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Planning for Long-Term Security in Central Europe

**Implications of the
New Strategic Environment**

Paul K. Davis, Robert D. Howe

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A Report from
The RAND Strategy Assessment Center

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August 1990

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PREFACE

This report was prepared for the Under Secretary of Defense for Policy and is intended for a broad audience. It presents analysis completed early in 1990 that takes into account the dramatic changes that have been occurring in Europe. Because we were to emphasize independent and forward-looking analysis that could be disseminated widely, the report relies upon public sources—including many articles by European and Soviet authors—and includes controversial arguments and recommendations that should not necessarily be associated with the particular sponsor or the U.S. government. The project was accomplished in the RAND Strategy Assessment Center (RSAC), which is part of RAND's 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. Comments are welcome and should be addressed to Dr. Davis, director of the RSAC.



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SUMMARY

The long-term security of Europe depends on continued progress on two fronts, East-West security issues and "other" security issues, the latter including economic developments to reduce discrepancies among nations, the harmonious emergence of a united Germany, and the moderation of ethnic disputes within Eastern Europe. This report is concerned only with long-term East-West security and the related concept of "stability." Our approach, however, is strongly tuned to the existence of the other class of problems.

The recent changes in Europe have transformed the strategic landscape and altered what can be accomplished with respect to security. In this report we propose a framework of new NATO objectives and a strategy for accomplishing them. Our approach starts with the desire to achieve long-term stability, by which we mean a state characterized by robust security, predictability, the absence of crises and dangerous international tensions, a "reasonable" defense burden that is either constant or shrinking, and public satisfaction with the situation.

To achieve this objective we recommend thinking in terms of five subordinate objectives, as shown in Fig. S.1. First, NATO must continue to deter, but without provocation, a Soviet invasion of Western Europe—the traditional mission that now seems easy to accomplish. Second, NATO must recognize that the security of both the Soviet Union and Western Europe is being greatly enhanced by the emergence of a strategic buffer zone composed of Poland, Czechoslovakia, and Hungary. Thus it is now important, even before Soviet forces leave Germany and Eastern Europe, to plan for long-term deterrence of Soviet *reentry* into Eastern Europe—again, without provocation or souring the trends toward greatly improved East-West relations and the integration of the Soviet Union into Europe. Fortunately, this is not a zero-sum game: to the contrary, it is just as strongly in the Soviet interest that the strategic buffer should emerge and continue.

The third element of strategy is to maintain strategic equivalence in the East-West competition, maintaining a good balance of forces and maintaining a vigorous program of research, development, and doctrinal evolution. This strategic equivalence is essential if the military balance is to be deemphasized in national politics and discredited as an instrument of foreign policy.

The fourth element is to deter rearmament, a challenge that NATO has never needed to concern itself with in the past but which may be especially important in the years ahead. Nuclear forces have an especially important role here that has no historical precedent. And, finally, we have the objective of reducing the sources of conflict and tension.

As summarized in Fig. S.1, there are many measures that can be pursued for each of the five subordinate objectives. These involve a mix of unilateral military improvements, arms control beyond CFE I (the postulated outcome of current CFE talks), and political and economic activities. Some of the measures are strongly interlinked and controversial. For example, we recommend reducing force levels to roughly 50 percent of CFE I levels, but this should be coupled with reductions and restrictions on forces outside the Atlantic to the Urals region, which is likely to mean the need to consider some measure of naval arms control. We also recommend joint Western and Soviet security guarantees for Eastern Europe and a state of defensively armed neutrality for the buffer states.

In contemplating the strategy as a whole, represented by the totality of Fig. S.1, it is useful to see it as having three aspects: a *core* strategy, an *environment-shaping* strategy, and a *hedging* strategy. The core strategy is essentially to pursue the highly favorable current trends that are restructuring Europe and the character of NATO. The environment-shaping strategy includes building the Soviet Union into Europe rather than continuing to treat it strictly as a "threat," using arms control to reduce the feasibility of large-scale military campaigns of aggression, removing some of the sources of tension, and developing military capabilities with great flexibility. The hedging strategy includes continued research and development, rapidly deployable U.S. air forces with advanced munitions, and realistic plans to permit mobilization if necessary. As the report makes evident, despite the very favorable trends, there is ample need and opportunity for environment shaping and hedging that goes well beyond CFE I: the end of history is not yet quite upon us, even in Europe.

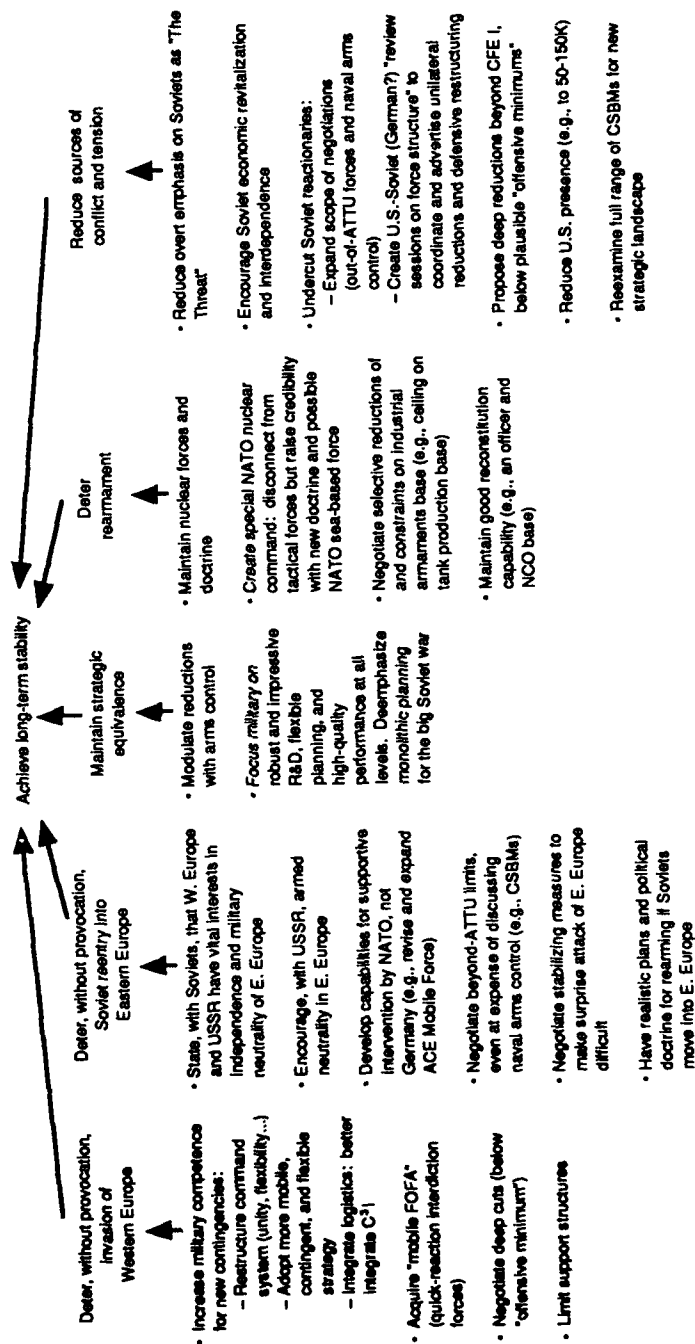


Fig. S.1—Summary of approach to long-term stability

ACKNOWLEDGMENTS

We gratefully acknowledge having drawn on the work of some of our RAND colleagues, notably William Wild, who contributed to related military analysis we have published elsewhere; Richard Kugler, David Ochmanek, and Kenneth Watman, who are conducting related studies under the sponsorship of the U.S. Air Force, the U.S. Army, and The Ford Foundation; and consultant Paul Bracken of Yale University. We appreciate the time spent with us by many serving military officers and defense officials in the United States, the Federal Republic of Germany, and the United Kingdom. A number of international conferences held by RAND, Harvard University, the University of California at San Diego, the Brookings Institution, the SHAPE Technical Center, the University of the Bundeswehr, the Institute for East-West Security Studies, and the Soviet Academy of Sciences made it possible to discuss theoretical and practical issues with scholars and military analysts from the Soviet Union, Poland, Hungary, East Germany, Czechoslovakia, Switzerland, Sweden, and Austria. Richard Kugler, Roger Molander, and Ulrich Weisser all provided useful reviews.

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I. INTRODUCTION

OBJECTIVES OF THE STUDY

Events in late 1989 have transformed the strategic landscape in Central Europe, changing fundamentally the degree and *nature* of security to which nations can reasonably aspire. The purpose of this report, largely completed in early 1990, is to propose a framework for conceptualizing and discussing new NATO security objectives and strategies for achieving them. Our scope is at once narrow and broad. On the one hand, we focus on East-West military security issues rather than such important issues as the political strains within Europe created by multipolarity, economic discrepancies, and ethnic tensions.¹ On the other hand, our treatment of East-West (military) security is broad—fully reflecting the new strategic landscape and recognizing the other issues, including the desire to better integrate the Soviet Union and Eastern Europe into Europe generally.

Our approach is based on distinguishing among what may be termed *core strategy*, *environment-shaping strategy*, and *hedging strategy*.² Within our discussion of strategy we review critically the elusive and sometimes insidious concept of “stability.” We then discuss ways in which long-term security could be enhanced by formally or informally negotiated arms control, including reciprocal unilateral measures, in the post-CFE period.

ASSUMPTIONS, APPROACH, AND SCOPE

Our approach requires defining a baseline image of the future environment. Although less favorable developments are obviously possible, we postulate for the post-CFE period (i.e., 1992–1996) a *core environment* in which the CFE treaty (CFE I) has been largely implemented; the Soviets have largely or completely withdrawn from Eastern Europe; a united Germany is part of NATO; Soviet foreign

¹See Mearsheimer (1990) for a provocative discussion of possible instabilities in post-Cold War Europe. For a German perspective on desirable policies, see Weisser (forthcoming).

²Separately identifying these types of strategy was a product of an earlier project on global military planning. See Davis (1989b) for an early application to global military strategy and Bracken (1990) for general discussion, including examples of business practice motivating the approach.

policy remains consistent with that of the last several years; the Warsaw Treaty Organization (WTO) effectively disintegrates in that Poland, Czechoslovakia, and Hungary go their independent ways; NATO becomes less "threat oriented" and somewhat more politically oriented, although retaining its military responsibilities; and political, social, and economic ties continue to grow between the West and both Eastern Europe and the Soviet Union. Despite this favorable core environment, we argue that there is a great deal of useful environment shaping and hedging to be considered. The end of history has not yet quite arrived, even in Europe.³

As noted earlier, we deal largely with military issues, but—consistent with the new environment—we seek to integrate them conceptually with political and economic considerations. We also approach security and stability theory from a neutral perspective that assumes as a goal the actual and perceived security of *all* relevant nations. Our analytic examples and recommendations, however, focus on the East-West defense-planning challenges facing NATO. We pay particular attention to the feasibility of long-term security in a deep-cuts regime with force levels at 50 percent of NATO's current levels. We also review (in App. A) the consequences of the new strategic landscape for judgments about the stabilizing or destabilizing effects of various classes of forces (e.g., deep-strike air forces), weapon systems (e.g., mobile air defenses), and "operational arms-control measures" dealing with such issues as readiness, deployment patterns, and exercises. We do *not* treat here such important issues as fine-tuning the CFE I

³Although its success is assumed here, CFE I is by no means a given. Indeed, since political activities have greatly outpaced the CFE process, many believe that the treaty is now only marginally important and could actually impede natural processes. Although we share concerns on the latter point, we believe completing the treaty promptly is important for four reasons: (a) codifying the obligation for reductions, (b) assuring destruction of excess armored equipment and artillery, (c) codifying underappreciated stabilizing measures already included in the draft treaty, and (d) institutionalizing a regime of relative openness.

The principal impediments to CFE's completion are (a) the prospect of Gorbachev's being distracted by internal problems that could even lead to revolution or disintegration, and (b) the strongly divisive internal arguments within the Soviet Union about German issues and "the loss of Eastern Europe." We believe that the German issues will be resolved along the lines of Western proposals, because—despite contrary and passionate views by Soviet conservatives, who can properly be called reactionaries—Soviet interests will be best served by allowing natural processes to occur gracefully so that improving and increasing Soviet relationships with Western Europe can continue. Further, the Soviets simply have no cards to play on the German issue. It appears at least plausible that a CFE treaty will be agreed on in 1990 or very early in 1991. [Note added shortly before publication: President Gorbachev agreed, in talks with Chancellor Kohl on July 16, 1990, to accept German membership in NATO and to withdraw Soviet forces from Germany.]

treaty, managing without crisis the prompt withdrawal of Soviet forces, establishing the desired end-point level for U.S. forces in Europe, or defining the political mechanisms suitable for a "CFE II." Nor do we consider military balances or potential conflicts within Eastern Europe, the Soviet Union, or Western Europe, or between, say, Germany and Poland. Our concern here is long-term East-West stability, appropriately defined and in a multipolar context.

II. THE NEW STRATEGIC LANDSCAPE

A STRATEGIC BUFFER

There are powerful and desirable trends to broaden and deepen interdependencies among Western Europe, Eastern Europe, the Soviet Union, and the United States. There is clearly no desire to isolate any of these states, including the Soviet Union—quite the contrary. Nonetheless, from a security perspective, one of the most important aspects of the emerging core environment is that there will exist a strategic buffer zone between Western Europe and the Soviet Union (Fig. 1). Although neither Poland nor Czechoslovakia wishes to consider itself a “buffer,” both states will play that role by virtue of geography.¹ The full implications of this for stability have not generally been appreciated. For example, such a buffer and the extension of NATO’s depth by German unification will:

- Rule out both surprise attacks and otherwise fast first campaigns against Western Europe or the Soviet Union.
- Provide a cushion in time and space for the defender, thereby compensating for uncertainties about the actual force levels the opponent might bring to bear (e.g., by drawing upon forces nominally assigned to regions other than Central Europe) and for some degree of sloppiness in initial mobilization.
- Assure the theoretical existence of mutually stable force-posture regimes, which do not necessarily exist without such a buffer because of the advantages of surprise attack (see App. B).
- Increase the distinctions between offensive and defensive force structures, thereby making nonoffensive defense more plausible.
- Give leverage to tactical air forces, which become more clearly stabilizing, even with deep-strike weapons.

There will be at least two corollary consequences:

¹One may ask, What’s in it for the buffer states? The answer is economic assistance and ties to Western Europe.

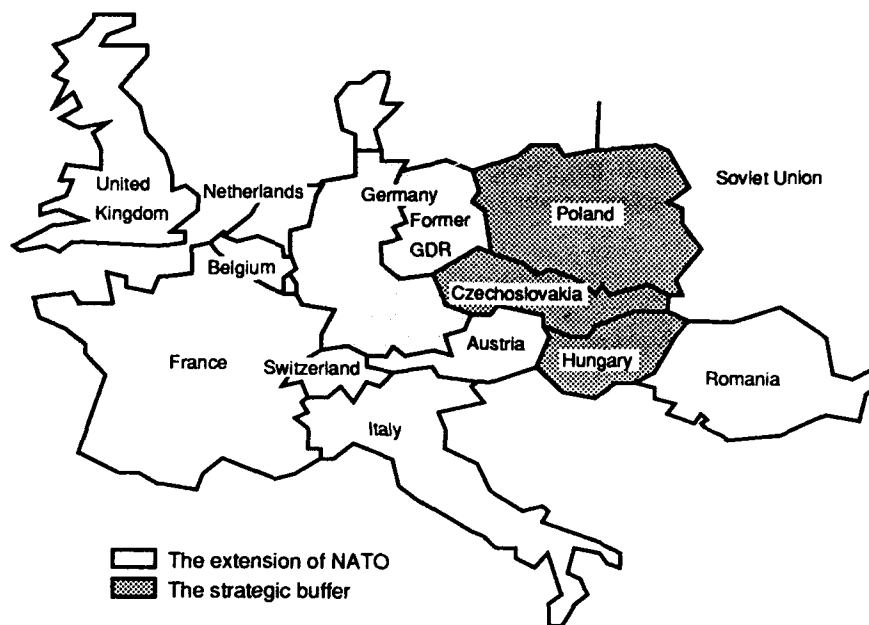


Fig. 1—The new geography of Central Europe

- A premium for *maintaining* the strategic buffer—i.e., NATO and the Soviet Union will have compelling strategic interests in assuring the continued independence of Poland and Czechoslovakia.
- A premium on having a strategic buffer of *defensively armed* neutrals.

These considerations will play a central role in our subsequent discussion.

GENERIC THREATS AND INCREASING DEFENSE DOMINANCE

We expect NATO's baseline planning and force operations to become increasingly independent of scenario and details of threat, with much more emphasis on generic maneuvers and flexibility and much less on monolithic planning for scenarios labeling the Soviets as "the

threat." This will be more natural over time if the sides move toward force postures that are more manifestly defensive, as now seems likely given Soviet policies, the emergence of the strategic buffer, and technological trends that favor defense dominance so long as there exists a strategic buffer. By the end of the decade, we expect indirect-fire weapons² and long-range interdiction by aircraft to make prospects for an attacker very poor indeed (Donohue and Gold, 1988; Canby, 1990).

²Indirect-fire weapons (e.g., artillery and mortars) fire on targets that cannot usually be seen directly by the operator. Given forward observers, reconnaissance aircraft, or drones, however, targeting can be rather accurate, and with terminally guided munitions such weapons can be extremely lethal.

III. THE SEARCH FOR LONG-TERM "STABILITY"

THE CONCEPT OF STABILITY

No one seeks complete "stability," in the sense of political and military stasis, especially in the current era that includes the unification of Germany and the attempted democratization and revitalization of Eastern Europe and the Soviet Union. But what, then, does "stability" mean? We offer the following specialized definition rather than the one that might be found in a dictionary:

Stability: A state characterized by robust security, predictability about the upper-bound threat, the absence of crises or dangerous international tensions, a "reasonable" defense burden that is either constant or shrinking, and public satisfaction with the situation. If crises or shocks occur, the tendency in a stable system will be to return to the original state.

In this definition, which can be used for any regional balance, overall stability is a complex state with many *aspects*, as suggested by Fig. 2. The convention in this influence diagram is that if an arrow points from one item to another, an increase in the first tends to produce an increase in the second. In some cases the influences are in both directions—i.e., the items reinforce each other.

Because of our emphasis in this study, we place military stability in the central position of Fig. 2. By military stability we mean a state or military balance in which both sides correctly believe that in the event of war the defender is *quite* likely to prevail.¹ The more this is true, the less the pressure for an arms race (unless one nation is determined to be aggressive). By arms-race stability we mean a state in which the parties are able to maintain security with "reasonable" defense burdens that are either constant or shrinking, in significant part because the threats to be balanced are well understood and changing only slowly. The reverse is also true: the absence of an arms race contributes to military stability (if the current balance favors the defense). Continuing, the greater the degree of military stability, the more secure from successful attack the parties would feel in

¹Other authors and papers use "force-posture stability" or "conventional stability" for essentially the same concept. See, for example, Rohn (1990), Huber and Hoffman (1990), and Davis, Howe, Kugler, and Wild (1989). Soviet analysts are comfortable with the concept as well (see discussion in Huber (1990)).

crisis, thereby reducing the likelihood that one side would attack the other out of fear that it was about to attack.² Indeed, given a high degree of military stability, one would not expect to have many military crises.

There are other, indirect, effects of military stability. If it increases arms-race stability, then that should produce a sense of satisfaction with the status quo and reduce opportunities for rancorous and often misrepresented defense issues to dominate political debate. That is, missile gaps and windows of vulnerability would neither exist nor be believed to exist, and it would be difficult for political leaders to manufacture or exploit such issues. Finally, the diagram suggests that arms-race stability should also improve international stability, by which we mean the quality of foreign relations, which in turn should reduce the likelihood of crises. Figure 2 could include economic stability and prosperity, but that would extend the concept of "stability" too far for this study.

There can be tensions among the types of stability. Certain confidence and security building measures (CSBMs) can, for example, improve international stability and thereby reduce the likelihood of crisis. If a crisis did arise, those same CSBMs could be destabilizing (Davis, 1988b).

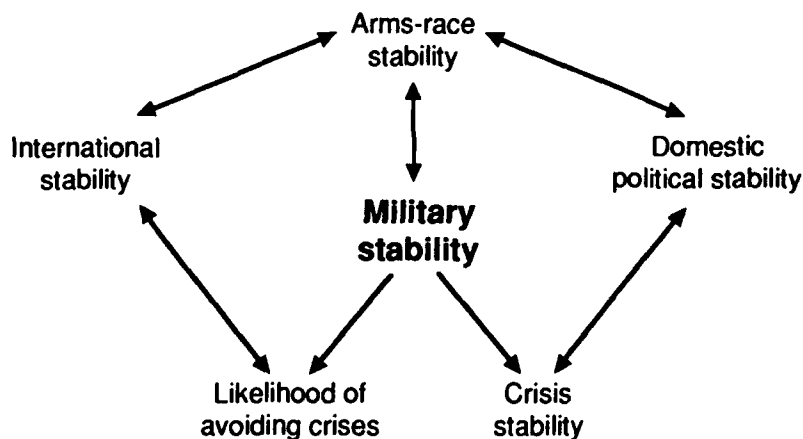


Fig. 2—Stability: aspects and interrelationships

²This sense of crisis stability is directly analagous to the one commonly used in strategic-nuclear analysis, sometimes under the terminology of "first-strike stability." See, for example, Davis (1989c).

A FRAMEWORK FOR PURSUING LONG-TERM STABILITY

Having defined what we mean by "stability," Fig. 3 suggests a framework for thinking about how to achieve it in Central Europe, a framework expressed in terms more suitable for the development of each side's security objectives, strategies, and plans. It suggests that long-term stability is enhanced by working successfully toward five subordinate objectives: (a) deterring aggression against Western Europe (or the Soviet Union, if one is a Soviet planner), (b) deterring aggression against Eastern Europe (the strategic buffer), (c) maintaining manifest strategic equivalence with a reduced defense burden, (d) deterring rearmament, and (e) improving the environment so as to remove or reduce the sources of tension and conflict. The deterrence objectives are to be achieved without provocation—i.e., it is not acceptable to deter by creating an invasion threat to the other side. A somewhat analogous subtlety has long been recognized in nuclear strategy, where stability requires that neither side develop a disarming first-strike potential, but it has seldom been discussed in Western conventional strategy. This is so because NATO has long been at a severe disadvantage, thereby making it unnecessary to worry about NATO's programs being truly destabilizing, however much the

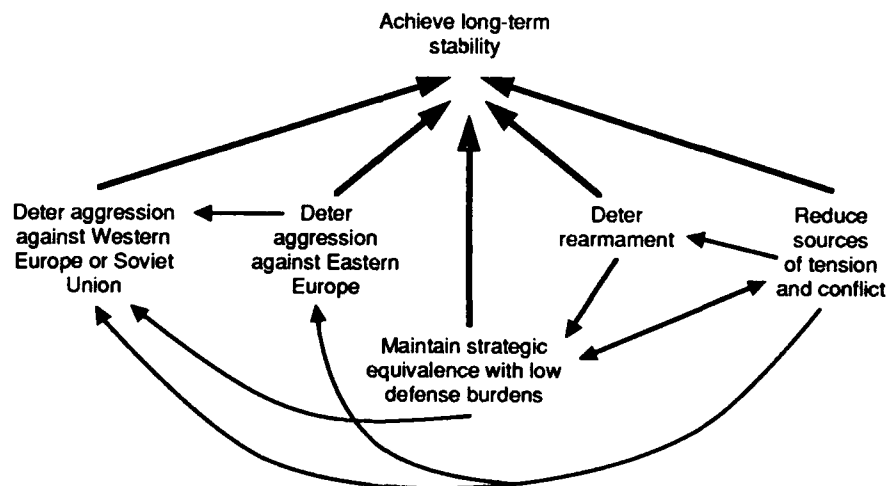


Fig. 3—Mutual influences in the search for security

Soviets might claim otherwise and deplore our "competitive strategies." Until recently,³ this subtlety of deterring without threatening aggression was not recognized, or at least accepted, by Soviet military planners.

Figure 3 covers all the aspects of stability shown in Fig. 2, although with a translation of terminology. In particular, we consider maintaining manifest strategic equivalence (or superiority) to be essential for domestic political stability, since wherever there are or appear to be severe nonequivalences, defense will be a political issue. Reducing the sources of tension and conflict reduces the likelihood of crisis and increases crisis stability.⁴

³This issue is discussed at length by some of the Soviet "new thinkers," including some familiar and sympathetic with the legitimate requirements of military planning. See, for example, Kokoshin, Kononov, Larionov, and Mazing (1989), Kononov (1990), or Kokoshin (1990).

⁴The important role in crisis stability of *compulsions* and other negative rather than positive incentives for attacking first is not discussed here. See, however, the related discussion for the strategic nuclear domain in Davis (1989c).

IV. PLANNING FOR THE NEW STRATEGIC CONTEXT

PRIORITIES

With this background of discussion about stability and security, let us now consider how NATO might conduct its security planning in the new environment. Perhaps the first point to make is that maintaining a *cohesive* NATO is itself an exceptionally important objective. Indeed, it is arguably at least as important as developing a strong deterrent against possible reemergence of a Soviet threat. Although this study is concerned with East-West stability, all of the suggestions that follow were developed in the belief that they would also strengthen the cohesion of NATO itself.¹

Assuming a NATO, and turning to objectives, our first observation is that with the disintegration of the Warsaw Treaty Organization, NATO is no longer faced with a "capital-T threat," and defense planning must change (and is changing) accordingly.² It is likely that a large war with the Soviets, should it ever occur, would be preceded by many months—or years—of political changes and rearmament.³ Indeed, NATO's *principal* security imperatives are not even "military," but rather are (a) to manage the transition quickly to the postulated post-CFE core environment with the Soviets out of Eastern Europe, (b) to maintain Western cohesion, and (c) to assure success of the East's political and economic revitalization and its integration with the West.⁴ We shall not discuss here how this is to be accomplished but simply note that many developments could sidetrack us (e.g., a 1991 crisis involving Soviet forces in the former

¹See Kugler (1990) for a forward-looking discussion of how NATO may evolve in the next decade.

²Our research cutoff for this report was June 1990. Early in July, NATO announced major changes of policy consistent with the trends suggested here, including the deemphasis of threat-oriented planning and a willingness to reduce the readiness of its forces for immediate combat.

³Small wars involving Hungary, Romania, republics of the Soviet Union, and other states may be *more* likely now than previously, but they are not of concern in this report.

⁴See Iklé (1990) for an exceptional discussion of this last item, one that may become a strategic classic. See also Nunn (1990) for a thoughtful discussion of the new strategic arena and the challenges it poses for defense planning. Kux (1990), Krause (1990), and Weisser (forthcoming) offer good surveys from European perspectives of the political challenges that existed through mid-1990.

German Democratic Republic or a Soviet backing away from the CFE process because of conservative backlash).

Although military challenges are no longer the primary challenge, NATO will continue to have important military security challenges, and failure to address them wisely could undermine prospects for long-term security and stability. In the short term, NATO's military strength will be a critical although implicit factor in maintaining the momentum, hopefully without crisis, for unification and Soviet withdrawal. In the mid and long terms, the Soviet Union will continue to pose a *virtual* threat to Western Europe that should be balanced with military capabilities, even if foreign and economic relations with the Soviet Union continue to improve. At least for the next five to ten years, NATO will need coherent military objectives and operational strategies for dealing with the Soviet threat, even if the threat is merely "virtual," and even if discussion and specific troop training against the Soviets is de-emphasized. What will be *required* for this balancing, however, will depend strongly on the results of arms control and related unilateral actions (and on future developments within or disintegration of the Soviet Union itself). With appropriate developments, the balancing will be relatively easy and the associated defense burden low by recent standards.⁵ Let us first consider the two objectives of Fig. 3 that deal with deterring aggression in Europe.

DETECTING AGGRESSION IN CENTRAL EUROPE: OBJECTIVES

Looking first to the task of promoting mid-term and long-term deterrence and stability, we believe NATO's security objectives should include:

- Have the capability to defeat with reasonable confidence the full range of hypothetical invasions of NATO and defend all of the united Germany regardless of peacetime force dispositions constrained by what emerges from the Genscher Plan.⁶

⁵Some of the ideas discussed here have been reported earlier. See, for example, Davis (1989a and 1989b), Kugler (1990), and Watman (1990). A classified discussion developed on a RAND-wide basis was distributed to policymakers in May 1990.

⁶The Genscher Plan was devised by the Federal Republic to ease some of the Soviet Union's concerns about German reunification. The basic issue was that NATO should not simply move the line of demarcation to the East by redeploying its forces into the former German Democratic Republic. Precisely what would be permitted and not permitted was unclear, at least within the public domain. By the time of this report's

- Be able to do so *conventionally*, depending on nuclear deterrence only for insurance in recognition of conventional deterrence's many historical failures, even when defenders had adequate forces, and for deterrence of direct nuclear attacks on the United States or its allies.
- For the sake of deterring Soviet reentry into Eastern Europe, have the capability—independent of formal commitments or even peacetime views about NATO interest—to assist in defense of Poland or Czechoslovakia, but without creating the capabilities that would constitute a threat to the Soviet Union itself.
- Establish with the other relevant nations a new political doctrine defining "rules of the road" for behavior that will ensure the continued independence and military neutrality of Eastern Europe.⁷

The objective of deterring reentry follows from the new strategic interest of maintaining a strategic buffer (Davis, 1989b). Currently, few people will acknowledge this interest publicly if doing so could be interpreted as extending a formal security guarantee. Most people are leery of taking on additional burdens and risks. Others understand the strategic logic but recognize that overtly extending security guarantees might at present appear provocative to the Soviet Union, which is understandably paranoid during this period of its strategic retrenchment. Despite these complications, NATO's military planners should be given the deter-reentry objective and should develop contingency plans accordingly. One advantage of the new environment's likely emphasis on generic training and exercising is that planning staffs may become more flexible and adaptive, thereby making such contingency planning easier and less conspicuous than it has been in the past.

One point deserves elaboration here. It is common for analysts as well as policymakers to assume *implicitly* as they consider threats to Western Europe that a Soviet attack, should it ever come, would be

final editing, however, clarifications had been reached in a meeting between President Gorbachev and Chancellor Kohl on July 16, 1990. It was agreed that after Soviet withdrawal there would be freedom to deploy NATO-integrated and nonintegrated German troops on the whole German territory (Weisser, forthcoming).

⁷The idea here, which comes from Paul Bracken, is that a key element of European stability in the last decades has been a set of implicitly understood rules of behavior in the danger zone (e.g., Berlin and near the inter-German border). A new set of rules will now be needed.

part of a single effort to march from the Soviet Union to the borders of or into France. Given this assumption, it follows that the threat to Western Europe is already low, even in terms of capabilities rather than intentions, and will become vanishingly small in the years ahead. One's perspective changes, however, if one merely considers some history. Wars have seldom been such quick and simple exercises as those envisioned in modern Central European campaign analysis. Further, they need not be one-step affairs any more than was Hitler's aggression. It is surely not difficult to imagine a future Soviet Union reentering and dominating Eastern Europe. It thus should not be difficult to recognize that the threat to Western Europe would subsequently be *much* greater. That threat might become severe in a matter of a year or so, depending on relative force structures, rearmament activities, and the degree of continued opposition within the East European states. All of this seems otherworldly in 1990 as we see peaceful trends, but the argument should suffice to explain why we have broken out deterring reentry as a separate objective. Finally, let us note that regardless of whether NATO in peacetime had expressed vital interests in the security of Eastern Europe, an aggressive Soviet reentry would quite likely produce a military response, however poorly prepared; if not, it is likely that governments would fall, since Eastern Europe would have been "given away for the second time."

It is not feasible for NATO or the Soviet Union to maintain security without having the inherent capability to invade Eastern Europe. However, both should adopt an objective to avoid any measures that might reasonably be construed as threatening by the East European states. Further, both should take on an objective to persuade those states to develop reasonably effective defense capabilities—enough to preclude quick and easy invasions from either side. Working such matters out will be an important element of developing the new security system for Europe.

DETERRING AGGRESSION IN CENTRAL EUROPE: STRATEGY

In thinking about military strategy to deter aggression, it is useful to consider that the outcome of a war in Central Europe would depend on a wide range of factors that can be categorized in terms of (a) political-military scenario, (b) strategies and command-control, (c) forces, and (d) technical factors and "laws of war" (Davis, 1988a). For exam-

ple, much traditional NATO analysis and planning (e.g., Thomson (1988)) was based on a scenario with full and effective participation of all alliance members on both sides and mobilization times of roughly 5 to 30 days for the Pact and somewhat less for NATO. The planning assumed a forward-defense strategy for NATO and a strategy of concentration and breakthrough for the Pact (actually, the duration of Pact mobilization was a key element of assumed strategy). The planning used either current or programmed forces. Finally, the planning made a host of assumptions about the effectiveness of forces and individual weapons (e.g., vehicle kills per aircraft sortie), and about such "laws of war" as real-world attrition and movement rates. In fact, there are *many* variables within each of the categories, which is why balance assessments have never been easy or well defined. For similar reasons, *core* military strategy tends to be based on a set of planning factors and to ignore the many uncertainties.

If *environment shaping* means anything in the realm of military strategy, it should be to seek to control favorably as many of the variables as possible. That is, strategy should seek to make unfavorable political-military scenarios very unlikely. Similarly, strategy should seek to assure flexible and adaptive command-control systems, including planning staffs. Of course, one cannot be confident of one's ability to control the environment (after all, there is assumed to be a malevolent adversary as well as a range of random factors). Thus, one wants also to develop a *hedging* strategy.

Turning from these abstractions to practicalities, let us now note some of the measures that come to mind as part of a broad-based strategy for NATO. We merely itemize them without extensive discussion.

Elements of Core Strategy for Deterring Aggression

- Plan to defend all of the united Germany, even if peacetime deployments are constrained by the Genscher Plan.
- More specifically, have as a planning baseline the objective to defend at the German/Polish and German/Czech borders (the former being defined by the Oder and Neisse rivers), using air forces for heavy interdiction of Soviet forces moving through Poland, Czechoslovakia, and Austria.
- Maintain the inherent capability to assist in defense of Eastern Europe (e.g., in a defense in depth or a defense at the

Vistula River), although not at a total force level (including support structure) to pose a threat to the Soviet Union itself.⁸

- Maintain over time the force-generation capabilities consistent with the above items and the then current best estimate of Soviet force-generation capabilities (see Fig. 4 for illustrative ground-force threat curves based loosely on Watman (1990)),⁹ taking into account likely lag times between strategic warning and reaction and the possibility that the Soviets would employ forces not nominally assigned to the Western theater of operations (e.g., forces from the Northern,

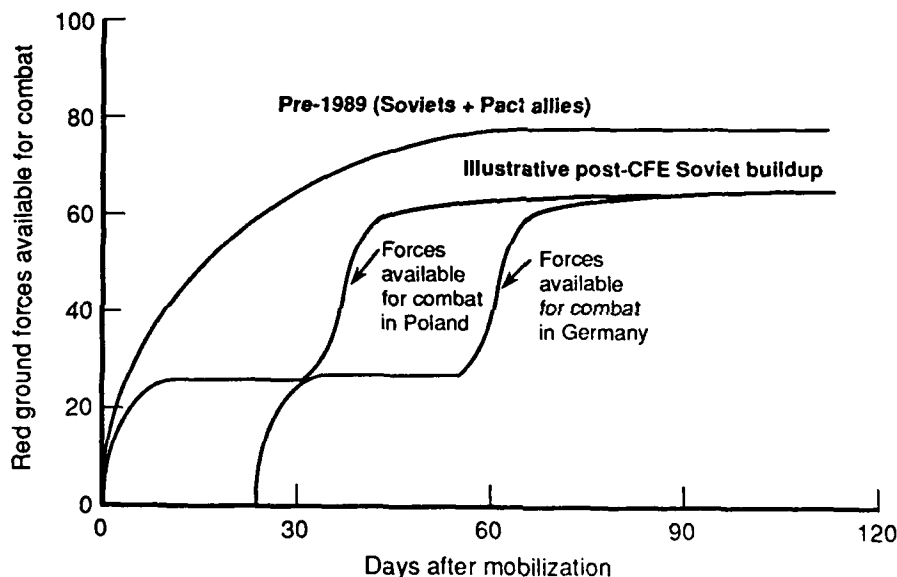


Fig. 4—Illustrative buildup rates for past and future Central European threats

⁸See Naumann (1990) for a general officer's systematic discussion of what constitutes offensive capability at different levels of combat.

⁹The illustrative post-CFE curves assume that the Soviets can use 10 to 20 out-of-area divisions, and that of the first 40 divisions only seven are in a high state of readiness. More detailed buildup assumptions must consider the infrastructure that may or may not exist in Poland, whether the Poles cooperate or resist, and a number of other factors.

Southwest, or Southern theaters of operations as well as other forces from outside ATTU, the Atlantic to the Urals region).¹⁰ This translates into requirements for an appropriate mix of active and reserve forces, probably with a wide range of readiness times across the reserve structure, and appropriate prepositioning and strategic mobility to assure timely redeployment.

This report is not the place to discuss NATO's military requirements, but we have done some preliminary analytic war gaming for the post-CFE world. Appendix C shows some illustrative results and notes key variables.

Elements of Environment-Shaping Strategy for Deterring Aggression

Having discussed core strategy, let us now itemize possible elements of an environment-shaping strategy. Some *unilateral measures* are as follows:

- Restructure NATO's military command system to have (a) multinational higher-level formations that could be maneuvered flexibly as needed by the theater commander (NATO needs unity of command), (b) an integrated logistics system rather than the current system in which logistics is a national responsibility, (c) an integrated air defense system including or coordinated as permitted with what exists in the former GDR, (d) much greater system interoperability, and (e) an emphasis on operational and tactical mobility.
- Move toward a command-control system (including mindsets, procedures, and norms) that emphasizes rapid planning and adaptation rather than perfecting and practicing a monolithic plan.¹¹

¹⁰See Davis, Howe, Kugler, and Wild (1989), Davis (1989a), and especially Watman (1990). The problem of out-of-area forces was analyzed in some detail by RAND colleague James Wendt.

¹¹Although we originally identified these and the preceding measures as desirable in the context of possible deep cuts (Davis, Howe, Kugler, and Wild, 1989), they are also desirable now because of the peacetime demilitarization of what will be the former GDR, coupled with the need in crisis to be able to move forward long distances and then defend on the border of the united Germany or even in support of Poles or Czechs.

- Include, in the program of training and exercises, activities that would be recognized by the Soviets as laying the basis for promptly taking up defense positions along the German border or even for intervention in support of Poles or Czechs defending themselves against a Soviet invasion (e.g., long-distance maneuvers with quick establishment of prepared defenses and coordinated with deep interdiction).¹²
- To provide greater flexibility for actions that would not be seen as purely German, consider expanding and redefining the Allied Command Europe (ACE) Mobile Force to assure capability for timely shows of force (e.g., to deter Soviet reentry in some crisis).¹³

These would shape the environment by creating the capability for flexible and prompt actions that would both affect Soviet thinking and, we believe, improve the long-term morale and dynamism of NATO's military forces. The remaining elements of environment shaping require arms control or other forms of negotiation and cooperation:

- Define details of Genscher Plan constraints so as to permit peacetime military activities in the former GDR that would be clearly defensive (e.g., integration of air defenses and stockpiling of modest stores of ammunition).¹⁴
- Promote a political doctrine (i.e., an internalized set of beliefs about proper behavior) that would encourage prompt response to strategic warning. And, in that connection, promote in "CFE II" a wide range of "operational arms control measures" (also called "stabilizing measures") that would prohibit activities necessary in preparation of an offensive and thereby re-

¹²There are obvious tensions between this and avoiding provocation. The tension is inherent but is also one of degree. It is one thing to move forward quickly and establish defensive positions; it is another to move forward quickly and go into assault operations against prepared defenses. The requirements in terms of both combat and support forces are quite distinct. Illuminating those distinctions might be a priority effort for future East-West analyst-to-analyst and military-to-military discussions.

¹³This was suggested to us by RAND colleague Richard Kugler.

¹⁴For rhetorical purposes, we could argue that the former GDR should be compared to the Western part of the Soviet Union, not to Poland, and suggest that if the Soviets wish to reject any military activities in the former GDR, they should be prepared for the sake of equity to demilitarize a zone on the western side of the Soviet Union. The intended outcome is not to create such a zone, but to soften the impact of the Genscher Plan, which has been important in the history of recent events but makes little sense strategically.

duce ambiguity about intentions if those activities were initiated. Examples here involve (a) sublimits on the percentage of units that can be in high states of readiness (e.g., effectively usable in assault operations within a month), (b) prohibiting unscheduled maneuvers close to the Polish or Czech borders, (c) removing, destroying or transferring Soviet infrastructure such as artillery ammunition from the East European states, (d) constraining deployments of bridging equipment, and (e) regular detailed information exchange about unit locations.¹⁵

- Encourage—preferably in a cooperation with the Soviet Union that might even include joint military assistance—the *armed* neutrality, with nonoffensive defense forces,¹⁶ of the East European states. Consider security assistance involving “nonoffensive” items such as obstacle-creation equipment and stocks, antitank guided missiles, and infantry equipment.
- Promote, in the context of formal or informal arms control, mutual restructuring in the direction of *relatively* nonoffensive defenses. As discussed in App. A, this is more feasible now because of the strategic buffer.

Assuming success in moving toward a more mobile, flexible, and integrated force, then another important measure would be:

- Support deep reductions in “CFE II” negotiations, whatever form those take, but do so in a more nearly global context that considers relevant forces outside the ATTU region so as to control the threat in Central Europe from redeployment of “out-of-area forces.” With force levels much below those of CFE I, strategic offensive operations will become implausible without rearmament. That is, force levels will be below an *offensive minimum* (Davis, 1989a).¹⁷

¹⁵For papers on such “operational arms control” or “stabilizing measures” see, for example, Davis (1988b), Blackwill and Larrabee (1989), Darilek and Setear (1989), Dean (1990 and forthcoming), and various papers by James Goodby. It is notable that a number of Eastern analysts have proposed overlapping lists of measures. See Kononov (1990), Gaertner (1990), Kokooshin et al. (1989), and Moraczewski and Multan (1990).

¹⁶Nonoffensive defense forces lack, *as a whole*, the means for long-distance invasion operations. They may have considerable tactical-level offensive capability and even some operational-level capability.

¹⁷In modern times it can be reasonably argued that strategic-scale invasions cannot be mounted and sustained without very large armies. For example, Hitler used some 130 divisions when invading France in 1940. To be sure, invasions could be successful with *much* smaller force levels (and were, for example, in the Napoleonic Wars), but as

Elements of Hedging Strategy for Deterring Aggression

One's core strategy may not suffice and one's environment-shaping strategy may fail, at least in part. Hedging is therefore important. We find it useful to think of the following as elements of a hedge strategy, although in some cases the hedging consists of buying more or giving more priority than one otherwise would. That is, most of the items in the list are familiar and might be thought of as elements of core strategy. It is not enough, however, to have *some* degree of activity or *some* modest program in each area. Our proposed hedging measures call for much more in each case than would occur routinely:

- Develop and acquire *in adequate quantity* the advanced munitions that will greatly improve the effectiveness of deep interdiction with aircraft.¹⁸
- Assure that effective deep interdiction (a "mobile follow-on-forces attack," or FOFA) could be initiated as quickly as the Soviets could realistically begin to invade Eastern Europe. This may require a concept of modulating both active- and reserve-force readiness in response to observed Soviet behavior, without requiring Congressional approval.
- "Overinvest" in stocks and equipment capable of rapidly creating obstacles in depth wherever needed, which might possibly include Eastern Europe (buy more than needed only for defense at the Oder-Neisse, or for a static defense at *any one defense line*; prepare for defense in depth as a hedge against failure of strategy).

a minimum, small force levels would tend strongly to deter general staffs sensitive to such issues as securing long lines of communication and occupying large areas. The ideal is to preferentially reduce the most offense-capable units such as tank battalions (see App. A). Making the distinctions is especially feasible so long as the strategic buffer exists. Although we are unaware of any in-depth analysis on the subject, it appears that the post-CFE force levels would still permit, with risks, large-scale long-distance offensive operations. Halving those force levels would bring them to levels that would be widely regarded as too small for such operations, assuming the nations maintained effective residual defenses and protected themselves against *coups de main*.

¹⁸Only two years ago, analysts were rightly concluding that there was much higher payoff for shorter-range interdiction (i.e., of forces relatively near the front) than for deep interdiction (see, for example, Donohue and Gold (1988)). This needs to be rethought in view of the new strategic geography in which an invading Soviet army would have to cross a long buffer zone, and we would prefer to visit substantial attrition on it before the ground battle even began. An important part of the rethinking should be to elevate the importance of destroying soft-support vehicles critical to long-range armored operations.

Lastly, but perhaps most importantly:

- Maintain nuclear forces and continue to train and exercise them (unilaterally by the United States, if necessary) in ways designed to remind the Soviets of our continued capabilities in this regard, even if political developments greatly diminish nuclear exercises in Europe.¹⁹

We have mentioned here only a few items, omitting, for example, the continued modernization and expansion of capabilities for surveillance and assessment of enemy military activities (e.g., the Joint Surveillance Target Attack Radar System, JSTARS, and remotely piloted vehicles, RPVs), which presumably will be a noncontroversial part of routine force development. We have also not listed *adding* strategic mobility forces because, with time scales of warning having increased, we are not persuaded that expanding strategic lift should be a priority, especially since we have options such as maintaining POMCUS stores in Europe, increasing the degree to which we depend on Europeans for support functions, and shifting the relative burdens so that the United States is increasingly responsible for air forces rather than ground forces.

Next, let us move to the third objective of Fig. 3, maintaining strategic equivalence.

MAINTAINING STRATEGIC EQUIVALENCE

We have little to offer on how to achieve this objective other than certain obvious points that relate to a core strategy. First, NATO should avoid unilaterally reducing so much as to undercut the parity that has finally been agreed on as a principle, especially so long as it appears feasible to negotiate mutual reductions. Second, NATO (and the United States individually) should maintain vigorous and innovative programs of research and development (in this case, hedging is an aspect of core strategy) and doctrine, taking pains to go well be-

¹⁹Different people draw different implications from this. It may be possible through doctrine and exercise practices to develop an adequately credible new version of extended deterrence with a combination of theater air-to-surface missiles (TASMs) and the portion of the U.S. SLBM force that is committed to NATO—disconnecting the latter from the central forces more generally. Some believe, however, that the disconnecting would be difficult and that SLCMs should be relied upon instead. Nuclear SLCMs, however, cause difficulties in strategic arms control.

yond paper studies while nonetheless resisting unnecessary acquisitions. We observe here that while NATO surely has the advantage at this time in advanced R&D, the same cannot be said about doctrinal thinking. It can be argued that the Soviet military has taken more seriously than ours the revolutionary implications of the next generation of weapon systems. If it follows past practice, it will conduct a thorough review of its military science and adjust operational art appropriately. NATO's armed forces may be inclined more to assimilate the new capabilities without adequately revamping operational concepts and associated command and control systems.²⁰

To cite one example here, consider the emergence of highly accurate indirect-fire systems—not only the deep-fire systems contemplated by the U.S. Army for the multiple launch rocket system, but also such tactical systems as mortars. These systems, along with associated operational- and tactical-level command and control systems, may be defining the end of the era of massed armored attacks: massed armor is too good a target and dispersed indirect-fire systems cannot easily be suppressed (Canby, 1990). If this is so, then it will require a fundamental rethinking of the relative role of armor and infantry, the new missions of infantry (e.g., to attack or protect the indirect-fire systems, and to attack by infiltration rather than massed attack), and combined-arms activities. If NATO is to maintain manifest strategic equivalence, and especially if it is to do better and maintain a competitive edge (albeit an edge that does not constitute an offensive threat), then it needs to be at the forefront of considering such technological and doctrinal issues. Opinions differ on whether that is the case today.

DETERRING REARMAMENT

In past eras, such as the one after World War I, significant moves toward disarmament proved dangerously counterproductive. It is incontrovertible that nations, particularly democracies, have difficulty reacting properly to strategic warning, because such warning is typically ambiguous, the seriousness of the threat is so easily rationalized, and democracies often have more friction in the decisionmaking process than do dictatorships. We therefore need an explicit strategy to deter rearmament.

²⁰Provocative papers on this and related topics were given by Andrew Marshall, Fred C. Iklé, and Edward Luttwak in a conference held at Los Alamos National Laboratories in September 1989. The papers should be published sometime in 1990.

A Core Strategy for Deterring Rearmament

- Maintain nuclear forces and the legitimacy of those forces and of nuclear deterrence (see also Wagner (1990)).
- Consider giving somewhat more prominence to the U.K. and French nuclear forces than has been traditional.
- Maintain a good capability for reconstitution of forces (e.g., with a good base of officers, NCOs, draft options, and industrial arrangements).

These ideas merit discussion, especially the first one. The present era differs fundamentally from earlier ones in that nuclear weapons exist and cannot be uninvented. In our view, the most important element in deterring rearmament is maintaining not only nuclear forces but the *legitimacy* of nuclear forces, and the legitimacy of falling back on a nuclear deterrent if necessary. One way to maintain legitimacy is to avoid losing it—e.g., by avoiding losing battles over maintaining nuclear artillery and other short-range nuclear weapons within Germany. It is fortunate that the NATO nations indicated flexibility on this matter earlier in the year, because a battle on particular weapon systems would have been interpreted as a battle about the acceptability of nuclear weapons in general.

On a more positive note, NATO may now wish to create a special nuclear command (or major subordinate command) that would at once disconnect nuclear forces from tactical forces consistent with the new environment and *increase* the credibility of the nuclear deterrent by developing a new doctrine and perhaps new approaches such as a NATO sea-based nuclear force.

To better appreciate the value of nuclear weapons in deterring rearmament, consider the situation of an advocate for aggressive rearmament 20 years hence if NATO and the Soviet Union had greatly reduced their force levels in the 1990s, perhaps to 50 percent of NATO's current levels. Such an advocate would have to convince his peers that the extraordinary expense of rearmament would be worthwhile, even though the Soviet Union had concluded in the 1980s that conventional superiority had proven unusable in Europe and severely counterproductive overall, by isolating the Soviet Union as a backward pariah state unable to obtain the infusion of Western investment and technology needed for its economic health and by draining its resources to pay for nonproductive military equipment. The single most important reason for the futility of conventional superior-

ity was nuclear weapons, although NATO's solidarity and conventional capabilities certainly helped. How, then, would the advocate of rearmament convince his peers that things were different now? The principal threats here—i.e., the principal ways in which the deterrence of rearmament might fail—appear to us to be (a) a fundamental change in the strategic-nuclear situation, such as the emergence of a high-quality defensive system, (b) the total delegitimization of nuclear weapons in the minds of policymakers and the common man, and (c) developments outside Europe that motivate a rearmament that then affects Europe (e.g., a civil war within the Soviet Union leaking into Southwest Asia, or a war with China). If this analysis is valid, then our strategy should be to maintain nuclear weapons and their legitimacy, to promote global conflict resolution and arms control (formal or informal) and to assure that if good strategic defenses ever emerge, we are not second in obtaining them.

All this may seem too sanguine, and some history is certainly sobering with respect to the consequences of substantial force reductions, but we believe that the nuclear era is indeed different than earlier eras.

A Possible Environment-Shaping Strategy to Deter Rearmament

- Open *exploratory* discussions with the Soviets about possible measures to encourage and perhaps codify shifts of industrial effort toward nonmilitary ends in ways that cannot readily be reversed (i.e., constraints on industry that would prevent rapid conversion to military purposes).

This idea is one often suggested by serious "new thinker" Soviet analysts, thinking at least as much about the importance of permanently transferring resources in the Soviet Union as constraining the United States. We are agnostic about prospects for anything useful in this domain, but the idea has merit given the enormous Soviet military-industrial base devoted to production of tanks, artillery, and other weapon systems unrelated to civilian products. It is possible that selective constraints on such types of industry might go far in deterring rearmament, even though more general constraints attempting to preclude reversibility would be both impractical and undesirable. It should be noted that any proposal to impose constraints on

the nature of the industrial base has the potential to be very controversial domestically and might produce political reactions that would make base-closing proposals appear uncontroversial by comparison. Nonetheless, we believe the issue should be studied in more depth with an open mind.²¹

A Hedging Strategy Regarding Rearmament

Here it seems clear that the United States and NATO should develop a wholly new set of contingency plans for rearmament at some point after the turn of the century. It seems likely to us that such a plan would be greatly different from those in the past, in part because a technological revolution is taking place in warfare: we are seeing inexorable changes in the relative significance of traditional weapon systems and new high-precision long-range systems and associated command and control as well as the relative importance of mechanized forces and new versions of infantry. We have not studied this problem in enough detail to have further suggestions now.

REDUCING THE SOURCES OF TENSION AND CONFLICT

Ultimately, the most important aspects of strategy probably involve assuring that the conditions motivating war do not arise again. As we stated earlier, top priority should go to the revitalization, democratization, and secure independence of the East European states constituting the strategic buffer. Of similar priority is the need to manage Soviet sensitivities during its stressful and internally divisive period of strategic retrenchment. Here we can again articulate core, environment-shaping, and hedging strategies.

²¹We tend to be biased toward the view that R&D should be unconstrained, and we have not thought deeply about whether any constraints would be both useful and feasible. Eastern analysts tend to be more interested in the subject but not naive. For two interesting papers on the subject, see Giessmann (1990) and Karkoszka (1990). One argument they make is that R&D tends today to be done in great secrecy and that greater openness is probably desirable in a stable regime. Avoiding "shocks" might indeed be an important part of maintaining real and perceived strategic equivalence and the associated domestic political stability.

Elements of Core Strategy for Reducing Sources of Tension and Conflict

- Assure that Eastern Europe "succeeds" and that the West does nothing to impede *perestroika* and perhaps some things to help (it is less clear that the West can help much, since reforming the Soviet economy requires radical measures that must be driven from within).
- Include the Soviet Union in a wide variety of international organizations, moving away from the image of the Soviet Union as "threat" and facilitating the process of integrating it into the world at large, thereby creating the same type of interdependence that has greatly eased the historical animosities of Western European nations toward each other (e.g., observer status at GATT, the General Agreement on Tariffs and Trade).

Elements of Environment-Shaping Strategy for Reducing Sources of Tension and Conflict

- Avoid having a vacuum develop in Eastern Europe (e.g., defenseless and unstable nations holding critical territory). Similarly, avoid forcing those states to try to play both sides against each other for security. Instead, the NATO nations and the Soviet Union should formally and consistently describe as a fact of life that the continued free and independent existence of Poland and Czechoslovakia is of vital national interest to everyone. Promote as part of an internationally accepted political doctrine that the new rules of the game prohibit doing anything of a military nature to disrupt this situation.
- Consider orchestrated security guarantees of Eastern Europe by both Western nations and the Soviet Union (e.g., repeated solemn pronouncements about vital national interests or, possibly, formal guarantees).
- Undercut the arguments of reactionary Soviet political figures (many backed by senior military officers) by (a) greatly increasing the visibility of military cutbacks being taken unilaterally by the United States and Western Europe in direct response to the diminishing worldwide Soviet threat; (b) seek-

ing deep reductions in the post-CFE era, reductions that would strongly affect Western nations as well as the Soviet Union; and (c) agreeing to place *all* military forces on the table for at least bilateral post-CFE discussions (this would include naval arms control).

We discuss both reductions and naval arms control more fully in the next section. Continuing, then, the other elements we suggest are:

- Manage the withdrawal of Soviet forces from Eastern Europe as promptly as possible (e.g., two years instead of seven), which in practice would mean withdrawing the bulk of U.S. forces on a similar time scale, perhaps leaving 100,000 on a permanent basis (a figure that must derive primarily from political judgments, although it can be informed by more technical analysis) until and unless the Germans conclude they would rather have us withdraw all of them.
- Facilitate resolution of the German issues (e.g., the size of the German army).
- Propose that new principles for negotiations be drawn up immediately after consummation of CFE I. These new principles would recognize that the previous concept of parity between blocs is now inequitable for the Soviets, because even if their erstwhile allies disarm, the single-nation limits preclude the USSR from building up its own forces to compensate.²²

²²Something missing from our discussion is any proposal for a European police force that could deal with smaller crises within Europe not of an East-West nature. A variety of approaches are possible but probably will not stem from NATO.

V. MAJOR ISSUES FOR DISCUSSION

In this section we discuss three controversial topics in somewhat more detail: (a) deep reductions, (b) quasi-global negotiations, including naval arms control, and (c) defining a useful armed neutrality for Eastern Europe.

THE SPECIAL ISSUE OF DEEP CUTS

A major objective of our study was to examine in some technical detail the implications of deep cuts. When our study began in early 1989, conventional wisdom throughout NATO was that deep cuts (e.g., to 50 percent of NATO's current force levels) would be highly destabilizing (see, for example, FRG (1988)). As we reported in mid-1989 (Davis, Howe, Kugler, and Wild, 1989; Davis, 1989a and 1990), that wisdom depended on dubious assumptions. We concluded after technical analysis that there is no theoretical reason why military stability cannot be achieved in a deep-cuts regime. As of mid-1989, however, there were many practical reasons for not being sanguine about being able to achieve the conditions required. In particular, the characteristics needed for a defender in a low-force-level regime included maneuver capability (including skills in both counterattacks and delay operations), flexibility, and unity of command. We expressed concerns about whether NATO would make the necessary adaptations, such as scrapping the layer-cake command structure in favor of a more coherently integrated structure, adapting forward defense to permit preferential defense and delay operations when necessary, and moving to a more maneuver-oriented doctrine at the operational level of combat.

Since then much has changed, to say the least. At this stage, we recommend that NATO pursue deep cuts aggressively in follow-on negotiations, however constituted. Our reasons are many and varied. Stated in neutral terms (rather than NATO-specific terms):

- Reducing the defense burden is highly desirable, and this cannot be accomplished without deep cuts in force structure, especially active force structure (CBO, 1990).
- With the unification of Germany and emergence of a strategic buffer, defense of NATO will be much easier at low force lev-

els because of increased depth, improved defensive terrain, and the opportunity for interdiction in the buffer zone.¹ The Soviet Union has enormous depth and would also benefit from the buffer zone.

- With post-CFE I force levels, the Soviet Union and NATO will still have large enough armies to mount large-scale offensive operations, although, to be sure, the defender's advantage has increased. In a deep-cuts regime, it would be manifest that neither NATO nor the Soviet Union could pose a large-scale threat to the other without a massive rearmament.
- For NATO to undergo deep cuts (along with Soviet cuts) would take away the principal argument put forth by Soviet reactionaries, including many senior military officers—namely, that Gorbachev's foreign policy has *reduced* Soviet security, as evidenced by the Soviets making virtually all the cuts envisioned in CFE I.
- By contrast with earlier historical eras, there is reason to believe that the deep-cuts regime might be permanent and that incentives for rearmament would be low because of nuclear weapons.

From NATO's perspective, deep cuts are even more attractive, because NATO now enjoys and will probably continue to enjoy advantages in air forces and related munitions, which provide enormous defensive leverage given a buffer zone.

"GLOBAL" LIMITS AND NAVAL ARMS CONTROL

If we are to pursue deep cuts, it will be necessary to do so on a more nearly global basis. Even after carrying out announced unilateral cuts, the Soviet Union may have as many as 66 ground divisions outside the ATTU. The Soviets could, if necessary, redeploy a significant portion of those forces (e.g., 10 to 20 divisions) to the Central European theater. Further, they could redeploy forces nominally associated with the Northern and Southern regions. NATO could not begin to match such redeployments, since its flank countries are heavily oriented toward relatively static infantry forces. Although

¹War gaming and simulation in support of this conclusion will be reported elsewhere. For past analysis focused on the inter-German border but more relevant than one might expect, see Davis, Howe, Kugler, and Wild (1989) and Wild, Howe, and Davis (forthcoming).

severe ethnic problems and the low quality of Soviet forces and equipment outside their Western theater of operations greatly mitigate our concerns on these matters today, the long term is another matter, and if NATO's force levels were much smaller than today's, there would be basis for concern.

Negotiating appropriate limits on the totality of Soviet ground-force divisions will, however, surely require that negotiations be conducted on a more nearly global basis, at least for the United States and the Soviet Union (and possibly in cooperation with the Chinese). This causes conceptual and ideological problems for the United States, because we have worldwide interests and responsibilities having nothing to do with the Soviet Union. At a practical level, the reality is that once again we find that the USSR has far more force structure than needed for its own security and that there are strong economic reasons for cutting those forces—well below the levels envisioned in CFE I. In theory, this could be done unilaterally. It is more plausible as part of an orchestrated arms-control regime, whether or not formalized by treaty.

What seems *implausible* to us is that the Soviets would allow naval forces to go unscathed in such a negotiation. American arguments on the subject may be valid substantively, but they are patently unpersuasive in terms of equity: if the Soviets have put ground forces (their strength) on the table, why is it that we are unwilling even to *discuss* naval forces (and were, for a long time, unwilling to discuss air forces)? In the past, Americans could disparage the importance of internal Soviet political factors because the man in the street had no say. Now, however, it behooves us to recognize that the democratization process we applaud is bringing such issues into the open and that ordinary Soviet citizens will understandably be concerned about equity—especially in a paranoia-prone period characterized by across-the-board strategic retrenchment and a fear that the West will “put the screws” to the Soviet Union in its period of weakness.²

²One of us (Davis) has had several occasions to discuss naval arms control issues with Soviet analysts. It seemed evident from these discussions that the Soviets have no particular sense of “threat” from U.S. naval forces, despite their generalities. When asked what threat they see, they tend to fall back to the nuclear delivery capability of the aircraft carriers that encircle the Soviet Union (a vision that was much more relevant 30 years ago than today, even though Soviet military maps may still emphasize this encirclement). The other threat they mention is the maritime strategy, but that is clearly not an invasion threat nor even a threat that could visit much damage upon the Soviet Union. It was intended to be only one optional part of a U.S. strategy for conducting a global war. Ultimately, the Soviet analysts seem to be most strongly concerned about the political issue of apparent equity.

A colleague has reviewed the history and current issues of naval arms control in a series of publications under this study (Lacy, forthcoming (a), (b), (c)). We shall not attempt to summarize that work here. Instead, we argue only that the United States should plan to include naval arms control in the next round of negotiations and that it should not only consider a range of naval confidence and security building measures, but should also improve the degree to which Soviet politicians and citizens are aware of and sensitive to the reductions in naval force structure that we impose upon ourselves unilaterally specifically because of the reduced worldwide Soviet threat. Given the importance of perceived equity and our interest in the success of Soviet liberal or moderate elements, as well as greater ground-force reductions, it seems to be inappropriate to be "getting no credit" for naval reductions. Ironically, the most fruitful area for East-West negotiations on naval force structure may involve nuclear attack submarines, of which the Soviets have far more than we (although they also have incentives for reducing).

Finally, let us mention here the possibility of convening special U.S.-Soviet "review sessions on force structure" to coordinate and advertise unilateral reductions and defensive restructuring. Germans might also be brought into the discussions from time to time. It is possible that the Conference on Security and Cooperation in Europe could provide some type of umbrella for the discussions, but the decisions and announcements would be unilateral.

DEFINING ARMED NEUTRALITY OF EASTERN EUROPE

Repeatedly in this report we have emphasized the importance of the strategic buffer and the desirability that it consist of independent states willing to defend their independence if invaded. Since active pursuit of this concept is controversial, some further discussion is worthwhile.

A Nonstarter: Strategic Barriers

Those contemplating the notion of Eastern Europe as a buffer often propose that the Eastern states construct strategic barriers along both borders. Most of these proponents probably have in mind some variant of the defensive-defense concepts previously suggested for both sides of the inter-German border by numerous Europeans (e.g., von Müller), Soviets (see, for example, Kokoshin, Konovalov,

Larionov, and Mazing (1989)), and a few Americans such as Jonathan Dean. Others may have in mind something more like Maginot lines. In our view, such proposals are distinct nonstarters for several reasons: (a) they would be seen as antithetical psychologically and politically to current trends emphasizing increased economic and political integration, (b) comprehensive barriers would be very expensive at a time when economic revitalization takes priority, (c) constructing such well-defined and fixed barriers might create a false sense of security, and (d) Soviet *military* planners responsible for defense against the (extremely virtual) NATO invasion threat might see such strategic barriers as potentially precluding a defense at the Vistula River, the only good terrain feature between the West and the Soviet Union; barriers could be seen as a fortress behind which an invader would prepare (and repair in sanctuary, given a temporary rebuff).

A Better Approach to Armed Neutrality

What form, then, should armed neutrality take? The Eastern states should emphasize cost-effective measures that would by no means guarantee successful defense (an impossibility against the Soviets) but that would deny the Soviets (or NATO or the Germans) any opportunities for quick and easy invasion. These would include: (a) preparations for the destruction of major bridges across the river lines and temporary destruction of rail lines and switching stations, (b) the laying of mines and other obstacles, and (c) maintaining a large infantry-heavy force with good antitank guided missiles and hand-held air defense weapons. Heavy forces and expensive air forces and air defenses would be deemphasized.

VI. CONCLUSIONS: A CONSOLIDATED TOP-LEVEL VIEW

If we pull together the key elements of the preceding discussion, they can be summarized as shown in Fig. 5, with obvious sacrifice of detail. The overall objective is to achieve long-term stability, by which in this report we mean East-West military-related stability. To accomplish that we should pursue a strategy made up of five subordinate objectives. To achieve the objectives we should adopt the measures shown below. For example, to deter, without provocation, invasion of Western Europe, we should increase military competence for new contingencies. All of the measures shown here have been discussed earlier, so Fig. 5 is merely a convenient way to summarize results.

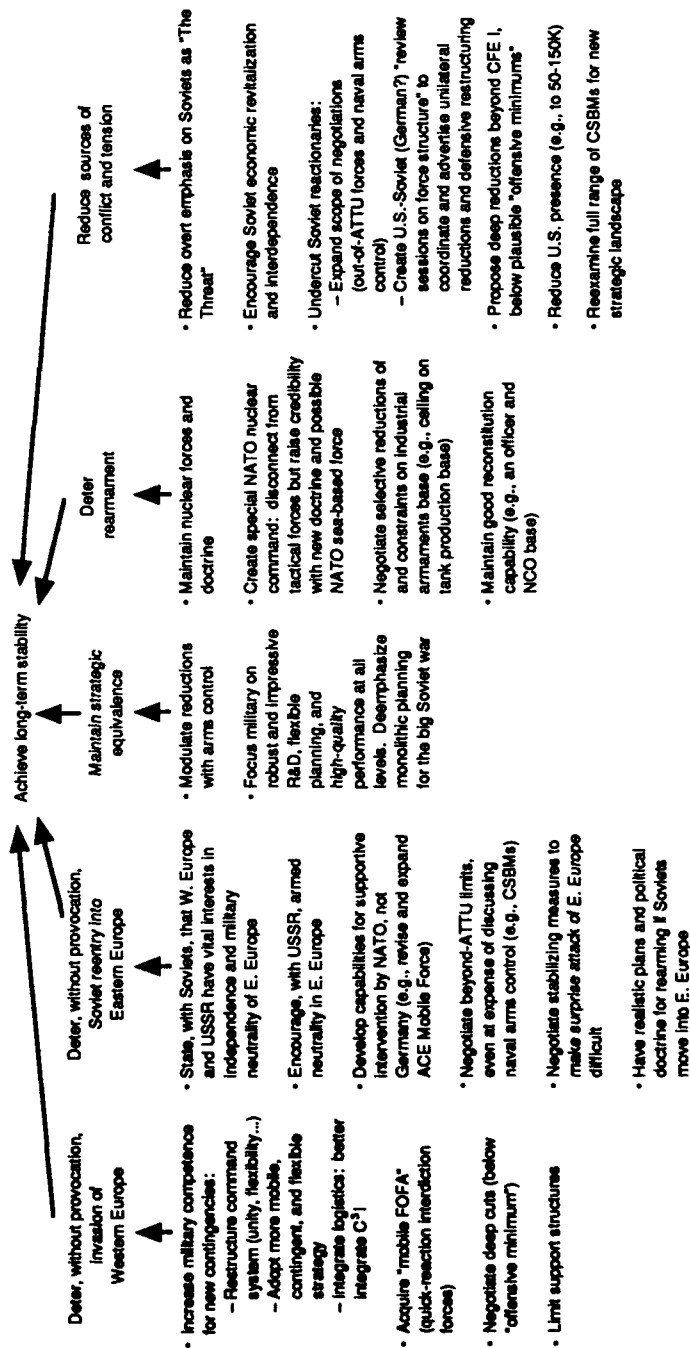


Fig. 5—Elements of a strategy to achieve long-term stability

Appendix A

EFFECTS ON STABILITY OF SELECTED FORCES

Individual weapon systems can be used for either offensive or defensive purposes. Further, the defender must conduct offensive operations at the tactical and perhaps operational level if he is to succeed in defense at the strategic level. Hence, the notion of characterizing some weapon systems as good and others as bad has always struck military analysts as peculiar. At the same time, one can look at an *entire* force structure and reach judgments about whether it is well suited to strategic-level (i.e., theater-level) offensive operations, and the judgments one reaches depend significantly on the *composition* of those forces, in such terms as the proportion of heavy and light units and the adequacy of support forces and stocks for long-distance operations.¹ Over time, it appears to us that conventional forces are naturally becoming more "defensive" in overall character and that this is especially so as the result of the strategic buffer. Having offered these background comments, we shall now review briefly our best characterization of whether particular forces are primarily offensive or defensive in character.

Until recently, many analysts argued that shifting to nonoffensive forces would mean reducing mobility and increasing dependence on strategic barriers and infantry forces armed with antitank guided missiles. Those concepts have been largely discredited, although recent hybrid concepts deserve to be taken more seriously (e.g., a meld of barrier concepts with significant mobile reserves). At an international conference late in 1990, analysts from East and West reached consensus on the principle that *stability is promoted by the defender's having a mobility advantage in its own rear areas*.² In this concept, armored personnel carriers and infantry fighting vehicles are "good" because they increase mobility in one's rear but are highly vulnerable during assault operations. Tanks, by contrast, are "bad." Obstacles, of course, are "good," although strategic barriers can seriously compli-

¹For Polish views on this, see Moraczewski and Multan (1990). See also Kononov (1990) and Kokoshin et al. (1989).

²See Huber (1990) for proceedings of the conference. See in particular the analysis working group report by Biddle, Davis, Goad, and Jones. See also Hines' discussion of likely Soviet General-Staff analysis of stability.

cate defensive maneuvers and counterattacks, and that is "bad." Thus, the capability to create tactical obstacles over large areas at whatever time and place one wishes is "good," but strategic barriers have an uncertain significance.

Aircraft suitable primarily for close-air-support missions are "good," since they are much more vulnerable in the attack. This includes attack helicopters. Deep-strike aircraft have a mixed effect, since they can reduce the mobility of both sides' operational reserves. If surprise attacks are feasible, one can argue that deep-strike aircraft are "bad" because they can greatly increase the effectiveness of the initial attack (as Operation Barbarossa demonstrated fifty years ago, when aircraft were dramatically less lethal than today). If surprise attacks are not feasible and the attacker must cross a buffer zone, then deep-strike aircraft are "good" because they will favor the defender.

Air defenses are also complex to evaluate. Highly mobile air defenses that can move with field armies on the attack are arguably "bad" because their *degree* of mobility is unnecessary for defensive operations. We emphasize "degree" because the defender's air defenses are essential and would be readily destroyed if they were not mobile. Patriot systems are "good" because they are not mobile enough to accompany fast-moving attack forces. Many Soviet short-range surface-to-air missiles are "bad" because they are highly mobile and even have cross-country capability. NATO short-range surface-to-air missiles such as the Improved Hawk are essential for defense and not nearly so mobile.

Offensive counterair operations are neither "good" nor "bad," because they affect both defensive close air support and offensive air support as well as deep-strike sorties.

Deep-fire and shorter-range indirect-fire systems with high accuracy and lethality are "good" if a strategic buffer exists, because they then are of more advantage to the defender. The tactical indirect-fire systems (e.g., advanced mortars) are "good" in any case, because they materially reduce the effectiveness of the massed armor operations necessary for blitzkrieg attacks. The United States is not currently pursuing such systems as seriously as might be desirable, but other nations, including the Germans, are apparently taking them quite seriously.

Air-mobile/air-assault forces are important for the defense of the future and are exceptionally vulnerable on the attack when the range of operations is large. Again, then, the existence of a strategic buffer is important.

Advanced reconnaissance, surveillance, and target acquisition capabilities are an enormous force multiplier for both sides. They favor the attacker *when conducting a preplanned surprise attack*. Given a buffer, however, such systems are "good."

Advanced artillery munitions are equally useful for attack and defense, although more effective for the defense because of concealment and prepared defenses. By contrast, "dumb" artillery munitions are essential for the attacker depending on defense suppression through area fire, for which accurate munitions are desirable but less of an advantage and very expensive. It follows that "smart" munitions may be considered "good," while *excessive* stocks of total munitions (mostly dumb) are "bad." No army will admit that it could get by with less artillery ammunition, smart or dumb, but the net effect of lowering the tonnage available to the sides would seem to favor the defense until the cuts were so large as to deny the defender the capacity for aimed fire and maneuvering of fire to thwart tactical breakthroughs until reserves arrive.

Bridging equipment is needed for both attack and defense. In the past such equipment could have been critical for NATO in moving some forces to the front in the first place or in extracting forces from the front if forward defense failed. Given the strategic buffer, however, and its particular geographic character, severe limitations on bridging equipment would be "good." Further, prechambering of bridges in the East European countries would be a prime candidate for nonoffensive defense, with big payoffs for East-West stability.

It is interesting to observe that if technological trends continue, with indirect-fire systems threatening to end the era of massed armor attacks, the various national armies will naturally shift toward an increasingly infantry-heavy force structure that will be inherently less offensive. Economic factors are also encouraging more extensive use of infantry. Without a strategic buffer, infantry would not necessarily be "good," since larger infantry forces could be an important part of alternative attack strategies more dependent on infiltration than on massed breakthrough.

Finally, it should be noted that existence of a buffer does not *guarantee* that the defender will use it well. If the aggressor is allowed to conquer the buffer without many losses and to then take his time (months perhaps) in preparing the next invasion phase, the defender's prospects will be much poorer: hence our emphasis on both sides' recognizing their interests in protecting the buffer politically and militarily.

Appendix B

STABILITY REGIMES WITH AND WITHOUT A STRATEGIC BUFFER

For some years a number of analysts, mostly in Western Europe and the United States, have used "stability diagrams" to explain some of the issues associated with attempting to achieve military stability.¹ Figure B.1 shows an example. The x and y axes are measures of Red's and Blue's strength (e.g., as measured in Equivalent Divisions). In Fig. B.1 the initial situation (point A) has Red with a force-ratio

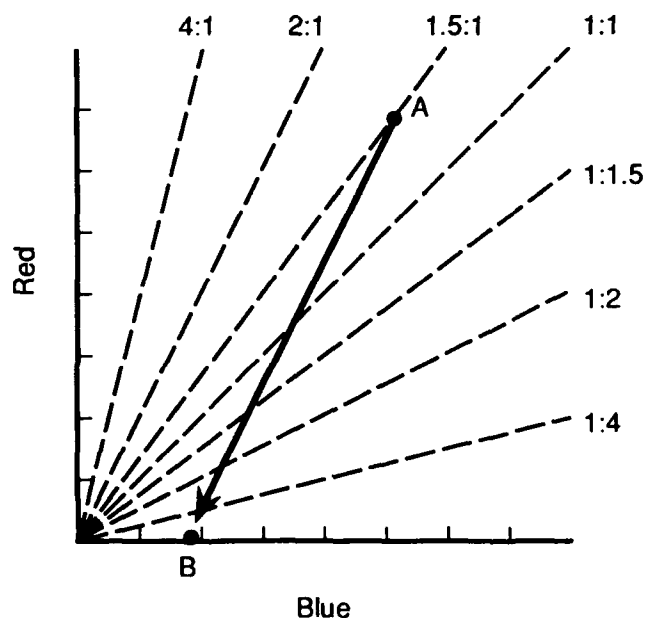


Fig. B.1—An illustrative stability diagram

¹See, for example, Rohn (1990), which includes a review of much of the literature, and Huber and Hoffman (1990). Huber and colleagues, and Von Müller and colleagues, have developed many papers on the subject, usually in the context of evaluating defensive defense concepts. RAND (especially colleague Kenneth Watman) used stability diagrams heavily in 1988 and early 1989. Similar diagrams have been used in the strategic nuclear community for two decades.

advantage of about 1.5:1 (the dashed rays are for reference only, and make reading the diagrams easier).

Because in this example it is assumed that the defender has a 2:1 exchange-ratio advantage (i.e., the ratio of attacker to defender losses is 2), if Red attacks he will be drawn down by attrition until, at point B, his force is completely exhausted and Blue wins. Similarly, if Blue had attacked Red, Blue would have lost. Note that in these diagrams one sees the course of the war, in terms of Red and Blue force levels, by moving along the arrow, with time increasing along that arrow.²

The issue of interest is whether there are regions in this space of Red strength versus Blue strength that correspond to "stable" force balances. If we assume that the defender has a 2:1 exchange advantage, then there is a stability region as shown in Fig. B.2. For any force balance represented as a point in that region, the attacker will lose and the defender will win (except on the edges, where there is a stalemate).

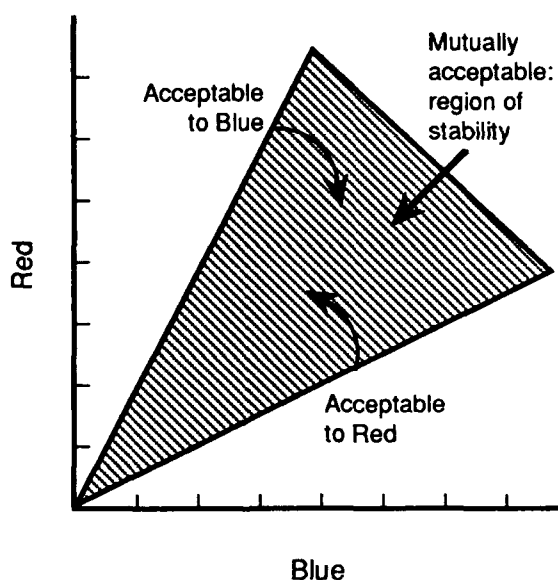


Fig. B.2—An illustrative region of mutual stability

²In real wars, the protagonists do not fight to the death as the figure would suggest. This is only one of many simplifications we use in this short discussion.

Figures B.1 and B.2 assume that the laws of combat are extremely simple, with the exchange ratio being constant in time and independent of the force levels and ratios. However, one can use more realistic models as the basis for estimating the results over time of combat (e.g., see Rohn (1990), which employs the RSAS model).

If, for example, one has a simulation model sensitive to force-to-space issues as well as force-ratio issues, then one might have something like Fig. B.3 to illustrate regions of stability and instability. Here large force levels are better than low ones because the defender has more of an advantage when force levels are high. When this kind of result emerges in models, it is reflecting the notion that an attacker has certain advantages of being able to concentrate forces. If the defender is spread too thinly, he may not be able to hold long enough to counterconcentrate. In the model underlying Fig. B.3 there is *no* region of mutual stability at low force levels. Whether that is a correct model of warfare depends on a host of factors, including the defender's operational strategy, actual force levels and terrain, the defender's command and control system, and so on. As we have previously discussed (e.g., Davis, Howe, Kugler, and Wild, (1989)), there is no inherent reason for the defender to do poorly at low force levels, but there are many reasons why he *might*.

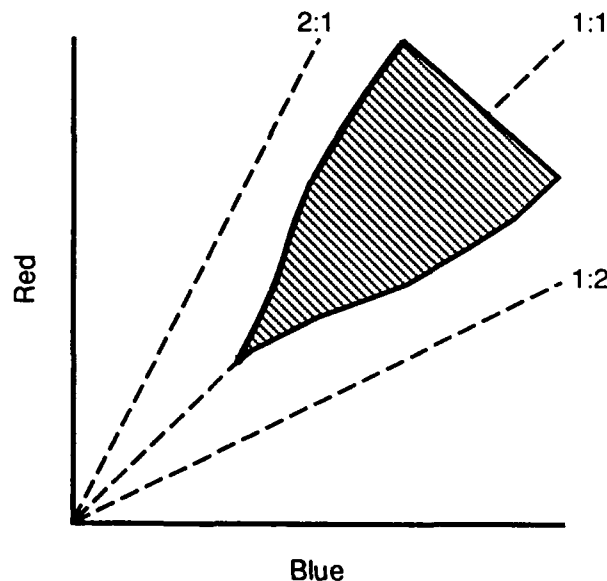
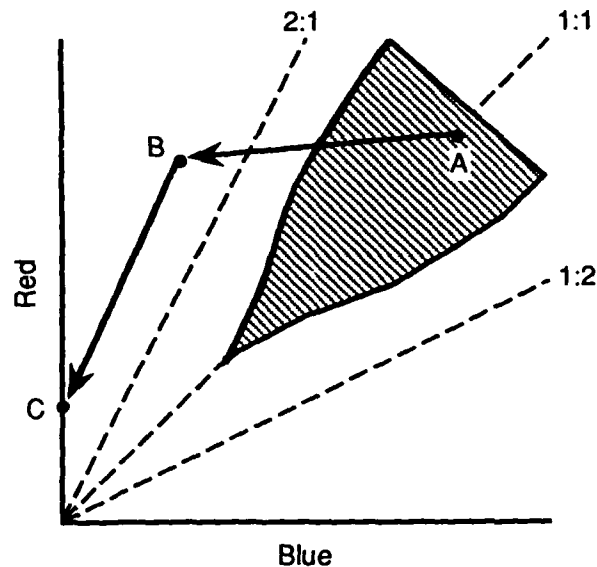


Fig. B.3—A more complex instance of a stability diagram

All of this was merely to illustrate some standard uses of stability diagrams. Our next point is that there may be *no* stability region at all. That is, unlike the worlds assumed in Figs. B.1 to B.3, it may be that the attacker always wins or that what looks like stability is not. The principal sources of difficulty are:

- Real-world attackers often achieve operational surprise, in which case the exchange ratio may be temporarily favorable to them rather than to the defender, after which, even if normal defender advantages apply, the force ratio may be so disadvantageous to the defender that the attacker still wins (e.g., Fig. B.4).
- In many cases of interest, the antagonists have to mobilize forces. Even if there is parity in the mobilized force levels, the attacker may have a substantial advantage if he is able to generate his forces faster.
- In many cases of interest (e.g., a hypothetical war after a CFE agreement), the attacker may have on D-Day more forces than he was "supposed to have," either because of deception or because he is able to use forces from other regions. Thus, even though there might be nominal parity in a theater, the war might start with the attacker having an advantage.
- Reality and perceptions often differ. If so, then a situation that "ought" to be stable may not be. If, for example, Red tends to overestimate the quality of Blue's forces and underestimate his own, then he might assess a situation of true parity as a situation of 2:1 disadvantage, or vice versa. This is exacerbated when the sides also have to worry about surprise effects.
- Aircraft can play a critical role. In some campaigns, air forces have bottled up ground forces so that they could not effectively be used. This is a special concern in surprise attacks, since it reinforces the problem of asymmetric force generation. In Operation Barbarossa, the German air force played a major role in precisely this way, something Soviet analysts and generals remember and use to argue that deep-strike aircraft are destabilizing. In terms of the diagrams, if the nominal situation was parity at, say, 40 divisions each after mobilization, a surprise attack by aircraft might delay the defender enough so that the attacker would have a 40 to 20 advantage on and shortly after D-Day.

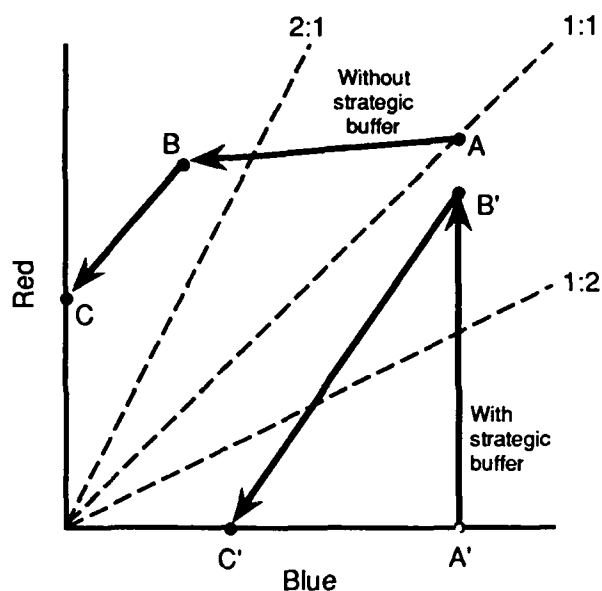


Red attacks; Blue defends. Red has benefit of surprise in time period A to B.

Fig. B.4—Illustrative effects of temporary surprise

These problems have the effect of eliminating the regions of stability: both sides seek to hedge, which drives their requirements into regions of their superiority.

Now, finally, consider the significance of a strategic buffer of considerable width. If we assume that the ground battle between Red and Blue does not begin until the attacker crosses the buffer, then surprise is very unlikely. Further, while the attacker is crossing the buffer he is much more vulnerable to interdiction than is the defender, operating behind his own lines. This greatly improves the defender's prospects. Figure B.5 illustrates how the combat trajectories might differ with and without a buffer. Without a buffer and with initial parity, Red attacks, achieves surprise, and wins a major first victory (during the period A to B). The defender never fully recovers, since he's been driven out of good terrain, so the defender's advantage is modest even in the terminal phase (B to C). By contrast, with a strategic buffer the initial force level of Red is zero at point A: he first has to cross the buffer zone. While he is doing that, he is suffering



Red attacks in both cases.

Fig. B.5—Illustrative effects of a strategic buffer

attrition from Blue's air forces, with Blue suffering very little if any comparable attrition because he is behind his own lines and well defended. Thus, even at the peak (B), Red's force level and force ratio are not as good as before. And, because there is no surprise and Blue has had considerable time to prepare, the subsequent battle is strongly favorable to Blue, the defender. It follows that in this world there is likely to be a significant region of stability. That can compensate nontrivially for problems of asymmetric force generation, surprise, and an adverse force ratio arising from use of out-of-area forces. As a result, there will be a considerable stability region for quite a range of assumptions.

Appendix C

ILLUSTRATIVE RESULTS OF ANALYTIC WAR GAMING FOR THE POST-CFE PERIOD

Below we describe some results of preliminary military analysis for the post-CFE world. There are, of course, many uncertainties, notable among which are the precise force levels each country will in fact have (including "out-of-area forces" brought in by the Soviets); whether the Poles and Czechs join the Soviets (unlikely), remain neutral, or resist; whether pre-CFE Soviet infrastructure (e.g., ammunition) remains in place or has to be reintroduced; Soviet and NATO mobilization times; Soviet operational strategy; NATO operational strategy; NATO's command structure; the effectiveness of interdiction; when NATO forces are allowed to move into the former GDR and how long it takes them to establish good defense positions; and various support-structure issues. Figure C.1 shows results for a case in which (a) the Soviets have 68 divisions, which includes out-of-area divisions; (b) the Poles and Czechs do not resist; (c) the Soviet units are fully mobilized and trained before deployment begins; and (d) the Soviets focus their attack primarily on the northeast portion of Germany. NATO mounts a forward defense along the Oder-Neisse but does not mobilize or introduce forces into the current GDR until the Soviets have clearly penetrated into Poland. This is clearly a *very* conservative case. In this simulation the Soviets were able to regain most of the former GDR and make some penetration into the FRG, but progress was slow and would be unlikely to look satisfactory to a Soviet planner. Figure C.2 shows a case with 56 divisions, a more likely threat, but with all other assumptions the same. In this case the penetration is greatly reduced, and the attackers are making virtually no progress by D+25.

NATO's ability to defend is relatively good even in these very conservative cases. If NATO begins mobilization reasonably close to the time of the Soviet invasion, and particularly if the NATO forces are allowed to advance to the Oder-Neisse line and begin defensive preparations there, then any significant penetration becomes unlikely. Also, the assumption about Polish and Czech acquiescence is significant and probably wrong. Again, we emphasize that these results are merely illustrative and do not constitute an analysis.

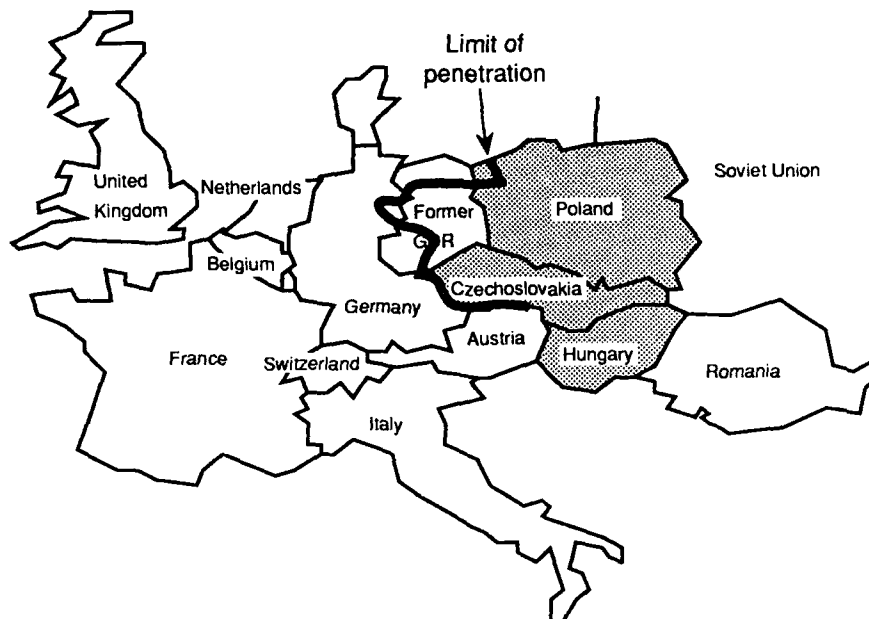


Fig. C.1—Illustrative worst-case scenario in the post-CFE environment (D + 25)

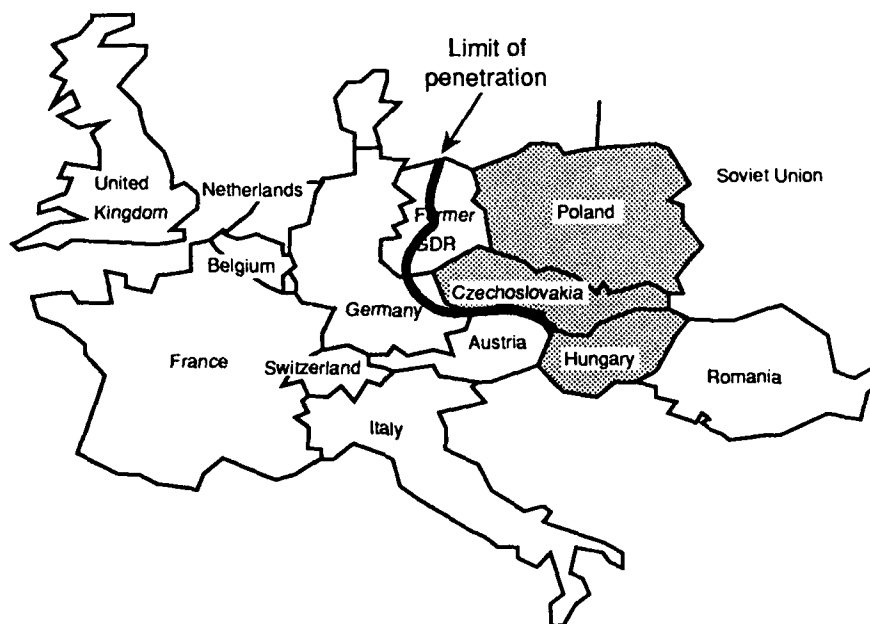


Fig. C.2—Illustrative post-CFE scenario (D + 25)

Suffice it to say here that we are able to conduct such simulations to explore such issues as the effects of alternative command arrangements and strategies, response to warning, the effectiveness of interdiction, the value of arms control constraints, and other matters.

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