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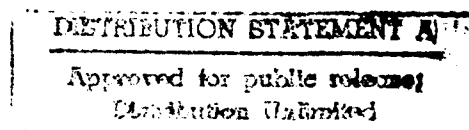
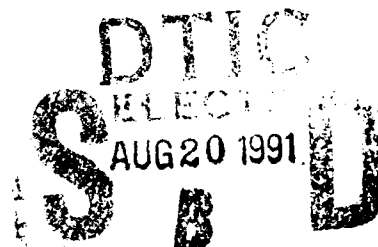
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A RAND NOTE

Roles and Phases in Superpower Deterrence and Escalation Control

William Schwabe

October 1990



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This Note presents an analysis of possible actions, such as force movements and communications, the United States might take to deter the Soviet Union or other powers during a variety of crisis situations. The analysis examines contingencies and options by using a framework that identifies possible superpower roles and distinguishes among different stylized phases of crisis and conflict. This framework posits and develops three alternative superpower roles: (1) the "True Believer"--an actor in a historic, ideological struggle between Soviet Marxism-Leninism and Western capitalistic liberal democracy; (2) the "Competitor"--a pursuer of national interests in the framework of competing blocs and alliances organized around the great powers and subject to nuclear-era constraints; and (3) the "Stabilizer"--seeking to maintain relative order and to contain risks. The analysis posits four phases in conflict scenarios: opening, posturing, engagement, and concluding. The analysis includes a consideration of the impact of Soviet deterrence actions on the United States and the impact of both U.S. and Soviet deterrence actions on other parties.

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**Prepared for the
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**A research publication from
The RAND Strategy Assessment Center**

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PREFACE

This Note is part of a larger study of future global challenges and options for national military strategy. It is a think piece concerned with new ways to think about and plan in advance for crisis actions, primarily through scenario studies and human gaming. The Note reflects results of seminar discussions at RAND and a gaming exercise hosted by RAND and attended by representatives of the Joint Staff and the Defense Intelligence Agency. However, it is ultimately the author's attempt to provide some structure to the kinds of discussion that arise in such meetings. This work may be of interest to strategy planners, crisis managers, designers of political-military simulations, and users of RAND Strategy Assessment System National Command Level models. It is hoped that subsequent work can greatly extend its ideas.

The work was undertaken by RAND's Strategy Assessment Center, which is part of the National Defense Research Institute (NDRI), a federally funded research and development center sponsored by the Office of the Secretary of Defense and the Joint Chiefs of Staff. This research was sponsored by the Under Secretary of Defense for Policy and NDRI's Defense Advisory Group (DAG). Members of the DAG are as follows:

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SUMMARY

This is an analysis of possible actions, such as force movements and communications, the United States might take to deter the Soviet Union or other powers during a variety of crisis situations. The analysis examines contingencies and options by using a framework that identifies possible superpower roles and distinguishes among different stylized phases of crisis and conflict. This framework posits and develops three alternative superpower roles:

1. The **True Believer** -- an actor in a historic, ideological struggle between Soviet Marxism-Leninism and Western capitalistic liberal democracy. This role can have as its primary objective furthering national interests or opposing an enemy. History is seen as a zero-sum game with the goal of eventually eliminating the enemy as a major player.
2. The **Competitor** -- a pursuer of national interests in the framework of competing blocs and alliances organized around the great powers and subject to nuclear-era constraints. The constraints are the following: avoid nuclear war, avoid war in the European heartland, and avoid direct combat between U.S. and Soviet forces. This role has as its primary objective support of national interests and as its secondary objective support of one or more allies.
3. The **Stabilizer** -- seeking to maintain relative order and to contain risks. It has as its primary objective containment or resolution of a potentially dangerous or destabilizing conflict and as its secondary objective supporting one or more allies or interests. Enforcement can be unilateral, cooperative with allies, or as a condominium of great-power cooperation.

The analysis posits four phases in conflict scenarios: opening, posturing, engagement, and concluding:

- In the first phase, **opening**, each actor recognizes a need to take some action immediately. This initial action must be taken unilaterally and only once. It concerns preparations and fact-finding and typically involves alerting (possibly mobilizing or deploying) forces and communicating preliminary statements, warnings, or questions to other countries. It is the first appearance of an actor onstage in the current scenario.
- In the second phase, **posturing**, actors interact with one another, working out the dynamics of their different roles. This can involve exchanges of

information, negotiating, deterrence, or escalation actions for the purpose of signalling, etc. Actions may be iterated in a pattern, sometimes likened to a "dance." At the end, each actor knows what he is going to do and is prepared (or is forced by events) to do it.

- In the third phase, **engagement**, the actors get on with the course of action that they have decided to follow. This, the main event, may or may not involve combat and may be quick or protracted. Now, there is little signalling or perception of signals; therefore, there may be difficulty in communicating or perceiving the signal of willingness to end the engagement phase and proceed to the next.
- In the fourth phase, **concluding**, actors again communicate, now to bring the conflict to an end. The process may be long or short. This involves two-way communications, new orders to forces, and residual interactions between opposing forces.

Attempts at deterrence occur almost exclusively in the first two phases, especially in the posturing phase.

The analysis includes the impact of Soviet deterrence actions on the United States and the impact of both U.S. and Soviet deterrence actions on other parties. The study considers inclination to attempt deterrence and the effects of deterrence actions on the superpowers and nonsuperpowers through development of alternative roles countries may choose to play. In addition, it considers issues of escalation control after combat is joined, to include both vertical and horizontal escalation. The proliferation of nuclear weapons and the recently renewed third-party use of chemical weapons have made control of escalation with regard to both pertinent to the study. In the conceptual framework developed here, attempts at escalation control would occur primarily in the engagement phase. A specific aspect addressed is the ability of the United States to control an opponent's escalation to chemical use when the United States does not have an effective chemical capability of its own. This is considered in two scenarios: an Arab-Israeli conflict and a Korean war. Issues of horizontal escalation include the impact of opening or threatening to open a second or third front, as well as the issue of involving additional nations. This work suggests that horizontal escalation may be considered as an option for superpowers playing the so-called True Believer or Competitor roles but probably not in the Stabilizer role.

To develop the framework further and in some sense to test it, the analysis considers a range of possible future conflicts among major powers, including the United

States as a direct participant and as an interested third party. Four scenarios are discussed: Azerbaijan-Iran, Syria-Israel, Lithuania-USSR, and North Korea-South Korea. To some extent it considers alternative national strategies, but the emphasis is on the implications for national military strategies that might be adopted by the United States during such conflicts and the possible policies and strategies that might be adopted by other major powers.

Originally it was intended that the output of this effort be reflected in the National Command Level models of the RAND Strategy Assessment System (RSAS). However, because of the monumental strategic changes that have occurred in the world during the last year, those models need significant augmentation. As a result, incorporating the ideas from this Note would not have been especially useful. Nonetheless, App. A gives computer code illustrating in some detail how the ideas could be so incorporated.

ACKNOWLEDGMENTS

This work has benefited from discussions with COL Clifford R. Krieger (USA), Col. Montgomery C. Meigs (USAF), Col. Wayne E. Rollins (USMC), and Dr. Jeffery Milstein, all serving on the Joint Staff. Paul Bracken of Yale University and Col. Warren Uthe (USA) of the Defense Intelligence Agency also made noteworthy contributions. The author is grateful for comments and participation in workshops by the following RAND colleagues: Paul Davis, John Hines, Zalmay Khalilzad, Dean Millot, Roger Molander, Mary Morris, Thomas Price, John Setear, David Shlapak, Ted Warner, and James Winnefeld.

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I. INTRODUCTION

PURPOSE

Since the end of World War II, much thought has been given to deterrence and, more recently, escalation control. Sometimes, as in the Cuban missile crisis, U.S. deterrent and escalation control actions are widely believed to have been effective. In other instances, as in the Chinese entry into the Korean war, the North Korean seizure of the USS Pueblo, and the terrorist attack against the Marine barracks in Beirut, the posture and actions of U.S. forces, which to some extent were intended to deter the opponent, did not deter. Although much has been written about deterrence and escalation control,¹ we cannot claim that we really *know* with any confidence how deterrence and escalation work, or if they work at all.

Nevertheless, we have reasons to *think* about it. Chemical weapons were used in the Iraq-Iran war; if possible, we would like to deter their future use. Nuclear weapons presently or potentially in the armories of North Korea, Iraq, Pakistan, or Israel add urgency to the need to plan for control of escalation in regional conflicts. The constraints on attacking hostage takers in Iran and Lebanon, American inefficacy over long months before our invasion of Panama, and restraints on executive action due to the War Powers Act all prompt consideration of whether and how *American* military action might be deterred. Finally, consideration of a multipolar world, the need to replace or refurbish the containment strategy, and reexamination of the missions of our services—prompted by *perestroika*, changes in Eastern Europe, and U.S. deficits—also motivate reconsideration of deterrence and escalation control.

APPROACH

Military analysis traditionally considers the *objectives* nations pursue, such as "deterrence," rather than the *roles* they may play. Military planners are comfortable assuming objectives and analyzing capabilities to achieve or to thwart them. Objectives can be related to physical reality and imply something about behavior, but they don't tell

¹This Note does not review deterrence theory, as it is assumed that most readers are generally familiar with it. In very broad terms, deterrence theory posits that threats or coercive actions can or will influence their recipients, if rational, not to do something or to cease doing it. It remains an unproven theory. Some of the standard works on deterrence theory are cited in the Bibliography. The approach taken in this Note is not to assume rational behavior but to posit behavioral patterns that form "roles."

the whole story. Analysis focused exclusively on objectives and the strategies intended to achieve them overlooks behavior that is not goal-directed. As Americans, we are inclined to view *all* behavior as goal-directed; we sometimes define ourselves by our achievements. But all cultures aren't like ours. In some cultures, how one acts may be more important than what one seeks or achieves. To the extent we seek to influence such behavior, it may be useful to consider a paradigm other than that of objectives and strategies.

This Note explores a behavioral approach to deterrence and escalation control: considering alternative *roles* nations might play in crises and conflicts, and how those roles might interact. These roles are simplifications of complex and incompletely understood national political-military behavior. But because they are simple, they can be grasped intuitively. By speaking of alternative roles, rather than positing anything about the inherent nature of national actors, we can accept and deal with uncertainties without having to commit to any one view. We can consider the possibility that nations may change role during the course of a crisis—perhaps as the result of deterrence or escalation control actions by another actor. We can also consider "hypergames,"² games in which actors differ in their assumptions on which roles are being played. These games, which are not uncommon in real-world behavior, are especially germane to deterrence, as they help explain the misreading of deterrence "signals."

ROLES

Many roles could be defined. This work, preliminary in nature, develops only three, any of which either superpower³ might choose to play in a given conflict situation: the True Believer, the Competitor, and the Stabilizer.⁴

1. The **True Believer**—an actor in a historic struggle in which the nation believes itself destined to carry the banner of the cause, be it imperialism, ideology, national unity, or whatever. The True Believer role may focus on furthering the national interests or on defeating an enemy. History is seen as a zero-sum game with the goal of eventually eliminating the enemy as a

²Several articles by P. G. Bennett and others on hypergames are cited in the Bibliography.

³Some readers may object to the idea of generic roles that do not represent the real differences between the United States and Soviet Union. Although there is merit to such concerns, the role models are developed generically in this paper to facilitate thinking about often unthought-of or taboo matters that can be essential to an understanding of deterrence and escalation control. These include consideration of Soviet responsibilities to their allies and under what conditions the United States itself might be deterred from taking various actions.

⁴Follow-on work could develop additional roles and apply them to nonsuperpowers.

major player. The True Believer is aggressive in the sense of being dissatisfied with stability. Examples of nonsuperpowers playing the True Believer role could include Khomeni's Iran and Kim Il Sung's North Korea. U.S. planners have usually not seen the United States in this role, but the Soviet Union was often viewed as wanting to play it.

2. The **Competitor**—a pursuer of national interests in the framework of competing blocs and alliances organized around the great powers and subject to nuclear-era constraints. The Competitor role has as its primary objective support of national interests and as its secondary objective support of allies.⁵ It seeks modest, low-risk gains over the status quo. This is the role the United States and the Soviet Union have generally planned for since World War II.
3. The **Stabilizer**—seeking to maintain relative order and to contain risks. It has as its primary objective containment or resolution of a potentially dangerous or destabilizing conflict and as its secondary objective supporting allies or interests. Stabilization efforts can be unilateral, cooperative with allies, or as a condominium of great-power cooperation. This is a role the United States and the Soviet Union have often *played* (as opposed to planned for) since World War II.⁶ It may be appropriate for the United States in the future if the danger of escalating conflict is viewed as a more important threat than Soviet aggression.⁷

Distinguishing characteristics are summarized in Table 1. Other distinctions might be made, such as whether there are choices to be made and what those choices might be.⁸ Table 2 displays historical conflicts in this framework. The United States acted as a True Believer in the days of Manifest Destiny and in the war against Hitler's Germany. The Soviets acted as True Believers during and after the revolution and in fighting fascism. Some Americans thought the Soviets were playing that role during the Cold War.

⁵In this paper the term "ally" is defined broadly, to include any state or faction with which one is cooperating, regardless of whether a formal alliance exists.

⁶Role 2 can also be thought of as a *sustained competitive* role, strengthening one's allies while seeking to increase "market share" and avoiding risks that could threaten the "market" itself.

⁷This can also be thought of as a *cooperative competitive* role, seeking to maintain a favored position with one's allies and willing to cooperate with other great powers to "keep a good thing going."

⁸Some additional constructs are discussed in App. B.

Table 1
COMPARISON OF ROLES

Characteristic	Role 1 True Believer	Role 2 Competitor	Role 3 Stabilizer
Objective	Historic change	Marginal change	Status quo
Focus	National destiny	National interests	Stability
Risk aversion	Varies	Moderate	High

Table 2
HISTORICAL CONFLICTS IN THE FRAMEWORK OF ROLES

Role	United States	Soviet Union
1 (True Believer)	World War II	World War II
2 (Competitor)	Cuban missile crisis Vietnam Laos (covert) Grenada Korea Angola (covert)	Cuban missile crisis Afghanistan?
3 (Stabilizer)	Lebanon Panama 1989 Israeli wars (limited)	Hungary 1956 Czechoslovakia Afghanistan?

The United States and the Soviet Union have competed directly or indirectly in many arenas since World War II, perhaps most directly in the Cuban missile crisis. The U.S. role in Afghanistan was largely indirect and covert as a Competitor, blocking Soviet expansion. The Soviets may have seen Afghanistan as a field for superpower competition or as a bordering country in need of stability or as a region they were destined to influence.

An actor may play one role throughout a scenario or change roles during it. The United States abandoned its peacekeeping (stabilizing) role in Lebanon after the Marine barracks bombing. A purpose of deterrence actions may be to prompt another country to change roles. This appears to have worked for the United States in Afghanistan, as the Soviets by and large lost the competition.

Note that one side's perception of the other's role is crucial in its own development of strategy (and assumption of role).⁹ The United States competed with the Soviet

⁹A major element of RAND Strategy Assessment System National Command Level (RSAS NCL) models is the sensitivity of political-level decisions to perceptions of the opponent. The current framework is thereby closely related to these basic RSAS concepts, which, however,

Union and North Vietnam in the Vietnam War, perhaps not recognizing the North Vietnamese as True Believers in their national destiny to reunify their country and free themselves from foreign domination, while the South Vietnamese were less-than-totally committed Competitors.

PHASES

In many scenarios the roles are played out in four phases. Were we to elaborate further on the analogy to theater suggested by the terms "actor," "role," and "scenario," we would call these phases "acts." The phases are (1) opening, (2) posturing, (3) engagement, and (4) concluding.

In the first phase, **opening**, each actor recognizes a need to take some action immediately. This initial action must be taken unilaterally and only once. It concerns preparations and fact-finding and typically involves alerting (possibly mobilizing or deploying) forces and communicating preliminary statements, warnings, or questions to other countries. As suggested by Fig. 1, the opening phase features one-way communications to other nations' policymakers, who issue orders to their forces.

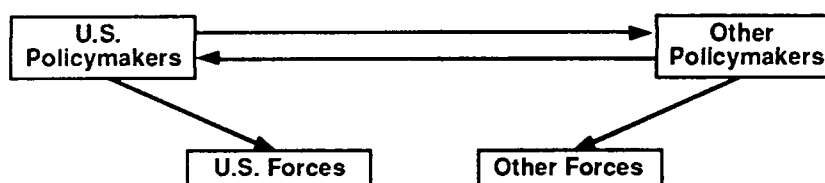


Fig. 1—Opening phase

Knowing that they lack sufficient information initially, decisionmakers may try to make decisions in the opening move that can be corrected for subsequently.

In the second phase, **posturing**, actors interact with one another, working out the dynamics of their different roles. This can involve exchanges of information, negotiating, deterrence, or escalation actions for the purpose of signalling, etc. Actions may be iterated in a pattern, sometimes likened to a "dance." At the end, each actor knows what he is going to do and is prepared (or is forced by events) to do it. Dogs,

have not previously been developed much for nonnuclear crises. See Paul K. Davis, *Studying First-Strike Stability with Knowledge-Based Models of Human Decisionmaking*. The RAND Corporation, R-3689-CC, April 1989.

diplomats, and nations do this when they confront one another in a new situation. As suggested by Fig. 2, this phase features bilateral (or multilateral) communications among policymakers, who issue orders to their forces.

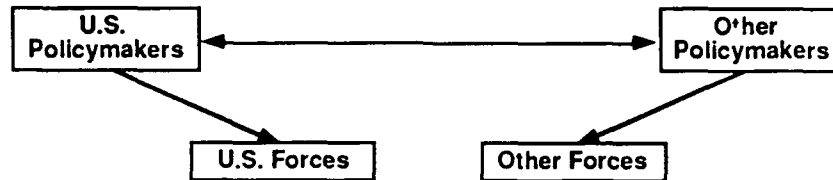


Fig. 2-Posturing phase

It is during the posturing phase that alternatives are more likely to be generated, to be input to decisions in the next phase.

In some cases there may be two posturing phases: the first involving alerting forces in their current positions and ordering deployments and the second involving adjustments after the major deployments have been executed. Here, however, we will consider there to be only one posturing phase.

In the third phase, **engagement**,¹⁰ the time to figure things out is past, and the actors get on with the course of action they have decided to follow. This is the main event; it may be quick or protracted. Now, there is little signalling or perception of signals. Because of this there may be difficulty in communicating or perceiving the signal of willingness to end this phase and proceed to the next. As suggested in Fig. 3, this phase includes issuing orders to forces, interaction between forces, and (to a much lesser extent) one-way communications between nations.¹¹

¹⁰"Engagement" here means engaging in the process decided upon. That may be combat, but it need not be.

¹¹A few years ago, a war game was played at RAND in which both U.S. and Soviet players erroneously assumed the worst intentions of the other side. At the (undeclared) transition between posturing and engagement, the Soviet team sent the U.S. team a written offer intended to dampen down the crisis. The U.S. team leader took the message, turned it, unread, face down on the table, and proceeded to lead a discussion planning U.S. combat actions. After the decisions were made, the U.S. leader turned over the Soviet message, read it aloud to the team, and they all laughed about it, assuming (incorrectly) that the Soviet offer was insincere.

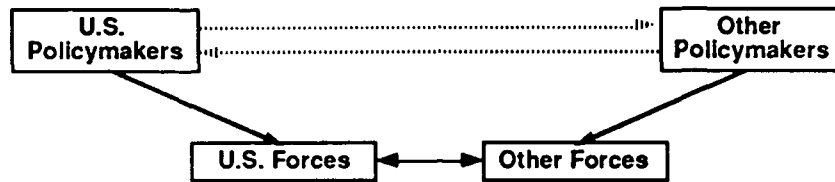


Fig. 3—Engagement phase

In the fourth phase, **concluding**, actors again communicate, now to bring the conflict to an end. The process may be long or short. As suggested in Fig. 4, this involves two-way communications, new orders to forces, and residual interactions between opposing forces.

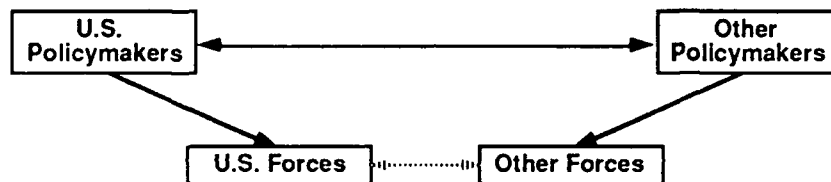


Fig. 4—Concluding phase

Variations are possible, such as engagement followed by premature conclusion and another phase of engagement, but they will not be considered further here.

What does this have to do with deterrence and escalation control? Traditionally, deterrence has been thought of as posturing in such a manner as to persuade an opponent not to start a fight. A strong deterrence posture has been assumed capable of deterring some sorts of opponent, accordingly defined as "rational," but not others, considered "irrational." A weak deterrence posture would not deter either type of opponent, and the situation would lead to war (if such was the opponent's intent). It is hoped that the framework formulated in this study is richer, more dynamic, and, in some contexts, more useful than the more traditional one. The two frameworks are compared in Table 3. In

the traditional framework, "termination" is in parentheses because, although it is acknowledged, it is seldom developed.¹²

Table 3
COMPARISON OF TRADITIONAL AND ROLE/PHASE FRAMEWORKS

Aspect	Traditional Framework	Role/Phase Framework
Varieties of behavior	Rational Irrational	Role 1 (True Believer) Role 2 (Competitor) Role 3 (Stabilizer)
Phases of conflict	Deterrence Warfighting (Termination)	Opening Posturing Engagement Concluding

What is here called Posturing includes deterrence actions, as well as actions meant to reassure allies and to offer constructive solutions to problems. Similarly, Engagement may include warfighting but could include cooperative actions to defuse a crisis. The crucial distinction between Posturing and Engagement is that the mind is open during Posturing, seeking information on which to base strategic decisions, but in Engagement the policies and strategies have been decided and the only decisions left are tactical.

In any crisis there is a strong tendency to mirror-image roles. Mirror imaging comes about in part because we believe our own analyses; that inclines us to believe that other parties will see the situation the same way and play the same role. That may not be the case if a country does not respect its adversary's intelligence or believes the enemy is "evil."

There is also a tendency for the more "macho" roles to dominate. If a country believes the other is playing Role 1, it may see itself virtually forced to play Role 1 also. If it is playing Role 1, it will likely assume the other is doing so also. Role 1 tends to dominate Role 2, which tends to dominate Role 3. This is akin to the prisoner's dilemma in game theory, in which the normal rules of the game tend to force behavior that would not be optimal behavior under other rules. If the United States and the Soviet Union are "prisoners" in some sense, it remains true that they are architects of the prison and have a hand in writing the rules. This presents a challenge for the future.

¹²Fred C. Iklé's *Every War Must End* (1971) is an interesting discussion of the difficulties in bringing war to a conclusion.

Given the possibility of differences in how roles are defined, of role-switching, or of bluffing, how can one know which role is being played? In fact, one probably cannot *know* which role is being played, any more than one can likely know if deterrence really works. Rather, the concept of roles facilitates systematic consideration of possibilities, assuming a nation is more or less free to choose or change its role.¹³

USEFULNESS OF RESULTS

The traditional post-WW II conceptual framework of strategic nuclear deterrence is probably not adequate for multiparty, multilevel deterrence and escalation-control issues that will have to be addressed in the future. What was to be deterred was aggression. Now, with chemical and nuclear weapons in (or soon to be in) the hands of several countries, including some whose leaders are not quite "rational" in the way posited by deterrence theorists, deterrence of *use* of those weapons may be as important as deterrence of aggression per se.

The roles discussed in this paper are meant to be simple enough to be understood, used as kernels around which to build intuition, and played in war games or planning exercises. They are intended to help people in talking about the right issues.

The roles purposely neglect some functions. They do not, for instance, attempt to guess the role or objectives of other players.¹⁴ The emphasis is on how national leadership might *act*, rather than on how they might *think* or decide.¹⁵ The objective has been to see what can be begun with simple models—which could be made more complicated where subsequently proved to be needed.

By building the models into the RSAS, the roles can be tested and refined so that the results of one study can serve as input to another.

What does this work suggest about national military strategy? It suggests that paying attention to other countries' purely military actions may not be sufficient—that success or failure of deterrence or escalation control may also depend on political-

¹³RAND colleague John Setear has pointed out that there is a tension here between the notion that perception of the other's role influences one's own choice of role and the notion of freely chosen roles. That is true; however, even if perception were to dictate role, since one does not know what a country perceives the other's role to be, the assumption that the country is free to choose its role can be useful. In any event, the assumption of freedom to choose facilitates "what if" analysis.

¹⁴It is recognized that perception of another's role can dominate one's own actions. The logic of estimating another's role is beyond the scope of this Note; however, it might not be difficult to decide one's own role, once the role of others had been determined.

¹⁵However, roles are related to mindsets.

military factors. Deterrence may become less important, while cooperative attempts to avoid escalation may be more important in the future. If U.S. and Soviet leverage over their allies diminishes, the need for the superpowers to cooperate with one another may increase.

Because each country has more than one plausible role (whether or not they are the roles posited in this paper) available to it in a given contingency, it may not suffice for the United States to develop only one military strategy per contingency. This may be an appropriate time to entertain such ideas—since we know we must somehow modify our thinking to take into account *perestroika* and other changes while not locking ourselves into assumptions that all is well in the world forevermore.

ORGANIZATION OF THE PAPER

Section II develops the three roles into structured models of National Command Level political-military behavior. Some details of the phases are provided, and further distinctions among the roles are made.

To develop the framework further and, in some sense, to test it, Sec. III discusses four conflict scenarios, stepping through each of the four phases. The scenarios are:

1. Unrest in Azerbaijan and Armenia
2. Lithuanian independence
3. Arab-Israeli conflict
4. Korean conflict

These scenarios were selected because they seemed timely, relatively likely to occur, and spanned a range of considerations relevant to deterrence and escalation control.

In each phase, distinctions and comparisons are made with respect to different roles the major actors may be playing. Some of this material draws on seminar war-gaming conducted as a research tool for the study.¹⁶

Appendix A provides RSAS RAND-ABEL[®] rules that could be developed into a National Command Level role-playing model. As written, the rules address the Arab-Israeli and Korean scenarios. This form will allow future testing and refinement in any of several modes of operation of the RSAS. Appendix B contains selected notes on the

¹⁶The four scenarios described in Sec. III were gamed. U.S. players took few strong military actions intended to deter. Rather, U.S. players took prudent precautions against further escalation and, in several cases, sought cooperative solutions with the Soviets. These games led both to the positing of Role 3 (Stabilizer) and to the distinction between the posturing and engagement phases.

theory and efficacy of deterrence. Appendix C covers some methodological material on decision trees, inference trees, and decision tables not treated elsewhere in the text.

The Note concludes with a Bibliography.

II. MODELS OF ALTERNATIVE NATIONAL ROLES

This section presents a relatively simple model for each of the three national roles, cast in a form to facilitate translation into RAND Strategy Assessment System RAND-ABEL computer language rules. RAND-ABEL source code is provided in App. A.

These models are each written for a single role, and though they respond somewhat to events as the scenario evolves, the models do not automatically change roles. In reality, nations do sometimes change roles; therefore, the models should, at least implicitly, consider the possibility of the other superpower's changing roles, which could well happen, not automatically but through the controlling analyst's actions.

Although each phase in reality could, and probably would, involve protracted interactions and subtle nuances, a useful, first-order approximation to reality can be as simple as the following:

- Opening phase
 - Assessment
 - Opening move
- Posturing phase
 - Assessment
 - Posturing move
 - Communication
- Engagement phase
 - Assessment
 - Direction
 - Response
- Concluding phase
 - Assessment
 - Negotiation
 - Concluding move

OPENING PHASE

The opening phase is assumed to consist of a one-time assessment of the situation, followed immediately by a one-time opening move, typically consisting of messages to other countries and orders to one's own forces.

Assessment

Although assessments may be repeated as a crisis develops, the opening assessment is assumed to be the final assessment made before a side takes its first *action*. It is assumed to have been taken as actionable warning.

The assessment reflects the different focus of attention of each role, with Role 1 being concerned lest the other superpower be preparing to make a historic move, Role 2 being concerned about possible changes in the balance of power and influence, and Role 3 being concerned about risks and the need to enforce order.

Table 4
OPENING ASSESSMENT

Role 1	Role 2	Role 3
Determine level of involvement by major opponent	Determine level of forces of major opponent	Determine present level of conflict and risk of escalation
Identify own and allied forces best suited to counter actions of major opponent	Identify own and allied forces best suited to counter forces of major opponent	Identify own and other resources available to contain or stabilize the conflict

Opening Move

The opening move is a commitment to action, without knowing with certainty how other countries will respond. Role 1 seeks to polarize the world, to build as large a base of support as possible, and to deter or deceive the enemy. Role 2 seeks also to build support and to show an appropriate level of concern. Role 3 seeks to bring enough force to bear and to hedge against escalation.

POSTURING PHASE

The posturing phase is assumed to begin shortly after the opening move. A delay can be justified—if the pace of crisis development permits it—to allow one's own and the other's opening moves to "take" before doing another assessment.

Assessment

The posturing assessment takes into account the other superpower's opening move—unless, of course, the two superpowers are out of synchronization with one another.

Table 5
OPENING MOVE

Role 1	Role 2	Role 3
Issue demarche to other superpower and its allies	Urge restraint by other superpower and parties opposing ally	Communicate shared interests to other superpower
Solicit broad support from own allies	Solicit specific cooperation and involvement by selected allies	Solicit lesser involvement by antagonists
Respond at least proportionally to involvement of other superpower	Respond proportionally to forces opposing ally	Enhance readiness for police action at present or reduced level of conflict
Anticipate next move of other superpower; take action now to prepare to take the initiative	Anticipate next move of opposing forces; take action now to prepare to take the initiative	Anticipate escalation; take action now to prepare to deal with it

Table 6
POSTURING ASSESSMENT

Role 1	Role 2	Role 3
Determine level of involvement by other superpower	Determine level of forces opposing ally	Determine present level of conflict and risk of escalation
Identify own and allied forces best suited to counter actions of other superpower	Identify own and allied forces best suited to counter forces opposing ally	Identify own and other resources available to contain the conflict
Assess prospects	Assess prospects	Assess prospects

Posturing Move

The posturing move can be the major effort to deter. It is also the time to make thorough, prudent preparations to be ready if deterrence fails. Although Table 7 shows M- and C-days, which will be set if OPLANs are executed, the posturing may in some cases involve starting to mobilize or deploy, without formal specification of M- or C-days.¹

If horizontal escalation is envisioned, it is here that Role 1 or Role 2 might posture for it, as a deterrent or preparation action.

¹The examples tend to assume a large-scale contingency, but much work needs to be done on crises in which there may be no such simple concepts as M-day, etc.

Table 7
POSTURING MOVE

Role 1	Role 2	Role 3
Set M-day, C-day, and proportional escalation guidance, and authorize war plan deployments for theater(s) affected; set nominal D-day but do not authorize combat; increase readiness worldwide	Set M-day, C-day, and proportional escalation guidance, and authorize war plan deployments for primary theater; set nominal D-day but do not authorize combat	Set C-day and proportional escalation guidance and authorize war plan deployments for primary theater; set nominal D-day but do not authorize combat

Communication

Although, in reality, negotiations during the posturing and concluding phases can be very complicated, a first-order approximation can be made in which one's role dictates the message sent to the other party, the other's reply implies his role, and one's own role, the other's implied role, and the assessment of one's own military prospects prescribe a course of action. The messages here are of the form "If you do X, then I will do Y, else I will do Z." Prospects are a function of one's own and the other's military posture. The more bellicose course of action dominates the less bellicose.

Table 8
POSTURING COMMUNICATION

Role 1	Role 2	Role 3
Respond to other superpower's opening communication - If demarche, retransmit demarche ² - If urging restraint, urge restraint - If claiming shared interests, urge restraint	Again, urge restraint	Respond to other superpower's opening communication - If demarche, urge restraint - If urging restraint or claiming shared interests, inform other of actions taken
Solicit broad support from own allies	Solicit specific cooperation and involvement by selected allies	Solicit lesser involvement by antagonists

²In this case, each side will know that both are playing Role 1.

ENGAGEMENT PHASE

Engagement does not *necessarily* mean combat; however, it does mean proceeding with one's main course of action.

Assessment

These role models assume the National Command Level does not micromanage operations throughout the crisis. Instead, it reassesses the situation at the beginning of the engagement phase. During the remainder of the engagement phase, assessment will devolve to subordinates.³

Table 9
ENGAGEMENT ASSESSMENT

Role 1	Role 2	Role 3
Assess military force levels and actions, political cooperation and involvement, conflict levels, warning, and other status	Assess military force levels and actions, political cooperation and involvement, conflict levels, warning, and other status	Assess military force levels and actions, political cooperation and involvement, conflict levels, warning, and other status
Project prospects, risks, and opportunity	Project prospects, risks, and opportunity	Project prospects, risks, and opportunity
Decide war aims and strategies vis-à-vis other superpower	Decide war aims and strategies vis-à-vis forces opposing ally	Decide war aims and strategies at minimum escalation level allowed by current situation and projection

Direction

Now the National Command Level gives guidance to subordinate commanders. Henceforth during the engagement phase, it responds to important incoming communications; otherwise, decisions are left to subordinates.

Table 10
ENGAGEMENT DIRECTION

Role 1	Role 2	Role 3
Promulgate global controls and theater bounds and authorizations	Promulgate theater bounds and authorizations; execute operations plans only in primary theater	Deploy forces for relatively secure presence; authorize defensive ROE ^a only

^aRules of engagement.

³Many of the items in Table 9 refer to functions already allowed for in the RSAS NCL models, although not for lower levels of crisis.

Engagement direction can signal a wish to control escalation. This has been done historically:

Holding one's actions within an area bounded by a range of mountains, a river, or a minor political boundary clearly signals a new limit that is being offered for both sides to observe. In Korea, for instance, the United Nations conspicuously halted all operations (including air operations) at the Yalu River; the communists did not attack U.N. forces or their supporting logistic systems outside the Korean peninsula and its immediate air and water environs.⁴

However, the signals should be unambiguous:

The critical conditions establishing saliencies are, first, that they be in some sense "objective," so that both sides know that each is aware of them or can easily be made aware of them; and second, that they be in some sense discrete or discontinuous—"qualitative and not matters of degree."⁵

Response

This has to do with responses to communications received during the engagement phase from subordinate commanders or from other countries, including the other superpower. Real communication now may be very difficult:

As escalation proceeds, then, a double gap is likely to open up between the two sides. Each finds it cognitively more dissonant to make a significant new offer, and cognitively more difficult to "hear" any hints of a new offer from the other—which the other is also finding it cognitively more difficult to make. As the escalation sequence goes on, this double gap will widen. As time passes and events become more threatening, each side may, so to speak, gradually retreat into its own universe.⁶

The final response in the engagement move may be to signal de-escalation or willingness to conclude. In addition to sending verbal messages, RAND colleague James A. Winnefeld has suggested the following categories of military actions that might be taken during de-escalation:

- Relocation of forces (e.g., moving forces away from positions that threaten an opponent, stopping reinforcing actions)
- Reducing the alert level of forces (e.g., standing down forces to levels approaching peacetime readiness status)

⁴Smoke (1977), pp. 15-16.

⁵Smoke, p. 16, quoting Schelling, *Arms and Influence*.

⁶Smoke, p. 289.

- Reducing the size of forces (e.g., stopping or reversing mobilization)
- Returning ROE to peacetime levels (e.g., fewer "hair triggers")
- Disabling forces or weapons or deliberately making them vulnerable (e.g., sweeping minefields, surfacing submarines, removing camouflage)
- Interposition of third-party peacekeeping/observer forces/teams
- Mutual inspection of force postures

He also lists the following graduations of military de-escalation measures:

1. Declaration of intent
2. Demonstrations to prove good faith and seriousness of purpose
3. Measures that affect long-term (>30 days) military capability
4. Measures that can be quickly and easily reversed
5. Measures that affect only offensive forces
6. Measures that reduce numbers of frontline forces of all types
7. Measures that reduce readiness of frontline forces
8. Measures that affect defensive as well as offensive forces

Table 11
RESPONSE DURING ENGAGEMENT

Role 1	Role 2	Role 3
Accept other superpower's offer to desist; ignore other communications	Accept other superpower's offer to desist or disengage; ignore other communications	Reassess in light of communications from other superpower
Respond as leader of own bloc to communications from other countries	Respond favorably to communications from allies and those supporting them	Promote moderation in actions of other countries
Accept recommendations from subordinate commanders that do not irresponsibly risk superpower nuclear war	Accept recommendations from subordinate commanders that do not irresponsibly risk superpower escalation	Accept recommendations from subordinate commanders that do not risk escalation

CONCLUDING PHASE

The model simplifies the concluding phase, assuming it is reached only when both parties are serious. Any "shape of the negotiating table" aspects are implicitly assumed to take place at the end of the engagement phase.

Assessment

The assessment here is similar to that in the engagement phase; however, projection of prospects, risks, and opportunity is done more stringently. This will tend to

make war aims more modest when there is substantial uncertainty as to the outcome of further combat.

Table 12
CONCLUDING ASSESSMENT

Role 1	Role 2	Role 3
Assess military force levels and actions, political cooperation and involvement, conflict levels, warning, and other status	Assess military force levels and actions, political cooperation and involvement, conflict levels, warning, and other status	Assess military force levels and actions, political cooperation and involvement, conflict levels, warning, and other status
Project prospects, risks, and opportunity	Project prospects, risks, and opportunity	Project prospects, risks, and opportunity
Decide war aims vis-à-vis other superpower	Decide war aims vis-à-vis forces opposing ally	Decide war aims at minimum escalation level allowed by current situation and projection

Negotiation

Again, bilateral communication is simplified. In concluding negotiations, both parties are likely to try for additional benefits at the margin (especially in Role 2).

Table 13
CONCLUDING NEGOTIATION

Role 1	Role 2	Role 3
Offer settlement consistent with revised war aims	Offer settlement consistent with revised war aims	Offer settlement consistent with revised war aims
Accept offer from other superpower if consistent with revised war aims	Accept offer from other superpower if consistent with revised war aims	Accept offer from other superpower if consistent with revised war aims

Latent interests and objectives may be activated either by victories⁷ or by challenges and defeats:

In a state of great anxiety and with a deep sense of threat, in fact, *a truly imaginative and creative approach* to the question "What generous new offers can we make to the other side in a renewed negotiating effort?" could be so dissonant as to be psychologically almost impossible. Yet a renewed

⁷Smoke, p. 246.

negotiating effort, and some generosity on at least some issues, might be the only thing that could control the further escalation of the conflict.⁸

Concluding Move

Scenarios end; history doesn't. What is meant to be the last move may not turn out that way. Accordingly, the concluding move has to hedge.

Table 14
CONCLUDING MOVE

Role 1	Role 2	Role 3
Immediate cease fire in place	Immediate cease fire with limited withdrawal from areas of direct contact with enemy	Immediate cease fire and withdrawal
Defensive ROE	Defensive ROE	Defensive ROE
Crisis alert level	Crisis alert level	Normal alert level
Continued resupply	Cease resupply	Cease resupply

⁸Smoke, p. 288.

III. SCENARIOS ILLUSTRATING ALTERNATIVE NATIONAL ROLES

This section expands the discussion of alternative national roles by examining them in the context of four crisis or warfare scenarios.

Each of these scenarios begins with consideration of real-world factors as they were early in 1990. We then consider some possible extensions that could present the superpowers with deterrence and escalation control situations. Finally, we sketch how the different roles might play out and interact.

UNREST IN AZERBAIJAN AND ARMENIA

Real-World Factors

1989 saw civil unrest in Azerbaijan, with repeated Azeri-Armenian clashes, occasional Azeri calls for independence, and Soviet use of the army to restore order. Soviet Azeris persecuted Armenians amongst them; they were armed and resisted the Soviet army.

Armenians in the Armenian SSR, observing the difficulties of their brethren in Azerbaijan, were restive. Armenian church leaders in Turkey supported the Armenian cause.

Initiating Scenario

If ethnic violence were to erupt again, there would be the potential for crossings of the Azerbaijan-Iranian or Turkish-Armenian borders by armed partisans to conduct guerrilla warfare or to deliver arms. Depending on Iranian, Turkish, and Soviet will and capability, border policing might or might not be effective. It is conceivable that Soviet forces might cross the Iranian or, less likely, Turkish borders to conduct large- or small-scale military/police actions.

This initiating scenario assumes serious Soviet Azeri resistance, substantially aided by Iranian Azeri supply of stolen Iranian armed forces weapons and ammunition. The Iranian government appears willing but unable to stop cross-border movements. Turkish Armenians are supplying Soviet Armenians, and the Turkish government does not appear to be doing anything to stop it. Having previously committed border guards and internal troops, the Soviets now mobilize army forces to subdue the insurgent Azeris in both Azerbaijan and northwestern Iran.

Soviet Options

The standard planning scenario for a Soviet invasion of Iran has implicitly assumed that the Soviets are playing Role 1 and that the war is about superpower strategic interests, especially control of Persian Gulf oil. The Azeri crisis could proceed along that path. Motivated by a need to resolve the problem or seeing it as a convenient rationale to justify strategic gains, the Soviets could initially decide to occupy all of Iran, or they could come to that decision incrementally. In the incremental approach, their first objective might be to subdue, disarm, and punish Azeri Iran. Having accomplished that, they might decide to withdraw, remain, or advance further into Iran. Even if the initial decision were to occupy all of Iran, adverse circumstances could prompt them to fall back to a lesser objective, which might still be an acceptable resolution of the original crisis. The major point to be made here is that because the standard planning scenario does not posit Soviet behavioral assumptions or motivations, which we are calling a "role," it provides little or no basis for analyzing the dynamics of possible deterrence or escalation control.

If the Soviets play Role 1, they could see the Azeri problem as a threat to the empire or to Soviet leadership of world communism, will see the incursion into Iran as an opportunity for strategic gain, and will want to deter or limit the United States from acting on it as a strategic struggle. Initially, at least, their declaratory policy will probably be to cast themselves in Role 3. Because of the inclination to do mirror imaging, they might tend to view any U.S. military preparations as strategic moves.

If the Soviets see the situation primarily as a threat to their empire, to their great power status, they may play either Role 1 or 2.

Playing Role 2, their concern would be to avoid marginal losses and, if they go into Iran (or Turkey), possibly to make marginal gains. Operations against ethnic forces inside or outside Soviet territory would probably be harsh; the intent would be to destroy those elements challenging Soviet nationalism. The Soviets would be sensitive to U.S. moves seen as attempts to take advantage of Soviet difficulties. If Soviet forces go into Iran and the United States subsequently puts forces into southern Iran (or elsewhere in Southwest Asia), the Soviets might assume that the United States was seeking a permanent marginal gain in the region. This could prompt a Soviet decision to make their marginal gains permanent also. Regardless of U.S. actions, once inside Iran, the Soviets might get greedy.

When this scenario was gamed, Role 3 was considered most likely. In this role, the first concern is to seal the borders and then to establish order internally. The Soviets would appeal to the government of Iran to police its borders, as both nations have found Azeris difficult to govern, and neither nation would want to see an independent all-Azeri state created. The Soviets would expect the United States to understand the Soviet need to restore order. Should Soviet forces cross into Iran, world public opinion might well be critical, but privately the government of the United States would be expected to understand. Soviet air attacks on targets in Azeri Iran would be less insulting to Iranian sovereignty than would an invasion on the ground.

The Soviets would appeal to Turkey to police its borders and would seek support from the United States in influencing Turkey. Likewise, the Soviets would assure West European nations that this problem with Turkey is not a threat to NATO.

U.S. Options

Similarly, the United States has options. The Carter Doctrine can be viewed as consistent with U.S. Roles 1 or 2.

Role 1 views Soviet preparations for and invasion of Iran in strategic terms. The United States must do something to counter it. The preferred outcome is deterrence of the attack. Failing that, there are three options: (a) engage and seek to drive back the Soviet advance in Iran, (b) establish a U.S. presence, such as at the Zagros Mountains, and deter or defeat Soviet attempts to advance further, or (c) establish an increased U.S. and allied presence in the Gulf Cooperation Council (GCC) states. Option (c) is the least preferred from the Role 1 perspective, as it permits the Soviets to achieve strategic gains in Iran.

The Role 1 True Believer may also consider horizontal escalation as a means to make the situation more difficult for the Soviets. This could involve fomenting disturbances in Armenia and Azerbaijan or on the Turkish-Armenian border through covert action. The strategic objective could be to promote the breakaway of one or more of these SSRs from the union.

Role 2 requires that there be an allied or friendly state for the United States to support and that it is possible to support that ally without necessarily engaging the other superpower. Iran could be that ally only if it were assumed to be friendly toward the United States. Alternatively, one or more of the GCC states could be U.S. allies, with the

U.S. objective being to deter or defend them from subsequent Soviet attack. In Role 2, it is likely that the United States would seek to use Soviet actions against Iran as an opening to improving U.S. relations with Iran.

When gamed, Role 3 was considered most likely for the United States. In monitoring the situation, the United States would probably express support for the Soviet need to control internal instability. Here, the United States would acquiesce to Soviet police actions in Azerbaijan and to quick in-and-out operations in Azeri Iran. The dual outcomes of increased Azeri stability and diminished Iranian friendliness toward the Soviets would be consistent with U.S. interests. Viewed entirely objectively, this might be a splendid opportunity for the United States to do nothing; however, various interests might demand that the United States do *something*.

Prudence might dictate moving U.S. deterrent forces into the region, just in case. USCINCPAC might bolster its infrastructure and surge collection assets.

In Role 3 there is some danger of the United States being duped—if the Soviets are not also playing Role 3. The United States might threaten a basic reversal of good relations if the Soviets went too deeply into Iran or stayed too long.

U.S.-Soviet Role Interactions

Some of the interactions between superpower roles in this scenario are depicted in Table 15. These interactions and analogous ones suggest several possible hypergames. For example, if the Soviet Union is playing Role 3 (motivated primarily by the need to restore law and order) and the United States (playing Role 2) takes some strong deterrent action, it may antagonize the Soviets, possibly motivating them to change to the less benign Roles 1 or 2.

As another example of hypergame, if the Soviets were playing Role 1, taking an opportunity to expand their communist empire and assuming correctly that the United States was playing Role 3, and if the United States initially believed the Soviet claim that they were playing Role 3, then U.S. action might be too little too late.

LITHUANIAN INDEPENDENCE

Real-World Factors

Early 1990 saw strong movement toward Lithuanian independence, with Soviet acknowledgment that secession might be possible under to-be-specified constitutional procedures, a unilateral Lithuanian declaration of independence, and Soviet moves—including military deployments—to enforce a constitutional process. The United States,

Table 15
SUPERPOWER ROLES AND INTERACTIONS IN AZERI-IRANIAN SCENARIO

U.S. Roles	Soviet Roles		
	1	2	3
1	U.S. unlikely to be deceived by Soviet claims to limited objectives; USSR may deter U.S. from deploying forces into Iran or from direct U.S.-Soviet combat	U.S. posture may deter Soviets from invading Iran, remaining, or advancing; once challenged, Soviets may expand goals, which they may achieve because their LOCs are shorter	Wary U.S. likely to reject Soviet offers to cooperate; U.S. deterrence posture permitting Soviets to save face may succeed
2	U.S. may be deceived by Soviet claims; Soviet posture may deter U.S. from deploying into Iran	Both sides' escalation control likely to succeed; contained conflict may be protracted	U.S. posture may deter Soviets from invading Iran, remaining, or advancing
3	Soviets may deceptively appear to cooperate; Soviet deterrence permitting U.S. to save face may succeed	Soviets may deceptively appear to cooperate; Soviet deterrence permitting U.S. to save face may succeed	If posturing is not too provocative, cooperation is likely to succeed

having historically supported Baltic state independence but now recognizing the difficulties facing Soviet leadership, proceeded cautiously.¹

Initiating Scenario

Lithuania has continued to move toward independence. This process is expected to culminate in its independence in about two months. A new Soviet president takes office.

Soviet Options

Role 1 assumes a new president committed to preservation of the Soviet Union, something akin to the unionist view of Lincoln. If necessary, this will mean civil war. If occurring after CFE, the Soviets might stand up CFE-withdrawn divisions for duty in Lithuania.

¹When this scenario was gamed, in January 1990, and as it is being described here in May 1990, the outcome of the Lithuanian situation is far from certain. Having scenarios overtaken by world events is an occupational hazard of scenario writers.

In Role 2 the Soviet government seeks to keep Lithuania within the Soviet Union, but it will not risk civil war to do it. Finlandization of Lithuania might be an acceptable outcome.

In Role 3 Soviet concern is that an independent Lithuania be at least nonhostile, that relations with the West not sour, and that this not encourage other SSRs to follow suit.

U.S. Options

Role 1 would involve covert or overt aid to Lithuania or action to impede Soviet operations. The extreme position would involve threatening to attack the Soviet Union if it did not allow Lithuania to secede.

In Role 2 the United States might aid Lithuania in its struggle and might respond to any harsh Soviet measures with sanctions and worsening relations. When gamed, this is the role assumed. Soviet military actions would sour East-West relations, but the United States would not back up its protests militarily. U.S. policy should be very clear; this is a problem more of communications than of deterrence. In gaming, it was thought that the *most* the United States would do was make political threats. Role 3 would have the United States applying diplomacy or other nonmilitary means to help the Soviets resolve Lithuanian-Soviet differences peacefully. This appears to be the role the United States played in April 1990, when the Soviets cut off supplies to Lithuania.

U.S.-Soviet Role Interactions

Interactions are summarized in Table 16. Again, several potentially dangerous hypergame situations are possible here.

ARAB-ISRAELI CONFLICT

Real-World Factors

After more than 40 years the Palestinian problem remains unresolved. Israeli settlement on the West Bank—including settlement of Russian emigrés there—has applied pressure on the Palestinians, and the *intifada* has applied pressure on the Israelis. The rule in the Mideast seems to be "never forgive, never forget."

In June 1981, Israel successfully attacked Iraqi facilities alleged to be involved in nuclear weapons work; Iraq has threatened to counter any future attacks with chemical weapons. Israel has said it would counter chemicals with more destructive means, generally thought to be its own existing nuclear weapons.

Table 16
SUPERPOWER ROLES AND INTERACTIONS IN LITHUANIAN SCENARIO

U.S. Roles	Soviet Roles		
	1	2	3
1	USSR may deter U.S. from deploying forces into Lithuania or from direct U.S.-Soviet combat	U.S. posture may deter Soviets from invading Lithuania, remaining, or advancing; once challenged, Soviets may expand goals, which they may achieve because their LOCs are shorter	Wary U.S. likely to reject Soviet offers to cooperate; U.S. deterrence posture permitting Soviets to save face may succeed
2	U.S. may be deceived by Soviet claims; Soviet posture may deter U.S. from deploying to Europe	Both sides' escalation control likely to succeed; U.S. efforts likely to be ineffective	U.S. posture may deter Soviets from invading Lithuania, remaining, or advancing
3	Soviets may deceptively appear to cooperate; Soviet deterrence permitting U.S. to save face likely to succeed	Soviets may deceptively appear to cooperate; Soviet deterrence permitting U.S. to save face likely to succeed	If posturing is not too provocative, cooperation is likely to succeed

Israeli and Syrian interests clash in Lebanon. Any future Arab-Israeli war could prompt economic sanctions, similar to the 1973 embargo by Arab or Muslim oil producers.

Initiating Scenario

Fighting between Syrian and Israeli forces has erupted in southern Lebanon.² The Soviet Union is resupplying Syria, and the United States is resupplying Israel. Syria is poised to attack Israeli air bases with chemical weapons. Given the possibility of its losing air superiority, Israel is assumed to be considering using nuclear weapons.

Soviet Options

Although the Soviet Union has backed communist movements in the Mideast, communism has not had the appeal of pan-Arabism or Islam in the region. Thus, to a

²For an extensive discussion of this scenario, see Winnefeld and Shlapak, Scenario F. Unlike they, I do not posit a specific year nor assume that Egypt reneges on the Camp David agreement.

Role 1 Soviet, Arab-Israel warfare is not a direct, vital concern, unless it is seen as leading to communist gains.

The Soviet role in the Mideast has been primarily as a Role 2 Competitor: it has supported Arab states in opposition to the U.S.-supported Israel. There is precedent for Role 2 in previous Arab-Israeli conflicts. The Soviets could introduce forces into Syria, possibly freeing up Syrian forces from defensive ground or tactical air missions.

Were Israel to use nuclear weapons against any Arab states, it is likely that one or more Arab states would act as Role 1 True Believers. Their response might be prompt or delayed, but its purpose would be to destroy Israel. They would appeal to the Soviet Union for help, but they would likely be willing to wage a serious nuclear or conventional *jihad*, with or without Soviet assistance. Soviet refusal to help the Arabs would mean abandoning the Competitor role in the Mideast.

Playing either the True Believer or Competitor role, it is possible that Soviet forces might actively oppose U.S. naval forces supporting Israel. This would constitute horizontal escalation to war at sea. The United States might, then, retaliate by striking Soviet air bases.

Cooperation, under Role 3, would focus on Soviet and U.S. pressure on the belligerents to dampen down the conflict and not to escalate. Deterrence of Syria might be achieved by making it clear in advance that any chemical use would result in immediate and complete cessation of Soviet aid. The most effective way to deter Israeli nuclear use might be by asking the United States to influence Israeli decisionmaking. Given the lack of strategic importance of the conflict and the risks of nuclear and continued chemical use, this could be the preferred role.

In any role, the Soviets would probably work through the United Nations in opposing Israel.

U.S. Options

Role 1 might be adopted if Soviet forces played heavily in Syrian or allied war efforts. The course of events could thrust the United States into Role 1; otherwise, it would not seem to be the preferred role.

Role 2 would view an Arab-Israeli war as competition between Soviet and U.S. client states. The United States expects to be able to support Israel, especially to protect her from overwhelming defeat, without Soviet interference. Role 2 might be seen to give the United States leverage to keep Israel from using nuclear weapons, regardless of the Soviet stance.

Role 3 might be the surest way to defuse this dangerous situation. Both Israel and Syria depend on outside support to sustain the conflict. U.S. pressure on Israel, together with Soviet pressure on Syria and both superpowers' influence on other Arab/Muslim states, could contain the risks. At issue would be whether the strategy would be effective quickly enough. The U.S. Sixth Fleet would increase readiness. If this occurred after force reductions, the U.S. might have to act earlier to get a carrier battle group into the area. In the future, the United States may be the only real superpower, but Israel may have more military force in the area than the United States.

Role 3 stabilization goals would include deterrence of both Syrian chemical use and Israeli nuclear use. A strong antichemical stand in peacetime coupled with U.S. assistance to Israel to supply any needed chemical protection equipment might be the most effective precrisis deterrent measures. The United States has not clearly stated publicly what it would do in the event of either chemical or nuclear use; there might be deterrent value in making such declarations.

U.S.-Soviet Role Interactions

Some of the role interactions are shown in Table 17.

KOREAN CONFLICT

Real-World Factors

Korea remains divided. Both sides are heavily armed. Northern communism is not yet mellowing. Economic trends favor the South. Kim Il Sung hasn't long to live. But the United States will likely remove forces from the ROK,³ and the DPRK⁴ is said to be developing nuclear weapons. Sooner or later the DPRK leadership will probably face the decision: it's now or never.

Initiating Scenario

All but one brigade of U.S. ground forces have withdrawn from South Korea. A Korean general commands all forces in the South. Northern forces attack, using chemical weapons, and quickly take Seoul.

³The Republic of Korea (South Korea).

⁴The Democratic People's Republic of Korea (North Korea).

Table 17

SUPERPOWER ROLES AND INTERACTIONS IN ARAB-ISRAELI SCENARIO

U.S. Roles	Soviet Roles		
	1	2	3
1	Initial deterrence unlikely to succeed; escalation may or may not be controlled	U.S. posture may deter Soviets from committing forces to combat; once challenged, Soviets may expand goals, which they may achieve because their LOCs are shorter	Wary U.S. likely to reject Soviet offers to cooperate; U.S. deterrence posture permitting Soviets to save face may succeed
2	U.S. may be deceived by Soviet claims; Soviet posture may deter U.S. from committing forces to combat	U.S. and USSR may be dragged into escalation by their allies	U.S. posture may deter Soviets from deploying to Syria
3	Soviets may deceptively appear to cooperate; Israeli-initiated nuclear war may escalate	Soviets may deceptively appear to cooperate; U.S. pressure on Israel may defuse crisis, to detriment of Israel	If posturing is not too provocative, cooperation may succeed

Soviet Options

In Role 1, Soviet strategic objectives would be to remove U.S. influence in Korea and to increase that of the USSR. Korea would be reunified militarily under a communist regime. The inability of the United States to defend its ally would be a lesson not lost on Japan. The Soviet Union would supply the DPRK and might involve its own land, air, or naval forces. It would be very difficult for the True Believer to accept defeat of the communist regime in the DPRK.

Role 2 actions could be very similar to those of Role 1, but objectives could be more moderate, and the worst-case unification of Korea under southern control might be accepted if all "reasonable" support of the DPRK failed. Soviet air and naval forces might challenge U.S. forces through deterrent or warfighting actions.

Role 3 would have the Soviets offering their good offices to restore peace in Korea, perhaps by engineering a cease-fire and by regulating resupply of the DPRK.

U.S. Options

Role 1 would be appropriate if the United States saw the DPRK as an agent of monolithic Soviet communism (unlikely in the current era) or if the United States saw it as necessary to counter a Soviet Role 1 strategy. Much could depend on the posture of Japan, which the United States presumably would try to influence.

Role 2 is the more likely, its being similar to the role taken by the United States in the earlier Korean police action. As in the past, the United States would expect the Soviets not to interfere directly in U.S. support of the ROK.

As in other scenarios, Role 3 is attractive if the risks of continued warfare outweigh the benefits and if the stance of the other superpower permits it. The United States might encourage Japan to use its air force and navy to aid in supporting and restraining South Korea.

In any role, U.S. reaction to DPRK chemical use might well depend on whether chemicals had inflicted significant casualties on U.S. forces. Such casualties could trigger a "Pearl Harbor" response by the United States, with the goal under Role 1, 2, or 3 not to restore the Demilitarized Zone (DMZ) but to reunify the country under southern control. This would constitute a horizontal escalation into the north. This is more easily rationalized as being necessary to remove the cancer of DPRK communism (a possible True Believer slogan) or to defend a Western-oriented ally (a possible Competitor slogan). It could also be rationalized as the only way to reestablish stability in Korea (a Stabilizer slogan).

A more moderate response, tenable if U.S. casualties were not especially high, could be to use chemicals against DPRK forces in an effort to induce both sides to abandon further chemical use.

U.S.-Soviet Role Interactions

Table 18 summarizes some of the interactions.

Table 18
SUPERPOWER ROLES AND INTERACTIONS IN KOREAN SCENARIO

U.S. Roles	Soviet Roles		
	1	2	3
1	Initial deterrence unlikely to succeed; escalation may or may not be controlled	U.S. posture may deter Soviets from committing forces to combat; once challenged, Soviets may expand goals, which they may achieve because their LOCs are shorter	Wary U.S. likely to reject Soviet offers to cooperate; U.S. deterrence posture permitting Soviets to save face may succeed
2	U.S. may be deceived by Soviet claims; Soviet posture may deter U.S. from ground or naval combat	Escalation control may succeed; conflict may be protracted	U.S. posture may deter Soviets from deploying to DPRK
3	Soviets may deceptively appear to cooperate; U.S. might pressure ROK to refrain from counter-offensive beyond DMZ	Soviets may deceptively appear to cooperate; U.S. might pressure ROK to refrain from counter-offensive beyond DMZ	May limit escalation and duration

Appendix A

RAND-ABEL RULES FOR COMPOSITE ROLE MODEL

This is a generic RSAS NCL model that includes rules for each of the three Red and Blue roles. The purpose here is to show in some detail what code might look like, not to provide verified code, because the other aspects of the NCL models need to be updated first and this paper is still in the nature of a think piece. The model would be used instead of an NCL model, such as SamN, executing its own logic and calling several standard-release functions.

Readers who are not familiar with RAND-ABEL or with how it is used in RSAS rule sets may find one or more of the following publications helpful:

- Davis, Paul K., *An Analyst's Primer for the RAND-ABEL Programming Language*, The RAND Corporation, N-3042-NA, January 1990.
- Davis, Paul K., Steven C. Bankes, and James P. Kahan, *A New Methodology for Modeling National Command Level Decisionmaking in War Games and Simulations*, The RAND Corporation, R-3290-NA, July 1986. Describes an earlier Ivan K version of Red Agent National Command Level.
- Schwabe, William, and Barry Wilson, *Analytic War Plans: Adaptive Force-Employment Logic in the RAND Strategy Assessment System*, The RAND Corporation, N-3051-NA, April 1990. Describes both AWP's and analyst plans. Documents many RAND-ABEL enumerations that are used by NCLs.

Although the code shown below is not part of the standard RSAS release, RAND can provide copies on magnetic tape to authorized RSAS users on request.

VARIABLES TO BE INPUT VIA CONTROL PLANS

The standard RSAS release versions of NCL contain considerable logic to determine things that can, more simply, be set by a user-analyst. To keep the NCL role models as simple and uncluttered as possible, certain variables, such as the identity of each superpower's ally (or allies), are preset using control plans.¹ Alternatively, they could be input via the RSAS Data Editor.

The global variables, such as Role and Ally, must be declared and an RSAS Data Dictionary "make" performed before these rules will interpret successfully.

¹Control plans are explained in Sec. III of Schwabe and Wilson.

The following control plan is for Blue, playing Role 2 in defense of the Republic of Korea. Red must also have a control plan, which can be copied from Blue's, with brackets, [], removed from around the Red statements and put around those for Blue.

Owner: Blue.
[Owner: Red.]

Define Control-plan.

Let Ally be Korea.
[Let Ally be DPRK.]
Let Other be Red.
[Let Other be Blue.]
Let Role be 2.

[The timing can be changed during an RSAS run by stopping and then editing any of the following day/move numbers]

Let Open-day be 0.
Let Posture-day be 5.
Let Engage-day be 20.
Let Conclude-day be 999.

If Move-number is 0
Then
{
 Log-note "Using NCL rules for" Owner "role " Role.
 Let Next-move-time-limit be Open-day * 24.
 Let Move-number be Open-day.
 Exit.
}

If Move-number is Open-day
Then
{
 Perform Opening-phase.
 Let Next-move-time-limit be Posture-day * 24.
 Let Move-number be Posture-day.
 Exit.
}

If Move-number is Posture-day
Then
{
 Perform Posturing-phase.
 Let Next-move-time-limit be Posture-day * 24.
 Let Move-number be Engage-day.
 Exit.
}

[The engagement phase executes daily, to allow the NCL to respond to notification from subordinates or from other countries]

If Move number >= Engage-day and Move-number < Conclude-day
Then
{
 Perform Engagement-phase.
 Let Next-move-time-limit be (Today + 1) * 24.
 Let Move-number be Move-number + 1.
 Exit.
}

```
}  
If Move-number >= Conclude-day  
Then  
{  
  Perform Concluding-phase.  
  Let Next-move-time-limit be Never.  
  Let Move-number be Move-number + 1.  
  Exit.  
}  
End.
```

GENERIC NCL MODEL FOR BLUE/RED ROLES

Function names appear in the Define statements below. For the rules to interpret successfully, the function names must also be declared in the Data Dictionary.

In standard RSAS releases, communications to or from Red or Blue are processed at the Global Command Level, SHC for Red or JCS for Blue. Here, international communications are taken to be a function of the National Command Level. Use of these rules in the RSAS may, therefore, necessitate bracketing out or modifying some SHC or JCS communications rules; they can be located on-line by searching for "Cable," "Announcement," and "Hotline."

Opening Phase

This function uses rules, such as Assess-situation and various communications tables,² from standard RSAS releases. The rules can readily be extended to additional allied states by copying and modifying appropriate sections of those listed below.

Define Opening-phase:

```
Declare opposition: Let opposition be Type-country.  
Declare ally:      Let ally      be Type-country.
```

[Opening Assessment]

```
Perform Assess-situation. [This is a standard NCL function, which assesses  
force quantities, military actions, side, cooperation, and involvement of  
various countries, strategic and tactical warning, force status, ground  
status, and other situational variables.]
```

[Opening Move]

```
If Role is 1  
Then  
{  
  [Issue demarche to other superpower and its allies]
```

²Formats for communications (Hotline, Announcement, and Cable tables) are given in Sec. VII of Schwabe and Wilson. Declared values for the enumerations, such as Type-reward, are given in Sec. XI of the same Note.

Table Hotline

request	reward	penalty	deadline
Do-not-escalate	--	Regional-gen-conv	--

If Ally is Israel

Then

```
{
  For opposition (Egypt or Iran or Iraq or Jordan or Syria):
    If Green's Home-Involvement of Green's opposition > Normal
      Then
        Table Announce
          country  channel  action          re  penal  dead
          =====  =====  =====  ward ty  line
          =====  =====  =====  =====  =====
          opposition From-Blue Cease-preparations -- Regional-gen-conv --
          [End Table].
}
```

If Ally is South-Korea

Then

```
{
  For opposition (DPRK or PRC):
    If Green's Home-Involvement of Green's opposition >
      Normal
      Then
        Table Announce
          country  channel  action          re  penal  dead
          =====  =====  =====  ward ty  line
          =====  =====  =====  =====  =====
          opposition From-Blue Cease-preparations -- Regional-gen-conv --
          [End Table].
}
```

[Solicit broad support from own allies]

If Ally is Israel

Then

```
{
  For ally (Belgium or Canada or Egypt or FRG or France or Greece or Italy
    or Netherlands or Portugal or Spain or Turkey or UK):
    If Green's Side of Green's ally is not Blue or Green's Cooperation of
      Green's ally < Transit
      Then
        Table Cable
          country  side  cooperation  home-  other-
          =====  =====  =====  involve involve other-
          =====  =====  =====  ment   ment   area
          =====  =====  =====  =====  =====  =====
          ally      Blue  Transit   --     --     --
          [End Table].
}
```

Else If Ally is South-Korea

Then

```
{
  For ally (Japan or Philippines or Taiwan):
    If Green's Side of Green's ally is not Blue or Green's Cooperation of
      Green's ally < Transit
      Then
```

Table Cable

country	side	cooperation	home- involve ment	other- involve ment	other- area
ally	Blue	Transit	--	--	--

[End Table].

}

[Respond proportionally to involvement of other superpower]

If Owner is Blue

Then

{

If USSR-civil-defense-preps > None

Then Let DEFCON-ordered of SAC be DEFCON-3.

If Red-Strat-ASAT > None

Then Let DEFCON-ordered of SAC be DEFCON-2.

If USSR-navy-out-to-sea is Yes

Then

{

Let DEFCON-ordered of LANT be DEFCON-3.

Let DEFCON-ordered of PAC be DEFCON-3.

}

If USSR-SSBN-dispersal is Yes or USSR-setting-up-bastions is Yes

Then

{

Let DEFCON-ordered of LANT be DEFCON-2.

Let DEFCON-ordered of PAC be DEFCON-2.

}

If Unusual-Mid-East-alert-level is Yes

Then

{

Table Alert-order

unit	owner	command	arena	in-region	%-ready
All	Blue	--	--	Mid-East	100

[End Table].

}

If Mid-East-USSR-mobilization is Yes

Then

{

Table Mobilize-order

unit	owner	command	arena	in-region	%-ready
All	Blue	CENT	--	--	100

[End Table].

}

If Unusual-Far-East-alert-level is Yes

Then

{

Table Alert-order

unit	owner	command	arena	in-region	%-ready
All	Blue	--	--	Far-East	100

[End Table].

}

If Far-East-USSR-mobilization is Yes

Then

{

```

    Table Mobilize-order
    unit  owner  command  arena  in-region  %-ready
    ====  =====
    All   Blue   KOREA    --     --         100
    [End Table].
  }
}
Else If Owner is Red
Then
{
  If Unusual-Mid-East-alert-level is Yes
  Then
  {
    Table Alert-order
    unit  owner  command  arena  in-region  %-ready
    ====  =====
    All   Red    --       --     Mid-East   100
    [End Table].
  }
  If Mid-East-US-mobilization is Yes
  Then
  {
    Table Mobilize-order
    unit  owner  command  arena  in-region  %-ready
    ====  =====
    All   Red    HCFS     --     --         100
    [End Table].
  }
  If Unusual-Far-East-alert-level is Yes
  Then
  {
    Table Alert-order
    unit  owner  command  arena  in-region  %-ready
    ====  =====
    All   Red    HCFE     --     --         100
    [End Table].
  }
  If Far-East-US-mobilization is Yes
  Then
  {
    Table Mobilize-order
    unit  owner  command  arena  in-region  %-ready
    ====  =====
    All   Red    --       --     USSR-Siberia 100
    [End Table].
  }
}
}

[Anticipate next move of other superpower; take action now to prepare to take
initiative]

Perform Adjust-assumptions+behavior. [This and the following functions are
in the standard release NCLs]
Perform Project-possible-futures.
Perform Set-candidate-strategy.
Perform Select-strategy.
}

Else If Role is 2
Then
{
  [Urge restraint by other superpower and parties opposing ally]
```

Table Hotline

request	reward	penalty	deadline
=====	=====	=====	=====.
Do-not-escalate	--	--	--

If Ally is Israel

Then

{

For opposition (Egypt or Iran or Iraq or Jordan or Syria):

If Green's Home-Involvement of Green's opposition > Normal

Then

Table Announce

country	channel	action	re ward	penal ty	dead line
=====	=====	=====	=====	=====	=====.
opposition From-Blue	Cease-preparations	--	--	--	--

[End Table].

}

If Ally is South-Korea

Then

{

For opposition (DPRK or PRC):

If Green's Home-Involvement of Green's opposition > Normal

Then

Table Announce

country	channel	action	re ward	penal ty	dead line
=====	=====	=====	=====	=====	=====.
opposition From-Blue	Cease-preparations	--	--	--	--

[End Table].

}

[Solicit specific cooperation and involvement by selected allies]

If Ally is Israel

Then

{

For ally (Egypt or or FRG or France or Portugal or Spain or UK):

If Green's Side of Green's ally is not Blue or Green's Cooperation of Green's ally < Transit

Then

Table Cable

country	side	cooperation	home- involve ment	other- involve ment	other- area
=====	=====	=====	=====	=====	=====.
ally	Blue	Transit	--	--	--

[End Table].

}

Else If Ally is South-Korea

Then

{

If Green's Side of Green's Japan is not Blue or Green's Cooperation of Green's Japan < Transit

Then

Table Cable

country	side	cooperation	home- involve ment	other- involve ment	other- area
=====	=====	=====	=====	=====	=====.
Japan	Blue	Transit	--	--	--

[End Table].

```

}
[Respond proportionally to forces opposing ally]
[Anticipate next move of opposing forces; take action now to prepare to take
initiative]
  If Ally is Israel
  Then
  {
    Let deployed be Red-EEDs in Mid-East.
    Table Deploy-order
      qty      #-% unit  owner command arena  in-   in-   to-   to-
      ===== == ===== ===== =====
      deployed #   Troops --   AFSOUTH --   --   --   AFSOUTH --
      30        %   Air    --   AFSOUTH --   --   --   AFSOUTH --
    [End Table].
  }

Else If Ally is South-Korea
Then
{
  Let deployed be Red-EEDs in Far-East.
  Table Deploy-order
    qty      #-% unit  owner command arena  in-   in-   to-   to-
    ===== == ===== ===== =====
    deployed #   Troops --   KOREA  --   --   --   KOREA  --
    50        %   Air    --   KOREA  --   --   --   KOREA  --
  [End Table].
}

Else If Ally is Syria
Then
{
  Let deployed be Blue-EEDs in Mid-East.
  Table Deploy-order
    qty      #-% unit  owner command arena  in-   in-   to-   to-
    ===== == ===== ===== =====
    deployed #   Troops --   HCFSW  --   --   --   Syria  --
    30        %   Air    --   HCFSW  --   --   --   Syria  --
  [End Table].
}

Else If Ally is DPRK
Then
{
  Let deployed be Blue-EEDs in Far-East.
  Table Deploy-order
    qty      #-% unit  owner command arena  in-   in-   to-   to-
    ===== == ===== ===== =====
    deployed #   Troops --   HCFFE  --   --   --   DPRK   --
    30        %   Air    --   HCFFE  --   --   --   DPRK   --
  [End Table].
}

}
Else If Role is 3
{
  [Communicate shared interests to other superpower]

```

```
Table Hotline
request      reward penalty      deadline
=====
Do-not-escalate --      --      --
```

[Solicit lesser involvement by antagonists]

```
If Ally is Israel
Then
{
  For opposition (Egypt or Iran or Iraq or Israel or Jordan or Syria):
    If Green's Home-Involvement of Green's opposition > Normal
    Then
      Table Announce
      country      channel      action      re      penal      dead
      ward ty      line
      =====
      opposition From-Blue Cease-preparations --      --      --
      [End Table].
}
```

```
If Ally is South-Korea
Then
{
  For opposition (DPRK or PRC):
    If Green's Home-Involvement of Green's opposition > Normal
    Then
      Table Announce
      country      channel      action      re      penal      dead
      ward ty      line
      =====
      opposition From-Blue Cease-preparations --      --      --
      [End Table].
}
```

[Enhance readiness for police action at present or reduced level of conflict]

[Anticipate escalation; take action now to prepare to deal with it]

```
If Ally is Israel
Then
{
  Table Alert-order
  unit  owner  command  arena  in-region  %-ready
  ----  ----  -
  All   Blue   --      --      Mid-East   100
  [End Table].
}
```

```
Else If Ally is South-Korea
Then
{
  Table Alert-order
  unit  owner  command  arena  in-region  %-ready
  ----  ----  -
  All   Blue   --      --      Far-East   100
  [End Table].
}
```

```
Else If Ally is Syria
Then
{
```

```

Table Alert-order
unit  owner  command  arena  in-region  %-ready
=====
All   Red    --       --      Mid-East   100
[End Table].
}

Else If Ally is DPRK
Then
{
  Table Alert-order
  unit  owner  command  arena  in-region  %-ready
  =====
  All   Red    --       --      Far-East   100
  [End Table].
}
}

End. [Opening-phase]

Posturing Phase

Define Posturing-phase:

  Declare opposition: Let opposition be Type-country.
  Declare ally:       Let ally       be Type-country.

  [Posturing Assessment]

  Perform Assess-situation.

  [Posturing Move]

  If Role is 1
  Then
  {
    [Set M-day, C-day, proportional escalation guidance, and authorize war plan
    deployments for theater(s) affected; set nominal D-day but do not authorize
    combat; increase readiness worldwide]

    Perform Adjust-assumptions+behavior. [This and the following functions are
    in the standard release NCLs]
    Perform Project-possible-futures.
    Perform Set-candidate-strategy.
    Perform Select-strategy.
  }
  Else If Role is 2
  Then
  {
    [Set M-day, C-day, proportional escalation guidance, and authorize war plan
    deployments for primary theater; set nominal D-day but do not authorize
    combat]
    Perform Adjust-assumptions+behavior. [This and the following functions are
    in the standard release NCLs]
    Perform Project-possible-futures.
    Perform Set-candidate-strategy.
    Perform Select-strategy.

    If Owner is Blue
    Then

```

```
{
  Let SAC-delegated-authority be Limited.
  Let SAC-ROE-for-self-defense be Limit-self-defense.
  Let Authorization of SAC, USSR-target be None.
  Let AFCENT-delegated-authority be Limited.
  Let AFCENT-ROE-for-self-defense be Limit-self-defense.
  Let Authorization of AFCENT, USSR-target be None.
  Let AFNORTH-delegated-authority be Limited.
  Let AFNORTH-ROE-for-self-defense be Limit-self-defense.
  Let Authorization of AFNORTH, USSR-target be None.
  Let AFSOUTH-delegated-authority be Limited.
  Let AFSOUTH-ROE-for-self-defense be Limit-self-defense.
  Let Authorization of AFSOUTH, USSR-target be None.
  Let LANT-delegated-authority be Limited.
  Let LANT-ROE-for-self-defense be Limit-self-defense.
  Let Authorization of LANT, USSR-target be None.
  Let PAC-delegated-authority be Limited.
  Let PAC-ROE-for-self-defense be Limit-self-defense.
  Let Authorization of PAC, USSR-target be None.
  Let KOREA-delegated-authority be Limited.
  Let KOREA-ROE-for-self-defense be Limit-self-defense.
  Let Authorization of KOREA, USSR-target be None.
  Let CENT-delegated-authority be Limited.
  Let CENT-ROE-for-self-defense be Limit-self-defense.
  Let Authorization of CENT, USSR-target be None.
}
If Owner is Red
Then
{
  Let SNF-delegated-authority be Limited.
  Let SNF-RCE-for-self-defense be Limit-self-defense.
  Let Authorization of SNF, US-target be None.
  Let HCFW-delegated-authority be Limited.
  Let HCFW-RCE-for-self-defense be Limit-self-defense.
  Let Authorization of HCFW, US-target be None.
  Let NWCOM-delegated-authority be Limited.
  Let NWCOM-ROE-for-self-defense be Limit-self-defense.
  Let Authorization of NWCOM, US-target be None.
  Let HCFSW-delegated-authority be Limited.
  Let HCFSW-ROE-for-self-defense be Limit-self-defense.
  Let Authorization of HCFSW, US-target be None.
  Let HCFE-delegated-authority be Limited.
  Let HCFE-ROE-for-self-defense be Limit-self-defense.
  Let Authorization of HCFE, US-target be None.
  Let HCFS-delegated-authority be Limited.
  Let HCFS-ROE-for-self-defense be Limit-self-defense.
  Let Authorization of HCFS, US-target be None.
}
Else If Role is 3
{
  [Set C-day, proportional escalation guidance, and authorize war plan
  deployments for primary theater; set nominal D-day but do not authorize
  combat]

  If Ally is Israel
  Then
  {
    [Because standard PCAS 4.0 does not represent an Israeli campaign, the
    following will only partially approximate desired results]

    Perform Decide-operational-strategy-for-AFSOUTH.
  }
}
```



```
}

Else If Ally is South-Korea
Then
{
  Perform Decide-operational-strategy-for-KOREA.
}

Else If Ally is Syria
Then
{
  [Because standard RSAS 4.0 does not represent a Syrian campaign, the
    following will only partially approximate desired results]

  Perform Decide-operational-strategy-for-HCFSW.
}

Else If Ally is DPRK
Then
{
  Perform Decide-operational-strategy-for-DPRK.
}
}

[Communication]

If Role is 1
Then
{
  [- If demarche, retransmit demarche
  - If urging restraint, urge restraint
  - If claiming shared interests, urge restraint
  Solicit broad support from own allies]

  If Owner is Blue
  Then
  {
    Perform JCS1-deterrence-announcement-response.
    Perform JCS1-deterrence-messages.
  }
  Else If Owner is Red
  Then
  {
    Perform SHC1-preparation-announcement-response.
    Perform SHC1-preparation-messages.
  }
}

Else If Role is 2
Then
{
  [Again, urge restraint
  Solicit specific cooperation and involvement by selected allies]

  Table Hotline
    request      reward penalty      deadline
    =====
    Do-not-escalate -- -- --

  If Ally is Israel
  Then
  {
    For opposition (Egypt or Iran or Iraq or Jordan or Syria):
      If Green's Home-Involvement of Green's opposition > Normal
```

```

Then
Table Announce
country      channel  action
=====
opposition From-Blue Cease-preparations -- -- --
[End Table].
}

If Ally is South-Korea
Then
{
  For opposition (DPRK or PRC):
  If Green's Home-Involvement of Green's opposition > Normal
  Then
  Table Announce
country      channel  action
=====
opposition From-Blue Cease-preparations -- -- --
[End Table].
}

[Solicit specific cooperation and involvement by selected allies]

If Ally is Israel
Then
{
  For ally (Egypt or FRG or France or Portugal or Spain or UK):
  If Green's Side of Green's ally is not Blue or Green's Cooperation of
  Green's ally < Transit
  Then
  Table Cable
country      side  cooperation
=====
ally         Blue  Transit
[End Table].
}

Else If Ally is South-Korea
Then
{
  If Green's Side of Green's Japan is not Blue or Green's
  Cooperation of Green's Japan < Transit
  Then
  Table Cable
country      side  cooperation
=====
Japan        Blue  Transit
[End Table].
}
}

Else If Role is 3
{
  [Respond to other superpower's opening communication
  - If demarche, urge restraint
  - If urging restraint or claiming shared interests, inform other of
  actions taken]
  Solicit lesser involvement by antagonists]
}

```

Table Hotline

request	reward	penalty	deadline
Do-not-escalate	--	--	--

If Ally is Israel

Then

{

For opposition (Egypt or Iran or Iraq or Israel or Jordan or Syria):

If Green's Home-Involvement of Green's opposition > Normal

Then

Table Announce

country	channel	action	re ward	penal ty	dead line
opposition From-Blue	Cease-preparations	--	--	--	--

[End Table].

}

If Ally is South-Korea

Then

{

For opposition (DPRK or PRC):

If Green's Home-Involvement of Green's opposition > Normal

Then

Table Announce

country	channel	action	re ward	penal ty	dead line
opposition From-Blue	Cease-preparations	--	--	--	--

[End Table].

}

}

End. [Posturing-phase]

Engagement Phase

Define Engagement-phase:

[Engagement Assessment]

Perform Assess-situation.

[Direction]

If Role is 1

Then

{

[Promulgate global controls and theater bounds and authorizations]

Perform Adjust-assumptions+behavior. [This and the following functions are in the standard release NCLs]

Perform Project-possible-futures.

Perform Set-candidate-strategy.

Perform Select-strategy.

}

Else If Role is 2

Then

{

[Promulgate theater bounds and authorizations; execute war plans only in primary theater]

Perform Adjust-assumptions+behavior. [This and the following functions are in the standard release NCLs]
Perform Project-possible-futures.
Perform Set-candidate-strategy.
Perform Select-strategy.

}

If Owner is Blue

Then

{

Let SAC-delegated-authority be Limited.
Let SAC-ROE-for-self-defense be Limit-self-defense.
Let Authorization of SAC, USSR-target be None.
Let AFCENT-delegated-authority be Limited.
Let AFCENT-ROE-for-self-defense be Limit-self-defense.
Let Authorization of AFCENT, USSR-target be None.
Let AFNORTH-delegated-authority be Limited.
Let AFNORTH-ROE-for-self-defense be Limit-self-defense.
Let Authorization of AFNORTH, USSR-target be None.
Let AFSOUTH-delegated-authority be Limited.
Let AFSOUTH-ROE-for-self-defense be Limit-self-defense.
Let Authorization of AFSOUTH, USSR-target be None.
Let LANT-delegated-authority be Limited.
Let LANT-ROE-for-self-defense be Limit-self-defense.
Let Authorization of LANT, USSR-target be None.
Let PAC-delegated-authority be Limited.
Let PAC-ROE-for-self-defense be Limit-self-defense.
Let Authorization of PAC, USSR-target be None.
Let KOREA-delegated-authority be Limited.
Let KOREA-ROE-for-self-defense be Limit-self-defense.
Let Authorization of KOREA, USSR-target be None.
Let CENT-delegated-authority be Limited.
Let CENT-ROE-for-self-defense be Limit-self-defense.
Let Authorization of CENT, USSR-target be None.

}

If Owner is Red

Then

{

Let SNF-delegated-authority be Limited.
Let SNF-ROE-for-self-defense be Limit-self-defense.
Let Authorization of SNF, US-target be None.
Let HCFW-delegated-authority be Limited.
Let HCFW-ROE-for-self-defense be Limit-self-defense.
Let Authorization of HCFW, US-target be None.
Let NWCOM-delegated-authority be Limited.
Let NWCOM-ROE-for-self-defense be Limit-self-defense.
Let Authorization of NWCOM, US-target be None.
Let HCFSW-delegated-authority be Limited.
Let HCFSW-ROE-for-self-defense be Limit-self-defense.
Let Authorization of HCFSW, US-target be None.
Let HCFFE-delegated-authority be Limited.
Let HCFFE-ROE-for-self-defense be Limit-self-defense.
Let Authorization of HCFFE, US-target be None.
Let HCFS-delegated-authority be Limited.
Let HCFS-ROE-for-self-defense be Limit-self-defense.
Let Authorization of HCFS, US-target be None.

}

Else If Role is 3

{

```
[Deploy forces for relatively secure presence; authorize defensive ROE
only]
If Ally is Israel
Then
{
  [Because standard RSAS 4.0 does not represent an Israeli campaign, the
  following will only partially approximate desired results]

  Perform Decide-operational-strategy-for-AFSOUTH.
}

Else If Ally is South-Korea
Then
{
  Perform Decide-operational-strategy-for-KOREA.
}

Else If Ally is Syria
Then
{
  [Because standard RSAS 4.0 does not represent a Syrian campaign, the
  following will only partially approximate desired results]

  Perform Decide-operational-strategy-for-HCFSW.
}

Else If Ally is DPRK
Then
{
  Perform Decide-operational-strategy-for-DPRK.
}

:

[Response]

If Role is 1
Then
{
  [Accept other superpower's offer to desist; ignore other communications.
  Respond as leader of own bloc to communications from other countries.
  Accept recommendations from subordinate commanders that do not
  irresponsibly risk superpower nuclear war.]
  If Owner is Blue
  Then
  {
    Perform JCS1-regional-combat-messages.
    Perform JCS1-regional-combat-announcement-response.
    Perform JCS1-regional-combat-notification-response.
  }
  Else If Owner is Red
  Then
  {
    Perform SHC1-regional-combat-messages.
    Perform SHC1-regional-combat-announcement-response.
    Perform SHC1-regional-combat-notification-response.
  }
}

Else If Role is 2
Then
{
  [Accept other superpower's offer to desist or disengage; ignore other
  communications. Respond favorably to communications from allies and
  allies supporting them. Accept recommendations from subordinate
```

```
    commanders that do not irresponsibly risk superpower escalation.]
If Owner is Blue
Then
{
    Perform JCS1-regional-combat-messages.
    Perform JCS1-regional-combat-announcement-response.
    Perform JCS1-regional-combat-notification-response.
}
Else If Owner is Red
Then
{
    Perform SHC1-regional-combat-messages.
    Perform SHC1-regional-combat-announcement-response.
    Perform SHC1-regional-combat-notification-response.
}
}
Else If Role is 3
{
    [Reassess in light of communications from other superpower. Promote
    moderation in actions of other countries. Accept recommendations from
    subordinate commanders that do not risk escalation.]
    If Owner is Blue
    Then
    {
        Perform JCS1-regional-combat-messages.
        Perform JCS1-termination-announcement-response.
        Perform JCS1-regional-combat-notification-response.
    }
    Else If Owner is Red
    Then
    {
        Perform SHC1-regional-combat-messages.
        Perform SHC1-termination-announcement-response.
        Perform SHC1-regional-combat-notification-response.
    }
}
}

If Announced-action of Other is Cease-preparations or Cease-fire or Surrender
Then
{
    Let Conclude-day be Today.
    Let Move-number be Today.
}
}

End. [Engagement-phase]
```

Concluding Phase

Define Concluding-phase:

[Concluding Assessment]

Perform Assess-situation.

[Negotiation]

If Role is 1

Then

[Offer settlement consistent with revised war aims. Accept offer from
other superpower if consistent with revised war aims.]

```

Table Hotline
  request      reward penalty      deadline
  =====
Cease-fire    --      --      --
}
Else If Role is 2
Then
{
  [Offer settlement consistent with revised war aims.  Accept offer from
  other superpower if consistent with revised war aims.]

  Table Hotline
    request      reward penalty      deadline
    =====
Cease-fire    --      --      --
}
Else If Role is 3
{
  [Offer settlement consistent with revised war aims.  Accept offer from
  other superpower if consistent with revised war aims.]

  Table Hotline
    request      reward penalty      deadline
    =====
Cease-fire    --      --      --
}

[Concluding Move]

If Role is 1
Then
{
  [Immediate cease fire in place.  Defensive ROE.  Crisis alert level.
  Continued resupply.]
  If Owner is Blue
  Then
  {
    Perform JCS1-termination-phase.
  }
  Else If Owner is Red
  Then
  {
    Perform SHC1-termination-phase.
  }
}
Else If Role is 2
Then
{
  [Immediate cease fire with limited withdrawal from areas of direct contact
  with enemy.  Defensive ROE.  Crisis alert level.  Cease resupply.]
  If Owner is Blue
  Then
  {
    Perform JCS1-termination-phase.
  }
  Else If Owner is Red
  Then
  {
    Perform SHC1-termination-phase.
  }
}
Else If Role is 3

```

```
(
  {Immediate cease fire and withdrawal.  Defensive ROE.  Normal alert level.
   Cease resupply.}
  If Owner is Blue
  Then
    {
      Perform JCS1-termination-phase.
    }
  Else If Owner is Red
  Then
    {
      Perform SHC1-termination-phase.
    }
  }
End. [Concluding-phase]
```


Appendix B

NOTES ON THEORY AND EFFICACY OF DETERRENCE

Much of our understanding [of escalation and escalation control] is so inadequate that the analyst cannot take up the question of controlling escalation immediately and systematically. He must first try to understand better what it is that he is trying to control.¹

Although most military planners are comfortable with Clausewitz's dictum that war serves political ends through military means, surprisingly little is known in general about the likely effects of *military operations* (including deployment and employment of forces) on national *political-military decisions*. That is not to say there isn't considerable literature on related topics ranging from theoretical works on deterrence to essays on crisis stability and to historical work on the termination of hostilities. Budgets for new weapons and forces are often justified by theories of extended deterrence, which typically assume that the *existence* (as distinct from the *operations*) of forces will deter. Crises are often managed by using forces to "signal" intent, with the hope of deterring counteractions. Analyses of military contingencies are based on knowledge of the likely effects of military actions on *military* decisions and outcomes, but they are almost always silent on how military operations are supposed to effect political ends. At most, they assume military stalemate will be resolved through negotiations or that overwhelming military success will achieve unconditional surrender, which dominates any more subtle political-military decisions.

It can be useful to distinguish among levels of escalation. Distinctions among "rungs" in escalation ladders are important for at least two reasons: first, the stakes go up the higher the rung (hence, the greater the penalty for making a mistake), and second, everyday life and actual history are far richer in information about the lower rungs than the higher ones.

A third level of distinction within consideration of a given escalatory level is useful: for a given military operation, the distinction between desired political-military decisions it may prompt (typically, the adversary decides *not to* escalate) and undesired decisions it may provoke (typically, the adversary decides *to* escalate). That is, a military

¹Smoke, p. ix.

operation may have desired and/or undesired consequences, with some likelihood of each.²

Table B.1 makes some distinctions, offered by Blechman and Kaplan,³ between efforts to influence other parties to continue what they are doing (reinforcing behavior) and those to influence change (modifying behavior). Different terms are used, depending on whether the other party is hostile (hence, we attempt to coerce) or not (thus, we attempt to support). To "deter" suggests attempting to coerce another party into continuing not to do something.

Table B.1
TYPES OF INFLUENCE

	Reinforce	Modify
Coerce (Hostile)	Deter	Compel
Support (Ally)	Assure	Induce

Blechman and Kaplan assessed the effectiveness of different actions in many conflicts since World War II. Some of their findings are represented in Fig. B.1. The vertical axis represents their judgment of percent effectiveness. The full bars show effectiveness in the short run (six months), and the dashed bars show it for the longer run (three years). In all cases, effectiveness was lower in the longer run. Their assessment suggests that land-based air is somewhat more effective than other forces. This may be because it includes relatively more small operations that by their nature were more doable.

Given the difficulty in assessing whether deterrence and escalation control work, it may be helpful to examine the results of *non*military efforts to influence national behavior. One such type of effort involves economic and political sanctions. John Train analyzed several U.S. sanctions; his evaluation of the ten most recent examples are given in Table B.2.

Train's conclusions are as follows:

First, sanctions, like wars, are most likely to succeed if your side holds overwhelming power. You usually are trying to asphyxiate the opponent,

²From a purely military perspective, operations may have desired consequences (military success) or undesired ones (military failure). Here, we are concerned with neither. Rather, in this study we limit consideration only to *political* success or failure from military operations that are generally (but not always) assumed to be militarily successful.

³³Blechman and Kaplan (1978), p. 71.

so for success all the major holes have to be plugged up. Significant leaks probably mean failure.

Then, the more limited your objectives, the better your chances. For instance, insisting that for most-favored-nation treatment a country must not send you goods made by convict labor is a simple idea to put across. But to demand that the target government do something that amounts to political suicide is not. If it yields, the electorate may repudiate it for bowing to foreign pressure.

Sanctions, like war, should usually be applied, if at all, decisively and overwhelmingly. The idea that gradual escalation will make an opponent recognize the error of his ways is wishful thinking. As Nietzsche said, what does not kill me, fortifies me. If you want to bend an adversary to your will, you should crush his resistance, not stimulate him to greater efforts. Gradual sanctions may have that effect, as the victim reacts energetically and works out his responses.⁴

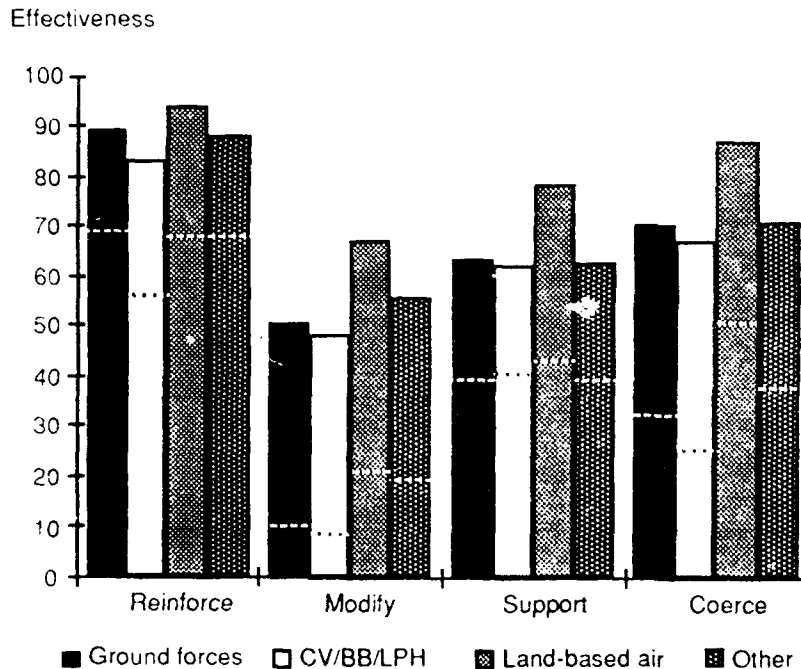


Fig. B.1—Historical effectiveness of military actions

⁴Train (1989), p. 14.

Table B.2
RESULTS OF U.S. ECONOMIC SANCTIONS

Date	Purpose	Result
1974-78	Remove Turkish troops from Cyprus	Failure
1975-present	Facilitate Jewish emigration from USSR	Failure, perhaps counterproductive ^a
1975-79	Human rights in Cambodia	Failure
1976-present	Human rights in Ethiopia	Failure (USSR replaced United States)
1978-82	Improve situation of Soviet dissidents	Failure
1977-79	Remove Nicaragua's Somoza	Success (combined with covert action)
1979-present	Bring democracy to Nicaragua	Failure (combined with covert action); (USSR replaced United States) ^b
1979	Recover Iranian hostages, settle claims	Helpful
1980-81	Impose grain embargo to end Soviet invasion of Afghanistan	Costly failure
1981-82	Prevent USSR-Europe pipeline	Costly and humiliating failure

^aRecent improvements did not come as result of sanctions.

^bTrain wrote this in 1989, when it appeared (to him, at least) that U.S. sanctions had failed.

Appendix C

METHODOLOGIES FOR ANALYZING DETERRENCE

A methodology that was employed during the study but is not developed elsewhere in this Note includes three components:

- Constructing scenarios that identify key U.S. decision points
- Laying out strategy inference trees for each of the key decision points in the scenario(s)
- Formulating decision tables for each decision point, consistent with the strategy inferences

The value of the methodology is that it produces three different but related views of possible events in context, together with important decision input variables, options believed suitable for different situations, and explicit presumed causal linkages from actions to objectives—all in standard representations appropriate for use in staff planning and briefing decisionmakers.

REPRESENTING SCENARIOS AS DECISION TREES

The first of two scenarios used to illustrate application of the methodology is sketched in Fig. C.1. The diagram follows the common decision analysis convention of depicting one's own decisions as boxes and other events or decisions as circles. For each scenario, successive key U.S. decision points are labelled D1, D2, D3, and D4; the specific U.S. decisions taken are not shown in this figure. What is shown in each case is a single, linear scenario. Of course, in a real-world developing situation, other things could happen: lines out of the squares (under direct U.S. control) and circles (not under direct U.S. control) could branch off along different paths or could stop. Deterrence and escalation control aim to make this happen, consistent with U.S. security objectives.

The first scenario is adapted from work by Winnefeld and Shlapak.¹ It begins with skirmishes between DPRK and ROK forces at the DMZ and subsequent seizure of American representatives at Panmunjom; this sets the stage for the first key U.S. decision point, D1. The situation worsens as the DPRK attacks ROK forces with conventional

¹This is their Scenario B, except I have combined their first and second U.S. decision points into one.

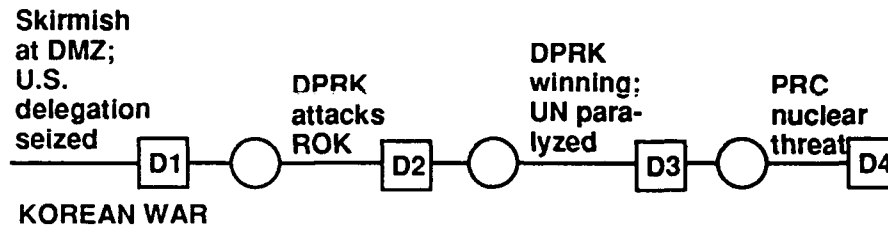


Fig. C.1-Korean war scenario

and chemical munitions. Seoul falls, the DPRK appears to be winning, and the UN is unable to function in a policymaking or commanding role. To deter possible U.S. use of nuclear weapons, the People's Republic of China (PRC) threatens that nuclear use would not be confined to the Korean peninsula.

The second scenario, depicted in Fig. C.2, is also adapted from work by Winnefeld and Shlapak.²

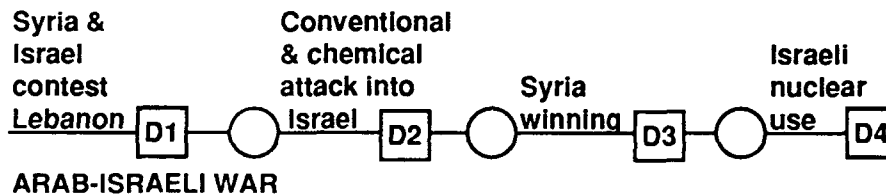


Fig. C.2-Arab-Israeli war scenario

The scenario begins with clashes between Syrian and Israeli forces in Lebanon. As tensions increase, Syria launches a surprise attack with conventional and chemical weapons against Israel; these prove especially effective against the Israeli Air Force. As it becomes apparent that Syrian advances are posing a clear and present danger to Israeli survival, Israel counters with missile-delivered nuclear weapons, halting the Syrian offensive.

REPRESENTING ASSUMED CAUSATION WITH STRATEGY TREES

The second of the three methodological components uses strategy inference trees³ to represent and analyze additional aspects of the U.S. decision points. The technique is illustrated in Fig. C.3.

²This is Winnefeld and Shlapak's Scenario F, except I have chosen to delete Egyptian abrogation of the treaty with Israel from the baseline.

³The author became familiar with this technique through the work of Rick Hayes-Roth.

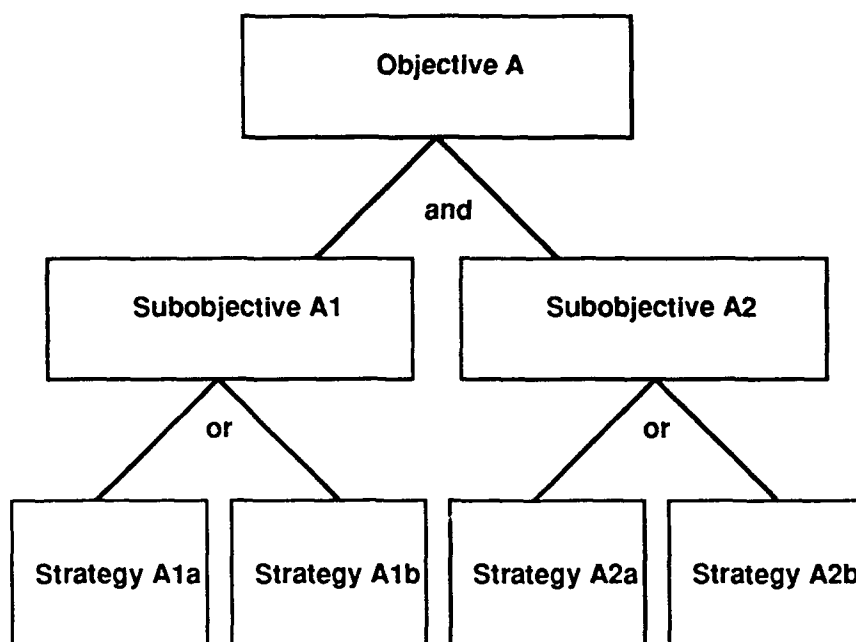


Fig. C.3—Illustrative strategy inference tree

Here, Objective A is assumed to be the operative U.S. objective in a given situation. It consists of two parts, Subobjectives A1 and A2. The “and” linking A1 and A2 to A means that *both* A1 and A2 must be achieved in order to achieve A. For example, if Objective A is “prevent a hostile state or group of states from dominating the Eurasian landmass,”⁴ then A1 and A2 might be prevention of domination of Europe and Asia, respectively—both of which would have to be achieved to achieve A. Any level of the diagram can, if desired, be related to lower-level requirements, such as A1a or A1b being required to achieve A1. As indicated by the “or” linking them, achievement of either A1a or A1b is assumed to suffice to achieve A1. Overall, this type of diagram says that to achieve a given objective, there must be at least one path of achieved requirements, consistent with the “and” and “or” conditions. To the extent that one cannot achieve any such path, one cannot achieve the top-level objective.

Strategy inference trees can be used to brainstorm additional options and put them in context. They can also be probabilistic, with confidence levels associated with various branches, in which case the overall confidence of achieving the top-level objective can be computed.

⁴President Reagan’s *National Security Strategy of the United States* identified such domination as endangering the United States’ most basic national security interests.

REPRESENTING ASSUMED CAUSATION WITH DECISION TABLES

The third component of the methodology is decision tables. A decision table is a tabular form of conditional logic. The following RAND-ABEL decision table

```
Decision Table
Today   perceived-threat / action
===== / =====.
>=5    --               Deploy
--      >None           Deploy-faster
--      --              Do-nothing .
```

is equivalent to the following If-Then-Else statement:

```
If Today >= 5
Then Let action be Deploy
Else If perceived-threat > None
Then Let action be Deploy-faster
Else Let action be Do-nothing.
```

The If part appears to the left of the slash, and the Then part is to the right. The double hyphens indicate indifference. Decision tables are executed row by row. When conditions match the values to the left of the slash, the action(s) to the right is (are) executed, and the table is exited. It is good programming practice to end each decision table with a default action, to be executed if none of the rows above it execute.

An example, using RAND-ABEL programming conventions, is shown in Table C.1. Here, the logic is that non-IC-Eur-land-theater-situation is the worst of the Southwest-Asian, Middle-East, Far-East and Other-land situations.

Table C.1
EXAMPLE OF DECISION TABLE

```
Decision Table

Southwest- Middle- Far- Other- / non-IC-Eur-
Asian-      East-  East- land- / land-theater-
situation  situation situation situation / situation
===== / =====.
Regional-nuc <=Gen-conv <=Gen-conv <=Gen-conv Regional-nuc
<=Gen-conv Regional-nuc <=Gen-conv <=Gen-conv Regional-nuc
<=Gen-conv <=Gen-conv Regional-nuc <=Gen-conv Regional-nuc
<=Gen-conv <=Gen-conv <=Gen-conv Regional-nuc Regional-nuc
[ Full table goes on to cover all other possibilities ]
```


BIBLIOGRAPHY

- Bennett, Peter G., "On Linking Approaches to Decision-Aiding: Issues and Prospects," *Journal of the Operational Research Society*, Vol. 36, No. 8, August 1985, pp. 659-669.
- Bennett, P. G., and C. S. Huxham, "Hypergames and What They Do: A 'Soft O.R.' Approach," *Journal of the Operational Research Society*, Vol. 33, No. 1, January 1982, pp. 41-50.
- Bennett, P. G., C. S. Huxham, and M. R. Dando, "Shipping in Crisis: A Trial Run for 'Live' Application of the Hypergame Approach," *Omega*, Vol. 9, No. 6, 1981, pp. 579-594.
- Blechman, Barry M., and Stephen S. Kaplan, *Force without War*, The Brookings Institution, Washington, D.C., 1978.
- Bracken, Paul, *Strategic Planning for National Security: Lessons from Business Experience*, The RAND Corporation, N-3005-DAG/USDP, February 1990.
- Broad, William J., "Non-Superpowers Are Developing Their Own Spy Satellite Systems," *New York Times*, September 3, 1989, p. 1. Notes that some nations are calling for spread of spy satellites as a deterrent to war. Also discusses potential problems.
- Commission on Integrated Long-Term Strategy, Fred C. Iklé and Albert Wohlstetter (chm), *Discriminate Deterrence*, January 1988.
- Davis, Paul K., *An Analyst's Primer for the RAND-ABEL® Programming Language*, The RAND Corporation, N-3042-NA, January 1990.
- Davis, Paul K., *Studying First-Strike Stability with Knowledge-Based Models of Human Decisionmaking*, The RAND Corporation, R-3689-CC, April 1989.
- Davis, Paul K., Steven C. Bankes, and James P. Kahan, *A New Methodology for Modeling National Command Level Decisionmaking in War Games and Simulations*, The RAND Corporation, R-3290-NA, July 1986. Describes an earlier Ivan K version of Red Agent National Command Level.
- DeSantis, Hugh, *The Reshaping of Europe*, The RAND Corporation, N-3043-DAG/USDP, January 1990.
- George, Alexander L., and Richard Smoke, *Deterrence in American Foreign Policy: Theory and Practice*, Columbia University Press, New York, 1974. A major work on deterrence.
- Hosmer, Stephen T., *Constraints on U.S. Strategy in Third World Conflict*, The RAND Corporation, R-3208-AF, September 1985. Historical survey of constraints in Third World conflicts since World War II, drawing heavily on U.S. experience in Korea and Vietnam.

- Iklé, Fred C., *Every War Must End*, Columbia University Press, New York, 1971.
- Kahn, Herman, *On Escalation: Metaphors and Scenarios*, Praeger, New York, 1965.
- Kahn, Herman, *On Thermonuclear War*, Princeton University Press, Princeton, N.J., 1960.
- Lakoff, George, and Mark Johnson, *Metaphors We Live By*, University of Chicago Press, Chicago, 1980.
- Lewis, Kevin, *Planning for Nuclear Deterrence and Defense: The Complex Decision Structure*, The RAND Corporation, P-7346, June 1987. Discusses ethical and practical difficulties in planning and implementing deterrence.
- Lewis, Kevin, *Getting More Deterrence Out of Deliberate Capability Revelation*, The RAND Corporation, N-2873-AF, August 1989. Discusses potential benefits from and constraints to deliberate revelation of U.S. capabilities during crisis or calm.
- Mandelbaum, Michael, *The Nuclear Revolution: International Politics before and after Hiroshima*, Cambridge University Press, New York, 1981.
- Schwabe, William, and Barry Wilson, *Analytic War Plans: Adaptive Force-Employment Logic in the RAND Strategy Assessment System*, The RAND Corporation, N-3051-NA, April 1990. Describes both AWP's and analyst plans. Documents many RAND-ABEL enumerations that are used by NCLs.
- Smoke, Richard, *War: Controlling Escalation*, Harvard University Press, Cambridge, Massachusetts, 1977.
- Train, John, "When Can Sanctions Succeed?" *Wall Street Journal*, June 14, 1989, p.14.
- Winnefeld, James, and David Shlapak, *The Challenge of Future Nonstandard Contingencies: Implications for Strategy, Planning, Crisis Management, and Forces*, The RAND Corporation, N-3098/1-DAG (Vol. 1) and N-3098/2-DAG (Vol. 2), forthcoming.