyed initial success and indeed had significant strategic consequences for those nations overrun, as a strategic concept it did not have the ability to achieve Germany's strategic objectives or create the strategic effects that Hitler sought at the national level. In the long run, it neither brought an end to the war in the west nor isolated England. It did not create the conditions to achieve *Lebensraum* or result in a better end state for Germany. It was rapidly negated by the Allied employment of strategic objectives and concepts that united multiple nations in opposition and sought to defeat Germany by total mobilization and a multi-front war. Hitler's over-reliance on military operational superiority proved misplaced as the Allies developed countermeasures and brought superior forces to bear. In a similar manner, one could argue that the much-hyped "shock and awe" in Operation IRAQI FREEDOM was elevated from an operational concept to a strategic one in the minds of some strategists and planners. In such a misconception, the operational concept does not have the sophistication or comprehensiveness to achieve and sustain strategic successes, and invariably produces contrary effects in the strategic environment. Good operational concepts are crucial

in support of strategy, but are subordinate to the strategic concept and are part of operational art.

The logic of strategy argues that the strategic concept answers the big question of “how” the objectives will be achieved by articulating clearly for subordinate levels who does what, when, where, how, and why in such a manner that the subordinate strategist or planner can see with clarity how the execution of the concept leads to the accomplishment of the objective and what he is required to do in order to support the strategy. It confines the subordinate strategy or planning to the strategic objectives and the relevant aspects of the strategic environment without unduly limiting the subordinate’s creativity or prerogatives.

### **Resources in Strategy.**

*Resources (means)* in strategy formulation determine the types and levels of resources that are necessary to support the concepts of the strategy. In strategy, resources can be tangible or intangible. Examples of tangible resources include forces, people, equipment, money, and facilities. The primary issue with tangible resources is that they are seldom sufficient to support the best concept optimally. This shortage can be an actual inability to resource, or the result of the desire on the part of leadership to be prudent and efficient with government funding, or competing demands. Intangible resources include things like national will, international goodwill, courage, intellect, or even fanaticism. Intangible resources are problematic for the strategist in that they often are not measurable or are volatile. National will in a democracy is certainly an essential resource, particularly in a long-term strategy, but the issue for the strategist is that it is more apt to need engendering and sustainment than be a given and reliable. Hence, intangible resources should always be suspect. They require close examination to determine whether they are actually improperly expressed concepts or objectives. The responsibility of the strategist is to ensure that the resources necessary for the accomplishment of the objectives as envisioned by the concepts are articulated and available.

The hierarchy and logic of strategy also function in consideration of resources. Resources increasingly are defined in detail as the

planning level is approached. A national security or grand strategy could list “military forces” as a resource for its concepts, even if the appropriate type of forces did not exist, and still be consistent as long as the development of the forces was funded and the concept allowed the time for building the force. It would then be the responsibility of the subordinate level of strategy to develop an objective and concept for creating the force—moving from the general to the particular. Assignment of resources requires no verb. It merely expresses what is to be made available for use in applying the concepts to accomplish the objectives. Thus “to develop, build, or establish a larger force” is a way; the “force” itself, or the dollars to build it, is the resource. In articulating strategy, using the discussion of means to describe concepts should be avoided, as should articulating concepts as resources. In a very simplified manner, “diplomacy” is a strategic concept, but diplomats are among the resources required for the use of diplomacy. Imprecision in the vocabulary and logic of strategy leads to confusion and encourages friction at lower levels. The student of *On War* knows Clausewitz preferred “overthrow of the enemy’s government” as the end, to fight a decisive battle as the way, and a large army as the means. He saw the large army as an appropriate resource to support his way—the decisive battle. But saying “to use a large army” implies a range of different concepts for success. The employment of verbs to describe resources frequently suggests a problem within the logic of the strategy.

The rule of thumb to apply is that resources can usually be quantified, if only in general terms: the Army, the Air Force, the Navy; units and armed forces of the United States; DoD personnel; dollars; facilities; equipment—trucks, planes, ships, etc.; and resources of organizations—Red Cross, NATO, etc. The strategist should state these as resources in terms that make clear to subordinate levels what is to be made available to support the concepts. How the resources are to be used is articulated in the concept. The specific development of resources is refined in the subordinate strategy and planning processes.

Resource selection, like concepts, has implications in regard to multi-level effects. Military resources can do a lot of things—fight wars, conduct humanitarian operations, and perform nation-

building are examples. While military forces may be the only available resources, the choice may have consequences. Military forces providing tsunami relief may not be as effective as experienced civilian nongovernment agencies or may be perceived as a threat to the sovereignty of the supported nations. Military forces involved in nation-building may be perceived by some as an occupying force, thus becoming the problem as opposed to part of the solution. If policy or circumstances dictate the use of the resources in such circumstances, the strategist's responsibility is to be aware of the potential second- and third-order effects and to consider such effects in the development of the strategy.

Resources are an integral part of good strategy. And while efficiency can be gained in the aggregate by doing things better, resources are usually the focus of efficiency advocates who promote doing the same things with less. Allocating inadequate resources for a strategic concept is a recipe for disaster, and will cause even greater costs in recovering. Another commonly heard refrain among the military profession at large is that resources drive strategy. There is an element of truth in this statement. Resources are almost always limited at the strategic level because of competing demands from diverse needs. The strategist's responsibility is to ensure that the strategic concept will accomplish the objective, and that it is resourced to do so. A better concept may require less or different resources. A strategy that is not adequately resourced is not a viable strategy at all.

### **Testing Strategy's Logic and Risk.**

All strategy has its own inherent logic which can be assessed to determine validity and risk. The identification of resources in the development process is a good starting point for testing a strategy's internal logic. The strategist should think backward through the process to ensure the resources provided are adequate to implement the concepts, that the concepts envisioned can achieve the stated objectives in an acceptable manner, that the accomplishment of the objectives will create the strategic effects to satisfy the policy aims and promote and protect the national interests, and so forth. Thus,



the strategist questions suitability—will the strategy's attainment accomplish the effect desired; he questions feasibility—can the action be accomplished by the means available; and he questions acceptability—are the effects as well as the methods and resources used to achieve those efforts justified and acceptable to the body politic? In this process, the strategist considers tangibles, such as resource availability, weapons capability, and geography, and intangibles, such as national will, public opinion, world opinion, and actions/reactions of U.S. allies, adversaries, and other nations and actors. A strategy that clearly can be labeled as unsuitable, infeasible, or unacceptable is not valid. However, if an appropriate strategy formulation process has been adhered to, this will rarely be the case. The strategy is likely to be assessed as valid with qualifications—the qualifications being the measure of risk.

*Risk* is an assessment of the balance among what is known, assumed, and unknown, as well as the correspondence between what is to be achieved, the concepts envisioned, and resources available. Risk assessment is not just a measure of the probability of success *or* failure. It is also an assessment of the probable consequences of success *and* failure. The strategic environment responds as a complex system—acting successfully, acting unsuccessfully, and failing to act must be anticipated and weighed. Since there are seldom enough resources or a clever enough concept to guarantee absolute success, there is always some risk in a dynamic strategic environment. Complexity, friction, and freedom of choice of other actors also guarantee some element of risk. Risk weighs the potential advantages and disadvantages of adopting the strategy.

Risk assessment examines the strategy in its entire logic—ends, ways, and means—in the context of the environment and seeks to determine what effects are created by the implementation of the strategy. It seeks to determine how the equilibrium is affected, and whether the environment is more or less favorable for the state as a result of the strategy. It asks how other actors will react to what has been attempted or achieved; how they will react to the way in which the strategy was pursued; what the balance is between intended and unintended consequences; how chance or friction will play in this strategy. The strategist must assess how the assumptions made

or factors that might change could impact on success or effects. He must ask how much flexibility is inherent to the strategy, how it can be changed or recovered, and at what cost; what are the elements of the strategic environment the strategy is relying on for success; and what are the consequences if these change, and is the strategy flexible or adaptable enough to accommodate these changes. Risk assessment is an integral part of the strategy formulation process and should lead to acceptance, modification, or rejection of the strategy.

The strategist seeks to minimize risk through his development of the strategy – the relationship or balance of ends, ways, and means. But ultimately the strategist informs the decisionmakers of the risks in the strategy so the leaders can decide if the risks are acceptable or not. The strategist continuously contemplates the possibilities as the future unfolds.

## V. THE STRATEGY PARADIGM IN SHORT: A THEORY RESTATED

[S]trategy has a complex nature and a function that is unchanging over the centuries.<sup>80</sup>

Colin S. Gray

At the highest level of strategy, the nation-state has interests that it pursues to the best of its abilities through the use of the instruments of power. Policy articulates the reflection of these interests in the strategic environment. In pursuing its policies, the state confronts adversaries and other actors, while some factors simply remain beyond control or unforeseen. Strategy, acting within the confines of theory, is a method of creating strategic effects favorable to policy and interests by applying ends, ways, and means in the strategic environment. In doing this, strategy has an inherent logic that can be understood as a theoretical construct and applied in the development and consideration of strategy at all levels.

Strategy applies in the realm of the strategic environment which is characterized by greater or less degrees of chaotic behavior and complexity—VUCA. The environment can be addressed at different levels of strategy. It has external and internal components, i.e., the international environment and the domestic environment, respectively. Rational and irrational choice, chance and probability, competitors, allies, and other actors are all part of the strategic paradigm.

Strategy is fundamentally a choice; it reflects a preference for a future state or condition in the strategic environment. It assumes that, while the future cannot be predicted, the strategic environment can be studied and assessed. Trends, issues, opportunities, and threats can be identified with analysis, and influenced and shaped through what the state chooses to do or not do. Thus strategy seeks to influence and shape the future environment as opposed simply to reacting to it. Strategy at the state level can be defined as:

The art and science of developing and using the political, economic, social-psychological, and military power of the state to create strategic effects that protect or advance national interests in the environment in

accordance with policy guidance. Strategy seeks a synergy and symmetry of objectives, concepts, and resources to increase the probabilities and favorable consequences of policy success and to lessen the chances of policy failure.

### **Assumptions and Premises of Strategy.**

1. Strategy is proactive and anticipatory but not predictive. Strategy seeks to promote or protect national interests as the future unfolds. In doing this, it must consider change and make assumptions. Both change and assumptions are bounded by existing facts and realistic possibilities. Strategy is clear on what are facts, assumptions, and possibilities.
2. Strategy is subordinate to policy. Political purpose dominates all levels of strategy. Policy ensures that strategy pursues appropriate aims in an acceptable manner. However, the development of strategy informs policy; policy must adapt itself to the realities of the environment and the limits of power. Thus, policy ensures that strategy pursues appropriate aims, and strategy informs policy of the art of the possible.
3. Strategy is subordinate to the nature of the environment. Strategy must identify an appropriate balance among the objectives sought, the methods to pursue the objectives, and the resources available within the particular strategic environment. Strategy must be consistent with the nature of the strategic environment.
4. Strategy maintains a holistic perspective. It demands comprehensive consideration. Strategy is developed from a thorough consideration of the strategic situation and knowledge of the nature of the strategic environment. Strategic analysis highlights the internal and external factors in the strategic environment that help define strategic effect and the specific objectives, concepts, and resources of the strategy. Strategy reflects a comprehensive knowledge of what else is happening within the strategic environment and the potential first-, second-, and third-order effects of its own choices on the efforts of those above, below, and on the strategist's own level.

5. Strategy creates a security dilemma for the strategist and other actors. Any strategy, once known or implemented, threatens the status quo and creates risk for the equilibrium of the strategic environment.<sup>81</sup> The strategist must determine if the end justifies the risks of initiating action, and other actors must decide whether to act and in what manner.
6. Strategy is founded in what is to be accomplished and why it is to be accomplished. Strategy focuses on a preferred end state among possible end states in a dynamic environment. It provides direction for the coercive or persuasive use of the instruments of power to achieve specified objectives, thereby creating strategic effects leading to the desired end state. The strategist must comprehend the nature of the strategic environment, the policy, and the nation's aggregate interests to determine what strategic effect is necessary before proper objectives can be determined.
7. Strategy is an inherently human enterprise. It is more than an intellectual consideration of objective factors. The role of belief systems and cultural perceptions of all the players is important in the development and execution of strategy.
8. Friction is an inherent part of strategy. Friction cannot be eliminated, but it can be understood and accounted for to a greater or lesser extent.
9. Strategy focuses on root purposes and causes. This focus makes strategy inherently adaptable and flexible. Strategy learns from experience and must be sufficiently broad and flexible in its construction to adapt to unfolding events and an adversary's countermoves. Strategy's focus on root causes and purposes ensures that direction of subordinate levels is sufficiently broad to be adaptable and flexible.
10. Strategy is hierarchical. Just as strategy is subordinate to policy, lower levels of strategy and planning are subordinate to higher levels of strategy. The hierarchical nature of strategy facilitates span of control.
11. Strategy exists in a symbiotic relationship with time. Strategy must be integrated into the stream of history; it must be congruous with what has already happened and with the realistic possibilities of

the future. Small changes at the right time can have large and unexpected consequences. Consequently, an intervention at an early date has greater effect at less cost than a later intervention. Strategy is about thinking and acting in time in a way that is fundamentally different from planning.

12. Strategy is cumulative. Effects in the strategic environment are cumulative; once given birth, they become a part of the play of continuity and change. Strategies at different levels interact and influence the success of higher and lower strategy and planning over time.
13. Efficiency is subordinate to effectiveness in strategy. Strategic objectives, if accomplished, create or contribute to creation of strategic effects that lead to the achievement of the desired end state at the level of strategy being analyzed. In that way, they ultimately serve national interests. Good strategy is both effective and efficient, but effectiveness takes precedence over efficiency. Concepts and resources serve objectives without undue risk of failure or unintended effects.
14. Strategy provides a proper relationship or balance among the objectives sought, the methods used to pursue the objectives, and the resources available. In formulating a strategy, the ends, ways, and means are part of an integral whole and work synergistically to achieve strategic effect at that level of strategy, as well as contribute to cumulative effects at higher levels. Ends, ways, and means must be in concert qualitatively and quantitatively, internally and externally. From the synergistic balance of ends, ways, and means, the strategy achieves suitability, acceptability, and feasibility.
15. Risk is inherent to all strategy. Strategy is subordinate to the uncertain nature of the strategic environment. Success is contingent on implementation of an *effective* strategy—ends, ways, and means that positively interact with the strategic environment. Failure is the inability to achieve one's objectives, the thwarting of achievement of one's objectives by other actors or chance, or the creation of unintended adverse effects of such magnitude as to negate what would otherwise be regarded as strategic success.

## Ends, Ways, Means.

Strategy is expressed in terms of ends, ways and means. Ends, ways, and means that lead to the achievement of the desired end state within acceptable bounds of feasibility, suitability, acceptability, and risk are valid strategies for consideration by the decisionmaker.

*Objectives (ends)* explain “what” is to be accomplished. They flow from a consideration of the interests and factors in the strategic environment affecting the achievement of the desired end state. Objectives are bounded by policy guidance, higher strategy, the nature of the strategic environment, the capabilities and limitations of the instruments of power of the state, and resources made available. Objectives are selected to create strategic effect. Strategic objectives, if accomplished, create or contribute to creation of strategic effects that lead to the achievement of the desired end state at the level of strategy being analyzed and, ultimately, serve national interests. In strategy, objectives are expressed with explicit verbs (e.g., deter war, promote regional stability, destroy Iraqi armed forces). Explicit verbs force the strategist to consider and qualify what is to be accomplished and help establish the parameters for the use of power.

*Strategic concepts (ways)* answer the big question of “how” the objectives are to be accomplished by the employment of the instruments of power. They link resources to the objectives by addressing who does what, where, when, how, and why, with the answers to which explaining “how” an objective will be achieved. Since concepts convey action, they often employ verbs in their construction, but are actually descriptions of “how” the objective of a strategy is to be accomplished. Strategic concepts provide direction and boundaries for subordinate strategies and planning. A strategic concept must be explicit enough to provide planning guidance to those designated to implement and resource it, but not so detailed as to eliminate creativity and initiative at subordinate strategy and planning levels. Logically, concepts become more specific at lower levels.

*Resources (means)* in strategy formulation set the boundaries for the types and levels of support modalities that will be made available for pursuing concepts of the strategy. In strategy, resources can be tangible or intangible. Examples of the tangible include forces, people,

equipment, money, and facilities. Intangible resources include things like will, courage, spirit, or intellect. Intangible resources are problematic for the strategist in that they are often immeasurable or volatile. Hence, intangible resources should always be suspect and closely examined to determine whether they are actually improperly expressed concepts or objectives. The rule of thumb to apply is that resources can usually be quantified, if only in general terms. The strategist expresses resources in terms that make clear to subordinate levels what is to be made available to support the concepts.

## **Validity and Risk.**

Strategy has an inherent logic of suitability, feasibility, and acceptability. These would naturally be considered as the strategy is developed, but the strategy should be validated against them once it has been fully articulated. Thus, the strategist asks:

Suitability – Will the attainment of the objectives using the instruments of power in the manner stated accomplish the strategic effects desired?

Feasibility – Can the strategic concept be executed with the resources available?

Acceptability – Do the strategic effects sought justify the objectives pursued, the methods used to achieve them, and the costs in blood, treasure, and potential insecurity for the domestic and international communities? In this process, one considers intangibles such as national will, public opinion, world opinion, and actions/reactions of U.S. allies, adversaries, and other nations and actors.

The questions of suitability, feasibility, and acceptability as expressed above are really questions about the validity of the strategy, not risk. If the answer to any of the three questions is “no,” the strategy is not valid. But strategy is not a black and white world, and the strategist may find that the answer to one or more of these questions is somewhat ambiguous.

Risk is determined through assessment of the probable consequences of success and failure. It examines the strategy in its entire logic – ends, ways, and means – in the context of the strategic environment, and seeks to determine what strategic effects are created



by the implementation of the strategy. It seeks to determine how the equilibrium is affected and whether the strategic environment is more or less favorable for the state as a result of the strategy. Risk is clarified by asking:

- What assumptions were made in this strategy, and what is the effect if any of them is wrong?
- What internal or external factors were considered in the development of the strategy? What change in regard to these factors would positively or adversely affect the success or effects of the strategy?
- What flexibility or adaptability is inherent to the components of the strategy? How can the strategy be modified and at what cost?
- How will other actors react to what has been attempted or achieved? How will they react to the way in which the strategy was pursued?
- What is the balance between intended and unintended consequences?
- How will chance or friction play in this strategy?



## VI. CONCLUDING THOUGHTS

Power is a means, not an end.<sup>82</sup>

Good strategy development requires the military professional to step out of the planning mindset and adopt one more suited for strategic thinking. In the strategic mindset, the professional military strategist embraces the complexity and chaos of the strategic environment and envisions all its continuities and possibilities in seeking to create favorable strategic effects in support of national interests. From an accurate analysis of the strategic environment, the strategist determines the threats to and opportunities for the advancement or protection of these interests. From policy, the strategist receives the political leadership's vision, guidance, and priorities of effort in regard to interests. Thus, in constructing a valid strategy, the strategist is bounded by the nature of the strategic environment, the dictates of policy, and the logic of strategy. The strategist is responsible for mastering the external and internal facets of the strategic environment, adhering to policy or seeking change, and applying the logic of strategy to strategy formulation. He articulates the strategy in the rational model of ends, ways, and means; but leadership remains responsible for the decision to execute the strategy.

Good strategy demands much of the strategist. The strategist must be a constant student of the strategic environment, both externally and internally. He must be emerged in the events of today while aware of the legacies of the past and the possibilities of the future. In one sense, the strategist must sort through an arena of cognitive dissonance to arrive at the "real" truth. The real truth best serves interests and policy in the long run; the strategist must reject the expedient, near-term solution for the long-term benefit. The strategist intervenes through action or selected nonaction to create a more favorable strategic environment. In this process, everything has meaning, and everything has potential consequences. The strategist cannot be omniscient, but the strategist can be open and aware—open to the possibilities and aware of the consequences. If the strategist is sufficiently open and aware, he can anticipate the future and formulate successful strategy. If in practice the strategist

is not immersed in uncertainty and ambiguity and examining the context of the past, the emerging events of today, and the possibilities of tomorrow, he is probably not doing strategy—but rather planning under the label of strategy. Thus, the proper focus of strategy is to clarify and exert influence over the VUCA of the strategic environment in order to create strategic effects favorable to the policy and interests of the state. This is done by articulation of ends, ways, and means that create the desired strategic effect.

Strategy is neither simple nor easy. Nothing in this “little book” should suggest either. Strategic thinking is difficult because it deals with the incredible complexity and unpredictability of the strategic environment. Its essence is to simplify this complexity and uncertainty—the VUCA—in a rational expression of ends, ways, and means so that planners can create a degree of certainty and a more predictable outcome. In this regard, it bounds planning but does not unnecessarily restrict the planner. Nor should anything in this monograph suggest that strategy is vague or imprecise. The complex and ambiguous must be reduced and made clear without loss of understanding of the comprehensiveness of interaction within the strategic environment. Strategy seeks great clarity and precision in developing and articulating objectives and concepts—but it does this in a manner appropriate to the strategic level. The logic of strategy requires that these be expressed in terms that allow for flexibility and adaptation; thus they do not unnecessarily confine innovation and initiative at subordinate levels. This requirement reinforces the need for clarity of thought and word so that strategic purpose and direction are evident.

Relative success is the product of good strategy: relative to objectives; relative to “current” reality; relative to the future; relative to risk; relative to costs; and relative to adversaries and allies. Strategy should be precise and clear its articulation, but it is anticipatory—not predictive. The future changes as it unfolds because the strategic environment is dynamic. Core interests remain over time, but their expression in regard to strategic circumstances changes with time. Once implemented, strategy by definition changes the fundamental conditions and perspective generating it and is at risk in some part. Thus, strategy can be measured relatively against its objectives and

the strategic effect they seek to produce, but it cannot guarantee the future. The future situation is always the product of more than the sum of the parts of a given strategy.

The theory of strategy teaches the military professional “how to think” about strategy, not “what to think” for a strategy. It educates his mind and disciplines his thinking for the environment that confronts him as a strategic leader, practitioner, and theorist so he can serve the nation well. So armed, the professional is prepared to develop, evaluate, and execute strategy appropriate for his place and time. Strategy formulation and terminology are less pure in execution than in their original conception. “Strategic planning” and other such “strategic labeling” are commonplace, and zealous advocates of various concepts and practices often seek to co-opt such terms to gain visibility. The professional should be neither seduced nor distracted by these manipulations but remain focused on strategy proper – never confusing strategy with planning nor the strategic level of war with the others. In this way, the professional’s formulation, evaluation, and execution of strategy will adhere to strategy’s logic, and his advice and recommendations will fully support policy in achieving the desired end state.

And, finally, strategy formulation is not the domain for the thin of skin or self-serving. Detractors stand ever ready to magnify a strategy’s errors or limitations. Even success is open to criticism from pundits who question its role, methods, or continued validity. Furthermore, strategy achieves strategic consequences by the multiorder effects it creates over time – always a point of contention in a time-conscious society that values quick results and lacks patience with the “long view.” In the end, it is the destined role of the strategist to be underappreciated and often demeaned in his own time. Consequently, strategy remains the domain of the strong intellect, the life-long student, the dedicated professional, and the invulnerable ego.



## ENDNOTES

1. Williamson Murray and Mark Grimsley, "Introduction: On Strategy," *The Making of Strategy: Rulers, States, and War*, Cambridge: Cambridge University Press, 1994; 1997, p. 22.
2. Joint Staff, J-7, *Joint Publication 1-02, Department of Defense Dictionary and Associated Terms*, Washington, DC: U.S. Joint Staff, November 30, 2004, p. 509.
3. Gregory D. Foster, "A Conceptual Foundation for a Theory of Strategy," *The Washington Quarterly*, Winter, 1990, p. 43. Foster's analysis of the assumptions and premises of strategy is particularly thought-provoking.
4. Carl von Clausewitz, *On War*, Michael Howard and Peter Paret, eds. and trans., Princeton: Princeton University Press, 1976, p. 141.
5. Clausewitz, pp. 100-102.
6. Colin S. Gray, *Modern Strategy*, Oxford: Oxford University Press, 1999, pp. 33-34, 51-54.
7. Major General Richard A. Chilcoat, *Strategic Art: The New Discipline for the 21st Century*, Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College, 1995, pp. 6-9.
8. Gray, p. 1.
9. David Jablonsky, *Why Is Strategy Difficult?* Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College, 1992; repr. 1995, p. 10.
10. Foster, pp. 47-48.
11. Clausewitz, p. 89.
12. Foster, p. 50.
13. Arthur F. Lykke, Jr., "Toward an Understanding of Military Strategy," chap. in *Military Strategy: Theory and Application*, Carlisle Barracks, PA: Department of National Security and Strategy, U.S. Army War College, 1989, pp. 3-8.
14. Clausewitz, p. 87.
15. Foster, p. 50.
16. Clausewitz, pp. 86-87, 607-608.
17. Robert Jervis, *System Effects: Complexity in Political and Social Life*, Princeton, NJ: Princeton University Press, 1997, p. 60.
18. Murray and Grimsley, pp. 1, 13; Clausewitz, pp. 86, 89.
19. Stephen J. Cimbala, *Clausewitz and Chaos: Friction in War and Military Policy*, Westport, CT: Praeger, 2001, pp. 7-14. While somewhat controversial, this book contributes important insights to the nature of the strategic environment.
20. *Ibid.*, p. 8.
21. Murray and Grimsley, p. 1.

22. *Course 2 Course Directive AY 2005: "War, National Security Policy & Strategy*, Carlisle Barracks, PA: Department of National Security and Strategy, U.S. Army War College, 2004, p. 158.

23. *Joint Publication 1-02*, p. 360.

24. *Ibid.*, p. 359.

25. *Ibid.*, p. 535.

26. Donald H. Rumsfeld, Secretary of Defense, *The National Defense Strategy of The United States of America*, Washington, DC: Department of Defense, March 2005.

27. Foster, pp. 56-57.

28. Murray and Grimsley, pp. 6-7. See also Richard E. Neustadt and Ernest R. May, *Thinking in Time: The Uses of History for Decisionmakers*, New York: The Free Press, 1986, for practices and examples of how to do this.

29. Robert H. Dorff, "Strategy, Grand Strategy, and the Search for Security," *The Search for Security: A U.S. Grand Strategy for the Twenty-First Century*, Max G. Manwaring, Edwin G. Corr, and Robin H. Dorff, eds., Westport, CT: Praeger, 2003, pp. 128-129.

30. Clausewitz, p. 178.

31. William J. Doll, "Parsing the Future: A Frame of Reference to Scenario Building," Unpublished Paper: Joint Warfare Analysis Center, 2005, pp. 2-3.

32. Roderick R. Magee II, ed., *Strategic Leadership Primer*, Carlisle Barracks, PA: U.S. Army War College, 1998, p. 1.

33. Alvin M. Saperstein, "Complexity, Chaos, and National Security Policy: Metaphors or Tools," *Complexity, Global Politics, and National Security*, David S. Alberts and Thomas J. Czerwinski, eds., 1997, <http://www.ndu.edu/inss/books/books%20-%201998/Complexity,%20Global%20Politics%20and%20Nat'l%20Sec%20-%20Sept%2098/ch05.html>, Internet, accessed December 8, 2004.

34. Alan D. Beyerchen, "Clausewitz, Nonlinearity, and the Importance of Imagery," *Complexity, Global Politics, and National Security*, David S. Alberts and Thomas J. Czerwinski, eds., 1997, <http://www.ndu.edu/inss/books/books%20-%201998/Complexity,%20Global%20Politics%20and%20Nat'l%20Sec%20-%20Sept%2098/ch07.html>, Internet, accessed December 8, 2004.

35. Manus J. Donahue III, "An Introduction to Mathematical Chaos Theory and Fractal Geometry," December 1997; available from <http://www.fractalfinance.com/chaostheory.html>, Internet, accessed December 13, 2004.

36. Clausewitz, p. 119.

37. Major Susan E. Durham, "Chaos Theory for the Practical Military Mind," March 1997; available from <http://www.au.af.mil/au/awc/awcgate/acsc/97-0229.pdf>, Internet, accessed on December 13, 2004. See also Donahue.

38. Donahue. See also Gaddis, *The Landscape of History*, pp. 71-90.



39. Vicente Valle, Jr., "Chaos, Complexity and Deterrence," Student Paper at National War College, April 19, 2000; available from <http://www.au.af.mil/au/awc/awcgate/ndu/valle.pdf>, Internet, accessed December 18, 2004, p. 4.

40. James N. Rosenau, "Damn Things Simultaneously: Complexity Theory and World Affairs" *Complexity, Global Politics, and National Security*, David S. Alberts and Thomas J. Czerwinski, eds., 1997, <http://www.ndu.edu/inss/books/books%20-%201998/Complexity,%20Global%20Politics%20and%20Nat'l%20Sec%20-%20Sept%2098/ch03.html>, Internet, accessed December 8, 2004.

41. Valle, pp. 2-3.

42. John F. Schmitt, "Command and (Out of) Control: The Military Implications of Complexity Theory," *Complexity, Global Politics, and National Security*, David S. Alberts and Thomas J. Czerwinski, eds., 1997, <http://www.ndu.edu/inss/books/books%20-%201998/Complexity,%20Global%20Politics%20and%20Nat'l%20Sec%20-%20Sept%2098/ch09.html>, Internet, accessed December 8, 2004.

43. Robert Jervis, "Complex Systems: The Role of Interactions," *Complexity, Global Politics, and National Security*, David S. Alberts and Thomas J. Czerwinski, eds., 1997, <http://www.ndu.edu/inss/books/books%20-%201998/Complexity,%20Global%20Politics%20and%20Nat'l%20Sec%20-%20Sept%2098/ch03.html>; Internet, accessed December 8, 2004.

44. Beyerchen.

45. Any query into a research data base will substantiate this assertion. The subject is manifest in various sources ranging across a spectrum of interests: *The New York Times*, *Washington Quarterly*, *New Political Economy*, *Foreign Affairs*, *Parameters*, *The World Economy*, *Journal of Business Ethics*, *Third World Quarterly*, etc.

46. Michael J. Mazarr, "Theory and U.S. Military Strategy: A 'Leapfrog' Strategy for U.S. Defense Policy," *Complexity, Global Politics, and National Security*, David S. Alberts and Thomas J. Czerwinski, eds., 1997, <http://www.ndu.edu/inss/books/books%20-%201998/Complexity,%20Global%20Politics%20and%20Nat'l%20Sec%20-%20Sept%2098/ch11.html>, Internet, accessed December 23, 2004 .

47. *Ibid.*

48. Robert Cooper, *The Breaking of Nations: Order and Chaos in the 21st Century*, New York: Atlantic Monthly Press, 2003, p. 5.

49. Gray, p. 50.

50. *Ibid.*, pp. 23-43.

51. MacGregor Knox, "Conclusion: Continuity and Revolution in the Making of Strategy," *The Making of Strategy: Rulers, States, and War*, Cambridge: Cambridge University Press, 1994; 1997, p. 615.

52. John Lewis Gaddis, *The Landscape of History: How Historians Map the Past*, Oxford: Oxford University Press, 2002, p. 61.

53. John Lewis Gaddis, "Grand Strategy in the Second Term," *Foreign Affairs*, January-February 2005, p. 14.
54. Jervis, pp. 10-28, 60.
55. Knox, p. 643.
56. Shona L. Brown and Kathleen M. Eisenhardt, *Competing on the Edge: Strategy as Structured Chaos*, Boston, MA: Harvard Business School Press, 1998, pp. 3-4, 7.
57. Gaddis, *The Landscape of History*, pp. 56-57, 59.
58. Beyerchen.
59. Jack Synder, "One World Rival Theories," *Foreign Policy*, November-December 2004, pp. 53-62.
60. Knox, p. 627.
61. James Kurth, "Inside the Cave: The Banality of I. R. Studies," *The National Interest*, Fall 1998, pp. 38-40.
62. Knox, pp. 645.
63. Gaddis, "Grand Strategy," p. 10.
64. Knox, p. 645
65. Gaddis, *The Landscape of History*, p. 65.
66. Bart Kosko, *Fuzzy Thinking: The New Science of Fuzzy Logic*, New York: Hyperion, 1993, pp. 4-22. The humanities are a noteworthy exception to this pervasiveness, but even here quantification has been applied by some to seek the "right" explanation.
67. Clausewitz, p. 120.
68. *Ibid.*, p. 119.
69. Gaddis, *The Landscape of History*, pp. 61, 64, 68-69.
70. Gray, pp. 19-20.
71. Dorff, pp. 128-129.
72. Donald E. Nuechterlein, *America Overcommitted: United States National Interests in the 1980s*, Lexington, KY: The University Press of Kentucky, 1984, p. 4.
73. *Joint Publication 1-02*, p. 360.
74. Clausewitz, p. 607.
75. Gaddis, *The Landscape of History*, p. 66.
76. Mackubin Thomas Owens, *National Review Online*, January 5, 2005; available from <http://www.nationalreview.com/owens/owens200501050715.asp>, Internet, accessed January 5, 2005.
77. Russell F. Weigley, *The American Way of War: A History of United States Military Policy and Strategy*, Bloomington: Indiana University Press, 1973, pp. 411-424.

78. Owens.
79. Cooper, pp. viii-xi.
80. Gray, p. 2.
81. Jervis, p. 60.
82. Murray and Grimsley, p. 13.



## ABOUT THE AUTHOR

HARRY R. (Rich) YARGER is the Professor of National Security Policy in the Department of National Security and Strategy at the U.S. Army War College. Currently he teaches courses in Fundamentals of Strategic Thinking, Theory of War and Strategy, National Security Policy and Strategy, and Grand Strategy. His research focuses on national security policy, strategic theory, and the education and development of strategic level leaders. In addition to teaching positions, Dr. Yarger served 5 years as the Chairman of the War College's Department of Distance Education and is considered one of the Army's leading experts in on-line education. Dr. Yarger has also taught at the undergraduate level at several local colleges. A retired Army colonel, he is a Vietnam veteran and served in both Germany and Korea. Dr. Yarger is a graduate of the Army War College and obtained his doctorate in history from Temple University.